

From: [REDACTED]  
To: [REDACTED]  
Subject: RE: Project 16 Network Rail and Acme's plans for Liverpool Street Station  
Date: 10 July 2025 10:01:22

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Many thanks for your response

My postal address is:

Flat 11, Block Q  
Peabody Estate  
Duchy Street  
London SE1 8DX

Sent from [Outlook for Android](#)

From: PLN - Comments <PLNComments@cityoflondon.gov.uk>  
Sent: Thursday, July 10, 2025 10:22:01 AM  
To: Chance, Veronique <[REDACTED]>  
Subject: RE: I object to Network Rail and Acme's plans for Liverpool Street Station.

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Dear Veronique Chance

Thank you for your comments, in order to log them we need to have your postal address. Can you please supply this?

Kind regards

Ray Carroll

 Ray Carroll  
Planning Business Administrator | Development Division  
City of London Corporation | Environment Department | Guildhall | London | EC2V 7RH  
[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

From: Chance, Veronique <[REDACTED]>  
Sent: 29 June 2025 16:43

Subject: I object to Network Rail and Acme's plans for Liverpool Street Station.  
Importance: High

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THIS IS AN EXTERNAL EMAIL

Dear Mr Sleight and Mr Shravan

As a frequent user of the Greater Anglia Line departing from Liverpool Street Station to get to my work in Cambridge, I am writing to object to Network Rail and Acme's plans to partially demolish and inappropriately redevelop Liverpool Street Station. This will cause substantial harm to the significance of nationally important heritage assets.

More specifically, I raise objections to:

- The substantial harm to the Grade II listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. This would also compromise the setting of the surviving C19 train shed. This is contrary to the National Planning Policy Framework which requires clear and convincing justification for any harm to a listed building and refusal of consent if a development will lead to substantial harm.
  - The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II listed heritage asset.
  - The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\* listed hotel - the last continually functioning C19 hotel in the City - through the construction of a 20-storey vertical tower over the station concourse, can be levered over the existing historic building, internal alterations to historic fabric to create new entrances to the station concourse, and the change of use from hotel to office use, resulting in the loss of last continually functioning C19 hotel in the City. Contrary to the National Planning Policy Framework which requires clear and convincing justification for any harm to a listed building and refusal of consent if a development will lead to substantial harm.
  - The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the National Planning Policy Framework which requires Local planning authorities to look for opportunities to enhance or better reveal significance of a Conservation Area. It is also contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St Paul's Cathedral Heights area. Harm to the Grade I listed St Paul's Cathedral by the massing and height of the proposed tower would also impact views protected under the London Views Management Framework. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I listed Christopher Wren City churches, and nearby St Botolph's church.
- I would remind you that:
- The National Planning Policy Framework in explicitly refers to in paragraph NPPF 213: "Substantial harm to or loss of a grade II listed building, or grade II registered parks or gardens, should be exceptional".
  - It also refers to in NPPF 200: "Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification."

I trust you will consider these objections and those by many others sent in to you. There are other ways to redevelop responsibly and profit should never be put above the significance of nationally important heritage assets.

Yours sincerely

Dr. Veronique Chance

Sent from [Outlook for Android](#)

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From: [REDACTED]  
To: [REDACTED]  
Cc:  
Subject: Re: Planning Application 25/00494/FULEIA  
Date: 06 August 2025 20:34:15

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THIS IS AN EXTERNAL EMAIL

Dear Shupi Begum

Many thanks for your email confirming receipt of my objection and requesting my full address, which is 51a Carnarvon Road, London, E15 4JW.

Kind regards,  
Fiona Pettitt

On Mon, 28 Jul 2025, 14:39 PLN - Comments, <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)> wrote:

Dear Fiona Pettitt,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**

Shupi Begum

Planning Administrator|Development Division  
City of London Corporation | Environment Department | Guildhall | London | EC2V  
7HH



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Juliemma McLoughlin

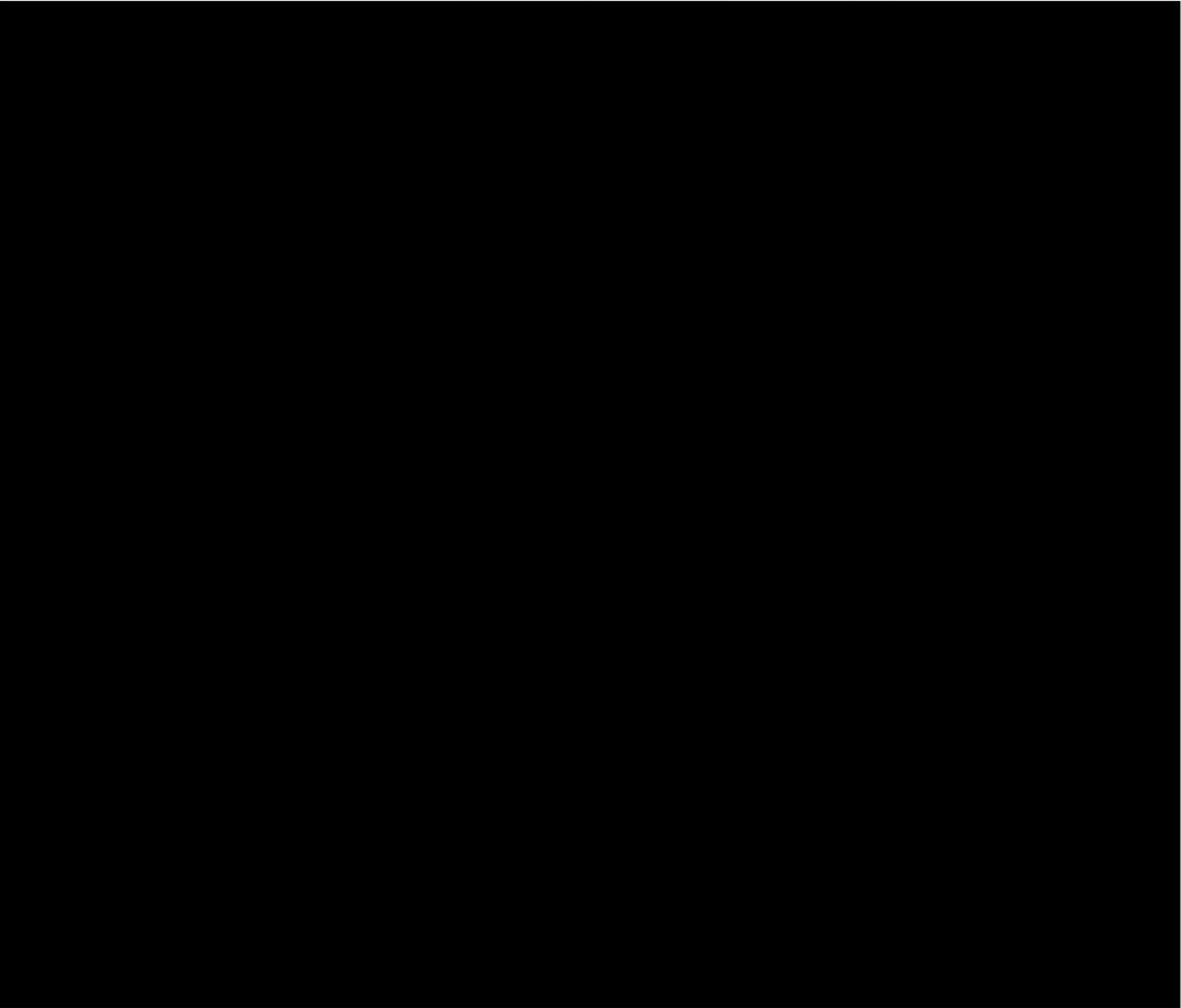
Executive Director Environment

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From: Fiona P 

Sent: 02 July 2025 12:49

To: PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>; Sleight, Tom (Deputy)



Subject: Planning Application 25/00494/FULEIA

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THIS IS AN EXTERNAL EMAIL

Dear Tom Sleigh, Chair of the Planning & Transport Committee,

**Objection to Planning Application 25/00494/FULEIA**

As someone who has regularly used historic Liverpool Street Station since the 1970s, I am writing to object to this application which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections as follow:

- That the demolition of the roof of the concourse and its replacement with a new structure will cause substantial harm to the Grade II-listed station and would also compromise the setting of the 19th century train shed;
- That the insertion of large amounts of new retail units in the 19th century train sheds, including the construction of two elevated retail galleries, **will cause** a high level of harm to the special interest and significance of the Grade II-listed heritage asset;
- The impact to the setting of surrounding listed heritage assets. In particular, there will be substantial harm to the significance of the Grade II\*-listed hotel, which is the last continually functioning 19th century hotel in the City, through the construction of a twenty-storey tower over the station concourse;
- That the scheme will cause substantial harm to the Bishopsgate Conservation Area by the imposition of a tall building in an area characterised by low-and medium-scale buildings. This is contrary to the 2015 City Plan which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches and nearby St Botolph's church.

I make reference to paragraph NPPF 213 of the National Planning Policy Framework, which states that: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Kind regards,

Fiona Pettitt

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# City of London Conservation Area Advisory Committee

Department of the Built Environment,  
Corporation of London,  
P.O. Box 270,  
Guildhall,  
London EC2P 2EJ

5<sup>th</sup> August 2025

Dear Sir/Madam,

At its meeting on 24<sup>th</sup> July 2025 the City of London Conservation Area Advisory Committee considered the following planning application and reached the decision given below:

**Case C.25/00494/FULEIA - Site Comprising Liverpool Street Station, 50 Liverpool Street, Sun Street Passage, 40 Liverpool Street (in Part), Hope Square, And Bishopsgate Plaza London EC2M 7PY**

**Bishopsgate Conservation Area/Bishopsgate Ward. No Ward Club Rep.**

The Committee received a presentation from the applicants on the revised proposals for development at Liverpool Street Station. The Committee considered that the new proposals were more sympathetic to the heritage assets affected than those in application 23/00453 to which the Committee had objected.

The Committee was unable to support the proposals in their present form, considering them still to be overdevelopment of the site. Members were pleased that the new proposals made fewer alterations to the Grade II\* listed Andaz (Great Eastern) hotel, but believed that the proposals would adversely affect the building's setting and its important role in the Bishopsgate Conservation Area. They considered that the proposed changes to the internal circulation in the station were beneficial to the public realm within the station but believed that their external expression was damaging to the character and appearance of the Conservation Area. The Committee was especially concerned about the effect of the southern projection of the western arm of the proposed development and its intrusion into the views along Liverpool Street. Members were also concerned about the proposed arched entrances, both in materials and design, and their relation to the new building which they believed sat uncomfortably on them. Therefore the Committee must register an objection to the application as presented to them.

I should be glad if you would bring the views of the Committee to the attention of the Planning and Transportation Committee.

Yours faithfully,



Mrs. Julie Fox  
Secretary

From: [REDACTED]  
To: [REDACTED]  
Subject: 25/00494/FULEIA  
Date: 11 August 2025 10:57:25

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[You don't often get email from [REDACTED]  
[REDACTED]]

THIS IS AN EXTERNAL EMAIL

To whom it may concern,

I would like to comment on the planning application with the above reference as a local resident.

The application is misleading in numerous ways:

- the notion that the driving motivation of the proposal is a better customer experience is laughable. Step-free access is available. It could be improved, but the introduction of an additional elevator for example at the Bishopsgate entrance is a relatively minor adjustment, a disabled toilet at concourse level an even smaller one, introducing both would be comparable in effort and cost with the recent adjustments to entry barriers and new ticket office.

- i noticed a social media campaign by Network Rail with questions such as 'Do you want accessible toilets at Liverpool Street Station' with respondents shoehorned into supporting the application, without information on the full scheme. I have never in the Built Environment Sector seen such manipulative and misleading efforts to shore up support, and I think this needs investigation.

- as an architect myself, i know that CGIs are often 'aspirational', but these are pure fantasy, any implementation of proposals would have minor likeness. In my opinion the CGIs should be discounted from the decision making process.

My main concern with the application is the destruction of exactly the quality that makes Victorian railway stations awe inspiring and brings delight to the everyday experience of travellers. These stations were celebrated as 'Cathedrals of Light', and the removal of exactly this quality could accurately be described as theft of public amenity. Not just within the concourse, but also within the historic enclosure of the platforms, which would be overshadowed.

I urge you to reject this application.

With best wishes,

Mark Lemanski  
424 Petticoat Square  
E1 7EB

From: [REDACTED]  
To: [PLN - Comments](#)  
Cc: [Sleigh, Tom \(Deputy\)](#)  
Subject: Objection to Planning Application for Redevelopment of Liverpool Street Station ref: 25/00494/FUALEIA  
Date: 15 July 2025 08:34:22

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[REDACTED]

[REDACTED]

[REDACTED]

Email: [REDACTED]

Planning Department – Department of the Built Environment

City of London Corporation

Guildhall

PO Box 270

London EC2P 2EJ

Email: [plncomments@cityoflondon.gov.uk](mailto:plncomments@cityoflondon.gov.uk)

CC: [tom.sleigh@cityoflondon.gov.uk](mailto:tom.sleigh@cityoflondon.gov.uk)

Re: Objection to Planning Application for Redevelopment of  
Liverpool Street Station

Planning Application Reference: 25/00494/FUALEIA

Dear Sir or Madam,

As a long-term resident of Spitalfields, living just a short walk from Liverpool Street Station, I am writing to register my strong objection to the proposed redevelopment, in particular the planned construction of a 97-metre glass and steel office block above the historic station.

Liverpool Street Station is not only a vital transport hub—it is also an architectural landmark with deep historic, cultural, and community value. The proposed development is deeply inappropriate in scale, design, and intent, and would cause lasting harm to both the heritage and character of the area I call home.

## 1. Destruction of Daylight and Passenger Experience

The proposal would enclose the station beneath a heavy, overbearing structure, cutting off natural daylight from the concourse and platforms. As a frequent user of the station, I can attest to the importance of light in creating a welcoming, safe and accessible environment. This loss would fundamentally change the experience of one of London's busiest transport interchanges—turning it into a gloomy, artificial and corporate space that serves private commercial interests at the cost of public amenity.

## 2. Severe Harm to Heritage Assets

The proposal directly threatens several listed heritage assets, including the Grade II-listed station structure and the \*Grade II-listed former Great Eastern Hotel (now the Andaz Hotel)\*\*. To place a high-rise commercial office tower on top of such carefully preserved Victorian architecture is to deface the very qualities that make these buildings so valuable.

This is not simply a matter of aesthetics; it is a fundamental breach of the principle that heritage buildings should be respected and sympathetically integrated—not overshadowed, engulfed, or rendered secondary to private development.

## 3. Architectural Discord and Conservation Area Impact

As a local resident who walks past this site daily, I believe the design is completely at odds with the surrounding urban fabric. The use of steel and reflective glass bears no architectural relationship to the textures, materials and proportions of the Bishopsgate Conservation Area. The proposed tower would loom over the historic streetscape, intruding on views and diminishing the station's historic presence.

This scheme undermines the very purpose of conservation areas: to protect and celebrate coherent historic character—not to treat them as blank canvases for glass skyscrapers.

## 4. Carbon Waste and Environmental Impact

The demolition of sound Victorian infrastructure and replacement with a new-build steel and glass tower is environmentally indefensible. The embodied carbon in the existing buildings is substantial, and demolishing them in favour of high-carbon new materials contradicts the City of London's own climate pledges. In an era where retrofitting and adaptive reuse must be the priority, this proposal is an outdated and irresponsible approach to development.

## 5. Community Disruption and Local Character

The construction phase alone would bring years of noise, dust, and traffic disruption to a residential neighbourhood already under pressure. The post-development environment would offer little in return to the local community: no new housing, minimal public benefit, and a sterile commercial atmosphere that prioritises global corporate tenants over local identity and quality of life.

Liverpool Street Station is a civic place—part of the public realm. Replacing it with a private office complex would make the station feel less like part of our city and more like part of a gated business district.

## 6. Precedent and Lack of Public Mandate

More than 2,000 objections have already been raised to this scheme—a clear demonstration of the widespread concern it has provoked across London. Approving this proposal would set a dangerous precedent: where the profit motives of developers are allowed to override heritage

protections, planning integrity, and overwhelming public opposition.

Moreover, there has been insufficient public engagement with the local community. As a resident, I have received no meaningful opportunity to take part in shaping or scrutinising such a major scheme. This lack of consultation further undermines the legitimacy of the planning process.

#### Conclusion

Liverpool Street Station is not just a site for development. It is a historic place that belongs to London's past, present, and future. It deserves to be protected, respected, and sensitively modernised—not buried under a generic tower block designed for maximum commercial return.

I therefore urge the City of London Corporation to refuse this application in full, and to demand a new approach—one that is heritage-led, environmentally responsible, and genuinely in the public interest.

Yours faithfully,

A solid black horizontal bar used to redact the sender's name.

P.S - Could you email me to confirm receipt of this email, and in addition I request that all my personal details be redacted before it is put into the public domain.

From: [REDACTED]  
To: [PLN - Comments](#)  
Subject: Re: Objection to the redevelopment of Liverpool Street Station  
Date: 15 July 2025 21:58:48

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THIS IS AN EXTERNAL EMAIL

Dear Ms Begum,

Thank you for confirming the receipt of my objection regarding the redevelopment of Liverpool Street Station. I appreciate you bringing to my attention the need for a full address to ensure that my comments can be considered.

In response to your request, my full address is as follows:

Name: [REDACTED]

Address: [REDACTED]

I would like to maintain my anonymity in the planning report submitted to the Planning and Transportation Committee. I understand that this might affect the weight given to my comments, but I am keen to protect my privacy.

Thank you once again for your assistance and for considering my concerns.

Kind regards,

[REDACTED]

Sent from [Outlook for iOS](#)

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From: PLN - Comments <PLNComments@cityoflondon.gov.uk>  
Sent: Monday, July 7, 2025 11:43 am  
To: Gary Jarvis [REDACTED]  
Cc: McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>  
Subject: RE: Objection to the redevelopment of Liverpool Street Station

Dear [REDACTED]

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

## Shupi Begum



Shupi Begum  
Planning Administrator | Development Division  
City of London Corporation | Environment Department | Guildhall | London | EC2V  
7HH  
[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)  
Juliemma McLoughlin  
Executive Director Environment

From [REDACTED]

Sent: 27 June 2025 23:40

To: PLN - Comments <PLNComments@cityoflondon.gov.uk>; Sleight, Tom (Deputy)  
<Tom.Sleight@cityoflondon.gov.uk>

Cc: Joshi, Shravan <Shravan.Joshi@cityoflondon.gov.uk>;

Shravan.Tana.Adkin@cityoflondon.gov.uk; joshi@cityoflondon.gov.uk; Bagchi, Samapti  
<Samapti.Bagchi@cityoflondon.gov.uk>; Bell, Matthew <Matthew.Bell@cityoflondon.gov.uk>;

Benn, Emily (Deputy) <Emily.Benn@cityoflondon.gov.uk>; Edwards, John (Deputy)

<John.Edwards@cityoflondon.gov.uk>; Fitzpatrick, Anthony

<Anthony.Fitzpatrick@cityoflondon.gov.uk>; Fredericks, Marianne (Deputy)

<Marianne.Fredericks@cityoflondon.gov.uk>; Gowman, Alison (Alderman)

<Alison.Gowman@cityoflondon.gov.uk>; Goyal CBE, Prem (Alderman)

<Prem.Goyal@cityoflondon.gov.uk>; Gupta, Madush (Deputy)

<Madush.Gupta@cityoflondon.gov.uk>; Hayes, Josephine

<Josephine.Hayes@cityoflondon.gov.uk>; Hodgson, Jaspreet (Deputy)

<Jaspreet.Hodgson@cityoflondon.gov.uk>; Horscroft, Amy

<Amy.Horscroft@cityoflondon.gov.uk>; Kelvin, Philip <Philip.Kelvin@cityoflondon.gov.uk>; King,

Elizabeth (Alderwoman) <Elizabeth.King@cityoflondon.gov.uk>; C E Lord

<C.E.Lord@cityoflondon.gov.uk>; Manchester, Antony

<Antony.Manchester2@cityoflondon.gov.uk>; Moss, Alastair (Deputy)

<Alastair.Moss@cityoflondon.gov.uk>; Oliver, Deborah <Deborah.Oliver@cityoflondon.gov.uk>;

Pollard, Henry (Deputy) <Henry.Pollard@cityoflondon.gov.uk>; Pryke, Simon (Alderman)

<Simon.Pryke@cityoflondon.gov.uk>; Qureishi, Nighat (Deputy)

<Nighat.Qureishi@cityoflondon.gov.uk>; Robertshaw, Gaby

<Gaby.Robertshaw2@cityoflondon.gov.uk>; Selka, Hugh <Hugh.Selka@cityoflondon.gov.uk>;

Silk, Alethea <Alethea.Silk@cityoflondon.gov.uk>; Sonpar, Naresh

<Naresh.Sonpar@cityoflondon.gov.uk>; Upton, William <William.Upton@cityoflondon.gov.uk>;

Waters, Matthew <Matthew.Waters@cityoflondon.gov.uk>; Webster, Jacqui

<Jacqui.Webster@cityoflondon.gov.uk>

Subject: Objection to the redevelopment of Liverpool Street Station

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THIS IS AN EXTERNAL EMAIL

Dear Mr. Sleight,

I am writing to express my strong objection to the planning proposals for the

redevelopment of Liverpool Street Railway Station in London.

My primary concern is the substantial harm that this redevelopment would cause to the Grade II-listed station, particularly through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. Such changes would undoubtedly impact the setting of the surrounding listed heritage assets.

One of the most significant concerns is the harm to the significance of the Grade II\*-listed Great Eastern Hotel –the last continually functioning 19th-century hotel in the City. The proposal to construct a 20-storey tower over the station concourse would severely alter the historic character and aesthetic of this iconic landmark.

On a personal note, I have fond memories of visiting London as a child, with trips to the Zoo, the Tower of London, and Madame Tussaud's. The first sight that always greeted me was the stunning Great Eastern Hotel. Even now, coming to London evokes that same sense of nostalgia, a connection to the city's rich history that I cherish and do not want to lose.

I sincerely urge you to reconsider these proposals and seek alternative solutions that would preserve the historical integrity and cultural significance of Liverpool Street Railway Station and its surrounding heritage assets.

Thank you for your attention to this matter.

Kind regards,



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Mr Gwyn Richards, Interim Chief Planning Officer,  
The City of London Corporation,  
P.O. Box 270, The Guildhall,  
London, E.C.2.P 2.E.J.

For the attention of Mr Kieren McCallum

**SITE COMPRISING LIVERPOOL STREET STATION, 50, LIVERPOOL STREET,  
SUN STREET PASSAGE, 40, LINHOPE STREET (IN PART), HOPE SQUARE  
AND BISHOPSGATE PLAZA, LONDON, E.C.2.**

**OBJECTIONS TO APPLICATION 25/00494/FULEIA AND TO FIVE, RELATED  
APPLICATIONS FOR LISTED BUILDING CONSENT (WITHOUT REFERENCE  
NUMBERS)**

FROM PAUL VELLUET, M.LITT., ARB, RIBA, IHBC, CHARTERED ARCHITECT, 9, BRIDGE  
ROAD, ST MARGARET'S, TWICKENHAM, T.W.1. 1.R.E.

1. I write in an independent capacity as a Freeman of the City of London; as a chartered architect with over forty years' experience specialising in the conservation, alteration and extension of listed and other historic buildings and in the design and development of new buildings and spaces in historic areas; working in both private practice and the public sector, including serving as English Heritage's Regional Architect for London between 1991 and 2004, and in past years as a member of the RIBA's Planning and National Awards Groups.

2. I have carefully studied relevant parts of the extensive material submitted on behalf of Network Rail Infrastructure Ltd. in support of the current applications for Planning Permission and Listed Building Consent, including the drawings and illustrative information, and, in particular, Newmark Gerald Eve's *Town Planning Statement*; ACME Architects' *Design and Access Statement*; Donald Insall Associates' *Heritage Impact Statement*; Donald Insall Associates' Chapter 8 – Built Heritage in Volume 1 of the *Environmental Statement* and Donald Insall Associates' *Townscape, Visual and Built Heritage Impact Assessment* in Volume 2 of the *Environmental Statement*. I have long been familiar with the listed Station, the adjacent, grade II\* listed Great Eastern Hotel (now branded The Andaz Hotel), the Bishopsgate Conservation Area and adjacent parts of the City, Islington, Hackney and Tower Hamlets.

3. Having now carefully considered the submitted material, I conclude that the project, by virtue of the height, bulk and massing of a key part of the development and the design and extent of the proposed alterations to the listed Station, is fundamentally misconceived in architectural, urban design and conservation terms and, if approved and implemented, will result in substantial and unjustified harm to the special architectural and historic interest, significance and setting of the listed Station; to the significance and setting of the grade II\* listed Andaz Hotel and other nearby listed buildings, and to the character, appearance and significance of the Bishopsgate Conservation Area, contrary to the relevant, formally adopted

policies of the City Corporation contained in the *City of London Local Plan* of January, 2015, the emerging *City Plan 2040*, and the *London Plan* of March, 2021, and, in the absence of potential public benefits that will balance or outweigh that harm will be contrary to the relevant provisions of the *National Planning Policy Framework* of December, 2024. On this basis, the applications should be refused or withdrawn at the earliest opportunity.

Copy to Tom Sleight, Chair, Planning and Transport Committee, City of London Corporation.

From: [Nick Rawlins](#)  
To: [PLN - Comments](#)  
Subject: Re: RE:  
Date: 28 July 2025 22:58:53  
Attachments: [image001.png](#)  
[screenshot1.PNG](#)  
[screenshot2.PNG](#)

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THIS IS AN EXTERNAL EMAIL

Hi Davis,

Thanks for your email.

Apologies - yes, sure.

My name & address is:  
Nicholas (Nick) Rawlins,  
The Studio, Cutts Lane,  
33A High Street,  
Kimpton,  
Herts.,  
SG4 8RA.

I left an earlier response on the official portal, but wasn't quite satisfied that I had done my opinion justice, hence my follow-up email.

I've attached screenshots of the auto-generated response to my earlier submission on the portal.

Perhaps the comments in my later email can be appended to my portal submission.  
If not, at least I am satisfied that I managed to submit an opinion on the official portal.

Sorry for messing you about.

Thanks,

Nick

---

From: PLN - Comments <PLNComments@cityoflondon.gov.uk>  
Sent: 28 July 2025 10:13  
To: Nick Rawlins [REDACTED]  
Subject: RE:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**  
Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation | PO Box  
270 | London EC2P 2EJ |  
[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

---

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From: Nick Rawlins [REDACTED]  
Sent: 05 July 2025 00:00  
To: PLN - Comments <PLNComments@cityoflondon.gov.uk>; Sleight, Tom (Deputy) <Tom.Sleight@cityoflondon.gov.uk>  
Cc: Joshi, Shravan <Shravan.Joshi@cityoflondon.gov.uk>; Shravan.Tana.Adkin@cityoflondon.gov.uk; joshi@cityoflondon.gov.uk; Bagchi, Samapti <Samapti.Bagchi@cityoflondon.gov.uk>; Bell, Matthew <Matthew.Bell@cityoflondon.gov.uk>; Benn, Emily (Deputy) <Emily.Benn@cityoflondon.gov.uk>; Edwards, John (Deputy) <John.Edwards@cityoflondon.gov.uk>; Fitzpatrick, Anthony <Anthony.Fitzpatrick@cityoflondon.gov.uk>; Fredericks, Marianne (Deputy) <Marianne.Fredericks@cityoflondon.gov.uk>; Gowman, Alison (Alderman) <Alison.Gowman@cityoflondon.gov.uk>; Goyal CBE, Prem (Alderman) <Prem.Goyal@cityoflondon.gov.uk>; Gupta, Madush (Deputy) <Madush.Gupta@cityoflondon.gov.uk>; Hayes, Josephine <Josephine.Hayes@cityoflondon.gov.uk>; Hodgson, Jaspreet (Deputy) <Jaspreet.Hodgson@cityoflondon.gov.uk>; Horscroft, Amy <Amy.Horscroft@cityoflondon.gov.uk>; Kelvin, Philip <Philip.Kelvin@cityoflondon.gov.uk>; King, Elizabeth (Alderwoman) <Elizabeth.King@cityoflondon.gov.uk>; C E Lord <C.E.Lord@cityoflondon.gov.uk>; Manchester, Antony <Antony.Manchester2@cityoflondon.gov.uk>; Moss, Alastair (Deputy) <Alastair.Moss@cityoflondon.gov.uk>; Oliver, Deborah <Deborah.Oliver@cityoflondon.gov.uk>;

Pollard, Henry (Deputy) <Henry.Pollard@cityoflondon.gov.uk>; Pryke, Simon (Alderman) <Simon.Pryke@cityoflondon.gov.uk>; Qureishi, Nighat (Deputy) <Nighat.Qureishi@cityoflondon.gov.uk>; Robertshaw, Gaby <Gaby.Robertshaw2@cityoflondon.gov.uk>; Selka, Hugh <Hugh.Selka@cityoflondon.gov.uk>; Silk, Alethea <Alethea.Silk@cityoflondon.gov.uk>; Sonpar, Naresh <Naresh.Sonpar@cityoflondon.gov.uk>; Upton, William <William.Upton@cityoflondon.gov.uk>; Waters, Matthew <Matthew.Waters@cityoflondon.gov.uk>; Webster, Jacqui <Jacqui.Webster@cityoflondon.gov.uk>  
Subject:

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THIS IS AN EXTERNAL EMAIL

Dear Mr. Sleigh & Committee Colleagues,

Just thought I'd send some additional opinions about the proposed Liverpool Street Station redevelopment.

To be clear, I have already sent my objection via the official portal.

And I'm just rushing this out with some last-minute 'stream-of-consciousness' wording, for which I apologise..

But I didn't feel like I had done enough for my side of the debate.

(And had some issues with my/this email address not being recognised when I was trying to set up an account on the City portal..)

I am perhaps unusual in my excess love of pre-war (gothic, renaissance, baroque, neoclassical, Victorian, etc.) architecture.

I've never thought of myself as a Luddite or someone who doesn't like progress.

And I don't dislike all modern architecture.

(The Shard is great, etc..)

But I've always been amazed at what gets built in place of, in my view, the beautiful generic (non-landmark) buildings that seem to continually be modified/demolished, particularly in London.

Because I always find the architecture jarring, like it is almost trying to upset..

I find it tends to be deliberately without ornament.

The clean-freak part of me can appreciate minimalism in certain parts of my life.

But I've never understood it with architecture.

Whenever I've spoken to anyone with no particularly strong specific architectural interest, they always seem to agree.

There are ideologues on my side of the debate, and perhaps some on the side of

redevelopment.

But I believe most of redevelopment is driven by money, which I don't think is appropriate for the built environment experienced by everyone.

But, more crucially, I believe the non-ideologues would agree with my side also.

Because it does seem to be a phenomenon that few people particularly think modern architecture is superior..

..except perhaps in supertall skyscrapers, etc., which I will admit are exciting..

..but moderately tall and low-rise modern buildings (at least those that are built) seem to be a step back in beauty.

Which makes me wonder why we keep doing it.

I almost can't really walk around the City of London now without feeling pained that this 2000 year-old district, (perhaps the most historic & significant square mile in the UK), aside from a couple of famous landmarks, and some Wren churches, has been redeveloped almost in its entirety in the last 70 years or so.

I've heard people say that that is because of the Blitz, but I've looked at maps of bomb damage and it seems like most of that development doesn't have anything to do with that and is just driven by what might be slightly be more convenient for some corporations.

But London isn't just its corporations and I think its historic buildings on this scale is what makes it almost unique.

I actually sadly, but non-begrudgingly, think Paris gets this right more often than us.

They have preserved the integrity of their historic fabric, even if interiors can be modified to suit the needs of the modern business world.

And then set aside a futuristic district (La Defence) for all the modern cool stuff.

Because modern buildings can be cool.

But I think it is all about context.

And I think the City is becoming ever more architecturally dystopian, which is tragic given how much passion and effort went into each and every pre-war building, at a time when there was no easy way out of knocking some steel girders and concrete blocks together.

In short, please don't approve this development.

There is a finite stock of these buildings, and an even smaller stock of unmutated Victorian railway architecture in its original setting.

And each one of these buildings that comes down is like a dagger through my heart (sorry to perhaps overstate - but it really is painful knowing that we will never be able to get this beauty or uniqueness back).

Also, the Bishopsgate Tower was built looking nothing like as exciting as what the developers showed in their pre-build images.

They seem to just get away with promising the world and not delivering.

Literally plonking a tower on a Victorian station is an over-use of the idea of mixing different styles, which I am perhaps surprisingly not totally against - I think it can work -

but it is all about context, and the context here just doesnt feel right.

But I don't want you to feel any additional responsibility from this rather bizarre email.  
I wouldnt want to be in your positions having to make these calls.

I still think of myself as relatively young (34).

Don't know if that's relevant but it is perhaps more unusual to hear these kind of comments from someone my age.

Don't know if that will work in my favour either..

Best wishes,

Nick

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From: [Andrew Jarmain](#)  
To: [PLN - Comments](#)  
Cc: [McCallum, Kieran](#)  
Subject: Re: Objection to Acme's plans for Liverpool Street Station  
Date: 29 July 2025 15:21:49

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THIS IS AN EXTERNAL EMAIL

Dear Shupi,

Here, In confidence, so not for use in marketing or any purpose other than for your own internal requirement and so for exclusion from publication, is my address:

[REDACTED]  
[REDACTED]  
[REDACTED].

Yours sincerely,

[REDACTED]

On Tue, 29 Jul 2025 at 15:13, PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)> wrote:

Dear [REDACTED]

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

From: [REDACTED]

Sent: 03 July 2025 09:07

To: PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>; Sleigh, Tom (Deputy) <[Tom.Sleigh@cityoflondon.gov.uk](mailto:Tom.Sleigh@cityoflondon.gov.uk)>

Cc: Joshi, Shravan <[Shravan.Joshi@cityoflondon.gov.uk](mailto:Shravan.Joshi@cityoflondon.gov.uk)>;

[Shravan.Tana.Adkin@cityoflondon.gov.uk](mailto:Shravan.Tana.Adkin@cityoflondon.gov.uk); [joshi@cityoflondon.gov.uk](mailto:joshi@cityoflondon.gov.uk); Bagchi, Samapti

<[Samapti.Bagchi@cityoflondon.gov.uk](mailto:Samapti.Bagchi@cityoflondon.gov.uk)>; Bell, Matthew <[Matthew.Bell@cityoflondon.gov.uk](mailto:Matthew.Bell@cityoflondon.gov.uk)>;

Benn, Emily (Deputy) <[Emily.Benn@cityoflondon.gov.uk](mailto:Emily.Benn@cityoflondon.gov.uk)>; Edwards, John (Deputy)

<[John.Edwards@cityoflondon.gov.uk](mailto:John.Edwards@cityoflondon.gov.uk)>; Fitzpatrick, Anthony

<[Anthony.Fitzpatrick@cityoflondon.gov.uk](mailto:Anthony.Fitzpatrick@cityoflondon.gov.uk)>; Fredericks, Marianne (Deputy)

<[Marianne.Fredericks@cityoflondon.gov.uk](mailto:Marianne.Fredericks@cityoflondon.gov.uk)>; Gowman, Alison (Alderman)

<[Alison.Gowman@cityoflondon.gov.uk](mailto:Alison.Gowman@cityoflondon.gov.uk)>; Goyal CBE, Prem (Alderman)

<[Prem.Goyal@cityoflondon.gov.uk](mailto:Prem.Goyal@cityoflondon.gov.uk)>; Gupta, Madush (Deputy)

<[Madush.Gupta@cityoflondon.gov.uk](mailto:Madush.Gupta@cityoflondon.gov.uk)>; Hayes, Josephine

<[Josephine.Hayes@cityoflondon.gov.uk](mailto:Josephine.Hayes@cityoflondon.gov.uk)>; Hodgson, Jaspreet (Deputy)

<[Jaspreet.Hodgson@cityoflondon.gov.uk](mailto:Jaspreet.Hodgson@cityoflondon.gov.uk)>; Horscroft, Amy

<[Amy.Horscroft@cityoflondon.gov.uk](mailto:Amy.Horscroft@cityoflondon.gov.uk)>; Kelvin, Philip <[Philip.Kelvin@cityoflondon.gov.uk](mailto:Philip.Kelvin@cityoflondon.gov.uk)>;

King, Elizabeth (Alderwoman) <[Elizabeth.King@cityoflondon.gov.uk](mailto:Elizabeth.King@cityoflondon.gov.uk)>; C E Lord

<[C.E.Lord@cityoflondon.gov.uk](mailto:C.E.Lord@cityoflondon.gov.uk)>; Manchester, Antony

<[Antony.Manchester2@cityoflondon.gov.uk](mailto:Antony.Manchester2@cityoflondon.gov.uk)>; Moss, Alastair (Deputy)

<[Alastair.Moss@cityoflondon.gov.uk](mailto:Alastair.Moss@cityoflondon.gov.uk)>; Oliver, Deborah

<[Deborah.Oliver@cityoflondon.gov.uk](mailto:Deborah.Oliver@cityoflondon.gov.uk)>; Pollard, Henry (Deputy)

<[Henry.Pollard@cityoflondon.gov.uk](mailto:Henry.Pollard@cityoflondon.gov.uk)>; Pryke, Simon (Alderman)

<[Simon.Pryke@cityoflondon.gov.uk](mailto:Simon.Pryke@cityoflondon.gov.uk)>; Qureishi, Nighat (Deputy)

<[Nighat.Qureishi@cityoflondon.gov.uk](mailto:Nighat.Qureishi@cityoflondon.gov.uk)>; Robertshaw, Gaby

<[Gaby.Robertshaw2@cityoflondon.gov.uk](mailto:Gaby.Robertshaw2@cityoflondon.gov.uk)>; Selka, Hugh <[Hugh.Selka@cityoflondon.gov.uk](mailto:Hugh.Selka@cityoflondon.gov.uk)>;

Silk, Alethea <[Alethea.Silk@cityoflondon.gov.uk](mailto:Alethea.Silk@cityoflondon.gov.uk)>; Sonpar, Naresh

<[Naresh.Sonpar@cityoflondon.gov.uk](mailto:Naresh.Sonpar@cityoflondon.gov.uk)>; Upton, William

<[William.Upton@cityoflondon.gov.uk](mailto:William.Upton@cityoflondon.gov.uk)>; Waters, Matthew

<[Matthew.Waters@cityoflondon.gov.uk](mailto:Matthew.Waters@cityoflondon.gov.uk)>; Webster, Jacqui

<[Jacqui.Webster@cityoflondon.gov.uk](mailto:Jacqui.Webster@cityoflondon.gov.uk)>

Subject: Objection to Acme's plans for Liverpool Street Station

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THIS IS AN EXTERNAL EMAIL

Good morning

I **strongly object** to this Acme application, which would cause **substantial harm** to the significance of **nationally important heritage assets**.

Moreover, with in regard to the above plans, with specific reference to the National Planning Policy Framework - in which

paragraph NPPF 213 states: *“Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.”*

these plans are very troubling.

More specifically, I raise objections to:

- The substantial **harm** to the **Grade II-listed station** through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of **new retail units** within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of **harm** to the **special interest and significance of the Grade II-listed heritage asset**.
- The impact to the setting of surrounding listed heritage assets. In particular, **harm** to the significance of the **Grade II\*-listed hotel** – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The **substantial harm** the scheme would cause to the **Bishopsgate Conservation Area**, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is **contrary** to the **2015 City Plan**, which requires the refusal of planning permission for tall buildings in **inappropriate** areas, such as in **Conservation Areas** and the St. Paul’s Cathedral Heights area. In addition, the

scheme would **impact** on the setting of numerous designated and undesignated **heritage assets in the City and beyond**, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.



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From: [Philip Ridley](#)  
To: [PLN - Comments](#)  
Cc: [McCallum, Kieran](#)  
Subject: RE: Enfield Transport User Group Objection to 25/00494/FULEIA Liverpool Street Station proposal  
Date: 04 August 2025 10:15:59

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THIS IS AN EXTERNAL EMAIL

Thank you, my details are:

Philip Ridley  
[REDACTED]

Please redact my address.

Please confirm that you can put the attachments on public register regarding Liverpool Street Station capacity that the application does not seek to safeguard, in particular potential new platforms and platform extensions that must be safeguarded.

Philip Ridley  
[REDACTED]

On 04/08/2025 at 9:47 AM, "PLN - Comments" <PLNComments@cityoflondon.gov.uk> wrote:

Dear Philip Ridley,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

## Shupi Begum



### Shupi Begum

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

shupi.begum@cityoflondon.gov.uk | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

**From:** Philip Ridley [REDACTED]

**Sent:** 04 July 2025 22:50

**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>;

kieron.McCallum@cityoflondon.gov.uk

**Cc:** amehdi@geraldev.com; Andy.mayer@cityoflondon.gov.uk; Joshi,

Shravan <Shravan.Joshi@cityoflondon.gov.uk>; Sean Cirillo

<seanscirillo@gmail.com>

**Subject:** Enfield Transport User Group Objection to 25/00494/FULEIA  
Liverpool Street Station proposal

You don't often get email from [REDACTED] [learn why this is important](#)

THIS IS AN EXTERNAL EMAIL

Dear Kieron McCallum

Please find this formal objection to the Sellar application 25/00494/FULEIA for the redevelopment of Liverpool Street Station. Our objection is that the proposal provides inadequate public benefit in light of the claims being made and the harm being caused to the significance

of the Grade II Listed Building. Our objection would be resolved by delivering or providing providing passive provision to the additional platforms proposed in the Annex 2 Liverpool Street Station document attached alongside taking all reasonable steps to deliver an eight track approach to Liverpool Street Station. This is necessary to deliver turn up and go services to London Overground services to Enfield Town and Cheshunt and to deliver additional capacity for the West Anglia Mainline, with East Anglia routes presently at full capacity.

We obtained some time ago via FOI details of a historic eight track approach to Liverpool Street Station that has been provided passive provision at a cost of millions of pounds in the form of a wider mezzanine over the tracks and a rammed earth construction for the East London Line bridge over. The eight track route requires some demolition of the Braithwaite Viaduct so we have lobbied that it should be co-ordinated with the Bishopsgate Goodsyrd redevelopment and restoration of the retained elements of the listed viaduct.

Also, our FOI revealed plans in the Anglia LTPP Route Study for additional platforms at Liverpool Street where it was identified that the current 18 platforms could be increased to 23 without any additional land take or extension of the existing shed but any new columns could get in the way of potential future platforms. Note, three of these new platforms must be extended into the main concourse with an extended mezzanine above so that new longer trains can use them and so the concourse must remain clear of new columns and other structure where future platform and mezzanine extensions would be desirable.

These improvements are necessary to provide any new paths on West Anglia routes to north east London and to the London, Stansted, Cambridge corridor, which is presently at full capacity with quad tracking allowing for a doubling of train paths for West Anglia. East Anglia routes would also benefit from additional platforms.

Our position is that the Developer has misled the City of London regarding upgrades that ought to take place and that Network Rail should be required to take all reasonable steps to increase capacity and resolve bottleneck issues into the station, including delivering more platforms or at the very least providing passive provision. If this does not occur then the public benefits of the scheme cannot be said to outweigh the undoubted harms that the scheme will have to the special

architectural and historic interest of the listed buildings and their setting, regarding the significant harm test set out in the NPPF.

I note that during pre-application discussion with Sellar for the previous proposal, they were unable to provide any evidence that passive provision would be provided for the potential additional platforms set out in the Annex 2 document. I note that Platforms 1, 2, 21 and 22 will need to be extended into the existing ground floor concourse to allow for operational use and there is a real risk that gate lines and new columns, etc will get in the way. We would expect an expert report from a structural engineer and or transport engineer to confirm whether passive provision has been provided otherwise the scheme could have a net negative public benefit.

Please confirm that this objection has been registered and that the attachments to this email regarding eight tracking and additional platforms, etc. are included in the planning register and please inform me of any committee date.

Philip Ridley, MSc, PGDip (Town Planning)

Enfield Transport User Group Committee Member  


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From: [Gareth Evans](#)  
To: [PLN - Comments](#)  
Subject: Re: Planning Application 25/00494/FULEIA - objection  
Date: 08 August 2025 13:46:02

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THIS IS AN EXTERNAL EMAIL

Thank you Shupi

Gareth Evans  
Flat 19 Dunston Road  
London E8 4FW

On Mon, 4 Aug 2025 at 11:28, PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)> wrote:

Dear Gareth Evans,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



Shupi Begum

Planning Administrator|Development Division  
City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

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From: Gareth Evans [REDACTED]  
Sent: 04 July 2025 11:21  
To: PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>; Sleigh, Tom (Deputy) <[Tom.Sleigh@cityoflondon.gov.uk](mailto:Tom.Sleigh@cityoflondon.gov.uk)>  
Subject: Planning Application 25/00494/FULEIA - objection

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THIS IS AN EXTERNAL EMAIL

Dear Tom Sleigh and all cc-ed

Re - Planning Application 25/00494/FULEIA

I object to this application which would cause substantial harm to the significance of nationally important heritage assets.

As you will know, the National Planning Policy Framework, paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

More specifically, I raise objections to

- The substantial harm to the Grade II-listed station through the demolition of the roof of the concourse and its replacement with a new structure, which would also compromise the setting of the 19th century train shed.
- The insertion of large amounts of new retail units in the 19th century train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning 19th

century hotel in the City – through the construction of a twenty-storey tower over the station concourse.

· The substantial harm the scheme would cause to the Bishopsgate Conservation Area by the imposition of a tall building in an area characterised by low-and medium-scale buildings. This is contrary to the 2015 City Plan which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches and nearby St Botolph's church.

Sincerely

Gareth Evans

E8 4FW

--

[Remarkable poetry from Gaza](#) "No human should have to write their poetry from inside death's dominion, but Batool Abu Akleen has done it and the result is truly astonishing."  
- **Max Porter**

[Gareth Evans](#):(he) writer, editor, event/film producer; LRB special projects consultancy), UCL Doc MA mentor, Editor [House Sparrow Press](#) / Contributing Editor [Tenement Press](#) / Trustee [Longplayer](#) & [Common Ground](#) / Advisor [Traumascapes](#)

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Let nothing be called natural in an age of bloody confusion, ordered disorder, planned caprice, and dehumanised humanity, lest all things be held unalterable! - **Brecht**

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**Max Porter**

[Gareth Evans](#): (he) writer, editor, event/film producer; LRB Screen and special projects (consultancy), UCL Doc MA mentor, Editor [House Sparrow Press](#) / Contributing Editor [Tenement Press](#) / Trustee [Longplayer](#) & [Common Ground](#) / Advisor [Traumascapes](#)

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Let nothing be called natural in an age of bloody confusion, ordered disorder, planned caprice, and dehumanised humanity, lest all things be held unalterable! - **Brecht**

From: [REDACTED]  
To: [PLN - Comments](#)  
Subject: Re: RE: Application 25/00494/FULEIA  
Date: 11 August 2025 21:07:01

THIS IS AN EXTERNAL EMAIL

My name and address is

Peter O'Connell  
The Rectory  
17 Ivy Mill Lane  
Godstone  
RH9 8NH

Sent using the mobile mail app

On 01/08/2025 at 10:15, PLN - Comments wrote:

From: "PLN - Comments" <PLNComments@cityoflondon.gov.uk>  
Date: 1 August 2025  
To: "Peter OConnell" <peter.oconnell@cheerful.com>  
Cc:  
Subject: RE: Application 25/00494/FULEIA  
Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

Davis Watson

Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation| PO Box  
270|London EC2P 2EJ|

[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

---

From: Peter OConnell [REDACTED]  
Sent: 02 July 2025 12:41  
To: PLN - Comments <PLNComments@cityoflondon.gov.uk>; Sleight, Tom (Deputy)  
<Tom.Sleight@cityoflondon.gov.uk>  
Subject: Application 25/00494/FULEIA

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I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. This goes against the National Planning Policy Framework because Paragraph NPPF 213 states: “Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.”

If developers are allowed to ride rough shod over the NPPF then it is not worth the paper it is printed on.

More specifically, I raise objections to:

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train

sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.

- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel –the last continually functioning nineteenth century hotel in the City –through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

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Website: <http://www.cityoflondon.gov.uk>

From: [Ross Udall](#)  
To: [PLN - Comments](#)  
Subject: Liverpool St Station Redevelopment  
Date: 14 August 2025 10:27:41  
Attachments: [image001.png](#)

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THIS IS AN EXTERNAL EMAIL

Dear Sir / Madam

I would like to add my voice to those objecting to the proposed redevelopment over the station and hotel.

The proposals are so detrimental to the environs of the existing buildings I simply cannot imagine why anyone other than an absolute philistine would propose them.

The loss of natural light in the concourse would be seriously detrimental to its ambience..

I implore you to refuse both the current applications and protect one of the few attractions experienced by regular rail users

Regards

Ross



Ross J Udall BSc[Hons] CMIOSH AFOH RMaPS  
Asbestos Management Consultant

Phone: [REDACTED]  
Email: [REDACTED]

From: [Christopher Cook](#)  
To: [PLN - Comments](#)  
Subject: Liverpool Street Station: Planning Application 25/00494/FULEI.  
Date: 14 August 2025 12:11:11

---

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THIS IS AN EXTERNAL EMAIL

Dear Sir,

I would wish to register my complete opposition to the proposed plans for the redevelopment of Liverpool Street Station. Apart from destroying an essential part of our national heritage it makes absolutely no sense in terms of easing the strain on a major London terminus and its surrounding area.

Yours faithfully,

Christopher Cook

Esperanza,  
8 Farrier Street,  
Deal,  
KENT CT14 6JR  
Email: [REDACTED]  
Tel: [REDACTED]

From: [Anthony Pilling](#)  
To: [PLN - Comments](#)  
Subject: OBJECTION to Liverpool St Station over development ref 25/00494/FULEI  
Date: 14 August 2025 13:31:36

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THIS IS AN EXTERNAL EMAIL

OBJECTION to Liverpool St Station over development ref 25/00494/FULEI

Dear Planners,

I object in the strongest possible terms to the appalling proposed development to destroy the environment and exceptionally fine listed station of Liverpool St Station, as well as this critically important area of London's cityscape.

The proposal is an example of crass over development which will do nothing to rebalance the North South divide while at the same time ruining the settings of world class landmarks such as St Paul's Cathedral and the Tower of London as well as of Liverpool St and its environs. Such large scale schemes should be confined to brownfield development sites near existing transport hubs where they could reverse decades of decline from lack of previous government policies to support and restore our country's expertise in innovation and manufacture onshore, leading to a serious strategic weakness globally.

I lived and worked in London for many years and have visited hundreds of times since. The disastrous redevelopment of Euston Station, destroying its iconic Arch, Great Hall and first Train Hall was a planning decision that led to all those responsible living in ignominy for the rest of their lives. It sentenced millions of travellers to a subterranean hole which had previously been a place of light. This is an almost exact repeat of that huge mistake. It would seem nothing has been learned by some financiers, their designers and developers.

If this new eyesore is to replace such a valued and appreciated listed building, it will just prove how feeble our planning system has become and how despised our once valued heritage by self serving pecuniary interests. This proposal appears to be of no discernible benefit to the Nation, the Locality or the Public, and will damage rather than assist tourism. According to recent published reports this dreadful proposal is not even technically or financially viable!

I implore that this new impending disaster be stopped now by refusal of planning permission.

Yours faithfully

Anthony Pilling

**Anthony Pilling** BSc, DipArch, RIBA,  
Former Chief Architect for Lancashire County Council,  
Leatside, Chapel Lane,  
Ellel, Lancaster,  
Lancashire, LA2 0PW

From: [AJ](#)  
To: [PLN - Comments](#)  
Subject: Re: Liverpool St Station redevelopment  
Date: 19 August 2025 13:03:15

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THIS IS AN EXTERNAL EMAIL

Of course, thanks for the update.

A Johnston  
102 Maldon Rd  
Colchester  
CO3 3AP

On Tue, 19 Aug 2025, 12:44 PLN - Comments, <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)> wrote:

Dear A Johnston,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**

**Planning Administrator|Development Division**  
City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

From: A J [REDACTED]  
Sent: 14 August 2025 18:20  
To: PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
Cc: Joshi, Shravan <[Shravan.Joshi@cityoflondon.gov.uk](mailto:Shravan.Joshi@cityoflondon.gov.uk)>;  
[Shravan.Tana.Adkin@cityoflondon.gov.uk](mailto:Shravan.Tana.Adkin@cityoflondon.gov.uk); [joshi@cityoflondon.gov.uk](mailto:joshi@cityoflondon.gov.uk); Bagchi, Samapti  
<[Samapti.Bagchi@cityoflondon.gov.uk](mailto:Samapti.Bagchi@cityoflondon.gov.uk)>; Bell, Matthew <[Matthew.Bell@cityoflondon.gov.uk](mailto:Matthew.Bell@cityoflondon.gov.uk)>;  
Benn, Emily (Deputy) <[Emily.Benn@cityoflondon.gov.uk](mailto:Emily.Benn@cityoflondon.gov.uk)>; Edwards, John (Deputy)  
<[John.Edwards@cityoflondon.gov.uk](mailto:John.Edwards@cityoflondon.gov.uk)>; Fitzpatrick, Anthony  
<[Anthony.Fitzpatrick@cityoflondon.gov.uk](mailto:Anthony.Fitzpatrick@cityoflondon.gov.uk)>; Fredericks, Marianne (Deputy)  
<[Marianne.Fredericks@cityoflondon.gov.uk](mailto:Marianne.Fredericks@cityoflondon.gov.uk)>; Gowman, Alison (Alderman)  
<[Alison.Gowman@cityoflondon.gov.uk](mailto:Alison.Gowman@cityoflondon.gov.uk)>; Goyal CBE, Prem (Alderman)  
<[Prem.Goyal@cityoflondon.gov.uk](mailto:Prem.Goyal@cityoflondon.gov.uk)>; Gupta, Madush (Deputy)  
<[Madush.Gupta@cityoflondon.gov.uk](mailto:Madush.Gupta@cityoflondon.gov.uk)>; Hayes, Josephine  
<[Josephine.Hayes@cityoflondon.gov.uk](mailto:Josephine.Hayes@cityoflondon.gov.uk)>; Hodgson, Jaspreet (Deputy)  
<[Jaspreet.Hodgson@cityoflondon.gov.uk](mailto:Jaspreet.Hodgson@cityoflondon.gov.uk)>; Horscroft, Amy  
<[Amy.Horscroft@cityoflondon.gov.uk](mailto:Amy.Horscroft@cityoflondon.gov.uk)>; Kelvin, Philip <[Philip.Kelvin@cityoflondon.gov.uk](mailto:Philip.Kelvin@cityoflondon.gov.uk)>;  
King, Elizabeth (Alderwoman) <[Elizabeth.King@cityoflondon.gov.uk](mailto:Elizabeth.King@cityoflondon.gov.uk)>; C E Lord  
<[C.E.Lord@cityoflondon.gov.uk](mailto:C.E.Lord@cityoflondon.gov.uk)>; Manchester, Antony  
<[Antony.Manchester2@cityoflondon.gov.uk](mailto:Antony.Manchester2@cityoflondon.gov.uk)>; Moss, Alastair (Deputy)  
<[Alastair.Moss@cityoflondon.gov.uk](mailto:Alastair.Moss@cityoflondon.gov.uk)>; Oliver, Deborah  
<[Deborah.Oliver@cityoflondon.gov.uk](mailto:Deborah.Oliver@cityoflondon.gov.uk)>; Pollard, Henry (Deputy)  
<[Henry.Pollard@cityoflondon.gov.uk](mailto:Henry.Pollard@cityoflondon.gov.uk)>; Pryke, Simon (Alderman)  
<[Simon.Pryke@cityoflondon.gov.uk](mailto:Simon.Pryke@cityoflondon.gov.uk)>; Qureishi, Nighat (Deputy)  
<[Nighat.Qureishi@cityoflondon.gov.uk](mailto:Nighat.Qureishi@cityoflondon.gov.uk)>; Robertshaw, Gaby  
<[Gaby.Robertshaw2@cityoflondon.gov.uk](mailto:Gaby.Robertshaw2@cityoflondon.gov.uk)>; Selka, Hugh <[Hugh.Selka@cityoflondon.gov.uk](mailto:Hugh.Selka@cityoflondon.gov.uk)>;  
Silk, Alethea <[Alethea.Silk@cityoflondon.gov.uk](mailto:Alethea.Silk@cityoflondon.gov.uk)>; Sonpar, Naresh  
<[Naresh.Sonpar@cityoflondon.gov.uk](mailto:Naresh.Sonpar@cityoflondon.gov.uk)>; Upton, William  
<[William.Upton@cityoflondon.gov.uk](mailto:William.Upton@cityoflondon.gov.uk)>; Waters, Matthew  
<[Matthew.Waters@cityoflondon.gov.uk](mailto:Matthew.Waters@cityoflondon.gov.uk)>; Webster, Jacqui  
<[Jacqui.Webster@cityoflondon.gov.uk](mailto:Jacqui.Webster@cityoflondon.gov.uk)>  
Subject: Liverpool St Station redevelopment

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THIS IS AN EXTERNAL EMAIL

Mr Tom Sleigh,

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure, which would also compromise the setting of the surviving C19 train shed.

The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.

The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.

The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

#### National Planning Policy Framework

Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Yours sincerely

A Johnston

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Website: <http://www.cityoflondon.gov.uk>

From: [Lizebeth Burch](#)  
To: [PLN - Comments](#)  
Subject: Liverpool Street Station development, Application #25/00494/FULEIA  
Date: 15 August 2025 00:16:40

---

THIS IS AN EXTERNAL EMAIL

WE OBJECT!

The City of London is already full of unattractive high-rise building that are half empty, post-Covid.

The idea of putting this proposed monstrosity on top of an HISTORIC AND IRREPLACEABLE RAIL STATION AND HOTEL, ruining the magnificent structures as well as blocking all outside light from the Station's beautiful glass ceiling, is unbelievable. How can the Planners even consider such a scheme in light of the disastrous changes that have already made much of the City uncomfortable for its smaller businesses, as well as its pedestrian population? There are already too many towers; this one in particular is not needed, appropriate, or desirable.

Viable cities need history to stay alive. You have only to look at the brilliant, useful, and POPULAR refurbishments of St. Pancras and Kings Cross Stations to see what could be done here. This high-rise alternative is not the way to go forward. We do not want a soulless City of London composed of glass blocks, and we do not want to see Liverpool Street Station ruined.

Please DO NOT APPROVE the current plans for the high rise above Liverpool Street Station.

Thank you.

Don and Lizebeth Burch  
25, Maiden Lane  
London WC2E 7NR



Outlook

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**Proposed Development of Liverpool Street Station - 25/00494/FULEI**

---

**From** Lindsay Wakeman [REDACTED]  
**Date** Sat 8/16/2025 15:45  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

Planning Application 25/00494/FULEI

I wish to object to the above planning application. As a user of the station, and the surrounding City, these are my reasons:

- An out of context modern 97m tower dwarfing a Grade II listed 19thC Station building including the Great Eastern Hotel
- Contrary to the 2015 City Plan regarding high buildings in conservation areas (Bishopsgate)
- Reduction of natural light into the station concourse
- Will irrevocably change the views of St Pauls Cathedral in the London City scape
- It is not environmentally sound to demolish the existing station concourse
- Is not a financially justified

Yours sincerely,

Lindsay Wakeman  
1 Howard Mews  
London N5 1SD

## Adjei, William

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**From:** PLN - Comments  
**Subject:** FW: Proposed building at Liverpool Street Station

> -----Original Message-----

> From: FRANCIS JAMIESON

> Sent: 14 August 2025 10:42

> To: PLN - Comments <PLNComments@cityoflondon.gov.uk>

> Subject: Proposed building at Liverpool Street Station THIS IS AN

> EXTERNAL EMAIL

>

>

> Plans by capitalists to "develop" Liverpool Street station are appalling. At the moment Liverpool St. station and Finsbury Square are places with a bit of light and space in that part of London. The proposal would mean more darkness, more impersonal, more alien space. All to make developers richer. Please think of ordinary people in the street, office workers and travellers. What do the developers care about them?

Francis C. Jamieson,  
303 Ralph Perring Court  
Stone Park Avenue  
Beckenham BR3 3 DD.

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> %7Cda16e6b2d12c4c037dbb08ddd000c2d%7C9fe658cdb3cd405685193222ffa96be8

> %7C0%7C0%7C638911913490959029%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGki

> OnRydWUsIlYiOiIwLjAuMDAwMCIslAIiOiJXaW4zMilslkFOljoitWFpbCIsIlldUljoyfQ

> %3D%3D%7C0%7C%7C%7C&sdata=encWLQmrGNjMOzA%2B5a2Ebz4yvSrhLm1TmebqZ28hbA

> o%3D&reserved=0

## Adjei, William

---

**From:** PLN - Comments  
**Subject:** FW: Planning Application at Liverpool St Station.

---

**From:** Andrew Taylor  
**Sent:** 14 August 2025 16:03  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
**Cc:** [office@savebritainsheritage.org](mailto:office@savebritainsheritage.org)  
**Subject:** Planning Application at Liverpool St Station.

THIS IS AN EXTERNAL EMAIL

Dear Sir

I would like to submit a comment regarding planning application 25/00494/FULEI.

It seems that this application involves the proposal to build outside of the guidelines laid down in the city plan which requires for the refusal of planning permissions of tall buildings in inappropriate areas.

The application falls within the Bishopsgate Conservation Area and would be another example of an hideous 'development'.

Please retain the present make up of buildings in this area as we no longer need to be reminded of the damage that can be done by 'development' of this kind.

I would support some form of redress against the applicant where it appears that such little consideration has been made in the proposal. If this were the case I would hope that less time would be wasted in considering fanciful applications.

With all good wishes

Andrew Taylor

3 Kidmans Close, Hilton, Huntingdon, Cambridgeshire PE28 9QB

[Sent from Yahoo Mail for iPad](#)

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## Adjei, William

---

**From:** PLN - Comments  
**Subject:** FW: Planning Application Ref 25/00494/FULEI

> From: I Tim Wentworth  
> Sent: 14 August 2025 14:11  
> To: PLN - Comments <PLNComments@cityoflondon.gov.uk>  
> Subject: Planning Application Ref 25/00494/FULEI

>  
>  
> THIS IS AN EXTERNAL EMAIL

>  
> Network Rail's proposals are a greedy, ill-considered insult to the City Of London where I worked for many years. To turn the station concourse into the proposed dark subterranean cave would be a disaster for which the City planners would never be forgiven. The Bullring in Birmingham and the Market Hall in Shrewsbury are horrors for which the planners at the time will be forever cursed. Please learn by others' mistakes.

>  
> Ian T. Wentworth  
LITTLE WYLD, COURT LANE, BATHFORD, SOMERSET BA1 7RY.

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> <https://gbr01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.cityoflondon.gov.uk%2F&data=05%7C02%7Cplncomments%40cityoflondon.gov.uk%7C714815a994bd4fee5d9c08ddf243708%7C9fe658cdb3cd405685193222ffa96be8%7C0%7C0%7C638912068817139895%7CUnknown%7CTWFPbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOilwLjAuMDAwMCIsIlAiOiJXaW4zMilslkFOIjoitWFpbcIsldUljoyfQ%3D%3D%7C0%7C%7C%7C&sdata=m66QaPpOpjW2X5UDr6shrm9HpVoNjfavNUtubaRSHZE%3D&reserved=0>



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**Re: Liverpool Street Station**

---

**From** James Kirkman [REDACTED]  
**Date** Tue 8/19/2025 16:42  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Cc** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>

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23 Rose Square,  
Fulham Road,  
London SW3 6RS

> On 19 Aug 2025, at 10:37, PLN - Comments <PLNComments@cityoflondon.gov.uk> wrote:  
>  
> Dear James Kirkman,  
>  
> Thank you for your email. I can confirm receipt of your objection.  
>  
> However, I cannot take into account comments that do not include a name and address, nor can  
the comments be reported. For the purposes of data protection, we do not reveal the email address,  
telephone number or signature of private individuals. You can ask for your name and address to be  
removed from the planning report to the Planning and Transportation Committee but your  
comments will be anonymous and that may affect the weight the Members give them.  
>  
> In light of the above, please can you provide a full address?  
>  
>  
> Kind Regards  
> Shupi Begum  
>  
>  
>  
> Shupi Begum  
> Planning Administrator|Development Division  
> City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH  
> shupi.begum@cityoflondon.gov.uk | <https://gbr01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.cityoflondon.gov.uk%2F&data=05%7C02%7CPLNComments%40cityoflondon.gov.uk%7Cd937b7045f184ed8049208ddd36f084%7C9fe658cdb3cd405685193222ffa96be8%7C0%7C0%7C638912149249229907%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiJlZCI0IjwvLjAuMDAwMCIslIAiOiJXaW4zMilslkFOljoiTWFpbGlldUljoyfQ%3D%3D%7C0%7C%7C%7C&sdata>

[=YC3VAixv5Y8%2F6ub7bbnjXihV4uvfar%2FpKxKDvidKDE4%3D&reserved=0](#)

> Juliemma McLoughlin

> Executive Director Environment

>

>

>

> -----Original Message-----

> From: James Kirkman [REDACTED]

> Sent: 14 August 2025 11:59

> To: PLN - Comments <PLNComments@cityoflondon.gov.uk>

> Subject: Liverpool Street Station

>

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>

> THIS IS AN EXTERNAL EMAIL

>

>

> Dear Sirs,

> I much object to this plan.

> James Kirkman.

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[url=http%3A%2F%2Fwww.cityoflondon.gov.uk%2F&data=05%7C02%7CPLNComments%40cityoflondon.gov.uk%7Cd937b7045f184ed8049208ddd36f084%7C9fe658cdb3cd405685193222ffa96be8%7C0%7C0%7C638912149249250637%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIslIAiOiJXaW4zMilslkFOljoiTWFpbGlldUljoyfQ%3D%3D%7C0%7C%7C%7C&sdata=txf6QA0LAsOxirf2VozYhO9E2%2BzoOkyNcKeL51Cb4Gs%3D&reserved=0](http%3A%2F%2Fwww.cityoflondon.gov.uk%2F&data=05%7C02%7CPLNComments%40cityoflondon.gov.uk%7Cd937b7045f184ed8049208ddd36f084%7C9fe658cdb3cd405685193222ffa96be8%7C0%7C0%7C638912149249250637%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIslIAiOiJXaW4zMilslkFOljoiTWFpbGlldUljoyfQ%3D%3D%7C0%7C%7C%7C&sdata=txf6QA0LAsOxirf2VozYhO9E2%2BzoOkyNcKeL51Cb4Gs%3D&reserved=0)



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**Re: Comments on application reference: 25/00494/FULEI**

---

**From** David Yates [REDACTED]  
**Date** Tue 8/19/2025 16:59  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Cc** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

Thank you,

**Address:**  
Flat g14 du cane Court, Balham High Road, London SW17 7JP

Kind regards,

David Yates  
[REDACTED]

---

**From:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Sent:** Tuesday, August 19, 2025 12:45:56 PM  
**To:** David Yates [REDACTED]  
**Cc:** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>  
**Subject:** RE: Comments on application reference: 25/00494/FULEI

Dear David Yates,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**  
**Planning Administrator|Development Division**  
City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH  
[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin  
Executive Director Environment

---

**From:** David Yates [REDACTED]  
**Sent:** 14 August 2025 23:04  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Subject:** Comments on application reference: 25/00494/FULEI

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I wish to subject an objection to planning application reference 25/00494/FULEI, for the proposed redevelopment of Liverpool St station.

The scheme is ill-considered and significantly harms public spaces, with the Bishopsgate entrance in particular much too overbearing and oppressive. The loss of architectural features at the Hope square and Bishopsgate entrances eliminates all attractiveness and charm from the current existing station design, including their towers and brick arch frontages. Cutting off the entire concourse from natural light is a massive diminishment for passenger experience, and instead the proposed tower eliminates and looms over what are currently open square spaces at the two major entrances.

The claimed merits of the scheme are entirely limited to some reduced clutter, and reorienting a handful of escalators and mezzanine walkways. These do not require the entire station to be subsumed into a basement, and for towers to eat into and loom over surrounding public spaces.

It is clear network rail have rushed out a poorly thought through scheme that maximises the volume of office space with no thought for its significant harm it does to the passenger experience. It is nowhere near as well designed as more thoughtful schemes completed at London Bridge and Paddington, or being designed at Waterloo.

Kind regards,

David Yates

[REDACTED]

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**Re: Liverpool St Station redevelopment**

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**From** Kim Denison [REDACTED]  
**Date** Tue 8/19/2025 20:01  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Cc** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

Good evening,

Thank you for your response to my email in confirming receipt of my objection.

My full details are as follows:

Mr. Kieron Denison  
Red House, 27A Creffield Road, Colchester, Essex CO3 3HY.

Thank you for your kind attention in this matter.

---

**From:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Date:** Tuesday, 19 August 2025 at 12:45  
**To:** Kim Denison [REDACTED]  
**Cc:** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>  
**Subject:** RE: Liverpool St Station redevelopment

Dear Kim Denison,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**  
**Planning Administrator|Development Division**  
City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH  
[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin  
Executive Director Environment

---

**From:** Kim Denison [REDACTED]  
**Sent:** 14 August 2025 19:46  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Cc:** Joshi, Shравan <Shравan.Joshi@cityoflondon.gov.uk>; joshi@cityoflondon.gov.uk; Bagchi, Samapti <Samapti.Bagchi@cityoflondon.gov.uk>; Bell, Matthew <Matthew.Bell@cityoflondon.gov.uk>; Waters, Matthew <Matthew.Waters@cityoflondon.gov.uk>; Upton, William <William.Upton@cityoflondon.gov.uk>; Webster, Jacqui <Jacqui.Webster@cityoflondon.gov.uk>; Sonpar, Naresh <Naresh.Sonpar@cityoflondon.gov.uk>; Silk, Alethea <Alethea.Silk@cityoflondon.gov.uk>; Selka, Hugh <Hugh.Selka@cityoflondon.gov.uk>; Robertshaw, Gaby <Gaby.Robertshaw2@cityoflondon.gov.uk>; Qureishi, Nighat (Deputy) <Nighat.Qureishi@cityoflondon.gov.uk>; Pryke, Simon (Alderman) <Simon.Pryke@cityoflondon.gov.uk>; Pollard, Henry (Deputy) <Henry.Pollard@cityoflondon.gov.uk>; C E Lord <C.E.Lord@cityoflondon.gov.uk>; Manchester, Antony <Antony.Manchester2@cityoflondon.gov.uk>; Oliver, Deborah <Deborah.Oliver@cityoflondon.gov.uk>; Moss, Alastair (Deputy) <Alastair.Moss@cityoflondon.gov.uk>; King, Elizabeth (Alderwoman) <Elizabeth.King@cityoflondon.gov.uk>; Kelvin, Philip <Philip.Kelvin@cityoflondon.gov.uk>; Horscroft, Amy <Amy.Horscroft@cityoflondon.gov.uk>; Hodgson, Jaspreet (Deputy) <Jaspreet.Hodgson@cityoflondon.gov.uk>; Kelvin, Philip <Philip.Kelvin@cityoflondon.gov.uk>; Hayes, Josephine <Josephine.Hayes@cityoflondon.gov.uk>; Goyal CBE, Prem (Alderman) <Prem.Goyal@cityoflondon.gov.uk>; Gupta, Madush (Deputy) <Madush.Gupta@cityoflondon.gov.uk>; Gowman, Alison (Alderman) <Alison.Gowman@cityoflondon.gov.uk>; Fredericks, Marianne (Deputy) <Marianne.Fredericks@cityoflondon.gov.uk>; Fitzpatrick, Anthony <Anthony.Fitzpatrick@cityoflondon.gov.uk>; Benn, Emily (Deputy) <Emily.Benn@cityoflondon.gov.uk>; Edwards, John (Deputy) <John.Edwards@cityoflondon.gov.uk>; Shравan.Tana.Adkin@cityoflondon.gov.uk  
**Subject:** Liverpool St Station redevelopment

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Mr Tom Sleigh,

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.

The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.

The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.

The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated

heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

#### National Planning Policy Framework

Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Yours sincerely

K Denison

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**Re: The Bonkers ACME proposal at Liverpool Street**

---

**From** Sue Whitley [REDACTED]  
**Date** Wed 8/20/2025 14:18  
**To** Begum, Shupi <Shupi.Begum@cityoflondon.gov.uk>

THIS IS AN EXTERNAL EMAIL

Of course, Shupi: my address is 9 Edna Street, London SW11 3DP and you are very welcome to use it. My email you have, and my telephone number in case you need it is [REDACTED]. Let me know if you need anything more.

All best wishes  
Sue

On Wed, Aug 20, 2025 at 1:07 PM Begum, Shupi <[Shupi.Begum@cityoflondon.gov.uk](mailto:Shupi.Begum@cityoflondon.gov.uk)> wrote:  
Dear Sue Whitley,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum****Shupi Begum****Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

**From:** Sue Whitley [REDACTED]  
**Sent:** Saturday, August 16, 2025 12:42  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
**Subject:** The Bonkers ACME proposal at Liverpool Street

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Ref 25/00494/FULEI

It would appear that not only is the proposed building hideously intrusive, cutting out all the daylight to the station and denying any proper architectural context to what is, after all, a handsome historical building in its own right, but it may not even be technically viable.

Is there any kind of rational argument for proceeding?? Post Covid, we seem, in any case, to be having difficulty filling the office spaces we have.

Yours sincerely

Sue Whitley

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**Re: Liverpool Street Station Redevelopment**

---

**From** Peter Elson [REDACTED]  
**Date** Wed 8/20/2025 18:41  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>

THIS IS AN EXTERNAL EMAIL

Dear Shupi Begum,

Re: planning application reference 25/00494/FULEI.  
Liverpool Street Station redevelopment proposal.

Thank you for your email regarding my address.

This is:

Peter J Elson  
14 Haywood Gardens  
West Park  
St Helens  
Merseyside  
WA10 4JU

I give my full permission for my name and address to be attached to my objection and comments about the Liverpool Street Station proposed redevelopment.

Although I live in the North West I am a regular user of the station.

Yours sincerely,  
Peter Elson

On Tue, 19 Aug 2025 at 10:52, PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)> wrote:

Dear Peter Elson,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

**From:** Peter Elson [REDACTED]  
**Sent:** 14 August 2025 12:35  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
**Cc:** [henrietta.billings@savebritainsheritage.org](mailto:henrietta.billings@savebritainsheritage.org); Jonathan Brown [REDACTED]  
**Subject:** Liverpool Street Station Redevelopment

You don't often get email from [REDACTED] [Learn why this is important](#)

THIS IS AN EXTERNAL EMAIL

Re: planning application reference 25/00494/FULEI.

Dear Sir/Madam,

I would like to object in the strongest possible terms to the proposed redevelopment of Liverpool Street Station with the threat of huge speculative office blocks.

Not only is the station one of the most attractive termini on the rail network, with its historical features beautifully incorporated into its more recent revamp (especially the concourse), but the go-ahead for this development makes a mockery of any laws and regulations protecting our heritage.

This also opens the door to developers taking a chance on compromising any protected building or area for their own gain, not as a public asset.

Liverpool Street Station is as it stands one of the aesthetic jewels in our railway system so please keep it that way, also it's far more fit for purpose than its 'modern' near neighbour London Euston.

Please reject these plans and let Liverpool Street Station alone!

Regards,

Peter Elson

Journalist and Broadcaster

Tel: [REDACTED]

Twitter: [REDACTED]

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--

Regards,

Peter Elson

Freelance Journalist

Tel: [REDACTED]

Twitter: @elsonpeter



Environment Department  
City of London  
PO Box 270  
Guildhall  
London EC2P 2EJ

Submitted via email to [PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)

FAO: Kieran McCallum, Planning Case Officer

Planning Application Ref: 25/00494/FULEIA

Re: Planning Consultation for site comprising Liverpool Street Station, 50 Liverpool Street, Sun Street Passage, 40 Liverpool Street (in part), Hope Square, and Bishopsgate Plaza London EC2M 7PY

August 2025

Dear Kieran,

Culture Mile Business Improvement District (BID) is pleased to be making a representation in relation to the above planning application.

The fifth and latest business improvement district (BID) to launch in the City of London in April 2023, the Culture Mile BID represents the area stretching from Farringdon in the west to Finsbury Circus in the east.

Brimming with cultural creativity, commercial vibrancy and a strong sense of community, the area is home to globally famed institutions such as the Barbican Centre and the future Museum of London (reopening in 2026), as well as hidden gems including St Bartholomew The Great, London's oldest surviving church, and some of the last surviving sections of the 2,000 year old wall that once surrounded the City of London.

Through its work, the Culture Mile BID will inject £11m into the local area over the next five years, working in partnership with its levy-paying member businesses as well as the public sector to deliver a range of ambitious projects including major public realm enhancements,

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Culture Mile Partnership is a private company limited by guarantee, registered in England and Wales.  
Registered office is 85 Gresham St, London EC2V 7NQ



agenda-setting green and climate resilience initiatives and high-profile destination marketing campaigns.

Given our holistic and strategic approach, it is appropriate that we make representations on key planning applications, and in particular, those that have an impact on the wider area, public amenity provision and ground floor public realm.

For clarity, it is not the role of the BIDs to explicitly support or oppose any specific planning application and this is not the purpose of this letter. Rather, we view aspects of the above application in relation to our published evidence base – namely our Public Realm Vision and Strategy for [Culture Mile BID \(2024\)](#) – which are rooted in insight, data and consultation with our member businesses, key stakeholders and the public.

Launched in 2024, following extensive engagement and analysis, this piece of work draws upon and ties together existing strategies, public realm schemes and developments, working collaboratively with the City of London Corporation and other key stakeholders.

The report provides a collective vision for public realm in the Culture Mile area, guiding future initiatives, and tackling urban realm and movement challenges.

We are supportive of the significant development pipeline and projected growth in the area. We see this as a positive thing for City, bringing benefits such as increased vibrancy and economic growth to this globally important area and unique part of the City. This is an area that has driven change for 2000 years, a hub of economic activity and the growing Destination City agenda. We are excited about the opportunities provided by the future growth of the area.

In the context of this growth, our public realm and the ‘spaces between the buildings’ are ever more important.

In this instance, whilst we maintain the BID’s position on planning representations, we also recognise that transport infrastructure is vital to support a thriving, vibrant and growing global city, and it is crucial that hubs such as Liverpool Street station keep pace with the current and projected growth in this part of the City, accommodating the rise in the number workers and leisure visitors. We therefore state firmly that the complete overhaul of Liverpool Street Station would be transformational for the area. Even though the station sits just to the East of our boundary, we understand it is a key hub for many people who work and visit the area, and a key connection point to Finsbury Circus Gardens. The upgrade plans would dramatically increase



capacity and the experience for all station users, creating a gateway fit for the future of the City as a commercial powerhouse. We make this statement without setting a precedent for any future representations we will make on other planning applications.

We are grateful to the developer for their consultation and positive engagement with the BID through the planning process. We have shared our Public Realm Vision and Strategy with them and drawn specific attention to the development's strategic location. The Vision set out in this document has four key thematic aims from public realm;

Welcome to the Culture Mile; Feeling welcomed, making it a destination, getting between places easily and going beyond the boundaries.

A place for people; Green and pleasant, maximising comfort, facilitating functionality, a place to linger.

Exploring the Culture Mile, a place with many stories, encouraging exploration, a place of contrasts.

Going beyond the name; a place to support day to-day office activity, Friday-to-Monday vitality, cultural celebration

Considering the proposed scheme in light of the strategic aims for the area, we welcome several key provisions outlined in the application. These elements demonstrate a thoughtful approach to placemaking, accessibility, and urban integration. Should the scheme receive approval, we look forward to continued collaboration with the developer to ensure its successful delivery.

We wish to highlight the following aspects of the application:

#### Improved Station Access and Wayfinding

The proposal introduces more clearly defined routes into and out of the station, supported by visual decluttering and enhanced wayfinding. These improvements will significantly increase permeability, particularly along key approaches such as Finsbury Circus and Blomfield Street, strengthening connections to the Culture Mile and complementing the City of London Corporation's investment in Finsbury Circus Gardens.

#### Strengthened Urban Connectivity

Enhanced pedestrian links to neighbouring developments will open up intuitive and accessible routes into the City and towards the Culture Mile to the west. This will support wider ambitions for a more connected and legible urban environment.



### Increased Green Infrastructure

The inclusion of additional tree planting and other green elements contributes to the environmental resilience of the area, while also improving visual amenity and supporting biodiversity.

### Enhanced Retail and Hospitality Offer

The scheme proposes an expanded and diversified retail, food, and beverage offering, which will help activate the public realm and provide a more vibrant experience for station users and visitors.

### Improved Lighting and Heritage Integration

Upgraded lighting around station entrances will enhance the visual appeal of the area, celebrate the station's historic character, and contribute to a safer and more welcoming environment.

### Inclusive Facilities for Diverse Needs

We welcome the inclusion of enhanced facilities designed to support families, neurodiverse individuals, and those with visual or mobility impairments. These provisions reflect a commitment to inclusive design and equitable access.

### Active Travel and Sustainable Mobility

The integration of improved cycling infrastructure, including secure cycle parking and clearer cycle routes, supports active travel and aligns with broader sustainability goals for the City.

### Sensitive Integration of the public realm enhancement

The architectural approach to respect the historic fabric of Liverpool Street Station while introducing contemporary elements that enhance functionality. We encourage continued sensitivity in design detailing to preserve heritage assets.

### Smart Infrastructure and Digital Enhancements



The incorporation of smart technologies—such as real-time travel information, digital wayfinding, and energy-efficient systems—will improve user experience and operational efficiency.

#### Cultural Activation and Public Realm Programming

Opportunities for cultural programming and public art installations within the station and surrounding public realm could further reinforce Liverpool Street's role as a gateway to the Culture Mile and a destination in its own right.

#### Emergency Access and Safety Provisions

Enhanced emergency access routes and improved safety measures, including CCTV coverage and clear evacuation signage, will contribute to a more secure environment for all users.

#### Meanwhile Public realm intervention

To be accommodated where possible to discourage the area from being a building site. Encourage various purposeful meanwhile experience for the surrounding neighbours.

Yours sincerely

**Andrew Smith, Chair, Culture Mile BID**



Re: 25/00494/FULEI OBJECTION

From Simeon Jackson <[redacted]>  
Date Tue 9/2/2025 12:40  
To Begum, Shupi <[redacted]>  
Cc McCallum, Kieran <[redacted]>

THIS IS AN EXTERNAL EMAIL

Of course, my full address is  
32 St Leonard's Rd, Norwich, NR1 4AZ

My full name is Simeon Jackson

On Tue, 2 Sept 2025, 11:53 Begum, Shupi, <[Shupi.Begum@cityoflondon.gov.uk](mailto:Shupi.Begum@cityoflondon.gov.uk)> wrote:  
Dear Simeon Jackson,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

**From:** Simeon Jackson [REDACTED]  
**Sent:** Thursday, August 21, 2025 10:18  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
**Subject:** 25/00494/FULEI OBJECTION

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THIS IS AN EXTERNAL EMAIL

I object to the proposals for Liverpool Street Station on that basis that it will harm the heritage significance of Liverpool Street Station and other local listed buildings and will not provide an overriding benefit to users of the station.

Simeon Jackson  
NR1 4AZ, Norwich

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**Liverpool Street Station - Application No.25/00494/FULEIA**

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From Peregrine Bryant [REDACTED]  
Date Thu 8/28/2025 11:21  
To PLN - Comments <PLNComments@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

I write to object to the above application in the strongest possible terms.

The proposed development is destructive to elements of this listed structure, is an inappropriate and overbearing to the surviving buildings and, as confirmed in the recent report, fails against the latest industry benchmarks for carbon emissions by as much as 33%.

As you will be aware, British Rail first sought to redevelop the 19th-century Liverpool Street station in the mid 1970s. Happily the Liverpool Street Station Campaign (LISSCA), then figure-headed by the poet Sir John Betjeman, successfully thwarted British Rail's demolition plans and led to the Grade II listing of the Liverpool Street offices and western train shed in 1975. My brother-in-law John Chesshyre, now sadly passed on, was part of that campaign and would be turning in his grave at this new threat to a treasured historic, but still functioning and much loved, building.

I urge your planning committee, without hesitation, to refuse this application

Peregrine Bryant



**PEREGRINE BRYANT**

Tel: [REDACTED]

Email: [REDACTED]

4 Dorset Road  
London SW8 1EJ



---

**Re: Objection to Liverpool Street Station development plans**

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**From** Begum, Shupi <Shupi.Begum@cityoflondon.gov.uk>  
**Date** Tue 9/2/2025 14:57  
**To** [REDACTED]  
**Cc** McCallum, Kieran <Kieran.McCallum@cityoflondon.gov.uk>

Dear Nat Segnit,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum****Shupi Begum****Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

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**From:** [REDACTED]  
**Sent:** Thursday, August 21, 2025 15:29  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>; Sleigh, Tom (Deputy) <Tom.Sleigh@cityoflondon.gov.uk>  
**Cc:** Joshi, Shravan <Shravan.Joshi@cityoflondon.gov.uk>; Shravan.Tana.Adkin@cityoflondon.gov.uk

<Shravan.Tana.Adkin@cityoflondon.gov.uk>; joshi@cityoflondon.gov.uk <joshi@cityoflondon.gov.uk>; Bagchi, Samapti <Samapti.Bagchi@cityoflondon.gov.uk>; Bell, Matthew <Matthew.Bell@cityoflondon.gov.uk>; Benn, Emily (Deputy) <Emily.Benn@cityoflondon.gov.uk>; Edwards, John (Deputy) <John.Edwards@cityoflondon.gov.uk>; Fitzpatrick, Anthony <Anthony.Fitzpatrick@cityoflondon.gov.uk>; Fredericks, Marianne (Deputy) <Marianne.Fredericks@cityoflondon.gov.uk>; Gowman, Alison (Alderman) <Alison.Gowman@cityoflondon.gov.uk>; Goyal CBE, Prem (Alderman) <Prem.Goyal@cityoflondon.gov.uk>; Gupta, Madush (Deputy) <Madush.Gupta@cityoflondon.gov.uk>; Hayes, Josephine <Josephine.Hayes@cityoflondon.gov.uk>; Hodgson, Jaspreet (Deputy) <Jaspreet.Hodgson@cityoflondon.gov.uk>; Horscroft, Amy <Amy.Horscroft@cityoflondon.gov.uk>; Kelvin, Philip <Philip.Kelvin@cityoflondon.gov.uk>; King, Elizabeth (Alderwoman) <Elizabeth.King@cityoflondon.gov.uk>; C E Lord <C.E.Lord@cityoflondon.gov.uk>; Manchester, Antony <Antony.Manchester2@cityoflondon.gov.uk>; Moss, Alastair (Deputy) <Alastair.Moss@cityoflondon.gov.uk>; Oliver, Deborah <Deborah.Oliver@cityoflondon.gov.uk>; Pollard, Henry (Deputy) <Henry.Pollard@cityoflondon.gov.uk>; Pryke, Simon (Alderman) <Simon.Pryke@cityoflondon.gov.uk>; Qureishi, Nighat (Deputy) <Nighat.Qureishi@cityoflondon.gov.uk>; Robertshaw, Gaby <Gaby.Robertshaw2@cityoflondon.gov.uk>; Selka, Hugh <Hugh.Selka@cityoflondon.gov.uk>; Silk, Alethea <Alethea.Silk@cityoflondon.gov.uk>; Sonpar, Naresh <Naresh.Sonpar@cityoflondon.gov.uk>; Upton, William <William.Upton@cityoflondon.gov.uk>; Waters, Matthew <Matthew.Waters@cityoflondon.gov.uk>; Webster, Jacqui <Jacqui.Webster@cityoflondon.gov.uk>

**Subject:** Objection to Liverpool Street Station development plans

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THIS IS AN EXTERNAL EMAIL

To whom it may concern

I am writing to voice my strong objection to the proposed redevelopment of Liverpool Street Station. It would in my considered opinion cause substantial harm to the significance of nationally important heritage assets.

More specifically, I object to the demolition of the roof structure on a Grade-II listed station; the insertion of new retail units within the nineteenth-century train sheds, causing irreversible damage to the special interest of the heritage asset; the impact on surrounding heritage assets; and the substantial harm the development would cause to the Bishopsgate Conservation Area, by imposing an uncharacteristically tall building in an area known for its small and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate area.

All in all, the application does not in any way align with the National Planning Policy Framework, Paragraph NPPF 213 of which states that "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Regards

Nat Segnit



application reference 25/00494/FULEIA

From Jane Hill [REDACTED]  
Date Thu 8/28/2025 18:19  
To PLN - Comments <PLNComments@cityoflondon.gov.uk>

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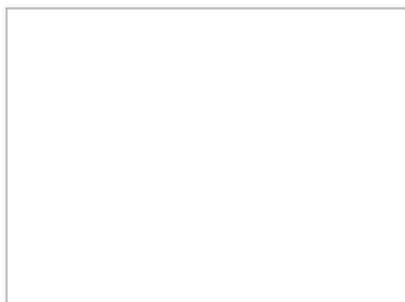
THIS IS AN EXTERNAL EMAIL

Dear Sir or Madam,

I object to the proposals for Liverpool Street Station and support the SAVE campaign.

Yours faithfully,

Jane Hill



Jane Hill  
The Cottage  
36a Highgate High Street  
London N6 5JG



The Art of Dora Carrington  
<https://www.bloomsbury.com/uk/art-of-dora-carrington-9780713657265/#>

The Sculpture of Gertrude Hermes  
<http://www.lundhumphries.com> & <https://www.ebay.co.uk/usr/janeslot>





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**Re: Planning application reference 25/00494/FULEIA**

---

**From** Richard Budd [REDACTED]  
**Date** Tue 9/9/2025 11:06  
**To** Begum, Shupi <Shupi.Begum@cityoflondon.gov.uk>

THIS IS AN EXTERNAL EMAIL

Thank you for your email  
My full address is  
2 Prolific Place, Bidford on Avon, Parks B50 4NF  
Regards  
Richard Budd

[Yahoo Mail: Search, organise, conquer](#)

On Tue, 9 Sept 2025 at 16:09, Begum, Shupi  
<Shupi.Begum@cityoflondon.gov.uk> wrote:

Dear Richard Budd,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



A picture  
containing  
text Description  
automatically  
generated

**Shupi Begum**

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

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**From:** Richard Budd [REDACTED]  
**Sent:** Thursday, August 28, 2025 13:00  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Subject:** Planning application reference 25/00494/FULEIA

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THIS IS AN EXTERNAL EMAIL

Dear Sir

Further to this planning application, I would like to express my [strong objection](#) to the Acme plans, including a 97m tower, which would have a serious detrimental impact on the listed station and its environs. It would completely dominate the Victorian landscape and setting, detracting from the overall appearance, and in complete contravention to the principles of the Bishopgate Conservation Area and the 2015 City Plan. This scheme would be a serious retrograde step and I would strongly urge the refusal of the application.

Regards  
Richard Budd

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**Re: Liverpool Street Station**

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**From** PKV [REDACTED]  
**Date** Tue 9/9/2025 13:41  
**To** Begum, Shupi <[Shupi.Begum@cityoflondon.gov.uk](mailto:Shupi.Begum@cityoflondon.gov.uk)>

THIS IS AN EXTERNAL EMAIL

Thank you for your email, Here are my details:

Mr Peter Venner,  
24 Monkton Street,  
Ryde  
Isle of Wight  
PO332BZ

Mobile: [REDACTED]

On Tue, Sep 9, 2025 at 1:24 PM Begum, Shupi <[Shupi.Begum@cityoflondon.gov.uk](mailto:Shupi.Begum@cityoflondon.gov.uk)> wrote:

Dear Peter Venner,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

**Shupi Begum**



**Shupi Begum**

**Planning Administrator|Development Division**

City of London Corporation | Environment Department | Guildhall | London |  
EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

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**From:** PKV [REDACTED]  
**Sent:** Thursday, August 28, 2025 18:55  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>  
**Subject:** Liverpool Street Station

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THIS IS AN EXTERNAL EMAIL

Yet another desperately sad correspondent who loves and appreciates this beautiful and iconic building;  
I implore you to join with us to prevent the destruction of yet another loved feature of London.....  
Once it is spoiled or lost it can never be recovered and, as with almost all modern innovative designs,  
all that would be accomplished would be yet another valueless eyesore, unfit for use, and redundant  
within months.  
Also any monetary return on contemporary designs tends to ebb away in next to no time so that  
"modern" developments  
have **proved to be poor investments.**

Please help to staunch the hemorrhage of our heritage.

Yours aye,  
Peter Venner

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Outlook

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**Fwd: Re: Re: 25/00494/FULEIA Liverpool Street Station**

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**From** celia.scott [REDACTED]  
**Date** Wed 9/10/2025 10:15  
**To** Begum, Shupi <Shupi.Begum@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

Dear Shupi.

Very sorry there is an error in my email which I have just sent you. The post code should be SW1V **3NY** and not SW1V **3NA**

Best wishes

Celia Scott

----- Original Message -----

**From:** [REDACTED]  
**To:** Shupi.Begum@cityoflondon.gov.uk  
**Sent:** Wednesday, September 10th 2025, 10:00  
**Subject:** Re: Re: 25/00494/FULEIA Liverpool Street Station

Dear Shupi Begum

My address is:- 107 Nelson House, Dolphin Square, London SW1V 3NA. So I hope you have it for my strong objection.

Thank you for this and Good Luck with the very justified objections of so many users of historic Liverpool Station.

Kind regards

Celia Scott

----- Original Message -----

From: Shupi.Begum@cityoflondon.gov.uk

To: [REDACTED] Cc: Kieran.McCallum@cityoflondon.gov.uk

Sent: Tuesday, September 9th 2025, 14:15

Subject: Re: 25/00494/FULEIA Liverpool Street Station

Dear Celia Scott,

Thank you for your email. I can confirm receipt of your objection.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning and Transportation Committee but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind Regards

## Shupi Begum

### Shupi Begum

 A picture containing text Description automatically generated

#### Planning Administrator|Development Division

City of London Corporation | Environment Department | Guildhall | London | EC2V 7HH

[shupi.begum@cityoflondon.gov.uk](mailto:shupi.begum@cityoflondon.gov.uk) | [www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Juliemma McLoughlin

Executive Director Environment

---

**From:** [REDACTED]

**Sent:** Friday, August 29, 2025 19:04

**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>

**Subject:** 25/00494/FULEIA Liverpool Street Station

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THIS IS AN EXTERNAL EMAIL

I am writing to oppose these plans for historic Liverpool Street Station. They should be rejected. forthwith

They are not compliant with a significant number of local and national policies and targets..

As a regular user of Liverpool Station I am shocked by these unacceptable plans.

Celia Scott

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**Liverpool Street Station redevelopment Ref: 25/00494/FULEIA**

---

**From** Jackie Power [REDACTED]  
**Date** Fri 8/29/2025 16:24  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

## Application reference 25/00494/FULEIA

Further to the current application to redevelop the Grade II listed Liverpool Street Station.

I object to this redevelopment for the following reasons.

I was born in London, and have used this station for over 60 years. It is part of my city streetscape heritage and I have many memories of the station and its Victorian industrial architecture and was a regular user of Liverpool Street station with my family as a child. I also travelled regularly through the station to Hertfordshire during the last major redevelopment circa 1989/1990.

It is approx. 35 years since the reconfiguration and major upgrade and there is no credible evidence to suggest a further large scale demolition and rebuild is required, other than the usual repairs and minor upgrades that would be needed for a listed building and working station, as a matter of course.

A massive tower looming over the station which will dwarf the listed structure, obscure the site lines, reduce the light and make the station appear like a model, detracting from its status and compromising the integrity of the listed building is totally inappropriate. The tower is out of context and will also destroy the environment of the immediate location.

This is a total overdevelopment of the site and unnecessary. The Financial Viability Assessment doesn't look feasible and without an upturn in the market this is not a viable development. There is a great deal of surplus office space in the City. But even if it was, this is not a justification for a totally inappropriate development, unworthy of the site and not worth the destruction of Liverpool Street station and its environs.

I urge you to refuse this planning application on the grounds of overdevelopment, destroying the integrity of the listed building, ruining the environment and the questionable financial viability of the scheme.

Yours sincerely,  
Jacqueline Power (Ms)

111 Caroline Gardens  
Asylum Road  
London

SE15 2SG



---

**25/00494/FULEIA**

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**From** chris clarke [REDACTED]  
**Date** Mon 9/1/2025 10:18  
**To** PLN - Comments <PLNComments@cityoflondon.gov.uk>

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THIS IS AN EXTERNAL EMAIL

Dear Planning Committee

I write to state my strong objections to the proposed development at Liverpool Street Station. I am a regular user of the station and I do not believe that Network Rail's plans to stick an office block on top of the station are in the best interests of passengers. Indeed I believe it will be an oppressive, light-restricting, claustrophobic and unwelcome addition. The City of London is absolutely full of tower blocks like this and there are few remaining public buildings in the City which are not given over to commercial interests. The overall effect is to make the general public feel like they are walking around in someone else's city, whereas the truth is this city exists for the public. Please help keep our public spaces protected for the people. We risk losing the heart and soul of our city if everything is covered over with an office block.

I believe many share my views and I will be grateful if you can take them into consideration at your committee.

Yours sincerely  
Chris Clarke  
Flat 2 Bramble Court  
Woodmill Rd  
E5 9GF



Planning Department  
City of London Corporation  
The Guildhall  
PO Box 270  
City of London  
London  
EC2P 2EJ

11<sup>th</sup> September 2025

FAO :Kieran McCallum, Case Officer: by Email Only

Dear Kieran

Further Objection on behalf of Hyatt International (Europe Africa Middle East) LLC, in relation to the Andaz London Liverpool Street: The (former) Great Eastern Hotel.

Ref: 25/00494/FULEIA: Phased development comprising partial demolition and alterations, including station concourse, train sheds, and truss/columns, demolition of 50 Liverpool Street, demolition of Bishopsgate Square entrance and Hope Square entrance; works to Sun Street Passage; Works of reconstruction and remodelling of station basement, lower and upper concourse levels, new station columns/truss and roof (in part); introduction of new lifts, escalators and stairs and service spine at basement; increased operational space; insertion of new ticket gates; creation of new station entrances from Hope Square and Bishopsgate Square; creation of new units at lower and upper concourse levels for Class E (shops, cafe, restaurants), hot food takeaway (Sui Generis) and pub/bar (Sui Generis); creation of new upper concourses and associated new public access from Exchange Square including new walkways; provision of over-station development reaching a maximum height of 97.67m AOD to accommodate Class E use (commercial, service and business); and creation of an auditorium (Sui Generis) at Level 18 with ancillary terrace; creation of a public amenity terrace (Sui Generis) at Level 18 with access from Hope Square entrance; provision of private office terraces; provision of cycle parking and associated access ramp, servicing, refuse and ancillary plant; alterations to pedestrian and vehicular access including provision of new ramp; public realm works to Hope Square and Bishopsgate Square; and associated works.

Site Comprising Liverpool Street Station, 50 Liverpool Street, Sun Street Passage, 40 Liverpool Street (in Part), Hope Square, And Bishopsgate Plaza London EC2M 7PY

## Introduction

Further to our letter of objection of 11<sup>th</sup> July 2025, we write on behalf of Hyatt International (Europe Africa Middle East) LLC (Hyatt), to further object, in relation to the Andaz London Liverpool Street (The Andaz), the (former) Great Eastern Hotel.

GEH Properties Limited, an affiliate of Hyatt and a member of the Hyatt group, owns The Andaz through a long lease.

Having further reviewed the wider planning documents, we maintain Hyatt's position in our first letter of objection and FURTHER OBJECT to the proposals.

This further objection relates to our additional assessment of both the practical outcome of the proposed development and the further impacts of the proposals during construction, which could be for a period of greater than 8 years.

In combination, Lichfields and Hyatt reserve the right to add further to the objections made ahead of any consideration of the planning application by the City of London Corporation.

### Background / summary of previous objection

The Andaz, being The (former) Great Eastern Hotel, was built by the Great Eastern Railway to serve its London terminus, Liverpool Street Station.

It opened in May 1884 and was designed by Charles Barry Junior and his son Charles Edward Barry, and was built by Lucas Brothers. It's expansion in 1901 was designed by Robert William Edis, with interior fittings by Maple & Co.

It is a Grade II\* Listed Building and is one of the City of London's principal hotels.

Hyatt have been the key steward of this important City of London hotel for almost 20 years. Its residents see and use the Hyatt as a 'home away from home' with many regular guests including residents working or attending meetings in the City. The changes which will be necessitated as part of any development of the nature proposed by the planning application is likely to severely impact and fundamentally change the operation of the hotel.

The importance of the hotel and its Grade II\* listed status (applying to only about 5.8% of all Listed Buildings in the country), which is not only architectural, but also of historic, interest, is set out in our letter of 11<sup>th</sup> July 2025 and is not repeated here.

However, in business, operational and historic terms the hotel is a key part of the City of London's offering and part of the raison d'être of the Listed Building's listing.

The Objection submitted on 11<sup>th</sup> July outlines the significant harm which the plans, as presently proposed through the planning application, would have on the Hotel, including:

- Impact on the Grade II\* Listed building and its setting;
- Impact to daylight/sunlight;
- Impact from light trespass;
- Impact from noise;
- Vibration impact; and
- Significant disruption to business continuity.

Previous discussions with MTR, Sellar and Network Rail had proposed to include the Andaz within a wider scheme, providing assurance that the hotel's position as a key 5\* hotel in the City was maintained and further improved; guaranteeing its future. As part of these original proposals, compensatory provision was made to locate key hotel facilities as part of the wider

station redevelopment. In turn, the ambition was to allow permeability through the hotel to enhance pedestrian flow within and around the station, notably helping mitigate those areas around the Old Broad Street / Liverpool Street and Bishopsgate entrances, where pedestrian movement is most concentrated. This is something which Hyatt remains in support of.

However, the submitted proposals remain a 'worst of all possible worlds' with proposals immediately abutting the Andaz to the north and west, creating massive impact and disruption, with no added benefit to the Andaz or to the station redevelopment through the enhanced permeability previously proposed by including the hotel.

Further, the application, as submitted, provides no evidence to offset the significant harm resulting from the development on the Andaz, both in terms of its operation and its status as a Grade II\* listed building.

Hyatt remain willing to be engaged in the process and remain disappointed at the lack of engagement and involvement from Network Rail with Hyatt as a key stakeholder.

### Additional objections

Our objections of the 11<sup>th</sup> of July remain valid and as made.

Having had the opportunity to further consider some of the wider documents, notably around construction and pedestrian movement, further issues have been identified which are likely to impact the Andaz.

Greater scrutiny also suggests there will, in fact, be limited, if any, benefit to the station or its concourse resulting from the proposals.

These further comments are set out below.

### Pedestrian Flows into / out of the station

The previous proposals, which included the Andaz, allowed for greater permeability into / out of the station through the opening up of the ground floor of the hotel. This was only achieved through compensatory improvement for the hotel within the wider scheme, in order to maintain its 5-star status and provide for a better resident experience.

The revised proposals remove the Andaz from the scheme, and therefore the benefit of increased permeability into and around the station and the opportunity to dissipate pedestrian flows. The proposals, as they stand, do not achieve any of this and provide no greater concourse space to that which exists today.

This missed opportunity, in combination with the removal of the upper concourse will have the effect of concentrating pedestrian flow within key stress points in and around Liverpool Street station. The proposals therefore do nothing to assist in the dissipation of commuters nor help in the increased flows and stress points since the opening of the Elizabeth Line.

Key entrances on Liverpool Street and Bishopsgate will therefore remain congested, especially at peak times, and the stresses experienced on the concourse / entrances to the Tube will not be mitigated. In fact, in all likelihood, the position will be materially worse given the increased column and support requirements for the development necessitating large structural support columns to be positioned across the concourse and within the Tube hall.

The net effect, notably with the removal of the upper concourse in its entirety, is that pedestrian movement will be further concentrated around the entrances and the Andaz, and

will not mitigate and may further exacerbate those stress points presently experienced, notably at rush hour.

#### Capacity of concourse

Liverpool Street Station and the capacity of its concourse has experienced growth in pedestrian movement, notably since the opening of the Elizabeth Line in 2022.

This has resulted in a greater number of pedestrians both within the concourse and at key 'stress points' around the concourse, notably the lower concourse, where most of the existing congestion lies, including in particular (i) areas around the London Underground main entrances / exits off the concourse; and (ii) areas across the entrances to platforms 1-10. Initial proposals which included the Andaz/Great Eastern achieved greater pedestrian permeability through the opening up of the ground floor, with compensatory replacement and enhancement of floorspace for the hotel elsewhere within the development, however the latest plans by Network Rail now exclude the hotel and this previously presented opportunity. There will therefore be no enhanced permeability from the south east corner of the development.

A review of the plans and supporting documents for the proposals indicate that the capacity / space for increased capacity (and therefore safe pedestrian movement - see below) within this concourse does not increase at all, with the ACME scheme neither presenting a materially greater concourse to that already existing, nor increasing the scale of the upper concourse, which largely remains in the format of the existing arrangement, with further upper elements removed in their entirety.

In fact, with those upper concourse areas being removed completely, the capacity of the concourse will be reduced significantly, rather than increased.

This will have a potentially significant detrimental impact on the operation of not only the railway station, but also the Tube station (including linked key tube platforms) and the recently completed Elizabeth line. It is also likely to lead to increased congestion at key entrances and exits of the station.

The proposed installation of temporary platform lifts during Phase 1 construction is also likely to impact pedestrian flows in an already busy area of the concourse.

As part of the proposals for the Hope Square reconstruction, Ticket Hall B will be partially closed and large columns will also be sunk at the entrances to platforms 1 and 2 which will cause significant disruption for train arrivals and departures. There appears to be no assessment of the usability of these areas post construction and the effect this will have on further concentrating pedestrian movement. Critically, the proposals fail to increase the size of Ticket Hall B despite the Elizabeth line now discharging directly onto the existing concourse. The overbuild lift cores further reduce Ticket Hall B's concourse size, exacerbating, not improving any resulting development.

Given that there would be no increase in concourse capacity, the net effect of these proposals is likely to be materially worse for commuters and other pedestrians using the station.

#### Construction disturbance

The sheer extent of the construction programme, which is at risk of prolongation and / or significant amendment, is material to the harm the Andaz will suffer both as a business and a Listed Building.

The development, including demolition, is predicted to take approximately 8 years, with a very real prospect for additional delays. As part of this, it is estimated that station works would take over 4 years, with Underground works taking just under 4 years. During this period, approximately 50% of the main concourse will be closed during construction (four years). We consider this will result in a material health and safety concern for both passengers and visitors to the Andaz. This is simply unmanageable.

Throughout this process, the Andaz will need access to the rear of the property for emergency exit and servicing. Such access does not appear to be possible during the construction period, especially during the phase 1 works. If this is the case, this would likely create a health and safety issue for the Andaz.

The Demolition and Construction response in the Environmental Statement<sup>1</sup> notes the programme as being both indicative and subject to a number of assumptions. There will need to be further detail on the likely phasing of demolition and construction works, the need for additional assessment of technical detail, and the need for further discussions with key stakeholders, including TfL in its capacity as operator of both the Tube and bus stations (given the impact on both assets).

Appendices<sup>2</sup> within the outline CEMP set out the level of closure during this period, and the extent to which the concourse and Tube will be impacted. They show that over 60% of the station concourse (including Platforms 16 and 17) would be closed for a minimum of 2 years<sup>3</sup>, following which the remaining 40% (including Platforms 1 and 2) would be closed for the next 2 years<sup>4</sup>. This means that over the aforementioned 4 year period, there will always be 2 platforms out of service, reducing the 17 platform capacity of the station by approximately 12%.

The anticipated partial closure of the concourse over a period of 4 years, together with the anticipated closure of up to 50% of the Tube Station, during the construction works is highly likely to result in a significant health and safety issue, notably at rush hour, which does not appear to have been considered or, more importantly, mitigated for as part of the proposals.

The proposals also appear to result in the closure of the station control room, which would include significant cabling and electronics that do not appear to have been considered. Similarly, it appears that ticket Hall B would be partially closed, but no assessment of the impact of this on pedestrian flow has been provided. Ticket Halls A/B/C constructions appears to run concurrently but no details have been provided on how this will be achieved without significantly impacting pedestrians or commuters.

In summary, the significant disturbance caused by the construction works has not been adequately dealt with as part of the proposals: this will lead to further stress within the station and may create a very real health and safety issue which has not been considered.

Throughout the duration of the construction works, the Andaz will require access to the rear of the property which has been similarly ignored in the planning documents.

#### Impact of construction traffic

The application indicates that rail services may be utilised for waste removal from the demolition process, as well as to help facilitate construction.

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<sup>1</sup> ES Vol 1 Chapter 5 Demolition and Construction

<sup>2</sup> Outline CEMP Appendix D

<sup>3</sup> Outline CEMP Appendix D: Phase 1, Lower Ground Floor (Grey Shade)

<sup>4</sup> Outline CEMP Appendix D: Phase 2A, Lower Ground Floor (Grey Shade)

However, this is very heavily caveated, ‘... providing this is logistically practical’.

A review of the demolition / construction plans show no direct secure linkage between the relevant platforms (i.e. platforms 16 and 17 during phase 1 and platforms 1 and 2 during phase 2) and annexed construction areas. This means that any transfer of materials, either from demolition or for construction, will need to cross active pedestrian routes which are being maintained within the station for its continued operational use.

We therefore seriously question the efficacy of any transfer of material in this manner being achieved across an operational station which is already compromised, without significantly impacting health and safety; particularly given that the pedestrian routes are necessary to keep the station operational and are likely to become more heavily pedestrianised during demolition and construction due to the reduction of commuter space.

Any closure of platforms will also necessitate trains being taken out of service (the CEMP suggests trains may be diverted or dropped, but no further detail is provided) or the platform usage being extended beyond operational hours. This latter option indicates a very real prospect of building operations extending to 24hrs, exacerbating an already significantly compromised operation for the Andaz hotel for a period of 8 years and possibly more.

The Application outlines the potential impact of construction traffic<sup>5</sup> resulting from the development.

In terms of access by road, it is acknowledged that the construction process will require the significant use of pitlanes to allow for deliveries and remove waste from site, including in particular the following:

The pitlane at Bishopsgate will require the entrance to Liverpool Street immediately outside the hotel be closed for at least 2 years, therefore placing construction activities immediately alongside the Andaz<sup>6</sup>

Construction compounds and pitlanes in Hope Square appear to be in place for almost 7 years<sup>7</sup>

The use of pitlanes also means that there is not going to be any access from Liverpool Street or Sun Street for over 2 years: it is not clear whether this will also limit access to buses during the same period.

Clearly these closures are based on a ‘best case scenario’, with a real prospect for extended demolition and construction periods requiring further additional closures.

The CEMP estimates up to 350 vehicle movements per day at peak, and up to 140-150 HGV movements per day and low loader vehicles movements of up to 12 per day during the main construction period. Most of this vehicle movements are expected to take place overnight / out of working hours, with the potential for the loading of demolition waste and unloading and movement of construction materials across the site expected to take place between 00.30 and 03.30 in the morning.<sup>8</sup>

Additionally, if it turns out that the platforms cannot be used to transfer waste / import construction material as anticipated, this will further increase the number of vehicular movements, working hours or extended use of these pitlanes. The CEMP appears to consider

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<sup>5</sup> ES Vol 1 Chapter 5 Demolition and Construction 5.3.3 and Outline CEMP 3.3.12

<sup>6</sup> Outline CEMP / Appendix D Construction phasing

<sup>7</sup> Outline CEMP / Appendix D Construction phasing

<sup>8</sup> ES Vol 1 Chapter 5 Demolition and Construction para 5.4.2

this as a very real prospect, by acknowledging this as an option, but provides no further detail.

No account has been taken of the 40+ deliveries per day which the Andaz averages, alongside the very significant drop offs by taxis and other vehicles. The pitlanes along Liverpool Street will result in there being significant construction traffic in front of the Andaz for years; impacting deliveries, taxis bringing guests and accessibility to the hotel overall.

More widely, pitlanes will also impact Bishopsgate significantly. As one of the key arterial routes into the City this will have a long term impact on both one of the City's primary roads, and also the extensive use of Bishopsgate for buses. Similarly, the pitlane proposed within Sun Street passage will have a long term material impact on the existing TFL bus station serving Liverpool Street Station. Any diversion of these routes and services will have a transferred impact elsewhere.

The true impact of this is not considered at all in the planning documents.

### Disruption and business continuity

The planning application Ref:25/00494/FULEIA anticipates, during the demolition and construction stage, vibrations at the Andaz Hotel and neighbouring offices as a result of the works. There is, at present, no control over these works and when they will occur.

It further notes that a vibration risk assessment and monitoring strategy would be prepared in order identify any additional mitigation required. It is suggested that a risk assessment and monitoring strategy would be agreed with the hotel and secured through condition.

We do not consider this approach appropriate. Given the status of the Listed Building and the Andaz's position as a 5\* full service hotel, this work should be undertaken ahead of any decision being made on the application: it is not appropriate to leave this to condition.

Significant and excessive disruption through construction, dust, noise and vibration could render the hotel unable to operate. This is particularly the case for vibration associated with works subterraneous to the hotel and/or for works being undertaken to the rear of the Andaz.

This needs to include:

- Impact through demolition (noise, vibration, dust)
- Impact through construction (noise vibration, dust)
- Impact on essential services (water, gas, electricity)
- Impact on deliveries and servicing of the property
- Confirmed times scales (in weeks) for each of the above

Disruption to the Andaz may result in reduced services to visitors at a time when the City of London is seeking to build the City as a key destination for visitors under its 'Destination City' initiative. At worst, it may be necessary to close the hotel for a period of time. This would impact not only operations, but also cultural and neighbourhood events which the Andaz engages in within the wider community.

It is vitally important that any programme is acceptable to the operations of the Andaz, and that Hyatt is given precise details of timing and process for any construction in the event that planning permission goes ahead: this cannot be left to a condition.

As an operation highly sensitive to the quality of the environment of its surroundings, the operations of the Andaz have already been impacted in the past by more minor historic renovations / retrofit. Given the sheer scale of the proposed development, its potential impact

on hotel operations is concerning. At the present time, the level of harm to the hotel and its operations hasn't been fully communicated within the planning documents.

### Resulting Development

The resulting development does not increase the capacity of the main concourse and, in fact, reduces it as a consequence of the removal of the upper concourse. Platforms 1 and 2 need to have columns sunk down, meaning that platform 1 may not be able to re-open and may not be able to remain in service. Narrow station platforms with large columns may not be safe to re-open.

As a consequence, the benefits of the scheme to Liverpool Street station are overstated.

Further to the above, it is clear that there will be significant impact and harm to both the operation and setting of the Andaz, which includes:

- Significant alterations to station concourse, train sheds, and truss/columns,
- Demolition of 50 Liverpool Street, as well as the Bishopsgate Square entrance and Hope Square entrance;
- Creation of new upper concourses and associated new public access from Exchange Square, including new walkways;
- New entrances onto Liverpool Street and Bishopsgate;
- Provision of over-station development reaching a maximum height of 97.67m AOD to accommodate Class E use (commercial, service and business); including an auditorium (Sui Generis) at Level 18 with terrace; as well as provision of private office terraces;

Notwithstanding the fact that the scheme is not presently viable, the major disruption caused by the development on the hotel over a significant period of time, combined with the potential uncertainty over its delivery, means that the Andaz is likely to be blighted for at least, and possibly more, than a decade. Such impact, whilst acknowledged is likely to occur, is not considered in the planning application. The suggestion that this is left to condition is wholly unacceptable.

In combination with the additional impact on operations identified in this letter, the resultant 'benefits' to Liverpool Street station appear minimal, and do not outweigh such significant harm to a Grade II\* listed building.

### Sustainability

We note LISSCA (Liverpool Street Station Campaign) has commissioned carbon expert Simon Sturgis to examine the proposals<sup>9</sup>. The carbon report prepared by Simon Sturgis of Targeting Zero in relation to the proposed Liverpool Street Station redevelopment has been reviewed and has been picked up in the press<sup>10</sup>.

It is considered that Sturgis's report provides a clear, well-evidenced analysis which shows that the proposals fail to comply with sustainability requirements set out in local, London, and national policies.

The report suggest that the results are likely to underestimate the carbon emissions by 15 to 25%.

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<sup>9</sup> LISSCA (Liverpool Street Station Campaign) is a coalition of conservation groups which includes SAVE Britain's Heritage and The Victorian Society.

<sup>10</sup> Standard: Campaigners Slam Carbon Cost of ACME's Liverpool Street Station Plans

## Carbon standards

The scheme's whole-life carbon intensity of 2,200 kg CO<sub>2</sub>e/m<sup>2</sup> GIA is very poor, and somewhat comparable to 1990s buildings; failing to meet any contemporary standards.

## Operational Carbon

The proposed scheme does not meet the City of London or GLA policies on operational carbon reductions which is for a 35% reduction against Part L, with the intent that 15% is saved through "be lean" measures.

The proposal offers a 13.2% saving against Part L, a very significant departure from policy. Recent applications and consents of similar scale developments are materially more aligned to policy, with examples including 63 St Mary Axe (33% reduction), 60 Gracechurch Street (29% reduction), 1 Appold Street (28%) all demonstrating far greater policy alignment is achievable.

## Carbon Optioneering

As the Sturgis report notes, the robustness of the applicants Carbon Optioneering Report, developed in response to the City of London's landmark Planning Advice Note, is unclear.

Aside from valid technical concerns Sturgis has flagged, there seems little, if any review of options that allow for partial retention. Presenting options as either (a) full retention or (b) full demolition does not allow the assessment of the potential carbon savings from any partial retention. The Optioneering report is therefore misleading, as it doesn't assess real alternatives for the development.

## Whole Life Carbon

The embodied carbon assessment of the development reports values of 1,107kgCO<sub>2</sub>e/m<sup>2</sup> GIA for the whole development and 1,094kgCO<sub>2</sub>e/m<sup>2</sup> GIA for the OSD component only for A1-A5. These are both significantly above the GLA WLC A1-A5 benchmark for offices of <950kgCO<sub>2</sub>e/m<sup>2</sup> GIA and presents an unacceptable level of performance.

Within the detailed WLC reporting no significant opportunities have been identified for how the WLC carbon of the proposed development will be reduced as the design progresses.

The use of CLT slabs has been noted as providing a marginal improvement, but it is not viable due to regulatory and insurance requirements. A nebulous approach to finishes is mentioned, but no expected savings nor routes to savings that are within the development's control are noted.

While the WLC benchmarks are not policy imperatives, the City of London have included the following condition in recent consents (emphasis added):

Prior to the commencement of the development an update to the approved detailed Whole Life-Cycle Carbon assessment shall be submitted to and approved in writing by the Local Planning Authority, demonstrating that the whole life-cycle carbon emissions of the development are on track to achieve at least the GLA's Standard Benchmark set out in the GLA's Whole Life-Cycle Assessment Guidance. The assessment should include details of measures to reduce carbon emissions throughout the whole life-cycle of the development and provide calculations in line with the Mayor of London's guidance on whole life-cycle carbon assessments, and the development shall be carried out in accordance with the approved details and operated and managed in accordance with the approved assessment for the lifecycle of the development.

As these conditions have been imposed on other developments, there would be an expectation for uniformity of decision-making, that a similar condition would be imposed on the proposed scheme.

At present, the proposed development is clearly not on track to achieve, at the very least, the GLA's standard benchmark and therefore demonstrates that the current proposal is unacceptable and should not be progressed.

As the applicant has not identified viable further reductions in WLC, it would require the fundamentals of the proposed development to be changed to bring the scheme into alignment with the GLA benchmark targets.

Such significant changes will result in a scheme that cannot be the same as the proposal being contemplated by officers and the committee.

### Structural design

The upfront (A1–A5) carbon emissions of the transfer structure alone account for around 25% of the scheme's already excessive carbon footprint. Sturgis highlights that proven alternatives exist: Exchange House, which spans the same tracks with a parabolic tension structure, achieved dramatically lower carbon impacts.

The refusal to consider Cross Laminated Timber, dismissed only on "insurance concerns" despite successful London precedents, further underlines the lack of ambition. A lower-carbon structural strategy is both possible and necessary, yet has been rejected.

### Circular economy

The demolition strategy represents a wholesale abandonment of circular economy principles. The removal of major 1990s station elements—part of the acclaimed conservation scheme that itself prevented demolition in the 1970s—is indefensible. This approach directly contradicts Network Rail's own commitment to "reuse, repurpose or redeploy all surplus resources" by 2035.

### Underground Station Impact

The proposed rebuild of the Tube station is equally damaging. Demolition of the Hope Square concrete roof will generate vast demolition waste for the sake of accommodating lift cores for the commercial overbuild. This is not an upgrade but a degradation: it risks reducing operational capacity at the very moment pedestrian flows are at their highest following the opening of the Elizabeth Line.

This is fundamentally at odds with sustainable transport planning and, as set out elsewhere in the letter, will fail to achieve any meaningful improvement / public benefit to alleviate congestion or passenger flow.

### Urban Greening Factor

The proposed development does not meet the separate GLA and City of London policy identified 0.3 Urban Greening Factor, and only "achieves" the policy requirements by changing the assessment area to not be the red line boundary of the application.

It is unclear if the nuanced differences between the City of London and the GLA requirements for Urban Greening Factor have been taken into account. Therefore, even with the reduced site area, it's unclear whether the scheme complies with both GLA and City of London targets.

## Lettability/Funding Criteria

Major international occupiers and investors require strong sustainability credentials. Given the shortcomings in the ACME scheme there will be significant risk to both yield and rental levels which will have an additional significant effect on viability.

### Cumulative failure of sustainability principles

Taken as a whole: flawed carbon accounting, high-impact structural design, abandonment of circular economy principles, and harmful operational impacts shows that the scheme is fundamentally incompatible with declared sustainability policies.

As Sturgis concludes, this is “essentially the same as buildings designed in the last decades of the 20th century.”

We therefore fully support Sturgis’s recommendation that the application be rejected outright on sustainability grounds. Any future proposal must:

- retain the majority of the existing station roof,
- deliver genuine operational improvements, and
- demonstrate full alignment with circular economy principles.

This application cannot credibly be described as sustainable and the level of changes required to enable policy compliance would fundamentally result in a different set of proposals. The application should be refused in its entirety and trying to achieve policy alignment through conditions is not appropriate.

### Comparison with previous scheme

It is notable that the earlier Sellar/Herzog & de Meuron scheme adopted a far more responsible approach. By retaining the majority of the Hope Square roof, it avoided significant Underground demolition and achieved a substantially lower embodied carbon footprint. The alternative proposed development for the site demonstrates much closer policy alignment, saving against Part L of up to 37%, and a WLC A1-A5 projection of 867kgCO<sub>2</sub>e/m<sup>2</sup> GIA, demonstrating that it is possible to deliver policy-aligned development on the site, and that the failure to adhere to policy is a result of the specific proposals of the applicant.

### Viability

We understand that the development at the present time is not viable and therefore we question whether application Ref:25/00494/FULEIA is only ‘the tip of the iceberg’, and whether, ultimately, a larger scheme is required to achieve a viable development.

Network Rail acknowledges within the application that “..the Proposed Development is not viable..” and the base case appraisal shows a deficit of -£220.2m based on present-day numbers, and a deficit of -£209.7m using market growth assumptions for costs and values.

The supporting viability study (over) optimistically states “... improvements in the programme, costs and values could mean that the development becomes viable...”.

This question over viability appears to be the subject of press debate<sup>11</sup> and, whilst deliverability may be considered outside the planning process, it does bring into question whether the scheme's 'benefits' such as they are, should be disapplied.

A sensitivity analysis in the Financial Viability Assessment (that assumes a 5% increase in rental value and a 5% decrease in gross construction costs) still estimates a deficit of -£131.7m based on present-day numbers and a deficit of -£92.8m using market growth assumptions for costs and values. If rental values and construction costs are sensitised by the same 5% but in the opposite direction, the deficit increases to in excess of -£300m.

It is only when a further separate sensitivity appraisal is presented in the Financial Viability Assessment, with:

- average office rents of over £140 psf (compared to £95 psf in the base case ie a circa 50% increase on base assumption);
- retail rents increased by c.11%;
- the retail investment yield decreased by 25bp;
- void and rent free periods reduced; and
- the build programme reduced by 6 months.

that the project makes a small surplus of some £53.7m.

Unless the public sector plans to fund all the development costs, attracting external capital will be necessary to build and deliver the project. At present the evidence shows there is not a viable development to fund.

A review of the study suggests that the cost of finance used in the appraisal is below market indicators. The appraisals assume an all-in cost of finance of 6%. The Financial Viability Assessment itself acknowledges: "...This assumes rates drop prior to the start on site and is below expected debt pricing in the current market....".

Attracting external equity capital to finance the project is necessary and is likely to require higher target returns. For a project of this nature, being a speculative office-led ground-up development of c.800,000 sq ft, with a build cost of over £1.5bn and a Practical Completion date over 8 years away, investor equity capital is likely to be extremely limited.

Current 10 year swap rates, which are based on market expectations of future interest rate changes, are currently c.4.1%. When a lender's margin is factored in on top of that, which for speculative development is likely to be in excess of c.4%, all-in cost of finance is likely to be over 8%. We consider these figures potentially more realistic given the extended length over which the build period will be factored and a likely letting void of 18-24months, which will increase, rather than decrease the risk and thus the availability of likely commercial lending rates.

To attract finance, a higher rate of return than that currently assumed in the appraisal is likely to be required, potentially some 15% on GDV for the office and 10% of GDV for the retail.

This would further reduce, rather than improve, economic viability.

This is likely to have 2 potential outcomes for the scheme / the Andaz:

1. A more significant scheme will need to be advanced which is financially viable; or

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<sup>11</sup> Estates Gazette 'The Strain on Platform 4' 30/8/25

2. Any approval will sit unimplemented in lieu of better market environments catching up, representing a 'Sword of Damocles' to future business planning and viability at the Andaz.

Very little thought or regard appears to have been given to this, albeit it is understood that the development will only be delivered by one of the stakeholders rather than by a private developer. This further suggests that the true deliverability of the scheme has not been fully audited.

Moreover, neither option benefits the hotel's operation, or its function as a key Grade II\* Listed Building.

Conclusion to objection.

We write on behalf of the Hyatt International (Europe Africa Middle East) LLC (Hyatt), in relation to the Andaz London Liverpool Street (The Andaz), which is The (former) Great Eastern Hotel.

The Andaz / The (former) Great Eastern Hotel is one of the City of London's principal hotels. Hyatt have been key stewards of this important building for almost 20 years.

Previous discussions with MTR, Sellar and Network Rail had proposed to include the Andaz within a wider scheme, providing assurance that the hotel's views were accommodated, and that compensatory provision was made for key hotel facilities as part of the wider station redevelopment. However the latest proposals now exclude the Andaz, with the red line abutting the hotel on three sides, but excluding it from being part of the proposals.

Any redevelopment of Liverpool Street Station is technically and architecturally challenging due to the station's proximity to the Andaz, meaning it is very difficult to create a proposal which suitably accommodates Hyatt's needs without integrating the hotel into the wider proposals.

The above assessment shows that the development is poorly considered, unsustainable and is likely to result in a very extended period of demolition and construction, and with no meaningful improvement to Liverpool Street station nor enhancement to its concourse, pedestrian access, permeability or increase to its capacity. Indeed, the opposite is true, with the station, its entrances and circulation between it and the Tube likely to be significantly impacted for possibly up to a decade, with a potentially worse outcome to movement in and around its concourse, given the need for significant support structures for upper floor commercial areas and the removal of the upper concourse.

Notwithstanding the fact that the scheme is not presently viable, the major disruption from the proposals on the hotel has not been fully assessed, and whilst apparently acknowledged as likely to occur, the suggestion that this is left to condition is wholly unacceptable. Given the potential uncertainty over delivery and the risk of an extended build programme, it is likely that the Andaz would be blighted for at least, and possibly more, than a decade.

In the absence of such benefits / detail, there is nothing to offset the significant impact to the Grade II\* Listed hotel, or its setting.

Based on the above, the application in its present form is deficient and should be REFUSED.

Lichfields and Hyatt reserve the right to add further to this objection ahead of any consideration of the application by the City of London Corporation. Hyatt remain willing to remained engaged in the process.

If there any comments or queries, or clarifications required on any of the points raised in this review, then please do not hesitate to contact Ian Anderson at [REDACTED] or [REDACTED]

Kind regards

Yours sincerely

[REDACTED]

Ian Anderson: Senior Director, Planning  
[REDACTED]

**From:** [R Holden](#)  
**To:** [PLN - Comments](#)  
**Subject:** Reference 25/00494/FULEIA  
**Date:** 28 September 2025 20:40:46

---

~~THIS IS AN EXTERNAL EMAIL~~

Hello,

I oppose the proposed alterations to Liverpool Street Station due to the bizarre Net Zero ideology.

Firstly undertaking the works will have no impact on Britain or the world's carbon footprint.

Secondly, It's a complete waste of money and will never pay for itself.

And thirdly, Network Rail will be destroying great Victorian architecture and a piece of English history.

Now Network Rail and Mayor Khan (I would find it hard to believe if that man hasn't got something to do with this and Ed Miliband) might be perfectly fine with this and care very little about England, British

Heritage/History or in fact the British people....however we the British people do care about our heritage and history and we think your proposal is flawed and based upon lies so that some top brass will get lovely 'brown envelopes' (back handlers) as my father used to say.

We're not stupid - don't think for one minute as you sneer at this email that we are. We're watching and we know perfectly well that this proposal is absolute garbage!

Rebecca  
Sent from my iPad

**From:** [Krish Nathaniel](#)  
**To:** [PLN - Comments](#)  
**Subject:** 25/00494/FULEIA - Objection  
**Date:** 26 October 2025 16:47:41

---

THIS IS AN EXTERNAL EMAIL

To whom it may concern,

I wish to express my objection to the proposed redevelopment of Liverpool Street in the strongest terms, and the disastrous urban design, embodied carbon and heritage impacts this proposal would cause.

As a Principal Urban Design Officer for a London borough and an Associate Lecturer in Masters Architecture for a major arts university, I have extensive experience in assessing and evaluating the merits and planning benefit of new development.

In the case of this application, I am deeply concerned by the detrimental impacts and extensive harm to heritage assets which form the existing Liverpool Street Station, which not only includes demolition but the construction of ta buildings immediately adjoining these nationally listed assets. This development appears wholly unnecessary, especially at a time when commercial space nationally and in central London is struggling with occupancy.

Additionally, I am deeply concerned at the considerable amount of embodied carbon that would result from this development.

While Liverpool Street Station does have issues with capacity, and especially with step-free access (with a single lift for this entire station), these access issues should be addressed separately and do not necessitate the wholesale destruction of major parts of the existing building. This is not a valid reason for a redevelopment of this kind, and these improvements should be progressed outside of this application.

The 1980s redevelopment of the building provides a blueprint for how other uses can sensitively be brought into the station while maintaining the architectural integrity and character of this nationally significant station.

The objections to this application from national bodies such Historic England and the Victorian Society further expand and add weight to this.

This application should be refused primarily on heritage grounds and due to a distinct lack of public benefit while resulting in major damage to the historic fabric of this part of the City.

Yours faithfully,  
Krish Nathaniel

Krishan Nathaniel  
MArch Spatial Practitioner



**By email only:** [PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)

23 October 2025

Dear Sir/Madam,

**[London Property Alliance support for the redevelopment of Liverpool Street station](#)**

I am writing on behalf of the [London Property Alliance \(LPA\)](#). The LPA is a not-for-profit organisation that represents the leading owners, developers, investors and professional advisors of real estate operating across central London, providing a unified voice for over 300 organisations ranging from FTSE 100 companies to affordable housing developers. The LPA is the voice of property in London's Central Activities Zone (CAZ), which in 2024 generated an estimated £315bn of GVA (over 10% of UK economic output) and was home to 48% of the capital's output and 41% of its jobs.<sup>1</sup> Our current membership lists can be viewed [here](#) and [here](#).

We understand Network Rail has submitted revised plans for a £1bn redevelopment of the station aimed at improving accessibility, reducing congestion and creating an enhanced public transport interchange with expanded concourse capacity and enhanced step-free facilities. These improvements will be funded through building an office development above the station, with the intention that there should be little or no cost to the taxpayer. The LPA is therefore strongly supportive of Network Rail's plans to upgrade the capacity of Liverpool Street station.

As is often the case, the scheme has generated concerns over its potential impact on the heritage features of both the station and its surrounding area. Some critics of the revised scheme have also argued that the proposals fall short on sustainability grounds, claiming that they do not meet net zero targets.

The LPA recognises that there will always be a debate about the impact of development on heritage assets and their immediate surroundings. However, the major contribution an enhanced, higher-capacity Liverpool Street station would make to London's overall economic prosperity and sustainability risks being overlooked in the current debate. According to research by Arup (a leading built environment consultancy) for the LPA, the CAZ is the most sustainable location for employment in England and Wales.<sup>2</sup>

As their research highlights, central London boroughs have the lowest levels of carbon emissions per job across the country, with an average annual greenhouse gas emission level of 0.6 tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e). Furthermore, the City of London has the best performance with just 0.3tCO<sub>2</sub>e of emissions per job. In comparison, the average level in England and Wales is 2.5tCO<sub>2</sub>e, around four times higher than the CAZ average and eight times higher than the City of London.

This remarkable performance in sustainability terms is underpinned by a number of factors, not least the increasingly sustainable real estate that central London offers to tenants underpinned by a high-capacity, extensive rail and Underground network which makes public transport the overwhelmingly preferred choice for commuters. A 2017-2020 study by the City of London found that some 93% of all trips to, from and within

<sup>1</sup> <https://www.londonpropertyalliance.com/good-growth-in-central-london-2/>, p12

<sup>2</sup> <https://www.londonpropertyalliance.com/good-growth-in-central-london-2/>, p19

the City were by public transport or walking and ‘wheeling’; fewer than 3% of those travelling used private cars or taxis.<sup>3</sup> None of this would be possible if developers were prevented from delivering high-capacity, high-quality places of work complete with excellent sustainability credentials. As LPA’s *Retrofit First Not Retrofit Only* report argues, the best overall outcome in sustainability terms is at least some of the time for existing buildings to be redeveloped in part (or indeed their entirety).<sup>4</sup>

### Concluding comments

London and, in particular, central London is the engine of growth for the UK. The central area supports 2.2 million jobs and makes a major contribution to UK public finances. Its economy is inextricably linked to regional economies across the country. Furthermore, central London and the City of London are the most sustainable locations in the country for sustaining and growing employment. This sustainability is driven by major factors such as the availability of high-quality office space and the very high levels of employment density underpinned by public transport and specifically rail networks. A bigger, better Liverpool Street station would help to reinforce and maintain the ability of central London and the City of London to deliver growth, prosperity and employment for the foreseeable future in the most sustainable location in England and Wales.

The London Property Alliance strongly supports Network Rail’s plans to upgrade the station and in doing so, deliver lasting benefits for Londoners, the UK economy as we together pursue the goal of net zero and sustainable economic growth.

Yours sincerely,

**Alexander Jan**

Chief Economic Advisor, London Property Alliance

E:

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<sup>3</sup> <https://democracy.cityoflondon.gov.uk/documents/s191266/Appendix%204%20Transport%20in%20the%20City%20-%20Data%20summary.pdf>

<sup>4</sup> <https://www.londonpropertyalliance.com/retrofit-first-not-retrofit-only-future-proofing-national-policy-to-support-sustainable-development/>

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul’s Cathedral Heights area. In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph’s church.
- The timeline for this submission of a revised planning application that only permits consideration during a busy Christmas and New Year period in an attempt to limit the number of objections that can be received

The application is contrary to the National Planning Policy Framework. In particular Paragraph NPPF 213 states: “Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.”

With kind regards,  
Martin Collett

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Possible rebuild of Liverpool St station  
**Date:** 08 December 2025 16:45:50

---

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

I object to the plans to rebuild Liverpool Street Station [LSS].  
LSS was redeveloped in the 1990s , the northern or country end was spoiled by an office block. The rest of the station, having survived the IRA bomb ,is not too bad. Whilst the rebuild of London Bridge station was good, just look at the horrors of New Street, Stafford,Banbury and many more.  
Victoria , Charing Cross and Cannon Street all have offices above them preventing light from falling into the station.  
Leave Liverool Steet alone. It is rather nice  
Geoff Burton  
No 6 N21 1BU

**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter  
**Date:** 08 December 2025 16:52:32

---

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Sir or Madam,

I am writing to submit a formal objection to the current planning application for the redevelopment of Liverpool Street Station.

While I recognise the need for improvements that enhance passenger experience and accessibility, I strongly oppose the proposal to construct a large office block above the station and adjoining historic buildings. My concerns relate specifically to the harm this element of the scheme would inflict on designated heritage assets and to the absence of any genuine public benefit that could justify such harm.

#### 1. Harm to Heritage Assets and Historic Character

Liverpool Street Station and the former Great Eastern Hotel are valued historic buildings whose architectural form, roofscape and townscape setting contribute significantly to the character of the wider conservation area. The scale, massing and visual dominance of the proposed office block would cause substantial harm to the aesthetic integrity of these assets. The development would overshadow, visually overwhelm, and materially alter the appearance of the station and the surrounding streetscape, thereby eroding its historic significance.

#### 2. Lack of Public Benefit / Failure of Heritage Balance Test

Under the National Planning Policy Framework and the statutory duties concerning designated heritage assets, any harm must be clearly outweighed by demonstrable public benefits. The office element of the scheme provides no direct or meaningful benefit to the public. It is fundamentally a private commercial venture designed to generate revenue, rather than an intervention required for transport improvement. The proposed office block therefore fails to meet the necessary threshold of public benefit to justify the level of harm it would cause.

#### 3. Overdevelopment of a Sensitive Site

The height and mass of the office block represent clear overdevelopment within a highly constrained and sensitive historic environment. Its bulk is incompatible with the surrounding scale and would introduce an intrusive visual form above a station whose landmark value derives partly from its low-rise profile and Victorian engineering.

#### 4. Insufficient Exploration of Less Harmful Alternatives

It is not evident that the applicant has meaningfully considered alternative design approaches that could achieve necessary station enhancements without erecting a large commercial block above the historic roofscape. Several independent architectural schemes have already demonstrated that capacity, accessibility, and passenger-flow improvements can be delivered without such intrusive vertical expansion. This underlines the fact that the proposed form of development is a choice, not a necessity.

## 5. Negative Impact on Views, Light and the Conservation Area

The proposed block would alter key views into and across the station; diminish natural light levels within the historic structures; and undermine the legibility and coherence of the conservation area's architectural rhythm. These impacts further compound the extent of heritage harm.

## 6. Dangerous Precedent for Air-Rights Development over Heritage Sites

Approval of such a scheme would set a precedent that could normalise inserting large-scale commercial structures above protected historic assets elsewhere. This would undermine long-standing conservation policy and weaken safeguards intended to preserve nationally significant architecture.

Given these concerns, I respectfully urge the planning authority to refuse the application in its current form. A more sensitive, heritage-led redevelopment is both possible and desirable—one that delivers the necessary passenger improvements without imposing a commercial overbuild that detracts from the historic fabric and character of the station.

Yours faithfully,

Michael P Greene

Address: Sqn Ldr MP Greene 213681V, NATO CAOC Torrejon, BFPO56, BF1 2AX, United Kingdom.

On Mon, 8 Dec 2025 at 16:15, Liverpool Street Station  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to Liverpool Street Station (25/00494/FULEIA).

Reply with your comments to [LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of

Kieran McCallum

Environment Department

City of London

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**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Revised plan  
**Date:** 09 December 2025 15:24:27

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You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

A massive **NO** to any scheme to redesign Liverpool St station (or whatever part of this historic corner of London)

for the simple gratification of an architect's overblown ego. **NO** again;

and thrice **NO**!

John W Morris  
17 Maltese Road  
Chelmsford CM1 2PB

**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** RE: (25/00494/FULEIA)  
**Date:** 16 December 2025 10:52:53  
**Attachments:** [image001.png](#)

THIS IS AN EXTERNAL EMAIL

R H Davies  
14 Marchant Close  
Molescroft  
East Yorkshire  
HU179GE

[Yahoo Mail: Search, organise, conquer](#)

On Tue, 16 Dec 2025 at 10:40, Liverpool Street Station  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**  
Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation | PO Box  
270 | London EC2P 2EJ |  
[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

---

**From:** Robert Huw Lloyd Davies [REDACTED]  
**Sent:** 08 December 2025 15:26

**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** (25/00494/FULEIA)

You don't often get email from [REDACTED] [Learn why this is important](#)

THIS IS AN EXTERNAL EMAIL

Dear Sirs

I remain opposed to the proposal. Lovely corner of London: Old Liverpool Street Station, Bishopsgate, Artillery Row, Brushfield St. etc. This will do nothing to enhance the area.

Robert H Davies. Beverley. East Yorkshire

[Yahoo Mail: Search, organise, conquer](#)

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**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Re: Objection to Revised Application Ref: 25/00494/FULEIA - Liverpool Street Station Redevelopment  
**Date:** 16 December 2025 11:31:35  
**Attachments:** [image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Davis,

Of course please find my full address below:

11 Paxton Close,  
Kew,  
Richmond,  
TW9 2AW

Best,

James

On Tue, 16 Dec 2025 at 10:39 am, Liverpool Street Station  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator

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Environment Department  
City of London Corporation

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270 | London EC2P 2EJ |

[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

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**From:** James [REDACTED] >  
**Sent:** 08 December 2025 15:19  
**To:** Liverpool Street Station <[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)>  
**Subject:** Objection to Revised Application Ref: 25/00494/FULEIA - Liverpool Street Station Redevelopment

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Sir/Madam,

I strongly object to the proposed redevelopment of Liverpool Street Station, including the additional information submitted.

The revised proposal would still result in substantial harm to the Grade II-listed station, particularly through demolition of the station concourse roof and structural columns. This loss would irreversibly damage the architectural and historic character of the building and compromise the integrity of the surviving 19th-century train sheds. The insertion of new escalators, lifts, retail units and elevated concourses within these sheds would erode the site's heritage value and spatial experience.

The proposal also introduces an over-station development reaching 97.67m AOD, including commercial space, bars, restaurants, and an auditorium. The 20-storey tower would dominate the Grade II-listed Great Eastern Hotel\*, the last continually operating Victorian railway hotel in the City, causing significant harm to its historic setting and character.

The scheme would also inflict major harm on the Bishopsgate Conservation Area, which is defined by low- to mid-rise buildings. The proposed scale and massing are in direct conflict with the City of London's 2015 Local Plan, which opposes tall buildings in Conservation Areas and within the protected St Paul's Heights Zone.

Furthermore, the cumulative impact on the setting of numerous listed and unlisted heritage assets including several Grade I-listed Wren churches and St Botolph's Church has not been adequately mitigated.

Per NPPF Paragraph 213, "substantial harm to or loss of: a) grade II listed buildings... should be exceptional." The harm here is both substantial and unjustified by any public benefit.

I respectfully urge the City of London Corporation to refuse this application.

Kind regards,

James Oddy

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**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** RE-CONSULTATION - Site Comprising Liverpool Street Station, 50 Liverpool Street, Sun Street Passage, 40 Liverpool Street (in Part), Hope Square, And Bishopsgate Plaza London EC2M 7PY  
**Date:** 16 December 2025 21:25:36

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You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Mr McCallum

Thank you for reconsulting me on the proposed works to Liverpool Street Station. Given the lack of change in the detailing, massing, or scale of the proposed application - the changes are limited to minor efficiency amendments and the weighting of values and harms, which were themselves poorly assessed from the outset - I have no further comments to make, and reiterate my previous objections.

Yours sincerely

Richard Barraclough  
112-113 Ferry Lane  
Aston, Henley on Thames  
RG9 3DH



**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Re: name & address  
**Date:** 18 December 2025 19:09:01  
**Attachments:** [image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

sorry I never realised its Philip Lancer 35 Tunstall Avenue Hainault IG6 3EG.

On Thursday 18 December 2025 at 16:34:24 GMT, Liverpool Street Station <liverpoolstreetstation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



Environment Department  
City of London Corporation

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270 | London EC2P 2EJ |

[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

**From:** Philip Lancer <[REDACTED]>

**Sent:** 10 December 2025 10:46

**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>

**Subject:**

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

I hope it all going to be assessable when finished

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**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Re: proposed changes.  
**Date:** 18 December 2025 20:11:58  
**Attachments:** [image001.png](#)

---

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Mrs Rosalind Hodgkins Flat 1 9 Pier Terrace. Lowestoft. Suffolk NR33 OAB E Mail  
[REDACTED] thank you for now hopefully accepting my comments and for contacting on a subject which is of interest to me and being able to put forward the views on it from the many many Pensioners I represent in the Anglian Region who travel to and from Liverpool Street

---

**From:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Sent:** 18 December 2025 16:35  
**To:** Ros Hodgkins [REDACTED]; Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** RE: proposed changes.

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**  
Planning Administrator



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City of London Corporation

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**From:** Ros Hodgkins [REDACTED] >  
**Sent:** 11 December 2025 13:19  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** proposed changes.

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Team,

I have read with much interest your report on the proposed improvements for this iconic railway station. Just last Thursday and this Monday, we travelled through it on our way to Uxbridge, West London, where I originate from and have family. I must say, the waiting room has become a valuable and comfortable space for us, especially with its convenient access to our trains.

However, we do face some challenges, particularly when it comes to carrying our suitcases and travel bags up and down the stairs to connect to the Metropolitan Tube line to Uxbridge. The stairs are quite awkward to manoeuvre, and I often find myself asking for help from a kind fellow traveller, or we end up taking one bag at a time. A small lift or a small escalator would greatly alleviate this struggle, and I know we are not alone in this. Families with prams, buggies, and those with walking sticks also find the stairs difficult. If you could address this issue, it would be a tremendous relief for myself and many others.

I also wanted to mention the new message board for trains. While we are quite adept at following the trains across the board, a clearer display would certainly be an improvement.

I understand the planning dilemma that comes with modernising an old station while retaining its historical features. It is a delicate balance, but I believe these changes would enhance the experience for all travellers.

Thank you for considering my suggestions. As Vice Chair of the Anglian Region Pensioners Convention, I can assure you that these improvements would be very relevant and beneficial to our members.

Yours sincerely,

Rosalind Hodgkins

Vice Chair of the Anglian Region Pensioners Convention

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**From:** [REDACTED]  
**To:** [Liverpool Street Station](#)  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter  
**Date:** 18 December 2025 21:37:04  
**Attachments:** [image001.png](#)  
[image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Miss D Davies  
Flat 8 Abinger House  
Pilgrimage Street  
Off Great Dover Street  
London  
SE1 4XU

It's not just a change for now it's a change forever...

On Thu, 18 Dec 2025, 16:31 Liverpool Street Station,  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation | PO Box  
270 | London EC2P 2EJ |

[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

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**From:** Diane Davies [REDACTED]  
**Sent:** 08 December 2025 16:15  
**To:** Liverpool Street Station <[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)>  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Mr. McCallum and Planning Administration Team,

I am writing to provide my comments on the re-consultation for the phased development at Liverpool Street Station, application reference **25/00494/FULEIA**.

I wish to express my **strong support** for this application. I believe the proposed phased development is essential for modernizing the station and improving connectivity in the City of London.

## Key Reasons for Support:

- **Improved Passenger Experience:** The proposed works, including new lifts, escalators, increased operational space, and new concourse levels, are vital for improving accessibility and relieving congestion at this major transport hub.
- **Enhanced Public Access:** The creation of new station entrances and public walkways, particularly from Exchange Square and into Hope Square and Bishopsgate Square, will significantly improve pedestrian flow and public realm.
- **Necessary Modernization:** The phased approach is a practical way to deliver the necessary infrastructure improvements while aiming to minimize disruption to existing rail services.
- **Vibrant Mixed-Use:** The integration of commercial space (Class E) and public amenities, such as the auditorium and public amenity terrace, will create a dynamic, multi-functional destination.

I am confident that this comprehensive phased plan will deliver substantial long-term

benefits to commuters, residents, and the City of London as a whole.

Please ensure that during the development, adequate measures are taken to protect the setting of nearby heritage assets and to manage construction disruption effectively.

Thank you for considering my representation.

Kind Regards,

On Mon, 8 Dec 2025 at 15:13, [Liverpool Street Station](mailto:LiverpoolStreetStation@cityoflondon.gov.uk) <[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to Liverpool Street Station (25/00494/FULEIA).

Reply with your comments to [LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of

Kieran McCallum

Environment Department

City of London

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| It's not just a change for now it's a change forever...

Dear Sirs,

I write with horror regarding the proposed development at Liverpool Station by Network Rail.

Having looked at the planed design I see that it will not do anything to bring the City of London to Net Zero by 2040

This a GROSS overdevelopment of the site and a further destruction of my beloved City.

The development appears to depend on the future of property prices going ups. As there are SO many empty offices in the city and everyone now needing a laptop to do their work this increase cannot be supposed and speculated on.

The airy sense of space will be lost by the enclosure and the whole building is visually HORRID .

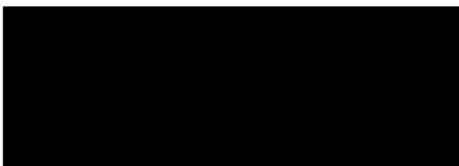
Which all these facts in ming I would like you to reject the full planning when It comes in and keep me fully updated on any changes which are presented ,

Thank you for your assistance ,

Yours faithfully ,

Paul Dyson

PAUL DYSON DESIGN  
85 Blackfriars Road  
London SE1 8HA



**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: Comment on Planning Application 25/00494/FULEIA  
**Date:** 31 December 2025 20:15:53  
**Attachments:** [image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

My full address is: 142 Barnsbury Road, Islington, London N1 0ER

James Dunnett

On Thursday, 18 December 2025 at 16:33:56 GMT, Liverpool Street Station  
<liverpoolstreetstation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



Environment Department  
City of London Corporation

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270|London EC2P 2EJ|

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**From:** James Dunnett <[REDACTED]>  
**Sent:** 09 December 2025 14:57  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** Comment on Planning Application 25/00494/FULEIA

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

I am sorry to have to say it, but this is a thoroughly tasteless application in terms of design. The vaulted entrances have no design relationship to the rest of the proposed building, and it is ridiculous to face in brickwork the free forms of the cantilevered canopy over the southern entrance - nothing could be less suited to brick. The L-shaped plan-form of the proposed office building is without architectural coherence, especially with its irregular stepped corners, and in scale it will reduce to insignificance the listed Midland Hotel and block views of it from the south west. I suppose it is just about possible that a straight rectangular office block could be built over the station concourse running east-west along the north side of the Midland Hotel, leaving the hotel open on its west side. But it would be regrettable from the point of view of station users who would lose natural light. This is a misguided application.

James Dunnett  
[REDACTED]

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**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: Regeneration and refurbishment of Liverpool Street Station  
**Date:** 19 December 2025 19:11:30  
**Attachments:** [image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Hi

Sorry, there didn't appear to be a space for my address, but it's 30 Cedar Road, Chadwell st Mary, Grays, Essex, RM16 4SX

On Thursday, 18 December 2025 at 16:32:33 GMT, Liverpool Street Station <liverpoolstreetstation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



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**From:** Glenna Medhurst [REDACTED]  
**Sent:** 08 December 2025 18:36  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>

**Subject:** Regeneration and refurbishment of Liverpool Street Station

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Hello

Firstly, thanks for allowing me to be one of the many people to give an opinion on the above.

As a semi frequent user of the station, I welcome the plans to improve the station. There aren't enough lifts from the upper concourse to the underground and they are small, so sometimes a wait can be as long as 5 minutes to get space in one. I don't do escalators anymore and am slow on stairs because I have arthritis in my feet and hands, I also have mild balance issues, which leaves me fearful of falling and making a complete fool of myself and /or requiring medical attention.

I have looked at the map in detail of the particular areas earmarked for works and commented from my own point of view as as a passenger and visitor of the station and the surrounding area.

Hope Square is always busy, due to it's proximity to McDonalds, which is take away only. People congregate outside and I avoid it if at all possible. With regard to the demolition of 50 Liverpool Street, I can see why that would be earmarked, being workspaces and maybe not being used to full capacity, it might not be making enough money to be profitable.

Sun Street Passage, where the buses pull in, is fine as it is, but I guess it has to be part of the integral works on order for the programme to be complete.

The Bishopsgate entrance is always crowded during the evening Peak, people rushing for their train with no care for anyone else, people waiting for buses, people drinking in the bar, sometimes spill out of the garden and stand by the wall, especially in the warmer weather.

The lower concourse is nothing short of a nightmare during the evening peak. People just barge like bulls in china shops, with little or no thought for anyone with mobility issues.

The toilets are accessible by escalator or stairs, not very good for anyone with mobility or sight issues.

I've been into the basement, as I used to work for Travellers Fare station catering, and the station stores was down in the basement, not the nicest, or cleanest of places, with lots of different departments and people traversing it on a daily basis it was busy.

I would like to view the plans, or read in a bit more detail the plans, to make a more informed decision on the whole project, because overall I think it's a good looking project. If it brings more people and in turn, more revenue, then that surely is a good thing. Obviously, not everybody will agree on the whole thing, but if the majority agree then it will make for a thriving, bustling area to spend time, because at the moment the majority of people just pass through.

I've not commented on 40 Liverpool St or Bishopsgate Plaza, because I don't know how they fit in to the plans, but with more information I can make a better, more informed decision on the whole project.

Once again thanks for allowing me to have a say on the project.

Yours

Glenna Medhurst

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**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter  
**Date:** 20 December 2025 00:18:42  
**Attachments:** [image001.png](#)

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Davis,

My address is Warren Cottage, Bristol Road, Wells, Somerset, BA5 3AA.

Kind regards,  
Thomas

On 18 Dec 2025, at 16:33, Liverpool Street Station  
<LiverpoolStreetStation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**  
Planning Administrator

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<image001.png>

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**From:** Tom Sheppard <[REDACTED]>  
**Sent:** 09 December 2025 12:16  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Dear Sir / Madam,

I am writing to maintain my objection to the proposals following submission of the latest plans. The proposals will result in the loss of historic fabric which contributes towards the character of Liverpool Street. The scale and massing of the extensions will also overwhelm the historic station.

Regards,  
Thomas Sheppard

On 8 Dec 2025, at 15:13, Liverpool Street Station  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to Liverpool Street Station (25/00494/FULEIA).  
Reply with your comments to  
[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of  
Kieran McCallum  
Environment Department  
City of London

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<http://www.cityoflondon.gov.uk>

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter  
**Date:** 24 December 2025 13:54:30  
**Attachments:** [REDACTED]

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Hello David

Yes please - an anonymous comment please

[REDACTED]  
[REDACTED]  
Merry Christmas  
[REDACTED]

On Thu, 18 Dec 2025 at 16:31, Liverpool Street Station  
<[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator

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**From:** [REDACTED]  
**Sent:** 08 December 2025 15:51  
**To:** Liverpool Street Station <[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)>  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Many thanks

My thoughts are that Liverpool Street station is of national historical interest and should therefore be preserved and protected as such.

No development should take place that could hinder that heritage.

Once lost, never gained again, and that would be an awful shame for a nation which has such a rich history.

Many thanks

[REDACTED]

On Mon, 8 Dec 2025 at 15:14, Liverpool Street Station <[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)> wrote:

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to Liverpool Street Station (25/00494/FULEIA).

Reply with your comments to [LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of

Kieran McCallum

Environment Department

City of London

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**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: Enfield Transport User Group Objection to 25/00494/FULEIA Liverpool Street Station proposal - Re-Consultation Letter  
**Date:** 19 December 2025 17:11:55  
**Attachments:** image001.png  
image002.png

You don't often get email from [REDACTED]  
**THIS IS AN EXTERNAL EMAIL**

Details are as follows please ensure that the attachments are on the public register also.

Philip Ridley  
190 Galliard Road  
London N9 7DJ  
[REDACTED]

On 19 December 2025 at 15:55, Liverpool Street Station <liverpoolstreetstation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



**From:** Philip Ridley [REDACTED]  
**Sent:** 08 December 2025 22:58  
**To:** Liverpool Street Station <liverpoolstreetstation@cityoflondon.gov.uk>  
**Cc:** Joshi, Shrawan [REDACTED]; [REDACTED]; Connor McNeill [REDACTED]; [REDACTED]; Guy Newton [REDACTED]; Marie Clements [REDACTED]  
**Subject:** Enfield Transport User Group Objection to 25/00494/FULEIA Liverpool Street Station proposal - Re-Consultation Letter

You don't often get email from [REDACTED]  
**THIS IS AN EXTERNAL EMAIL**

Dear Mr McCallum,

I submit this formal objection to planning application 25/00494/FULEIA for the redevelopment of Liverpool Street Station. The proposal, which includes modifications to the station's concourse, introduction of new structural elements such as columns and gate lines, and associated over-station development, would cause less than substantial harm to the significance of the Grade II Listed Liverpool Street Station and its setting, including the architectural and historic interest of the Edwardian Barlow Shed and the retained elements of the listed Braithwaite Viaduct within the Bishopsgate Goods Yard. This harm arises from potential obstructions to future capacity enhancements, which are essential for addressing existing bottlenecks and supporting regional rail growth.

The public benefits advanced by the applicant—primarily improved immediate accessibility through additional ticket halls, escalators, and operational space—do not sufficiently outweigh this harm under the balancing test established in paragraph 202 of the National Planning Policy Framework (NPPF, December 2024 edition). In the absence of delivery or passive provision for an eight-track approach to the station and additional platforms (increasing the current 18 to 23), the scheme fails to demonstrate long-term strategic value commensurate with the identified heritage impacts. Such provisions are necessary to resolve the Bethnal Green Junction bottleneck, enable "turn up and go" London Overground services to Enfield Town and Cheshunt, and provide additional capacity for the West Anglia Main Line (WAML) and East Anglia routes, which are presently at full capacity. WAML quad-tracking would double train paths to northeast London and the London-Stansted-Cambridge corridor, while East Anglia services would benefit from enhanced platforming to accommodate longer trains and eliminate conflicting movements.

This objection is informed by historical Network Rail (NR) planning documents obtained via Freedom of Information request FOI201701092, which evidence significant prior investments in safeguarding these enhancements. For instance, a 2005 draft paper (Disclosure Document 7) outlines a £25–30 million scheme for eight-tracking through the Bishopsgate Goods Yard, involving partial demolition of the Braithwaite Viaduct and coordination with its restoration to preserve listed elements. This aligns with passive provisions already incorporated at considerable expense, including a wider mezzanine over the tracks during the 1980s Broadgate Phases 12 and 13 (£2 million for a 22-platform layout plus extra tracks, per Disclosure Document 6, 2010 email) and a reinforced earth embankment at Bridge GE19 (East London Line Extension) to facilitate two additional tracks (Disclosure Documents 4 and 6, 2008 and 2010 emails). A plan illustrating the eight-track footprint is attached for reference. NR's 2017 FOI response (Disclosure Document response.pdf) confirms these materials, though dated, reflect ongoing strategic considerations, with a pivot toward Crossrail 2 underscoring the need for non-prejudicial development.

Further, the Anglia Long Term Planning Process (LTPP) Route Study Pre-GRIP Feasibility Report (Annex 2, 5 August 2014) identifies opportunities to expand platforms from 18 to 23 without additional land take or extension of the existing shed. Option 2 proposes three new platforms between Platforms 10 and 11 (totaling 21 platforms), with Platforms 1, 2, 21, and 22 requiring extensions into the ground-floor concourse via an extended mezzanine to support 12-car operations. The report explicitly warns (p. 17) that new columns or structures in the concourse could obstruct these, recommending revisions to future-proof the layout. The full report is attached.

These enhancements are not merely aspirational but align with national, regional, and local policy imperatives. Under NPPF Chapter 16 (paragraphs 200–221), heritage assets must be conserved proportionately to their significance, with less than substantial harm justified only by public benefits that secure optimum viable use—here, rail capacity to support economic growth without compromising the station's historic fabric. The London Plan 2021 reinforces this through Policy T3 (Transport Capacity, Connectivity, and Safeguarding), mandating safeguards for future rail infrastructure, and Policy HC1 (Heritage Conservation and Growth), requiring no net loss of significance and enhancements via sympathetic design. Policy D9 (Tall Buildings) presumes against over-station development that harms transport viability or heritage settings, demanding robust Heritage Impact Assessments.

At the local level, the City of London Corporation's City Plan 2040 (Strategic Policy S9: Transport and Servicing; DM10.1: Conservation of the Historic Environment) requires coordination with NR for station upgrades and land safeguarding to minimize disruption while conserving assets. The Transport Strategy 2024 emphasizes future-proofing interchanges like Liverpool Street for 20% patronage growth by 2040. Complementing these, the Mayor's Transport Strategy (2018, updated in the *Delivering the Mayor's Transport Strategy 2024/25* progress report) advances Goals 1 (good public transport experience) and 2 (enhancing connectivity) via Policy 13 (Public Transport Capacity), which compels boroughs and developers to protect alignments for expansions such as WAML quad-tracking and Crossrail 2. The proposal's failure to integrate these safeguards contravenes all frameworks, as amendments (e.g., new Ticket Hall B and wayfinding improvements) address only short-term flows, not strategic needs.

The applicant has, in my view, misled the City of London by understating the necessity of these upgrades, despite pre-application discussions with Sellar yielding no evidence of passive provision for the Annex 2 platforms. NR should be required to take all reasonable steps to increase capacity, including passive measures such as column-free concourses and Goods Yard coordination. Without an independent expert report from structural and transport engineers verifying non-prejudice to these elements, the scheme risks a net negative public benefit, failing the NPPF's significant harm test and rendering benefits inadequate against heritage harm.

This objection would be resolved by conditioning approval on: (i) passive provisions for the eight-track formation and additional platforms, integrated with Braithwaite Viaduct restoration; (ii) the aforementioned engineering report; and (iii) NR endorsement. I request confirmation that this objection and attachments (FOI disclosures, Annex 2 report, and eight-track plan) are registered on the planning portal, together with details of the committee determination date. I am available to provide further evidence or attend hearings.

Please ensure that the attached documents are added to the planning register and please send me an invitation to make representation to the Planning Committee.

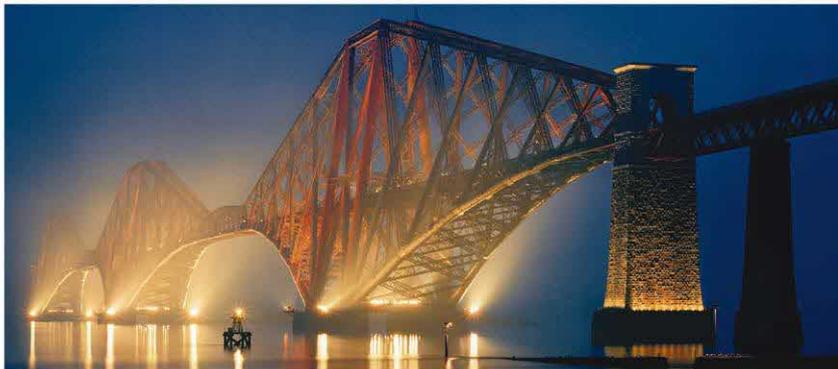
Yours sincerely,

Philip Ridley MSc, PGDip (Town Planning) Enfield Transport User Group Committee Member



*Infrastructure Projects*

*Southern*



**Anglia LTPP Route Study  
Liverpool St Station – Train  
Capacity  
Pre-GRIP Feasibility Report**

5<sup>th</sup> August 2014

Issue 1.1



## Contents

|           |  |           |
|-----------|--|-----------|
| <b>1.</b> | <b>Executive Summary .....</b>                                     | <b>1</b>  |
| <b>2.</b> | <b>Background .....</b>  | <b>3</b>  |
| 2.1       | Site Location and Extent of Study Area .....                       | 3         |
| <b>3.</b> | <b>Methodology.....</b>  | <b>5</b>  |
| <b>4.</b> | <b>Constraints .....</b>   | <b>6</b>  |
| 4.1       | Existing Station Overview .....                                    | 6         |
| 4.2       | Flooding Risk .....  | 8         |
| 4.3       | Buried/Other Services.....   | 8         |
| 4.4       | Land ownership/Development .....                                   | 9         |
| 4.5       | Environmental/Heritage considerations .....                        | 10        |
| 4.6       | Ground Conditions .....  | 12        |
| 4.7       | Opportunities .....  | 12        |
| <b>5.</b> | <b>Options for Increasing Train Capacity .....</b>                 | <b>14</b> |
|           | Options Overview .....   | 14        |
| 5.1       | Option 1, Platform 0 .....   | 15        |
| 5.2       | Option 2, New Platforms Between 10 and 11 .....                    | 16        |
| 5.3       | Option 3, Remodel Station Platforms 1 – 10 .....                   | 21        |
| 5.4       | Option 4, Construct New Shoreditch Terminus Station .....          | 23        |
| <b>6</b>  | <b>Construction Considerations.....</b>                            | <b>27</b> |
| 6.1       | Construction Sites.....  | 27        |
| 6.2       | Construction Methodology .....                                     | 27        |
| 6.3       | Construction Programme .....                                       | 28        |
| 6.4       | Electrical System .....  | 28        |
| 6.4.2     | Overhead Line Electrification .....                                | 30        |
| 6.5       | Signalling .....   | 32        |
| 6.6       | Permanent Way .....  | 35        |
| 6.7       | General Items .....  | 38        |
| 6.7.1     | Network Change .....   | 38        |
| 6.7.2     | Impact upon existing maintenance arrangements .....                | 38        |
| 6.7.3     | Operational restrictions (gradients, gauge, RA, line speeds) ..... | 38        |
| 6.7.4     | Lead RAM buy-in? Providing supporting comments.....                | 38        |
| 6.7.5     | Considerations and assessment of impact on performance .....       | 38        |
| 6.7.6     | Timescales.....  | 38        |
| <b>7</b>  | <b>Risks and Assumptions .....</b>                                 | <b>39</b> |
| <b>8</b>  | <b>Conclusions and Recommendations .....</b>                       | <b>40</b> |
| 8.1       | Costs.....   | 40        |
| 8.2       | Technical Feasibility .....  | 40        |

|   |    |
|---|----|
| 8.3 Network Operations .....                        | 40 |
| 8.4 Economic Viability.....                         | 40 |
| Appendix A – References .....                       | 41 |
| Appendix B – Drawings related to Options 1 & 2..... | 42 |
| Appendix C – Drawings related to Options 3 & 4..... | 43 |

Version Control

| Date                        | Version | Originator | Checker    | Comments                                  |
|-----------------------------|---------|------------|------------|---|
| 13 June 2014                | 0.1     | [Redacted] | [Redacted] | Draft first issue with no cost estimation |
| 5 <sup>th</sup> August 2014 | 1.1     | [Redacted] | [Redacted] | Updated to Include Cost Estimates         |
|                             |         |            |            |   |
|                             |         |            |            |   |

## Abbreviations

|      |   |
|------|---|
| AC   | Alternating Current                           |
| AFC  | Anticipated final cost                        |
| DC   | Direct Current                                |
| DN   | Down  |
| ELR  | Engineer's Line Reference                     |
| GRIP | Governance of Railway Infrastructure Projects |
| IECC | Integrated Electronic Control Centre          |
| km   | Kilometre                                     |
| kV   | Kilo Volts                                    |
| LTPP | Long Term Planning Process                    |
| LVAC | Low Voltage Air Conditioning                  |
| m    | metres  |
| mph  | miles per hour                                |
| no.  | number  |
| NR   | Network Rail                                  |
| NW   | Northwest                                     |
| OLE  | Overhead Line Equipment                       |
| RAM  | Route Asset Manager                           |
| RCM  | Remote Condition Monitoring                   |
| ROC  | Railway Operations Centre                     |
| S&C  | Switch and Crossing                           |
| SSI  | Solid State Interlocking                      |
| SSSI | Site of Special Scientific Interest           |
| SW   | Southwest                                     |
| TP   | Track Parallelling                            |
| UPS  | Uninterruptible Power Source                  |
| yds  | yards   |

## 1. Executive Summary

Network Rail Group Strategy has remitted IP Southern to undertake a pre-GRIP study to inform the feasibility of constructing additional platforms at Liverpool Street Station in London by revisiting the previous studies carried out by Mott MacDonald under a British Airports Authority (BAA) – Stansted Airport G2 development and by WS Atkins for the Broadgate Phase 12/13 Feasibility Study.

The remit states that any works planned at Liverpool Street station within Control Period 5 are to be assumed to have been completed. The assumed works include the lengthening of platforms 16 to 18 to accommodate 10 car train lengths and the remodelling of Bow Junction near Stratford as part of the Crossrail 1 project.

The original options proposed for the additional platforms comprised the following:-

- Platform 0 located within the shopping area to the west side of the Liverpool Street Station. The proposed platform length allowed for 157m long trains and as a consequence the length of platform 1 will be shortened from 242m to 157m in length (Option 1)
- New platforms between the existing platforms 10 and 11. The proposal comprised the construction of 3 additional platforms with a single platform adjacent to platform 10 and two new platforms within the taxi rank area. 253m long platforms were proposed under this solution (Option 2).
- Remodel the existing platforms 1-10 within the western most train shed to allow provision of an additional 3 no. 12 car length platforms or an additional 2 no. 12 car and 2 no. 10 car platforms (Option 3).
- An option that has not been considered as part of the previous works was the creation of an additional terminus station to the north of Liverpool Street within the area of Network Rail owned land adjacent to Shoreditch High Street station on the East London Line (Option 4).

This report is to carry out a high level review of the potential options for the creation of additional platform capacity at London Liverpool Street Station and to produce a pre-GRIP feasibility Study Remit to inform the Long Term Planning Process (LTPP) as part of the Anglia route study. The proposals considered within this GRIP 0 report largely builds upon the previous work undertaken by Mott MacDonald and WS Atkins and with additional options suggested in which additional capacity can be created at and adjacent to the existing station terminus.

Platform lengthening into the existing station concourse area in conjunction with the proposed additional platforms should be considered as this allows the junctions at the platform ends to be reconfigured to create longer platforms through the establishment of a larger mezzanine floor area above the existing concourse.

An alternative arrangement to providing the additional platform capacity would be through the creation of a new terminus station to the north of Liverpool Street within the area of the former Bishops gate goods yard, adjacent to the new East London Line Shoreditch High Street Station.

The programme duration will be identified during the development phase when an option has been chosen to be progressed; however this assumes that all necessary consents, approvals and land purchases are completed without delay. It should be noted that similar schemes around the country have experienced delay due to land and consents issues.

## 2. Background

Contained within the Department for Transport's High Level Output Statement is the requirement to deliver additional passenger capacity into Liverpool Street Station. The Route Utilisation Strategy issued in July 2011 [Ref 1] identifies the need to enhance station capacity at Liverpool Street to cater for the increasing usage.

Liverpool Street is one of the busiest railway stations in the United Kingdom and is the third busiest in London after Waterloo and Victoria. Liverpool Street Station is a central London railway terminus that also connects to the London Underground station in the north-eastern corner of the City of London. Figure 2.1 is a schematic diagram that shows the station as a terminus for the West Anglia Main Line (WAML) to Cambridge; the Great Eastern Main Line (GEML) to Norwich; West Anglia inner and outer suburban services, Great Eastern inner suburban stopping services on the Shenfield route and a mix of outer suburban, long distance and regional services centred on the GEML including the Stansted Express, a fast link to London Stansted Airport.

To facilitate the operation of additional services in peak hours, it is considered necessary that this capacity constraint be addressed through the construction of additional platforms within the terminus.

### 2.1 Site Location and Extent of Study Area

Liverpool Street Station forms the London Terminus of the Great Eastern Mainline within the Spitalfields area of London City. The study area extends from the station concourse behind the ends of the platform buffer stops to approximately 0m 1364yds at Bethnal Green West Junction. The engineers line reference (ELR) within the area is LTN1 (London Liverpool Street to Norwich via Ipswich).

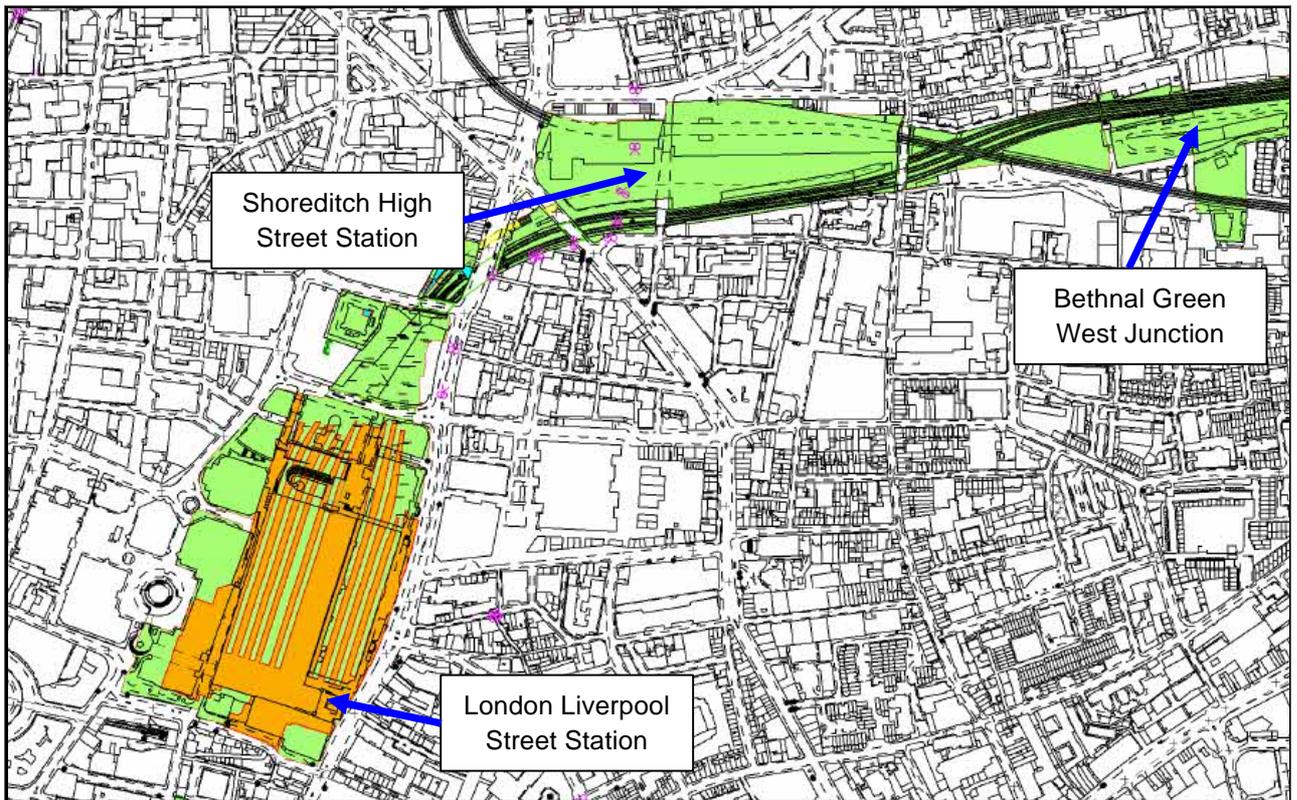


Figure 2.1 Extent of Study Area, Liverpool Street to Bethnal Green West Junction

### 3. Methodology

This study has been based on a desk study and a site visit (undertaken on the 29<sup>th</sup> April 2014) in order to establish an understanding of the location and identify the existing layout of the station terminus and the surrounding area. Prior to the site visit, a number of potential options were considered and the aspects discussed in principal at an engineering workshop, held on the 23<sup>rd</sup> April 2014 between the following Network Rail Design Groups:

| Design Discipline                      | Workshop Attendee        | Title                                    |
|--|--------------------------|--|
| Civils Design Group                    | [REDACTED]<br>[REDACTED] | Senior Design Manager<br>Design Engineer |
| Signalling Design Group                | [REDACTED]               | Signalling Design Manager                |
| Track Design Group                     | [REDACTED]               | Senior Design Engineer<br>(Track)        |
| Electrification and Plant Design Group | [REDACTED]               | Senior Design Engineer                   |

Ordnance Survey electronic map tiles have been examined and utilised at a scale of 1:1250 covering the study area to show the proposed options available.

Local planning documents have been reviewed with regards to the Bishopsgate Goods Yard option. The 'Bishopsgate Goods Yard, Interim Planning Guidance 2010' provides a detailed criteria in which the area is proposed for redevelopment through the creation of public open space and property development.

Previous capacity enhancement studies have been reviewed to provide a base for the available options and/or amended where additional benefits may be available. The previous capacity works were undertaken by Mott MacDonald under a British Airports Authority (BAA) – Stansted Airport G2 development and by WS Atkins for the Broadgate Phase 12/13 Feasibility Study.

For the purpose of the additional platforms to cater for 12 car train lengths, it is assumed that a train car length will be 20m long when used in a 12 car configuration, therefore the required platform length to be provided will be approximately 253m.

It is noted that the following infrastructure enhancements will have taken place by the end of CP5 and are therefore excluded from this engineering report:-

- Bow Junction remodelling completed.
- Platform extension to platforms 16 to 18 for Crossrail 1 to provide 10 car platform lengths.

Section 4 details the key issues and constraints associated with the train capacity feasibility works. It should be acknowledged that the following aspects are excluded from this report.

- Aspects of economic modelling and business case evaluations, as it will be the subject of further analysis by Network Strategy & Planning and the economic Analysis Team.
- Train modelling and performance to reflect the proposed track layout and signalling arrangements, these will be produced by the NR Capability Analysis Team.

## 4. Constraints

This section includes key constraints which have been considered when developing feasible options for providing additional train capacity at London Liverpool Street Station.

### 4.1 Existing Station Overview

The existing Liverpool Street Station is to remain operational throughout the construction of the additional platforms and is the prime consideration for the design of the additional platforms. An overview of the existing station information is listed below based on the information provided by NR Asset Management Service and from external sources.

- It was constructed in 1874 as a replacement for the Great Eastern Railway's Bishopgate station.
- The station was modernised and rationalised between 1985 and 1992.
- The track within the station largely comprises ballasted track, with slab track present to platforms 7 and 8.
- The gradient of the track within the terminus platforms comprises a fall of 1:300 away from the buffer stops in a northerly direction.
- At approximately 0m 1100yds the track gradient rises on a 1:70 gradient to Bethnal green station at mileage 1m 0110yds (approx).
- The tracks alignments are fully electrified with 25kV overhead line electrification.
- The permissible line speeds in the station area is 15mph to all running lines which rises to 30mph beyond 0m 0550yds. These are shown in Figures 4.1 and 4.2 which are extracted from the National Electronic Sectional Appendix (NESA).
- The current traffic types shall be as follows:
  - Class 379 "Electrostar"
  - Class 90 with Mk3 carriages and DVT
  - EMU classes 315, 317, 321, 357 and 360.
- Provision for future rolling stock is to consider:
  - Class 378 (TfL Trains)
  - Class 345 (Crossrail Trains)

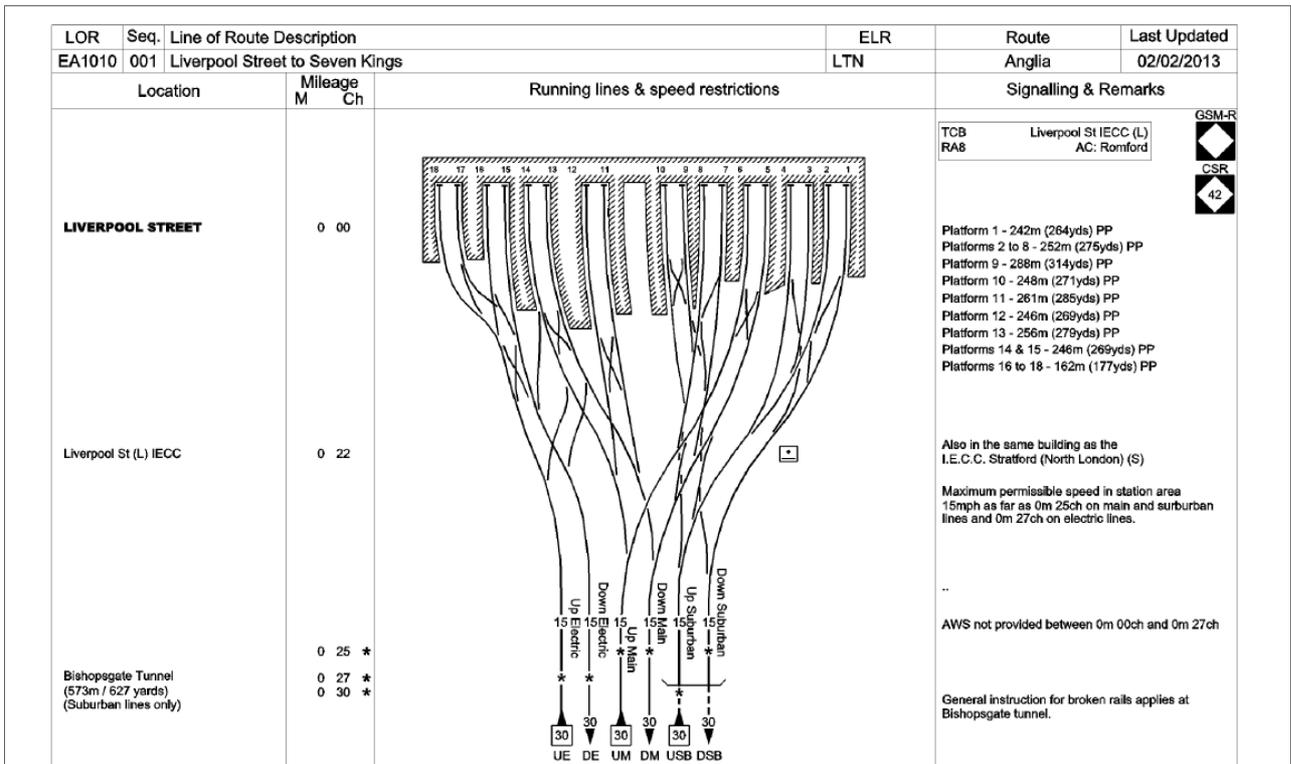


Figure 4.1 Existing line speeds at Liverpool Street Station to Bethnal Green West Junction

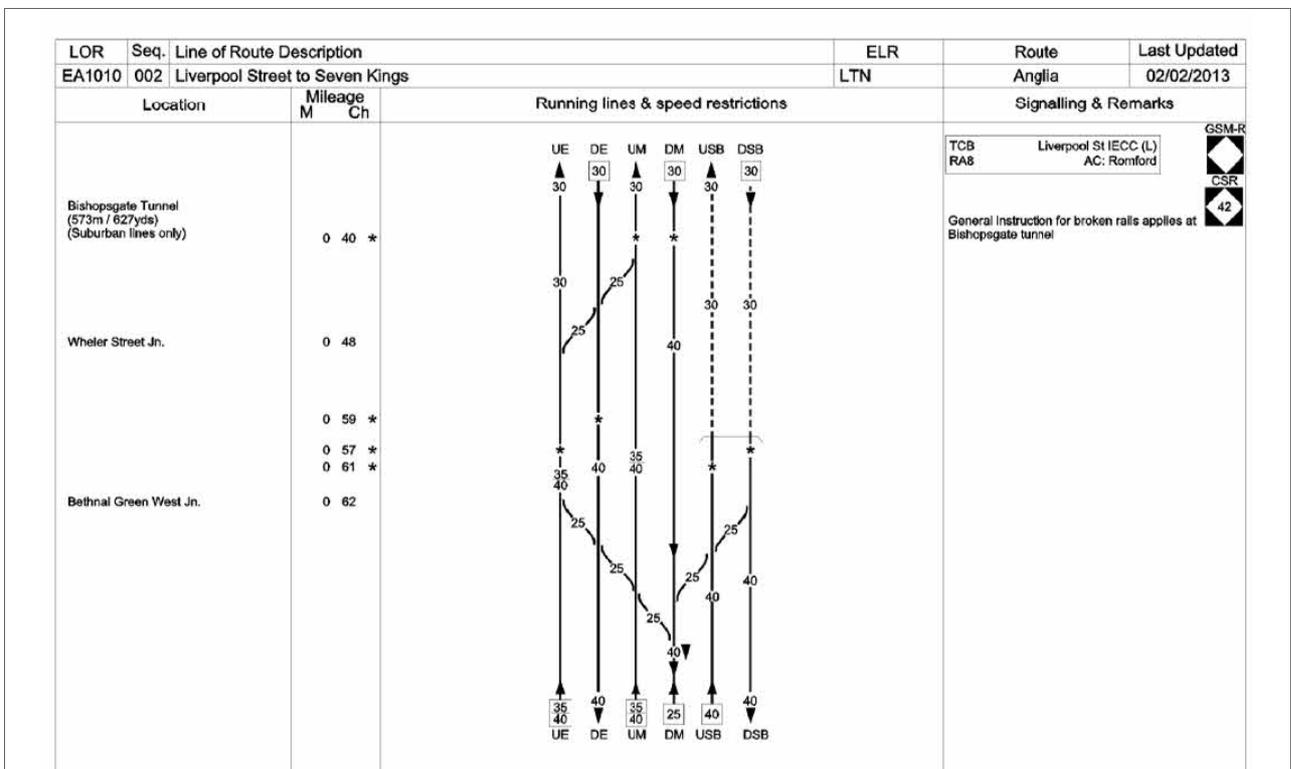


Figure 4.2 Existing line speeds at Liverpool Street Station to Bethnal Green West Junction

## 4.2 Flooding Risk

National Planning Policy Guidance provides guidelines on development and flood risk. Areas assessed as having between a 1 in 100-year and 1 in 1000-year annual probability of river flooding are classified as being in Zone 2. Areas assessed as having a 1 in 100-year or greater annual probability of river flooding are classified as being in Zone 3.

The Flood Map, as shown in Figure 4.3, available from the Environment Agency provides an indicative portrayal of flood risk envelopes with return periods of 1 in 100-years. The development zone from Liverpool Street station and Bethnal Green West Junction does not fall into either flood zone 2 or 3.



Figure 4.3 Flood Map retrieved from Environment Agency website

## 4.3 Buried/Other Services

Applications for buried services have not been made to the Buried services team as part of the pre-grip feasibility study works because it is considered safe to assume that all services within the study area will be either under the ownership of Network Rail or be largely unaffected by the platform enhancement works.

The presence of services around the Shoreditch High Street station are likely to be within the existing road carriageways and are assumed to have minimal impact upon the option at this stage of the scheme development.

#### 4.4 Land ownership/Development

Figure 2.1 shows that the study area is within the Network Rail Boundary with Figures 4.4 and 4.5 showing that the proposals to Liverpool Street Station and Shoreditch High Street are within areas under Network Rail ownership.



Figure 4.4 Land use of Liverpool Street Station from GI Portal



Figure 4.5 Land use of Shoreditch High Street Station from GI Portal

On the basis that Parliamentary powers exist, it may be necessary to review the Compulsory Purchase Order issues associated with the Shoreditch High Street option because it is very likely that some land purchase will be required for the development. An early understanding of whether the land is purchased through Compulsory Purchase Orders or by other means should be pursued, which is understood that it can be achieved through discussions with NR Property Managers.

#### 4.5 Environmental/Heritage considerations

Liverpool Street and Shoreditch High Street stations do fall within conservation areas however it is understood that there are no environmental protection measures associated with the sites.

A number of elements to the local buildings in the study area comprise listed building status which may impact upon the capacity increase works to the station as shown on Figure 4.6. The listed aspects are as follows:

- Listed status of Liverpool Street Station – gothic style offices flanking the ramp and the two western bays of the train shed).
- Listed status of Bishop gate goods yard forecourt wall and gates – Stone entablature and tall panelled parapet over elliptical Oriel bay with 3 sash windows. Oriel is of stone with console bracketed cornice and scrolled abutments to parapet. Hood moulds over windows. Double wrought iron entrance gates, each of 3 panels with large ornamental medallion in centre panel and top cresting.

- Listed status of Braithwaite viaduct – The Braithwaite Viaduct is a very early and rare example of a railway viaduct associated with a first generation London Terminus. Its unusual and individual design and use of materials set it apart both structurally and visually from the more standards forms of railway architecture. It is associated with an important phase of railway development and bridges the period between distinct canal and later distinct railway engineering forms.

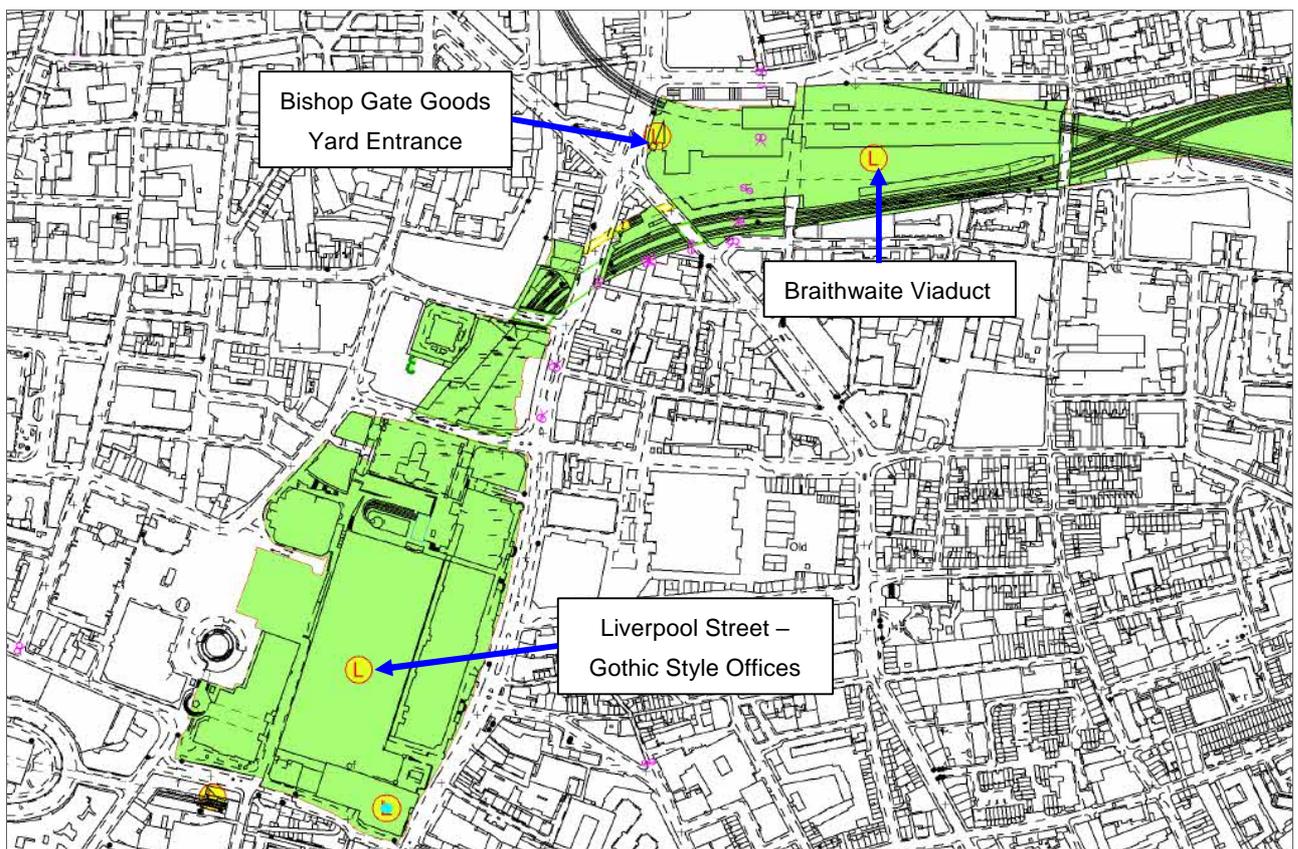
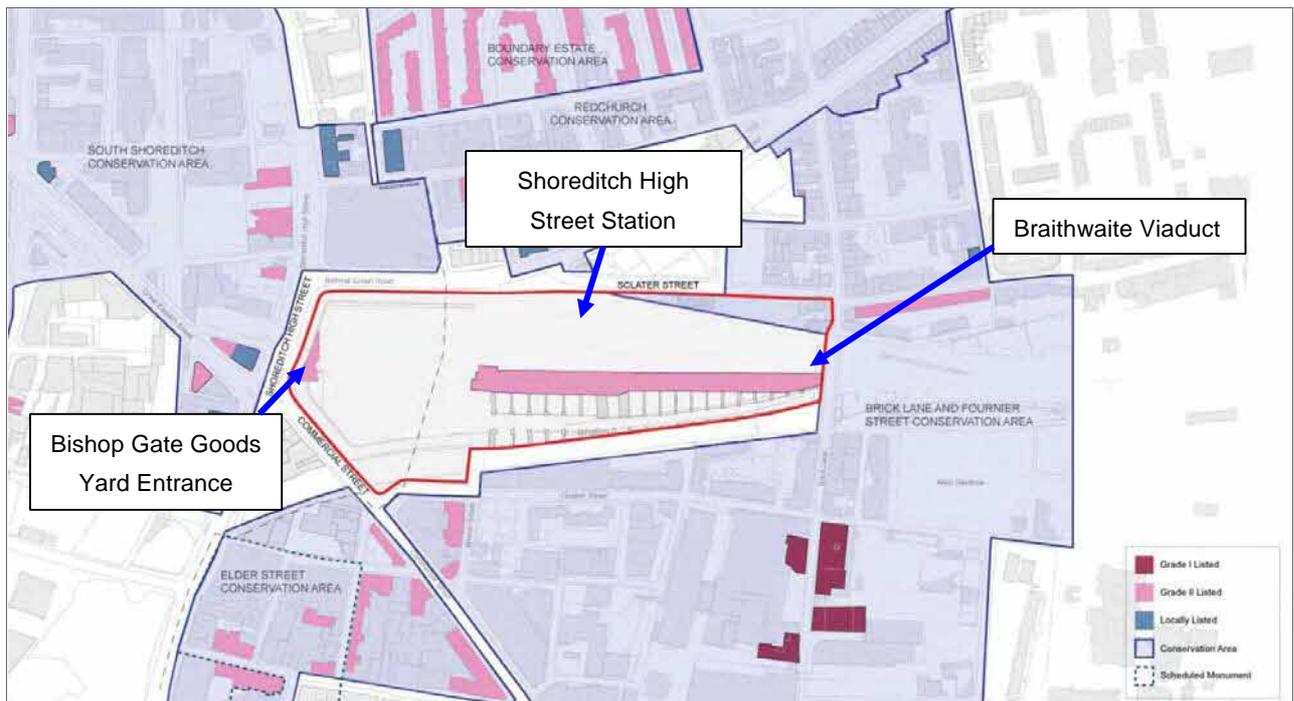


Figure 4.6 Listed Building Aspects extracted from GI portal

The former Bishopsgate goods yard area is surrounded by conservation areas which may require consideration as part of the development works. Figure 4.7 shows the names and locations of the conservation areas.



**Figure 4.7** Listed Building and Conservation Areas Aspects extracted from Bishopgate Goods yard Interim Planning Guidance 2010.

### 4.6 Ground Conditions

Ground conditions at the two site locations are anticipated to have minimal impact upon the option selection process as the loadings from train and platforms are of negligible increase in the overall loading on the ground. The Shoreditch High Street option will be impacted more by the underlying ground conditions, however given that existing railway structures are present the effects are anticipated to be minimal.

### 4.7 Opportunities

Plans exist to reconfigure the station facilities within the main shed of Liverpool Street Station (see figure 4.8). The plans involve expanding the fronting to the existing left luggage and general offices within the concourse level of the station which in turn will provide a larger seating area to the cafes and restaurants to the mezzanine floor area.

The existing office area occupies the proposed location of the additional platforms between 10 and 11, it is therefore suggested that any plans for the station facilities re-configuration be revisited prior to their construction to future proof for the potential for additional platforms to be constructed.



Existing View

Massing Models - Transparent Glass Box

**Figure 4.8 Proposed Liverpool Street Station Facilities Reconfiguration adjacent to Platform 10**

## 5. Options for Increasing Train Capacity

### Options Overview

The options being proposed for the additional platform capacity at Liverpool Street station comprise the following:-

- Option 1 – Platform 0 located within the shopping area to the west side of the Liverpool Street Station. The proposed platform length allowed for 157m long trains and as a consequence the length of platform 1 will be shortened from 242m to 157m in length.
- Option 2 – New platforms between the existing platforms 10 and 11. The proposal comprised the construction of 3 additional platforms with a single platform adjacent to platform 10 and two new platforms within the taxi rank area. 253m long platforms were proposed under this solution.
- Option 3 – Remodel Platforms 1 – 10 to create an additional 2 no. 12 car platforms and a longer Platform 0. This proposal remodels the existing platforms within the western most train shed and provides a total of 14 no. platforms in place of the existing 10. 12 platforms will be capable of providing 12 car train lengths and 2 platforms will be capable of providing 10 car trains.
- Option 4 – The creation of an additional terminus station to the north of Liverpool Street within the area of Network Rail owned land adjacent to Shoreditch High Street station on the East London Line within the confines of the former Bishopgate Goods Yard.

## 5.1 Option 1, Platform 0

Based on the WS Atkins Rail track design and development proposal (Drawing Ref: BE 6326-023 Rev A2 in Appendix B), the new platform 0 will occupy the area currently occupied by shops within the Broadgate link and Sun Street Passage on the western side of the station. The new platform 0 would be approximately 157m in length and would exit the existing line on platform 1 just to the north of the original main shed building. The new turnout and line into platform 0 would require the removal of a large section of the original main shed brickwork wall before entering into what is currently the pedestrian walking route known as Sun Street Passage.



Figure 5.1 Sun Street Passage

It will be possible to raise the level of Sun Street Passage to allow the new platform to be constructed underneath, this will minimise the effect on the local urban environment, as this is a heavily trafficked pedestrian walking route into the station and the surrounding area.

As a consequence of the additional platform 0, the existing 12 car platform 1 will require shortening to an 8 car length platform to allow a turnout to be provided which does not affect the section of Sun Street Passage which is under Exchange Square.

Extending platform 0 whereby the under cover section of Sun Street Passage will be affected would be possible to provide 10 car platform lengths. Locating the turnout from platform 1 under Exchange Square would allow the majority of the track alignment works to be undertaken before the track runs alongside the main shed brickwork walls. A minimum width 2.5m platform could be accommodated under this scenario, therefore reducing the effects on Sun Street Passage and the connecting streets.

## 5.2 Option 2, New Platforms Between 10 and 11

Based on the previous WS Atkins Rail track design and development proposed platforms 13 and 14 (Drawing Ref: BE 6326-023 Rev A2 in Appendix B), the area located between existing platforms 10 and 11 is currently utilised for a mixture of office, passenger information, taxi rank and delivery drop off and collection point. The vehicle access ramp into the terminus building commences on Primrose Street before descending down under Exchange Square with a signed headroom clearance of 5.1m. The access ramp and vehicle parking area within the station terminus appears to play an essential role in the delivery of supplies / products to the station shops and cafes. As a result of the key role that the vehicle access plays, it is considered worthwhile retaining some form of vehicle access into the terminus as part of the additional platform creation works.



**Figure 5.2** View along taxi rank and vehicle access ramp under exchange Square

The vehicle access ramp and taxi rank area provide an ideal location for additional platforms to be provided within the terminus with an approximate platform length of 253m. The proposed route into the new platforms would connect onto the up and down main lines on the eastern side of the railway alignment which currently serve platforms 11 and 12. The presence of the building support columns under Exchange Square and Exchange House do not appear to affect the proposed track connections.

Situated under the vehicle access ramp is mechanical and electrical equipment which will need to be relocated to allow the new track alignment to be routed into the new station platforms. There is adequate railway alignment space available under the access ramp and under Exchange Square which allows a new junction to be created to tie into the existing track alignment.

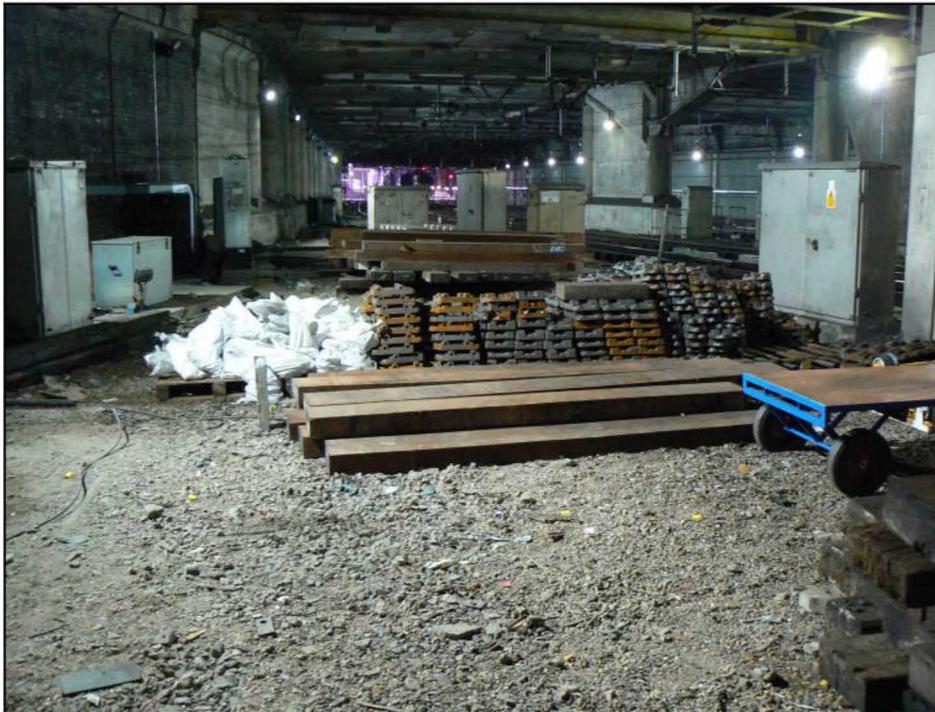


Figure 5.3 View from under the vehicle access ramp looking towards the railway alignment / junction area



Figure 5.4 View of Mechanical and Electrical equipment under the vehicle access ramp



**Figure 5.5** View from end of platform 11 showing the location of the proposed new junction into the new platforms will be provide on the left of the picture.

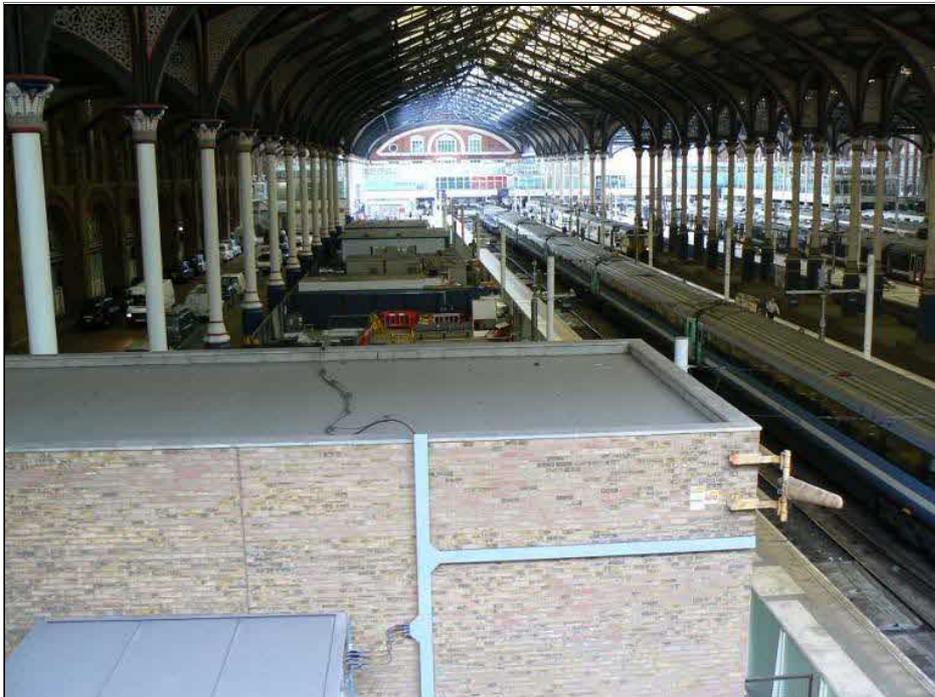
The existing crossovers located at the ends of platforms 11 and 12 (Figure 5.5) will require renewing/amending as part of the rail connection works into the new platforms. Making use of single slip crossovers as part of the remodelling will minimise the extents of new switch and crossing equipment required as part of the proposal whilst providing full flexibility for parallel moves to be undertaken in and out of the new and existing platforms.

A new switch will be required within the extents of the existing platform 12 to allow train departing platform 12 to access the down main line. This will effectively shorten the available length of platform 12, however it will remain more than 253m, therefore 12 car train lengths will still be able to utilise the platform. To remove the requirement for the revised switch from platform 12, the existing crossover unit which connects platform 13 onto the Down main could be converted to a double switch unit to allow trains departing from platform 12 access onto the Down main line.

To maintain a vehicle access into the station terminus, it would be possible to provide a single platform which abuts onto the existing platform 11. This allows for a single carriageway width vehicle access to be provided down the access ramp into a narrower taxi rank area. Separation screens and containment barriers would be erected to the back face of the new track into the platform to provide a barrier between trains and road vehicles. This option is not anticipated to be worthwhile as the provision of an extra platform is deemed to offer more benefits compared to maintaining the existing vehicle access ramp.

It may be possible to provide a new two lane vehicle access road into the station terminus whilst also providing two new platforms within the existing taxi rank area. This could be achieved by locally raising the small area of Exchange Square which is located above the existing access ramp followed by a series of 90 degree turns within the roadway to provide vehicle access into the area

adjacent to the existing Platform 10. The new running lines would be located beneath the reconfigured access ramp with the new platforms extending into the ramp opening as previously proposed by WS Atkins.



**Figure 5.6** View from Exchange Square over the potential access ramp area, note the equipment buildings and office cabins within the area.

A number of equipment houses would need to be reconfigured and/or repositioned for the 2 new platform proposal as the revised access ramp will require the occupied space (Figure 5.6). Repositioning the equipment under the revised access ramp would be possible to ensure space is utilised efficiently.

At the concourse end of the proposed new platforms are a number of office buildings at platform level with shops (Figure , restaurants and cafes located above at street/mezzanine floor level. Assuming that 2 new platforms are provided within the taxi rank area, the offices at platform level could be repositioned to be within the retained wide platform area adjacent to the existing platform 10 or be located upon an extended mezzanine floor area. A revised mezzanine floor area could be provided over the ends of the new platforms which would need to incorporate revised proposals to provide enlarged station facilities and seating area as outlined in section 4.7.



**Figure 5.7** View of offices and restaurants above the location of the proposed platforms adjacent to the existing platform 10.

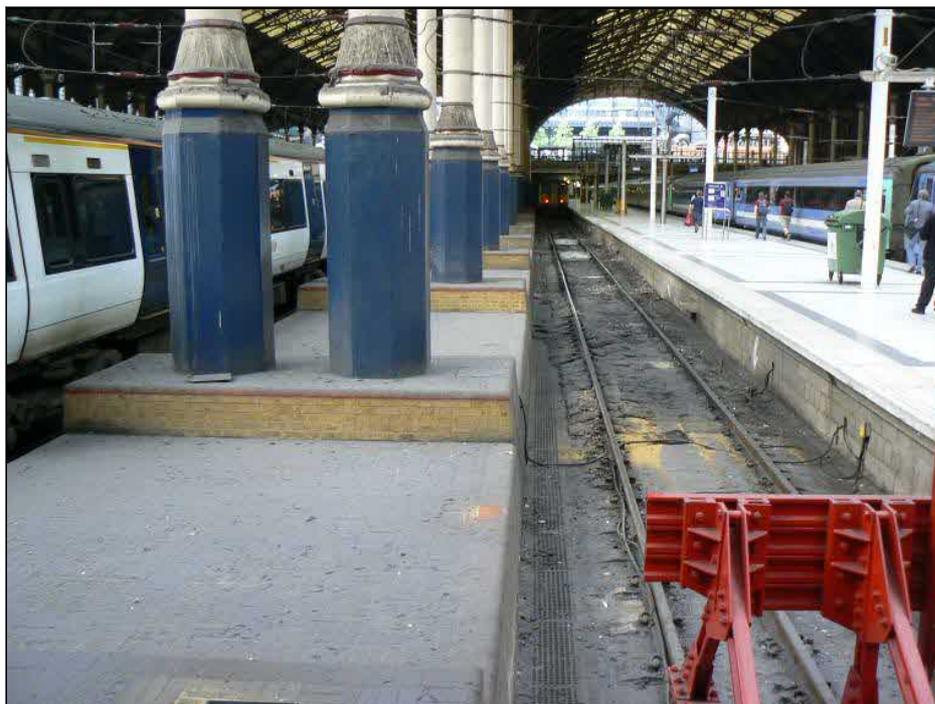
A new single line bay platform could be created adjacent to the existing platform 10 by providing a turnout at the end of platforms 9 and 10 cross over units. The storage rooms at the country end of platform 10 will require amending to accommodate the platform width requirements if a 12 car length platform is to be provided. The existing platform 10 will require shortening to 253m in length as part of the works to allow the new turn out to be positioned within the existing supporting structure footprint.

### 5.3 Option 3, Remodel Station Platforms 1 – 10

The existing configuration of platforms 1 – 10 within the western train shed of Liverpool Street Station could be remodelled to provide 12 no. 12 car length platforms and 2 no. 10 car length platforms, see Appendix C for proposed outline drawings. This option builds upon the previous platform 0 (option 1) and new platforms between existing platforms 10 and 11 (option 2).

The existing platform 1 will be relocated so that the running line runs alongside the wall of the main shed. The new platform 0 running line will be located on the opposite side of the main shed wall which in turn allows the new platform 0 to occupy the area of the shops and Sun Street Passage. Due to the relocation of the running line into platform 1, the turnout to the new Platform 0 will not have such a detrimental effect on the platform lengths. As a result, platform 1 will require shortening to a 10 car length platform and platform 0 could be constructed as a 10 car length platform as opposed to an 8 car platform as previously proposed.

The relocation of the existing platforms 1 – 10 allows the space within the main shed to be utilised more effectively. Currently a large proportion of space between platforms 7 and 8 is not utilised due to the running lines being located to either side of the 2no. main shed roof supporting columns, Figure 5.8. The remodelling works will result in the columns being incorporated into the platform construction therefore making better use of the available space.



**Figure 5.8** Existing un-utilised space between Platforms 7 and 8.

The single line of main shed roof supporting columns within platforms 2 and 3 will become located between the remodelled running lines into the new platforms 3 and 4. The overall width of the single line of columns is less than that between platforms 7 & 8 (Figure 5.9), therefore the available space within the train shed will be utilised more effectively. Derailment protection measures / robust kerbs will require constructing both sides of the columns as is currently the case between platforms 7 and 8. This scenario utilises the available main shed space more effectively as there will be less unused area around the single line of supporting columns.

Exchange Square is located above the country end of the station platforms with supporting columns located within the centrelines of the existing platforms. The columns could be located between the revised track alignment with suitable derailment protection provided. A small number of columns may require relocating to aid the track realignment works, however this will be dependant upon the platform widths to be provided. If 4m wide platforms could be provided at the country end of the platforms, it may be possible to realign the tracks to avoid the existing support columns.



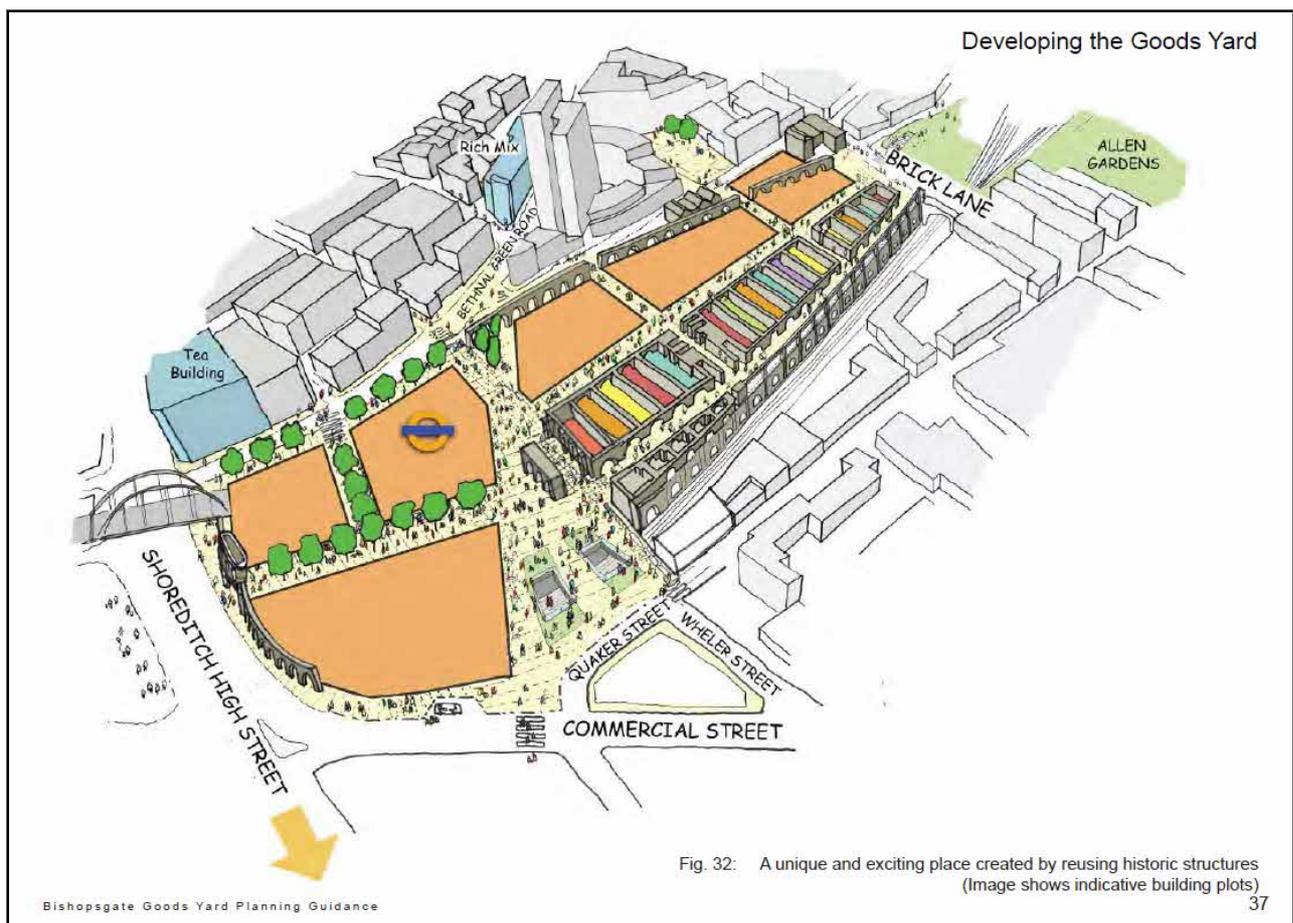
**Figure 5.9 Columns located beneath Exchange Square and Main Shed Roof Columns within Platforms 2 & 3.**

New platforms 11 and 12 adjacent to the existing platform 10 will require the existing equipment room under exchange square reducing in width to accommodate the new platform space. The main supports to Exchange House located above the station throat will be unaffected by the revised track layout. The new platforms 13 and 14 will be the same as the proposed platforms 11 and 12 within option 5.1.3 previously.

### 5.4 Option 4, Construct New Shoreditch Terminus Station

The creation of a new terminus station to the north of Liverpool Street within the area of Network Rail owned land should be considered, See Appendix C for proposed outline drawings. The new station would be located adjacent to Shoreditch High Street station on the East London Line within the confines of the former Bishopgate Goods Yard / Braithwaite Viaduct complex. The area of land is currently proposed to be redeveloped as a combination of mid-rise and tall buildings with an area of park above the remaining high level arches.

The arches under Braithwaite Viaduct are Grade II listed which may limit the scale of this option if the arches cannot be removed or incorporated into the scheme. Clarification regarding the extent of the listed arches will be required before this option is progressed further, see Figures 4.7 & 5.10. A minimum of 2no. platforms could be established whilst maintaining the vast majority of the original viaduct structure by constructing a new station within the space between the existing Shoreditch High Street station and the viaduct. The first 3-4 arches of the viaduct next to Brick Lane may require demolishing to provide the required alignment space to thread the tracks into the new station, alternatively by providing a single line into the new station, it may be possible to retain the full extent of the listed arches.



**Figure 5.10 Indicative Building Plots and Braithwaite Viaduct Proposal,** (Source: Bishopsgate Goods Yard Interim Planning Guidance 2010).

A further 2 no. platforms could be created on the south side of Braithwaite Viaduct under this proposal, this option would require the demolition of a large part of unlisted section of Braithwaite viaduct. The wrought iron and brick structure to the south elevation appears to be in a fair condition, however any maintenance works will require very costly access platforms establishing due to the requirement to work over the OLE to the lines below. It is considered worthwhile removing the maintenance liability associated with this structure as part of the new station works.

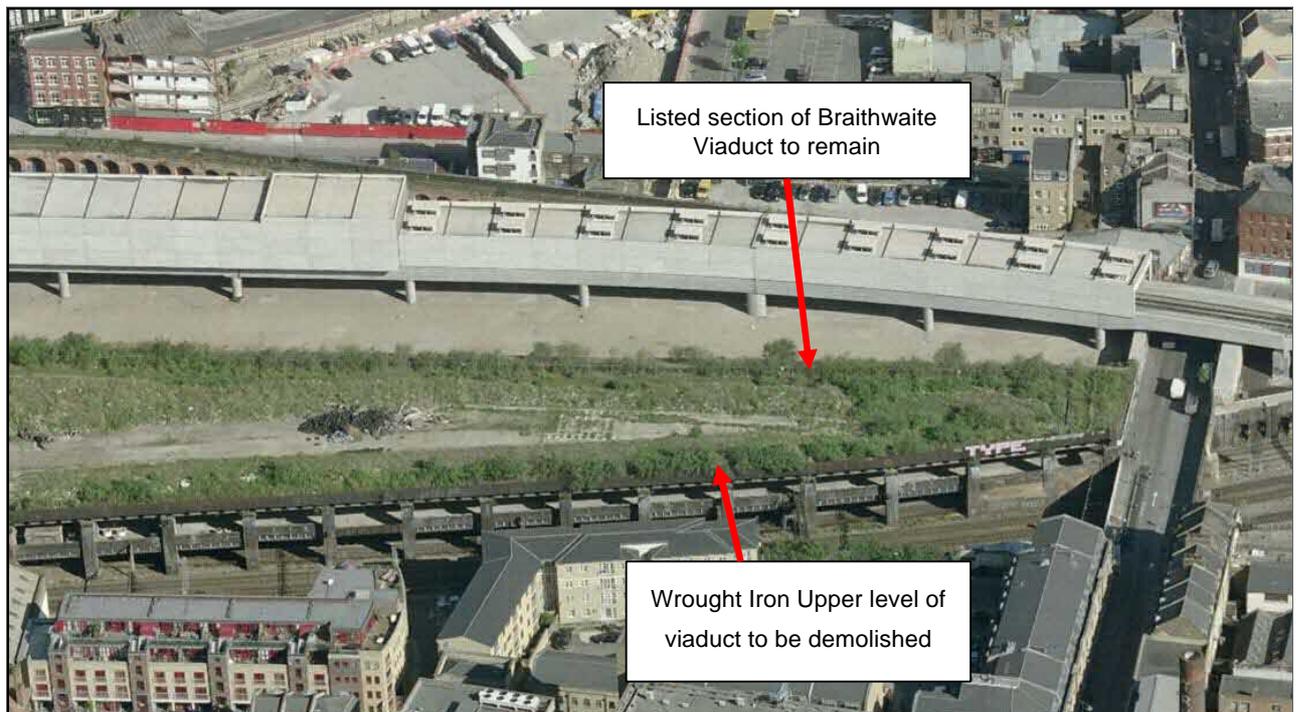
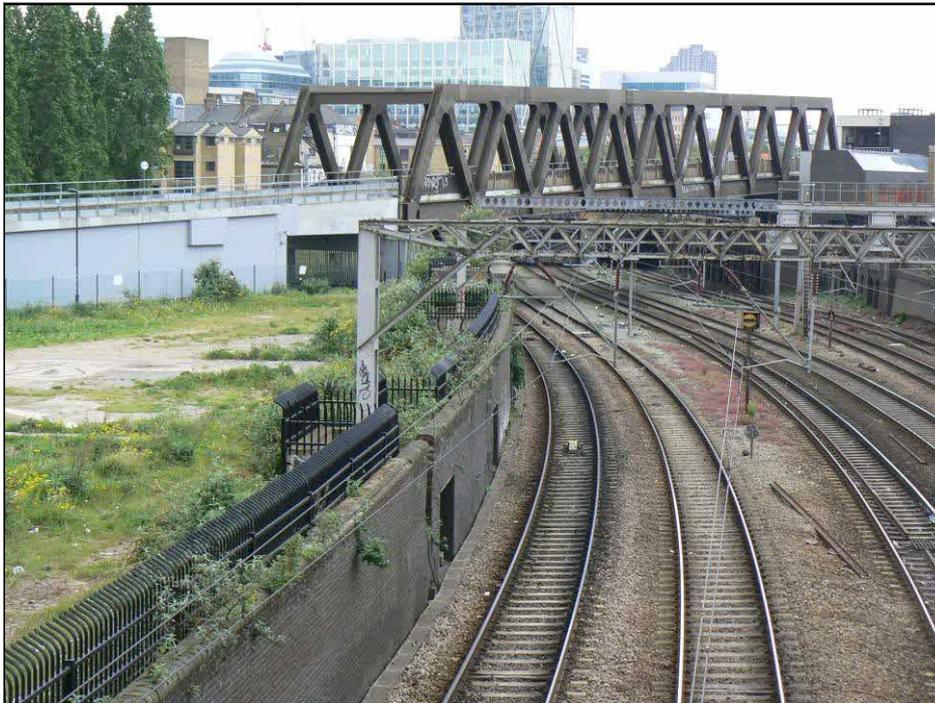


Figure 5.11 Birds Eye view of Braithwaite Viaduct and the proposed station area,

The new station platforms could be constructed within a new building which could incorporate a green roof to create park land space, similar to the proposal to the top of the listed Braithwaite viaduct section.

Rail access into the former Bishopgate Goods yard area will be possible by slewing the existing 6no. running lines to the south within the area of Network Rail owned land. This will create the required space to allow an additional 2 no. running lines to be installed on the north side of the alignment. This option is dependant upon it being possible to thread the Up Electric line through the bridge support columns of the new East London Line intersection bridge to create the required alignment space, Figures 5.12 & 5.13.



**Figure 5.12** View of ELL Bridge supports and bare ground to the up line side of the alignment.



**Figure 5.13** View of available alignment space looking towards Liverpool Street Station.

The bridge which carries Brick Lane over the railway alignment will require reconstructing with a single span structure, this will allow the existing brickwork supporting piers to be removed from within the alignment space which in turn will allow the tracks to be slewed in a southerly direction.

The track gradient in the area is 1 in 70 with the track falling from east to west towards Liverpool Street Station. The relatively steep track gradient will allow the two proposed running lines to gain height compared to the existing lines over a relatively short distance, therefore any new retaining walls required will be relatively short.

## 6 Construction Considerations

### 6.1 Construction Sites

The construction of the new platforms within the confines of Liverpool Street Station should include due considerations on the locations of the potential construction compound areas. Due to the tightly confined station and its location within central London, careful programming of the works will be required to ensure access is possible throughout the implementation phase.

A number of potential compound areas are available within the local area which should be considered for use within the implementation phase of the works. The existing taxi rank area between platforms 10 and 11 should be considered as a site compound/storage area for the initial phase of the works as this will provide direct access into the working areas. The taxi rank could be permanently or temporarily relocated onto a street alongside the station buildings.

Access for large items of plant and equipment required into platform 1-9 could be accessed from the vehicle access point adjacent to Bethnal Green Station at approximately the 1 mile marker. There are large areas of NR owned land at the vehicle access point which could be used for the delivery and storage purposes prior to gaining possession of the lines. If large quantities of spoil are required to be removed from within the station, the possibility of utilising engineers trains with open box wagons should be considered as this will remove the need for lorry movements within Central London.

The preferred location of the construction compound will be largely affected by the scale of the works to be implemented. It is anticipated that as a minimum, the vehicle access point and storage area near Bethnal Green Station and the existing taxi rank area will be required for all potential options, (Figure 6.1).

The construction of the new Shoreditch High Street station option can make use of the large areas of brown field site located around the proposed station area which simplifies the construction process.

### 6.2 Construction Methodology

The method in which the additional platform options are constructed would require a detailed phasing of the actual works in which are to be undertaken. All options require the construction phase to provide as minimal disruption to the operation of trains as possible to reduce the impact upon the passenger and reduce the compensation payouts to the train operating company.

The addition of new platforms within the Liverpool Street station western shed will require either a partial or full remodelling of the station throat. Any remodelling works will require a complete closure of the station for approximately a 9 day period to allow suitable signalling tests to be undertaken following the works.

The full remodelling of the station platforms and throat should be phased through the construction of the new platforms within the taxi rank area first as this will not reduce the number of available platforms within the station during the remodelling works.

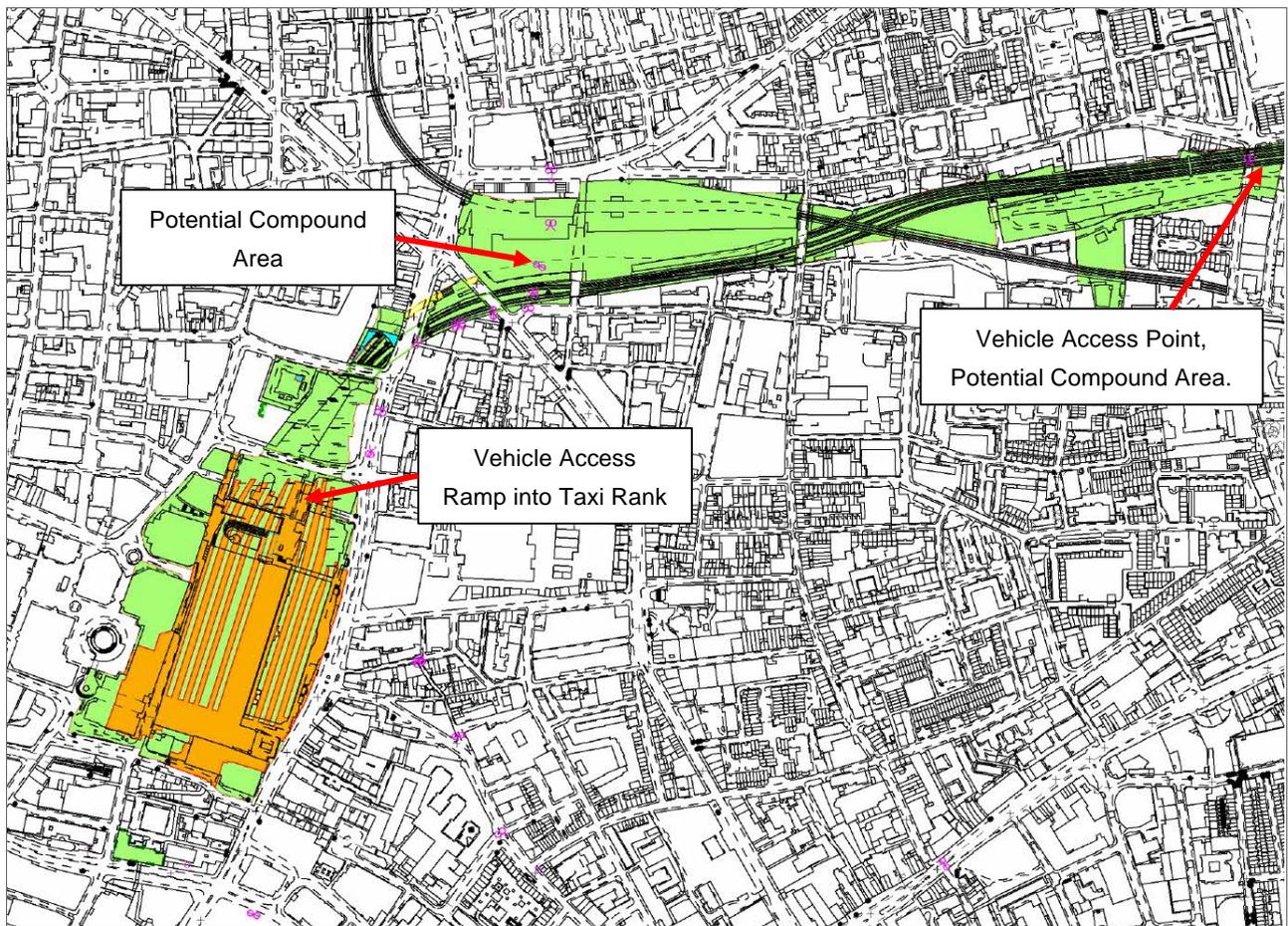


Figure 6.1 Potential Construction Site Locations

### 6.3 Construction Programme

Each of the solutions discussed within this Pre-Grip report have their own specific requirements in relation to programme. The ability to undertake construction work during normal working hours will be of benefit to any programme for the works. Programme and phasing of the works will need to be determined in more detail if the scheme is progressed and an option has been selected to be taken forward for further consideration.

### 6.4 Electrical System

#### 6.4.1.1 Liverpool Street

Liverpool street station is a major London terminus and in common with many other stations of a similar size it understood to be fitted with a HV ring which provides power to both railway plant and the various services throughout the station. The modifications to the station proposed in options 1, 2 & 3 are significant and it should be assumed that parts of the stations HV network will need to be diverted. Unfortunately it has not been possible to find any records of the system and it is therefore not possible to say which, if any, of the HV substations will be impact by these proposals.

As an early element of work should be the identification and verification of where the HV network at London Liverpool Street station goes and understand the extent of alterations required to the existing substations.

With respect to the new or altered platforms, designs will be required for the provision of suitable lighting and other LV services at this stage the change in load as result of these proposals is not anticipated to be significant but this will need to be confirmed during the design stage of the scheme. Should it be decided that additional plant (lifts, escalators, ventilation fans etc) is required as part of these schemes then some upgrade work may be required to the HV ring at the station.

The provision of new platforms at London Liverpool Street will require remodelling on the station throat. This in turn will have an impact on signalling, signalling power supplies and points heating requirements. As part of this scheme a full LV power design should be undertaken on the signalling power supplies and a similar design undertaken on the points heating requirements. At this stage it is not anticipated that these works will cause a significant rise in LV power consumption.

The overhead line works set out below recommend that consideration is given to installing motorised isolators and earth switches at Liverpool Street station in order to speed up isolations and possessions. Should these be installed, a LV power design will be required to provide them with power and a SCADA design will be required to control them.

#### *6.4.1.2 Bishops Gate goods yard site.*

The construction of a new station on the Bishops Gate Goods yard site will require new LV power supplies. These supplies will need to provide power to both the equipment on the new station and to the new junction required to access the station.

The presence of the East London Line station on the site will likely result in the two stations being incorporated into a single transport interchange. Assuming this occurs careful control will be required of the LV equipment and bonding on the site to prevent dangerous touch voltages occurring between the two systems (AC and DC).

#### *6.4.1.3 Earthing and Bonding*

For both sites, an earthing and bonding design will need to be produced. This design should meet requirements BSEN50122 ideally by the route set out in PAN 102. As required in PAN 102 the bonding associated with the new platforms at Liverpool Street station should be in common with the existing station bonding.

Should the Bishops Gate site be used, careful consideration should be given to earthing arrangements due to the presence of the DC electrified East London Line on the same site. The presence of the 25kV electrification in the proposed station drives towards a common traction and LV earth being constructed in the new station. Care will need to be taken to prevent this earthing becoming a stray current path for the DC railway.

## 6.4.2 Overhead Line Electrification

The electrical sectioning on the Great Eastern main line into Liverpool Street station is fed from Bow feeder station via Spitalfields TSC. Between Spitalfields TSC and the buffer stops at Liverpool Street are a large number of manually controlled isolation, earthing and alternate feeding switches. These collectively allow each platform at Liverpool Street station to be isolated and earthed individually.

Set out above are a number of options for providing more terminus platforms on the Great Eastern main line the purpose of which is to increase the capacity of the route. In addition to the options set out above an operation and maintenance assessment should be undertaken on the isolation and earthing arrangements associated with the electrification on the approach to Liverpool Street station. The aim of this work would be to see if additional capacity and flexibility would be created through the use of motorised switches and the implication of motorised fixed earthing devices. This work should be undertaken irrespective of which options are taken forward.

The provision of significant additional platform capacity at Liverpool Street Station may have significant impact on train service levels on the railway lines approaching the station. This increase in service level will have corresponding impact on loading of the traction power supplies. As a separate exercise to the construction of any new platforms a review should be carried out into the capacity of the traction power supplies on West Anglia and Great Eastern lines to support the increase in service levels enabled by the station enhancements discussed in this report.

### 6.4.2.1 Liverpool Street Station Options

This section covers the electrification and power works associated with option 1, 2 and 3 as described above.

For all options if a track can be installed it should be possible to install overhead line electrification provided sufficient electrical clearance space is provided.

In designing and assessing the viability of options it should be borne in mind that the nominal UK OLE contact wire height is 4.7m above top of rail and this should be installed wherever possible. While it is possible to install reduced height contact wire it may place operational restrictions on the railway and is likely to require tighter controls to be placed on the track tolerances possibly resulting in the need for slab track.

Sufficient clearances need to be provided for electrical and mechanical purposes above the contact wire. For a nominal contact wire height these clearances require a minimum soffit height of 6.9m for free running OLE which may be reduced to 5.7m with overhead contact beam or other low uplift OCS equipments and reduced electrical clearances. Soffit heights may be reduced further using lower contact wire heights and special reduced electrical clearances but these should be actively avoided as special measures will be required to manage the use of these values and they may further reduce the resilience and operational capability of the railway.

In addition to the comments made in section 5.4.2 the O&M procedures for Liverpool Street station will need to be reviewed if any of the options to construct new platforms is taken forward. This

review will need to consider the feeding arrangements for the new platforms to ensure both maximum operational flexibility and maintenance access is provided.

#### 6.4.2.2 *Bishops Gate Goods Yard*

This section covers the electrification and power works associated with option 4 as described above.

This option is for the construction of a brand new station including brand new track on the site of the old Bishops Gates Goods Yard. The site is adjacent to the East London Lines Shoreditch High street station and it reasonable to assume that it would have a direct physical link.

From an electrification and plant perspective this option may be carried out in conjunction with or independently to the works at Liverpool Street station.

For the purpose of this report it is assumed that the final station will be single structure from an earthing and bonding perspective.

Bearing in mind that the site will be brand new it should be assumed that derogation and permissions will not be given for the use of reduced electrical clearances and wire heights. As such the wire height in the new station should as minimum be 4.7m through out and soffit heights should be designed to be a minimum of 6.9m above top of rail level.

Should this option be implemented it should be able to provide at least four new platforms and consideration should be given to installing motorised sectioning switches or a TSS at the throat of both the new station and Liverpool Street station. The implementation of motorised isolators at this site should allow increased operational flexibility and speedier possession and isolations. The junction into the new station is also likely require additional crossovers between the up and down mains and up and down suburban lines these cross will need to be positioned such that they allow access to platforms 1 to 4 at Liverpool Street from the mains at the same time as the new Bishop Gates station is accessible from the suburban lines. It is recommend that construction of a new TSS or TSSs in the throat of the stations is co-ordinated with any remodelling of Liverpool Street station throat.

The East London Line is electrified with 3<sup>rd</sup> rail DC electrification. At the time of constructing the new railway, extensive measures where taken to prevent DC traction return currents leaving the east London line running rails. The earthing and bonding of the new station will need to make sure that these measures are not jeopardised. Areas of particular concern are likely to include the LV bonding network at the new station and the existing Shoreditch high street station which are likely to need to be coupled together. To manage this risk, it is recommend that an earthing and bonding strategy is produced for this scheme at an early stage.

## 6.5 Signalling

### 6.5.1 Operational Requirements Specification

Whilst the remit contains some operational aspirations at a high level, an Operational Requirements Specification must be considered an early signalling design deliverable to investigate with NR Operations, Railway Undertaking colleagues and other stakeholder organisations the precise detail of their operational needs of the respective signalling system.

### 6.5.2 SSI Interlocking & IECC capacity

The existing signalling infrastructure in and around the station is controlled by Liverpool Street IECC via Liverpool West Interlocking (platforms 1-10) and Liverpool East Interlocking (platforms 11-18); the capacity of the IECC and the interlockings will require assessment for expansion; an initial review of the current SSI Trackside Function Modules (TFM) count of each interlocking reveals 47 (West) and 37 (East) out of a maximum 62, but out of a preferred maximum of 57. Whilst processing speed is unlikely to be an issue with 2MHz processor upgrades in situ, capacity of the TFM's, internal and cross boundary telegrams, infrastructure identities and data volume will all need close scrutiny and could be a key factor in which platform(s) signalling functions can be supported by one, each or both of the interlockings. Consideration will also need to be given to bringing the existing interlockings (fully or partially) up to current standards including latest DIS papers, in particular the level of overrun management that is to be provided at the new platform starter signals when also considering the existing arrangements. For the Shoreditch option, an initial review of TFM modules at the affected Bethnal Green interlocking is a count of 54, with the same requirement listed above to verify the capacity and volumes etc. The positioning of the S&C connection off the existing lines or the re-modelling of any S&C to provide access to and from the layout onto the Shoreditch site with respective signalling alterations could be severely restricted by this TFM count.

Upon the further investigation, should the interlocking and/or data capacity be a constraining issue, then consideration will need to be given to interlocking renewal(s), with a requirement for a CBI type interlocking capable of interfacing with the existing lineside SSI, IECC and ARS. Pursuing a strategy of renewal would also alleviate cross boundary telegram issues and assist with the application of a staged commissioning of track and signalling. However, floor space for additional or replacement interlocking equipment is known to be an issue at Liverpool Street IECC.

### 6.5.3 Signalling controls

Other than the extent of upgrading controls to latest signalling standards and DIS papers, the changes to signalling controls to facilitate the new routes in and out of the new platforms are considered reasonably straightforward for all options.

It is of note that the existing interlocking controls into the station include Lime Street controls (measuring tracks) for permissive working and the new and existing controls will need to be commensurate with the new platform(s) unless consideration is given to abolishing these specific controls throughout. For the Shoreditch option, it is not proposed that Lime Street controls are required.

#### 6.5.4 ARS & Ergonomics

The expansion of the signaller's duties will require an ergonomic assessment to ensure these can be practically met within the proposed IECC workstation and manning arrangements. The expansion of the Automatic Route Setting (ARS) to encompass the new routes will help in this instance but ARS database capacity checks will also be required to confirm that expansion is feasible.

#### 6.5.5 Layout, Signal Positioning and Sighting

The criticality of platform length and S&C connection to the functionality and availability of the signalling layout is compounded by the positioning and sighting of the platform starting signal(s).

Consideration to mis-reading parallel signals will dictate single post or gantry requirements and 20m stand back allowance may be increased for right hand mounted signals due to cab positioning. It is recommended that signal sighting is completed as early as possible to identify and mitigate these issues including the impact of OLE structures on obscuration.

The provision of an adequate safe overrun distance(s) (SOD) will also be prevalent with Signal Overrun Risk Assessments (SORA) dictating an acceptably safe arrangement in contribution to the final layout; this assessment will be required not just for new signal(s) but also for existing signals with respective conflicting routes. Junction screening to understand respective comparable collision risks will form part of the option selection argument between layout options.

Subject to further layout design of the Liverpool Station options, it is not envisaged that any new signals will be required reading into the new platform(s); existing signals will require amended or new route indicators for this provision. The Shoreditch option again could re-use and amend existing signals although this remains subject to the position of the new S&C connection in the layout.

New platform starting signal(s) will be required for all options and careful consideration of LED or multi-lamp signal head to coincide with the existing types used within the existing station will be necessary to avoid signal mis-reading issues. Limited sighting may also require the provision of banner repeater(s) and OFF indicators as is prevalent on the existing platforms, although these are less likely to be required in the Shoreditch option.

#### 6.5.6 Train Dispatch

Dispatch requirements are likely to include Train Ready to Start (TRTS) and Route Away (RA) facilities; for the Liverpool Station options it will be necessary to replicate the existing station arrangements of the earlier vintage of (TRS) & (R) indicators. Closed Door (CD) indicators are not currently provided at Liverpool Street and would likely not be provided, however they could potentially be provided under the Shoreditch option if deemed by Operations to assist in station dispatch duties.

### 6.5.7 AC Immunity and EMC

The existing signalling system is AC immune against the threat posed by OHLE and expansion and amendment of the signalling system is not thought to pose any issues in this respect. Consideration of DC immunity will need to be made for nearby crossing and adjoining LUL DC Traction particularly for the Shoreditch station option. Similarly no EMC issues are envisaged with Crossrail's new rolling stock with it obtaining route clearance ahead of this scheme.

### 6.5.8 Train Detection

Current train detection in the area is by use of MVDC track circuits and there are no known issues that would prevent the use of this technology type for new track circuits.

### 6.5.9 Point Operating Equipment

Current point operating equipment in the area is predominantly Mk2 clamp locks. HW machines or preferably IBCL type of point operating equipment would be equally acceptable for consideration for the new connections.

### 6.5.10 TPWS

New TPWS will be required for buffer stop collision mitigation and platform starter signal overrun mitigation, there being no known issues around their provision.

### 6.5.11 Signalling Maintenance and PRAMS

In terms of the impact on signalling maintenance, it is not expected that the introduction of any of the above new infrastructure would be of detriment to the current regime, with the no novel equipment requirements being envisaged. Similarly, it is not anticipated that the proposals would impact upon performance, reliability or safety other than perhaps performance of an amended interlocking should the capacity and volume issues identified above prove to be detrimental, (it is envisaged this impact would be known and eliminated in further development works should it be considered a risk).

As described above, Operational layout risk shall be managed through rigorous SORA assessment. Occupational safety provision should be considered for staff protection systems for the new platform(s) to enable safe access and egress for litter collection and maintenance staff, but this should be considered against the existing arrangements in the station as a whole or as a stand alone benefit within the Shoreditch option.

### 6.5.12 Summary

Whilst interlocking capacity does not appear to be of major concern for the Liverpool Street Options, it is a likely issue for the Shoreditch option. For all options a detailed analysis of data volume and data obsolescence requires further analysis to ensure an interlocking modification strategy is preferred over an interlocking renewal. Likewise IECC & ARS capacity requires assessment for all options.

Functionality of the layout should be confirmed via PCAT modelling to ensure the required functionality of the new connection(s) within the altered layout.

Signal sighting of platform starting signal(s) directly affect the available platform length and connectivity of the track to the existing layout, sighting should be modelled early in development to ensure a holistic and interdisciplinary development of the build.

Junction screening and signal overrun risk need full and early consideration in the design and choice of the layout. Again, this can be captured in carrying out early collaborative and cross-discipline design between Signalling, Civils, OHLE and Track designs and production of early Signalling Overrun and junction selection risk Assessments.

## 6.6 Permanent Way

All platform lengths quoted are from the buffer stop to the top of the platform ramp. Allowance for stopping distances, inaccurate stopping and signal set back will need to be considered in determining the maximum usable length of each platform.

It may be possible to increase the length of the platforms in all of the options if it is possible to extend the platforms at the buffer stop end into the concourse.

### 6.6.1 Option 1, Platform 0

The option of installing a platform 0 adjacent to the current platform 1 conflicts with the existing shops along the corridor and will impact on the disabled access ramp.

This option as shown on the previous WS Atkins design would provide a platform of approximately 157m length without impacting on any of the existing S&C in the station throat. Access to the platform is by a single turnout from the platform 1 line. In order to construct the turnout into the new platform the length of platform 1 would be reduced to approximately 157m.

It may be possible to construct a variation to this option that would achieve platform lengths of between 190m – 200m for a new platform 0 and existing platform 1. This would move the turnout towards the station entrance to be toe to toe with the existing S&C and would increase the structural work required at the station.

The additional future track maintenance requirements as a result of this option would be minimal. The additional track asset is limited to a single turnout, 200m of plain line and a buffer stop that would require inspection and maintenance. Due to the asset being located within a platform the access regime to inspect and maintain the asset should be considered.

Constructing this option would require disruptive access to train services in the station area but due to the location of the new platform it may be possible to limit this to platforms 1 and 2 for large parts of the work.

### 6.6.2 Option 2, New Platforms between 10 and 11

This option would create two additional platforms with lengths of approximately 250m. Access to the platform is via a new double junction from the platform 11 and 12 lines. There is then a

scissors or slip arrangement between the double junction and the platforms to allow trains to enter either of the new platforms.

The short section of 160m radius currently shown on the WS Atkins design at the entrance to the new platforms would need alteration at a later design stage to increase the radius to be in the region of 200m. The layout as shown would be considered as having a high risk of derailment due to the tight radius and the limited scope to provide the required gauge widening and check rail due to the close proximity of the crossings at each end of the curve. This may reduce the useable length of the platforms by 20-30m from the 250 quoted above depending on the signalling controls for the platforms. This may also allow the scissors / slip arrangement to be separated into two crossovers. This would provide a much more standard and maintainable layout for the station.

An existing scissors crossover providing access into platforms 11 and 12 would need relocating further into these platforms to make way for the double junction. No alteration to the physical platform lengths of platforms 11 and 12 would need to take place but due to the relocation of the scissors crossover the usable length of these existing platforms may be reduced by up to 50m.

The additional future track maintenance requirements as a result of this option would be increased quite significantly. The additional track asset includes a double junction and either a scissors or slip arrangement, 400m of plain line and a further two buffer stops that would require inspection and maintenance. The complex S&C that is to be installed would increase the inspection regime and provide an additional requirement for non standard components to be available. Due to the asset being located within a platform and a constrained station approach, the access regime to inspect and maintain the asset should be considered.

Construction of the platform bay area for this option will cause disruption on the concourse and in the vehicular access area. It is likely to be disruptive to train services in platforms 11 and 12 as a minimum but it may be possible to operate much of the remainder of the station during this element of the construction.

Connecting the new platforms to the existing infrastructure in the station throat is going to require disruptive access for at least platforms 11 to 18, if not more of the station. Due to the amount of S&C to be installed and the lack of separation between the units to stage the work it is likely that a blockade would be required to connect the new platforms to the existing infrastructure within the station throat.

### 6.6.3 Option 3, Remodel Platforms 1-10

This option combines and builds upon options 1 and 2, including some significant platform reconstruction work. The above mentioned requirements to remove the 160m radius currently shown on the WS Atkins drawing would also apply to this option.

The additional future maintenance requirements will essentially be the sum of the previous two options including additional plain line and buffer stops in the platforms and some complex S&C on the station approach including slips, double slips, double junctions and scissors crossovers. Due to the larger scale of the proposed work in this option a large proportion of the S&C in the station throat would need to be renewed as part of the remodelling work which may offset some of the future maintenance requirements in the short to medium term. With large areas of the station

throat likely to be renewed as part of this option the use of slab track should be considered for the station throat. This would ease future maintenance requirements and limit it to inspection and component replacement as the use of slab track would fix the track alignment, cant and gauge.

Due to the asset being located within platforms and a constrained station approach, the access regime to inspect and maintain the asset should be considered.

Construction of this option would require multiple stages and is likely to be highly disruptive to the operation of the station for a number of weeks or months.

#### 6.6.4 Option 4, New Shoreditch Terminus Station

This option is to create a new terminus station away from Liverpool Street Station on the site of Bishop Gate Goods Yard. This would eliminate the need for any work at Liverpool Street, although this scheme would not prohibit the future implementation of any of the previous options.

There are a number of sub options for this proposal that broadly include a four platform terminus or a two platform terminus. The number of platforms is dependant on the ability to align the track around Braithwaite viaduct.

Both options would require the existing six tracks from Bethnal Green West Junction to Bishopsgate Tunnel to be slued to the south to create room for additional tracks to run from Bethnal Green West Junction into the new terminus.

The four platform option would consist of approximately 250m of new double track from Bethnal Green West Junction containing two new crossovers. At the station there would be an additional two turnouts and four 290m platforms with associated buffer stops.

The additional future track maintenance requirements as a result of this option would be low. The additional track asset would require inspection and maintenance and all of the S&C, including the connection at Bethnal Green West, could be designed to be standard units. Due to the asset being located within platforms and a cutting, the access regime to inspect and maintain the asset should be considered.

The two platform option would consist of approximately 250m of new single track from Bethnal Green West Junction with a single turnout into two 290m platforms with associated buffer stops at the station entrance.

The additional future track maintenance requirements as a result of this option would be very low. The additional track asset would require inspection and maintenance and all of the S&C, including the connection at Bethnal Green West, could be designed to be standard units. Due to the asset being located within platforms and a cutting the access regime to inspect and maintain the asset should be considered.

Construction of either of the sub options could largely be done in a non disruptive way to the operational railway. Staged track access would be needed to slue the existing tracks and to connect the new station to the railway. It may be possible to complete this largely within a small number of weekend possessions. All of the work would be remote from the immediate location of Liverpool Street Station.

It is worth noting that Bethnal Green West Junction is currently in the 16/17 S&C Renewals Workbank. There could be an opportunity to synchronise work. Alternatively it could be possible to obtain detailed survey data for early feasibility work for the new station.

## 6.7 General Items

### 6.7.1 Network Change

Network change will be required for the track work layout/configuration alterations and/or changes to the existing published linespeed profile.

### 6.7.2 Impact upon existing maintenance arrangements

All options considered will result in a net increase in infrastructure that requires to be maintained in the long term. Maintenance to the track associated with the options could be reduced if the remodelling works can simply the track layout whereby the number of point ends can be reduced through the installation of single and double slip turn outs.

### 6.7.3 Operational restrictions (gradients, gauge, RA, line speeds)

Track gradients and gauge clearances have not been investigated at this stage of the development. It is understood that all options suggested will have no impact upon the existing gradients or gauge clearances.

### 6.7.4 Lead RAM buy-in? Providing supporting comments

The Lead RAM for the Liverpool Street Station train capacity will provide comments within the subsequent GRIP stage to determine which option will be progressed to design phase.

### 6.7.5 Considerations and assessment of impact on performance

The impact upon performance will be determined in the subsequent GRIP stages.

### 6.7.6 Timescales

Estimated timescales for this scheme are shown below. The project timescales will depend on the option progressed and the figures below should be verified upon project progression.

- GRIP 0-3: 12 months
- GRIP 4-5: 12 months
- GRIP 6-8: 18 months

## 7 Risks and Assumptions

The major risks and assumptions for this project are listed below:

- Potential contamination issues not assessed or identified
- Topographical surveys required to confirm local topography and building footprints
- Location of building support columns within the station throat
- Existing services and signalling location cabinets affected by the proposals
- Existing overhead electrified railway equipment
- Works adjacent to operational railway
- Third party and local authority interfaces
- Timetable implications for rail services and future timetable aspirations
- Minimal land purchase(s)
- Construction access within the City of London
- Planning restrictions associated with any listed asset affected by the proposals
- Crossrail 1 platform alterations to existing platforms 16-18
- Lack of available possessions or short notice cancellations
- Costs of changing interlocking
- Pedestrian interface during the construction works
- Impacts upon the local road network during construction

## 8 Conclusions and Recommendations

### 8.1 Costs

#### 8.1.1 Capital Costs

Based on the options discussed in this report, and on the known data obtained from the desk study, the cost estimates for the capital funding of the discussed options are shown below ;

| Option | Costs (£)      |
|--------|----------------|
| 1      | £6,641,999.56  |
| 2      | £23,969,275.38 |
| 3      | £38,139,532.40 |
| 4      | £36,979,728.60 |

#### 8.1.2 Whole Life Costs

Whole life costs will be established in later GRIP stages. This may include development of indicative maintenance plans for the revised track layouts and associated structure maintenance requirements. The opportunity to remove redundant assets or structures requiring upcoming maintenance will improve the whole life costs associated with any option being progressed.

### 8.2 Technical Feasibility

Providing additional platforms within or near to Liverpool Street Station is technically feasible in various forms dependant upon the number of additional platforms that are envisaged.

### 8.3 Network Operations

The service enhancements and opportunities that might be provided by the additional platforms are yet to be determined. Any benefits are likely to not require any additional spend at other points on the network because the additional terminal platform capacity will ease the flow of trains in and out of the station which in turn reduces the likelihood of trains having to wait outside of the station for a platform to become free.

### 8.4 Economic Viability

The Business Case has yet to be determined. This should be determined once the cost benefit analysis has been completed.

## Appendix A – References

Reference documents & externally obtained records:

- 1 BAA-Stansted Development Rail Engineering (WARD) Platform Extensions at Liverpool Street Station 213053/ENG/REP/LIV/001/A March 2006 Mott MacDonald.
- 2 Liverpool Street Station – Station Facilities Reconfiguration, GRIP 3 Preferred Option – Drawings, Image & CGI's. Haskoll (Architects and Designers).
- 3 Bishopsgate Goods Yard, Interim Planning Guidance 2010. (Tower Hamlets, Mayor Of London, Hackney)

Drawing No

Drawing Title

BE 6326-023- Rev A2

Liverpool Street Station Proposed Track With New Columns Sheet 1 of 2.

BE 6326-024 – Rev A1

Liverpool Street Station Proposed Track With New Columns Sheet 2 of 2

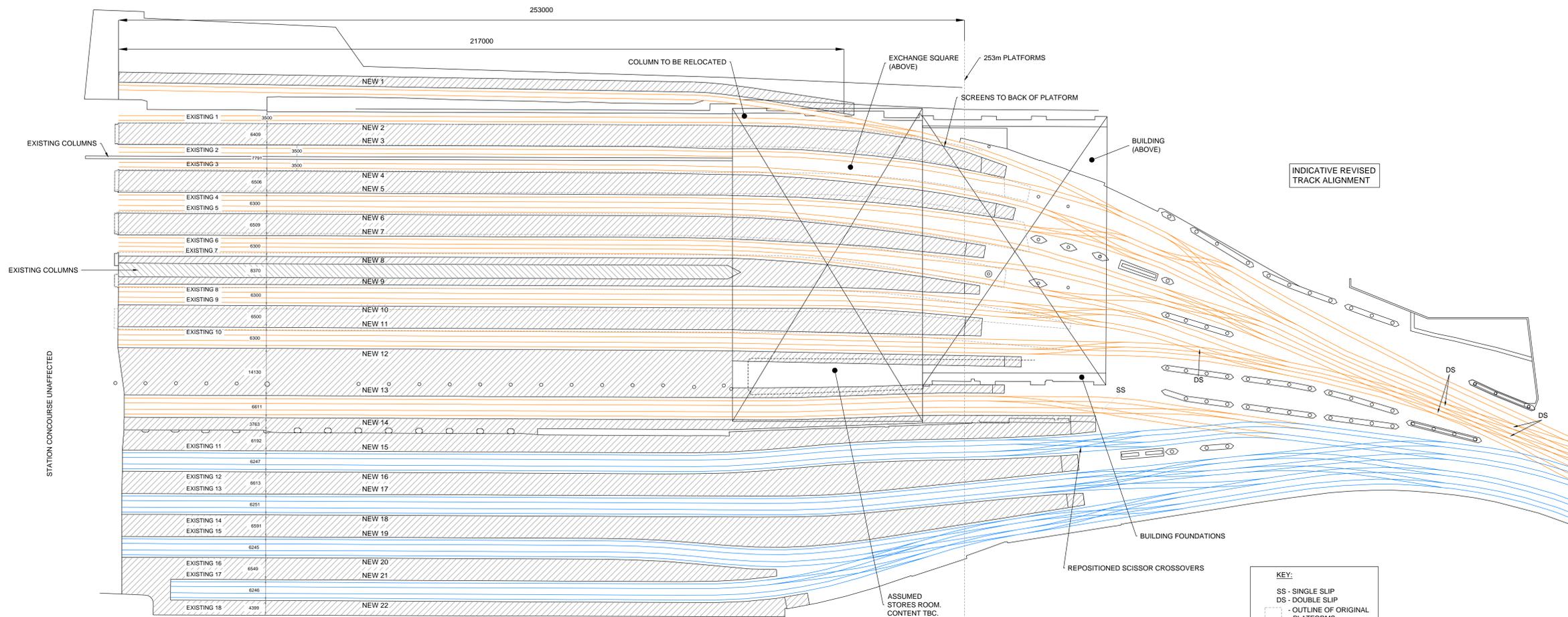
- 4 The analysis of signalling capabilities and capacity are based upon Network Rail records held in Network Rail's EBrower system at 24/04/13 including Liverpool Street Signalling Plan 86-YS-34/1 Version ADZ1.

## Appendix B – Drawings related to Options 1 & 2





## Appendix C – Drawings related to Options 3 & 4



OPTION 3 - REMODEL PLATFORMS 1-10  
SCALE 1:500

- Legend/Notes
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
  2. DO NOT SCALE FROM THIS DRAWING.
  3. THIS DRAWING IS BASED ON AVAILABLE NETWORK RAIL RECORD INFORMATION AND OS TILE MAPS.

|     |          |                          |       |      |      |
|-----|----------|--------------------------|-------|------|------|
| Rev | Date     | Description of Revisions | Drawn | Chkd | Appr |
|     | 05/06/14 | FIRST ISSUE              | GP    | RES  | RES  |

Status  
**PRE-GRIP FEASIBILITY**

Designers  
Infrastructure Projects  
Buildings & Civils  
Civils Design Group  
Manchester  
Square One  
4 Travis Street  
Manchester  
M1 2NY  
Tel: 0161 880 3936

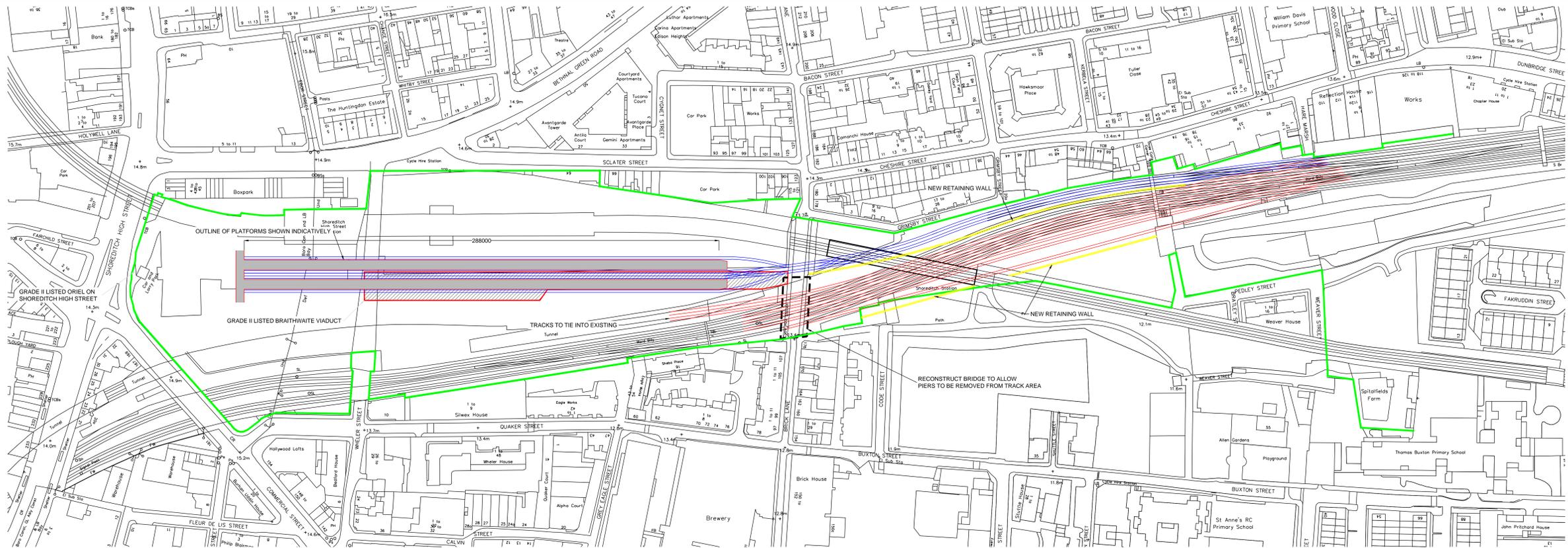


Project  
**LONG TERM PLANNING PROCESS**

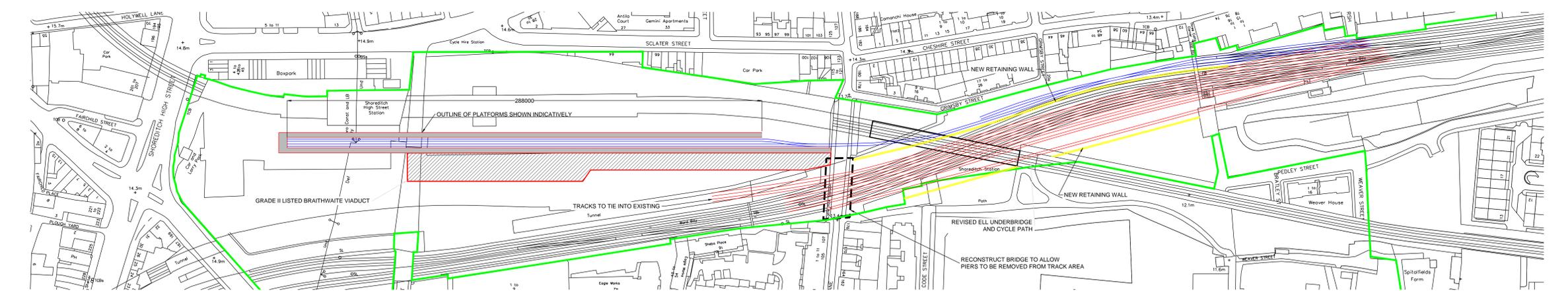
Drawing Title  
**LONDON LIVERPOOL STREET STATION  
TRAIN CAPACITY  
OPTION 3**

|          |                 |        |      |
|----------|-----------------|--------|------|
| Designer | R. JAKEMAN      | Signed | Date |
| Drawn    | G. PATERSON     | Signed | Date |
| Checked  | R. E. STANDRING | Signed | Date |
| Approved | R. E. STANDRING | Signed | Date |

Scale(s) at A1 Sheet Size A1 594 x 841 ELR & Mileage  
LTN1 0m 0000yds



**OPTION 4 - NEW SHOREDITCH HIGH STREET TERMINUS**  
SCALE 1:1000



**OPTION 4a - NEW SHOREDITCH HIGH STREET TERMINUS**  
SCALE 1:1000



**OPTION 4b - NEW SHOREDITCH HIGH STREET TERMINUS**  
SCALE 1:1000

- Legend/Notes
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
  2. DO NOT SCALE FROM THIS DRAWING.
  3. THIS DRAWING IS BASED ON AVAILABLE NETWORK RAIL RECORD INFORMATION AND OS TILE MAPS.

|          |                      |                          |       |      |
|----------|----------------------|--------------------------|-------|------|
| 05/06/14 | FIRST ISSUE          | GP                       | RES   | RES  |
| Rev      | Date                 | Description of Revisions | Drawn | Chkd |
| Status   | PRE-GRIP FEASIBILITY |                          |       |      |

Designers  
**Infrastructure Projects  
 Buildings & Civils  
 Civils Design Group**  
 Manchester  
 Square One  
 4 Travis Street  
 Manchester  
 M1 2NY  
 Tel: 0161 880 3936



LONG TERM PLANNING PROCESS

Drawing Title  
**LONDON LIVERPOOL STREET STATION  
 TRAIN CAPACITY  
 OPTION 4**

|                |                         |               |            |
|----------------|-------------------------|---------------|------------|
| Designer       | R. JAKEMAN              | Signed        | Date       |
| Drawn          | G. PATERSON             | Signed        | Date       |
| Checked        | R. E. STANDRING         | Signed        | Date       |
| Approved       | R. E. STANDRING         | Signed        | Date       |
| Scale(s) at A1 | Sheet Size A1 594 x 841 | ELR & Mileage | 0m 0000yds |
|                | LTN1                    |               |            |

## Appendix D – Cost Estimates

**Projects Estimating**

**Oracle Project No.:**

**Project Description:**

**Estimate Stage:**

| <b>Issue and Revision Record:</b> |             |                    |                |                    |
|-----------------------------------|-------------|--------------------|----------------|--------------------|
| <b>Rev.</b>                       | <b>Date</b> | <b>Prepared by</b> | <b>Checked</b> | <b>Description</b> |
| 0                                 | 1-Aug-14    | K.Siddiqui         |                | Original           |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |

Estimate Stage: Grip 0  
Oracle Project No.: 141982  
Project Description: Liverpool Street Station Option 1: Platform 0

Estimate Document Contents

|   |                           |
|---|---------------------------|
| I   | Assumptions               |
| II  | Estimate Summary Report   |
| 1. Direct Construction Works                          |                           |
| 1.01  | Railway Control Systems   |
| 1.02  | Train Power Systems       |
| 1.03  | Electric Power and Plant  |
| 1.04  | Permanent Way             |
| 1.05  | Telecommunication Systems |
| 1.06  | Buildings and Property    |
| 1.07  | Civil Engineering         |
| 1.08  | Enabling Works            |
| 2. Indirect Construction Works                        |                           |
| 2.01  | Preliminaries             |
| 2.02  | Overhead and Profit       |
| 3. Project / design Team Fees and Other Project Costs |                           |
| 3.01  | Design Team Fees          |
| 3.02  | Project Team fees         |
| 3.03  | Other Project Costs       |
| 4. Risk   |                           |
| 4.01  | Total Risk Allowance      |
| 5. Inflation  |                           |
| 5.01  | Inflation                 |
| 6. Taxation and Grants                                |                           |
| 6.01  | Tax allowances and grants |
| III   | Indirects                 |
| IV  | Escalation Calculator     |



## Infrastructure Projects

Southern

**Estimate Stage:** Grip 0  
**Oracle Project No.:** 141982  
**Project Description:** Liverpool Street Station Option 1: Platform 0

### Clarifications

#### General / Assumptions / Drawings & Documents / Exclusions / Revisions

##### General

- G1 The estimate base date is 3Q 2014 using rates.
- G2 The value of cost escalation has calculated using RPI and it is assumed that the mid point of construction will be 2Q 2022  
Escalation has been included within the Project AFC as the works is assumed to be mid point
- G3 2Qtr 2022 using compound interest at 2.75%
- G4 An uplift factor for contingency of 50% has been applied in consultation with the Estimating Manager for cost and scope uncertainty, in line with the Estimating procedure and Grip Stage .
- G5 Costs exclude VAT

##### Assumptions

- A1 Assume no over and above allowance for Bank Holiday working
- A2 Fees for Sponsor, Network Rail Management and Design allowances are based on a percentage of Total Construction Costs.
- A3 We have assumed at this stage no contribution to Network rails Fee Fund
- A4 We have assumed at this stage no contribution to Industry Risk Fund
- A5 Our prices are based on the assumption that the new platform 0 will be 157m in length
- A6 We have assumed that platform 1 is currently 242m long and this will be curtailed to 157m in length.
- A7 Average length of each carriage is assumed to be 20m.
- A8 Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team ~~and dealt separately to this estimate~~
- A9 We have assumed that the clearance of land to allow the extension to be built is carried out by others.
- A10 All works are assumed to be carried out in the station operational environment.
- A11 No allowance have been made for any passion or isolation management
- A12 All platform extension works are assumed to be cast in situ works.
- A13 We have assumed hit & miss method along with hydro-demolition for demolition of the wall.
- A14 We have made an allowance of 30k within our pricing for putting hoardings at Sun Street.

**Drawings & Documents**

The following documents have been used in the preparation of this estimate:

SOU-141892-EAR-DRG-IAB-001.pdf

Liverpool St Station 6326-023 92).pdf

Liverpool St Station 6326-024 92).pdf

**Exclusions**

E1

**Revisions**

The following revisions have been applied

R1

**ESTIMATE SUMMARY REPORT**

|                          |   |                   |        |                |        |
|--------------------------|---|-------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505                                    | Revision          | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14                                     | Price 'Base date' | 3Q2014 |                |        |
| Anticipated Start Date   | Anticipated Finish Date                       |                   |        |                |        |
| Project No.              | 141982  |                   |        |                |        |
| Project Title / Location | Liverpool Street Station Option 1: Platform 0 |                   |        |                |        |

| WBS      | Estimate Breakdown  | Value                 | %age of Point Estimate | Remarks  |
|----------|---|-----------------------|------------------------|--|
| <b>1</b> | <b>Direct Construction works -</b>                              |                       |                        |  |
| 1.01     | Railway Control Systems   | £ 326,680.00          | 8.6%                   |  |
| 1.02     | Train Power Systems   | £ -                   | 0.0%                   |  |
| 1.03     | Electric Power and Plant  | £ 12,500.00           | 0.3%                   |  |
| 1.04     | Permanent Way   | £ 612,500.00          | 16.1%                  |  |
| 1.05     | Operational Telecommunication Systems                           | £ 62,366.00           | 1.6%                   |  |
| 1.06     | Buildings and Property  | £ 637,982.00          | 16.7%                  |  |
| 1.07     | Civil Engineering   | £ 208,087.00          | 5.5%                   |  |
| 1.08     | Enabling Works  | £ 222,248.00          | 5.8%                   |  |
|          | <b>Direct Construction works :</b>                              | <b>£ 2,082,363.00</b> | <b>54.6%</b>           |  |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                       |                        |  |
| 2.01     | Preliminaries   | £ 520,590.75          | 13.7%                  |  |
| 2.02     | Overheads and Profit  | £ 351,398.76          | 9.2%                   | If zero, included within the rates   |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 871,989.51</b>   | <b>22.9%</b>           |  |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 2,954,352.51</b> | <b>77.5%</b>           |  |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                       |                        |  |
| 3.01     | Design Team Fees  | £ 208,236.30          | 5.5%                   |  |
| 3.02     | Project Team Fees   | £ 249,883.56          | 6.6%                   |  |
| 3.03     | Other Project Costs   | £ 399,553.40          | 10.5%                  |  |
| 3.04     | Cost of work done (COWD)  | £ -                   | 0.0%                   |  |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 857,673.26</b>   | <b>22.5%</b>           |  |
|          | <b>Point Estimate :</b>   | <b>£ 3,812,025.77</b> | <b>100.0%</b>          |  |
| <b>4</b> | <b>Risk</b>   |                       |                        | 50.00%   |
| 4.01     | Risk  | £ 1,906,012.88        |                        |  |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 1,906,012.88</b> |                        |  |
| <b>5</b> | <b>Inflation</b>  |                       |                        | When included within the project AFC, less COWD.<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 923,960.91          |                        |  |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 923,960.91</b>   |                        |  |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                       |                        | If Applicable  |
| 6.01     | Tax allowances and Grants                                       | £ -                   |                        |  |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>            |                        |  |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 6,641,999.56</b> |                        |  |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         |                         |                         |
| Date :-     | 01 August 2014          |                         |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase  
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under 'Other Costs to the Customer'
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

**ESTIMATE SUMMARY REPORT**

|                          |   |                         |        |                |        |
|--------------------------|---|-------------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505                                    | Revision                | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14                                     | Price Base date         | 3Q2014 |                |        |
| Anticipated Start Date   |   | Anticipated Finish Date |        |                |        |
| Project No.              | 141982  |                         |        |                |        |
| Project Title / Location | Liverpool Street Station Option 1: Platform 0 |                         |        |                |        |

| WBS      | Estimate Breakdown  | Value                 | %age of Point Estimate | Remarks   |
|----------|---|-----------------------|------------------------|---|
| <b>1</b> | <b>Direct Construction works -</b>                              |                       |                        |   |
| 1.01     | Railway Control Systems   | £ 326,680.00          | 8.6%                   |   |
| 1.02     | Train Power Systems   | £ -                   | 0.0%                   |   |
| 1.03     | Electric Power and Plant  | £ 12,500.00           | 0.3%                   |   |
| 1.04     | Permanent Way   | £ 612,500.00          | 16.1%                  |   |
| 1.05     | Operational Telecommunication Systems                           | £ 62,368.00           | 1.6%                   |   |
| 1.06     | Buildings and Property  | £ 637,962.00          | 16.7%                  |   |
| 1.07     | Civil Engineering   | £ 206,067.00          | 5.5%                   |   |
| 1.08     | Enabling Works  | £ 222,248.00          | 5.8%                   |   |
|          | <b>Direct Construction works :</b>                              | <b>£ 2,082,363.00</b> | <b>54.6%</b>           |   |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                       |                        |   |
| 2.01     | Preliminaries   | £ 520,590.75          | 13.7%                  |   |
| 2.02     | Overheads and Profit  | £ 351,398.76          | 9.2%                   | If zero, included within the rates  |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 871,989.51</b>   | <b>22.9%</b>           |   |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 2,954,352.51</b> | <b>77.5%</b>           |   |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                       |                        |   |
| 3.01     | Design Team Fees  | £ 208,236.30          | 5.5%                   |   |
| 3.02     | Project Team Fees   | £ 249,883.98          | 6.6%                   |   |
| 3.03     | Other Project Costs   | £ 399,553.40          | 10.5%                  |   |
| 3.04     | Cost of work done (COWD)  | £ -                   | 0.0%                   |   |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 857,673.26</b>   | <b>22.5%</b>           |   |
|          | <b>Point Estimate :</b>   | <b>£ 3,812,025.77</b> | <b>100.0%</b>          |   |
| <b>4</b> | <b>Risk</b>   |                       |                        | 50.00%  |
| 4.01     | Risk  | £ 1,906,012.88        |                        |   |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 1,906,012.88</b> |                        |   |
| <b>5</b> | <b>Inflation</b>  |                       |                        | When included within the project AFC, less COWD<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 923,960.91          |                        |   |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 923,960.91</b>   |                        |   |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                       |                        | If Applicable   |
| 6.01     | Tax allowances and Grants                                       | £ -                   |                        |   |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>            |                        |   |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 6,641,999.56</b> |                        |   |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         | <i>pp Neal Evans</i>    |                         |
| Date :-     | 01 August 2014          | <i>Neal Evans</i>       |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration, escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase  
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under "Other Costs to the Customer"
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided, the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)



|                     |   |   |
|---------------------|---|---|
| Estimate Stage:     | Grip 0  | <b>Infrastructure Projects</b><br><i>Southern</i> |
| Oracle Project No.: | 141982  |   |
| Project Name:       | Liverpool Street Station Option 1: Platform 0 |   |

**Calculation of Contractors and Network Rail's Indirect Costs**

| Asset                     | Total Direct Costs | %     | Preliminaries | %     | Design       | %     | OH & P       | %     | Network Rail Management | %    | Sponsor |
|---------------------------|--------------------|-------|---------------|-------|--------------|-------|--------------|-------|-------------------------|------|---------|
| Railway Control Systems   | £ 326,680.00       | 25.0% | £ 81,670.00   | 10.0% | £ 32,668.00  | 12.5% | £ 55,127.25  | 12.0% | £ 39,201.60             | 3.0% |         |
| Train Power Systems       | £ -                | 25.0% | £ -           | 10.0% | £ -          | 12.5% | £ -          | 12.0% | £ -                     | 3.0% |         |
| Electric Power and Plant  | £ 12,500.00        | 25.0% | £ 3,125.00    | 10.0% | £ 1,250.00   | 12.5% | £ 2,109.38   | 12.0% | £ 1,500.00              | 3.0% |         |
| Permanent Way             | £ 612,500.00       | 25.0% | £ 153,125.00  | 10.0% | £ 61,250.00  | 12.5% | £ 103,359.38 | 12.0% | £ 73,500.00             | 3.0% |         |
| Telecommunication Systems | £ 62,366.00        | 25.0% | £ 15,591.50   | 10.0% | £ 6,236.60   | 12.5% | £ 10,524.26  | 12.0% | £ 7,483.92              | 3.0% |         |
| Buildings and Property    | £ 637,982.00       | 25.0% | £ 159,495.50  | 10.0% | £ 63,798.20  | 12.5% | £ 107,659.46 | 12.0% | £ 76,557.84             | 3.0% |         |
| Civil Engineering         | £ 208,087.00       | 25.0% | £ 52,021.75   | 10.0% | £ 20,808.70  | 12.5% | £ 35,114.68  | 12.0% | £ 24,970.44             | 3.0% |         |
| Enabling Works            | £ 222,248.00       | 25.0% | £ 55,562.00   | 10.0% | £ 22,224.80  | 12.5% | £ 37,504.35  | 12.0% | £ 26,669.76             | 3.0% |         |
|                           |                    |       | £ 520,590.75  |       | £ 208,236.30 |       | £ 351,398.76 |       | £ 249,883.56            |      | £ -     |

**Allowance for TOC / FOC Compensation - calculator**

|  |              |                  |
|--|--------------|------------------|
| £ 2,082,363.00                           | £ 520,590.75 | £ 351,398.76     |
| TOTAL                                    |              |                  |
|  |              | £ 2,954,352.51   |
| Allowance for TOC / FOC compensation (%) |              | 10% £ 295,435.25 |

| Oracle Project No.  | 141982  |                   | Infrastructure Projects<br>Southern |              |                     |   | NetworkRail |
|---------------------|---|-------------------|-------------------------------------|--------------|---------------------|---|-------------|
| Project Description | Liverpool Street Station Option 1: Platform 0                     |                   |                                     |              |                     |   |             |
| Ref                 | Description   | Quantity          | Unit                                | Rate         | Cost                | Comments  |             |
| <b>2.01</b>         | <b>Preliminaries</b>  |                   |                                     | <b>TOTAL</b> | <b>£ 520,590.75</b> |   |             |
| <b>2.01.xx</b>      | <b>Allowance where Preliminaries have not been quantified.</b>    |                   | <b>Sum</b>                          |              | <b>£ 520,590.75</b> |   |             |
| 2.01.0xx.01         | Preliminaries allowance   | 1                 | Sum                                 | £ 520,590.75 | £ 520,590.75        | From percentage allowance; see "indirects" tab. |             |
| <b>2.01.01</b>      | <b>Contractor's preliminaries</b>                                 |                   | <b>Sum</b>                          |              | <b>£ -</b>          |   |             |
| <b>2.01.01.01</b>   | <b>Employers requirements</b>                                     |                   | <b>Sum</b>                          |              | <b>£ -</b>          |   |             |
| 2.01.01.01.01.      | Insurance, bonds, guarantees and warranties                       |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.01.02       | Site accommodation for the employer and Employer's representative |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.01.03       | Site records  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.01.04       | Completion and post completion requirements                       |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.01.05       | Other   |                   | Sum                                 | £ -          | £ -                 |   |             |
| <b>2.01.01.02</b>   | <b>Contractor's cost items</b>                                    |                   | <b>Sum</b>                          |              | <b>£ -</b>          |   |             |
| 2.01.01.02.01       | Management and staff  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.02       | Site establishment  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.03       | Security  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.04       | Safety and environmental protection                               |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.05       | Control and protection  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.06       | Site records  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.07       | Completion and taking over requirements                           |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.08       | Cleaning  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.09       | Fees and charges  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.10       | Works and other insurances  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.02.11       | Other   |                   | Sum                                 | £ -          | £ -                 |   |             |
| <b>2.01.01.03</b>   | <b>Temporary works and services</b>                               |                   | <b>Sum</b>                          |              | <b>£ -</b>          |   |             |
| 2.01.01.03.01       | Access scaffolding / encapsulation                                |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.03.02       | Temporary works and diversions                                    |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.03.03       | Temporary services  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.03.04       | Other   |                   | Sum                                 | £ -          | £ -                 |   |             |
| <b>2.01.01.04</b>   | <b>Safety and environmental protection</b>                        |                   | <b>Sum</b>                          |              | <b>£ -</b>          |   |             |
| 2.01.01.04.01       | Safety of workpeople  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.04.03       | Possessions   |                   | Sum                                 | £ -          | £ -                 |   |             |
| 3.01.01.04.03       | Isolations  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 3.01.01.04.04       | Protecting the environment  |                   | Sum                                 | £ -          | £ -                 |   |             |
| 2.01.01.04.05       | Other   |                   | Sum                                 | £ -          | £ -                 |   |             |
|                     |   | <b>Page Total</b> |                                     |              | <b>£ 520,590.75</b> |   |             |

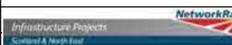
| Oracle Project No. 141982                     |   | Infrastructure Projects |            |              |                     |   | NetworkRail |
|---|---|-------------------------|------------|--------------|---------------------|---|-------------|
| Project Description                           |   | Southern                |            |              |                     |   |             |
| Liverpool Street Station Option 1: Platform 0 |   |                         |            |              |                     |   |             |
| Ref   | Description   | Quantity                | Unit       | Rate         | Cost                | Comments  |             |
| <b>2.02</b>                                   | <b>Overheads and profit</b>                               |                         |            | <b>TOTAL</b> | <b>£ 351,398.76</b> |   |             |
| <b>2.02.xx</b>                                | <b>Allowance where OH&amp;P have not been quantified.</b> |                         | <b>Sum</b> |              | <b>£ 351,398.76</b> |   |             |
| 2.02.xx.01                                    | Overheads and profit allowance                            | 1                       | Sum        | £ 351,398.76 | £ 351,398.76        | From percentage allowance; see "indirects" tab. |             |
| <b>2.02.01</b>                                | <b>Contractor's overheads and profit</b>                  |                         | <b>Sum</b> |              | <b>£ -</b>          |   |             |
| <b>2.02.01.01</b>                             | <b>Head office costs proportioned to contract</b>         |                         | <b>Sum</b> |              | <b>£ -</b>          |   |             |
| 2.02.01.01.01                                 | Overheads   |                         | Sum        | £ -          | £ -                 |   |             |
| 2.02.01.01.02                                 | Administration  |                         | Sum        | £ -          | £ -                 |   |             |
| <b>2.02.01.02</b>                             | <b>Profit</b>   |                         | <b>Sum</b> |              | <b>£ -</b>          |   |             |
| 2.02.01.02.01                                 | Profit on cost  |                         | Sum        | £ -          | £ -                 |   |             |
|   | <b>Page Total</b>   |                         |            |              | <b>£ 351,398.76</b> |   |             |

| Oracle Project No. 141982                     |  | Infrastructure Projects |            |              |                     | NetworkRail             |
|---|--|-------------------------|------------|--------------|---------------------|-------------------------|
| Project Description                           |  | Southern                |            |              |                     | Infrastructure Projects |
| Liverpool Street Station Option 1: Platform 0 |  | Southern & North End    |            |              |                     | NetworkRail             |
| Ref   | Description  | Quantity                | Unit       | Rate         | Cost                | Comments                |
| <b>3.01</b>                                   | <b>Design Team Fees</b>                                      |                         |            | <b>TOTAL</b> | <b>£ 208,236.30</b> |                         |
| <b>3.01.xx</b>                                | <b>Allowance where Design Fees have not been quantified.</b> |                         | <b>Sum</b> |              | <b>£ 208,236.30</b> |                         |
| 3.01.xx.01                                    | From percentage allowance, see "indirects" tab.              | 1                       | Sum        | £ 208,236.30 | £ 208,236.30        |                         |
| <b>3.01.01</b>                                | <b>Employer's own design fees</b>                            |                         | <b>Sum</b> |              | <b>£ -</b>          |                         |
| <b>3.01.01.01</b>                             | <b>Railway Control Systems Design</b>                        |                         | <b>Sum</b> |              | <b>£ -</b>          |                         |
| 3.01.01.01.01                                 | Site investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.02                                 | Ground Investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.03                                 | Topographical Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.04                                 | Environmental Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.05                                 | Feasibility Study  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.06                                 | Option Selection Study                                       |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.07                                 | Single Option Development                                    |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.08                                 | Design Development   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.09                                 | Outline Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.10                                 | Detailed Design  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.11                                 | Post contract Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.12                                 | Design - As Built Documentation                              |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.13                                 | Correlation  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.01.14                                 | Other  |                         | hrs        | £ -          | £ -                 |                         |
| <b>3.01.01.02</b>                             | <b>Train Power Systems Design</b>                            |                         | <b>Sum</b> |              | <b>£ -</b>          |                         |
| 3.01.01.02.01                                 | Site investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.02                                 | Ground Investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.03                                 | Topographical Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.04                                 | Environmental Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.05                                 | Feasibility Study  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.06                                 | Option Selection Study                                       |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.07                                 | Single Option Development                                    |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.08                                 | Design Development   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.09                                 | Outline Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.10                                 | Detailed Design  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.11                                 | Post contract Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.12                                 | Design - As Built Documentation                              |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.13                                 | Correlation  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.02.14                                 | Other  |                         | hrs        | £ -          | £ -                 |                         |
| <b>3.01.01.03</b>                             | <b>Electric Power and Plant Design</b>                       |                         | <b>Sum</b> |              | <b>£ -</b>          |                         |
| 3.01.01.03.01                                 | Site investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.02                                 | Ground Investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.03                                 | Topographical Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.04                                 | Environmental Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.05                                 | Feasibility Study  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.06                                 | Option Selection Study                                       |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.07                                 | Single Option Development                                    |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.08                                 | Design Development   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.09                                 | Outline Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.10                                 | Detailed Design  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.11                                 | Post contract Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.12                                 | Design - As Built Documentation                              |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.13                                 | Correlation  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.03.14                                 | Other  |                         | hrs        | £ -          | £ -                 |                         |
| <b>3.01.01.04</b>                             | <b>Permanent Way Design</b>                                  |                         | <b>Sum</b> |              | <b>£ -</b>          |                         |
| 3.01.01.04.01                                 | Site investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.02                                 | Ground Investigation   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.03                                 | Topographical Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.04                                 | Environmental Survey   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.05                                 | Feasibility Study  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.06                                 | Option Selection Study                                       |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.07                                 | Single Option Development                                    |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.08                                 | Design Development   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.09                                 | Outline Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.10                                 | Detailed Design  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.11                                 | Post contract Design   |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.12                                 | Design - As Built Documentation                              |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.13                                 | Correlation  |                         | hrs        | £ -          | £ -                 |                         |
| 3.01.01.04.14                                 | Other  |                         | hrs        | £ -          | £ -                 |                         |
| <b>Page Total</b>                             |  |                         |            |              | <b>£ 208,236.30</b> |                         |

|                           |   |   |
|---------------------------|---|---|
| Oracle Project No. 141982 | Infrastructure Projects                       | NetworkRail                                     |
| Project Description       | Liverpool Street Station Option 1: Platform 0 | Infrastructure Projects<br>Southern & North End |

| Southern   |  |          |            |      |            |          |
|--|--|----------|------------|------|------------|----------|
| Ref  | Description  | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                 |          |            |      |            |          |
| <b>3.01.01</b>   | <b>Employer's own design fees (continued).</b>       |          | <b>Sum</b> |      |            |          |
| <b>3.01.01.05</b>  | <b>Operational Telecomms System Design</b>           |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.05.01  | Site investigation                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.02  | Ground Investigation                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.05.03  | Topographical Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.05.04  | Environmental Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.05.05  | Feasibility Study                                    |          | hrs        | £    | - £        | -        |
| 3.01.01.05.06  | Option Selection Study                               |          | hrs        | £    | - £        | -        |
| 3.01.01.05.07  | Single Option Development                            |          | hrs        | £    | - £        | -        |
| 3.01.01.05.08  | Design Development                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.09  | Outline Design                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.05.10  | Detailed Design                                      |          | hrs        | £    | - £        | -        |
| 3.01.01.05.11  | Post contract Design                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.05.12  | Design - As Built Documentation                      |          | hrs        | £    | - £        | -        |
| 3.01.01.05.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.06</b>  | <b>Buildings and Property Design</b>                 |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.06.01  | Site investigation                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.02  | Ground Investigation                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.06.03  | Topographical Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.06.04  | Environmental Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.06.05  | Feasibility Study                                    |          | hrs        | £    | - £        | -        |
| 3.01.01.06.06  | Option Selection Study                               |          | hrs        | £    | - £        | -        |
| 3.01.01.06.07  | Single Option Development                            |          | hrs        | £    | - £        | -        |
| 3.01.01.06.08  | Design Development                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.09  | Outline Design                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.06.10  | Detailed Design                                      |          | hrs        | £    | - £        | -        |
| 3.01.01.06.11  | Post contract Design                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.06.12  | Design - As Built Documentation                      |          | hrs        | £    | - £        | -        |
| 3.01.01.06.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.07</b>  | <b>Civil Engineering Design</b>                      |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.07.01  | Site investigation                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.02  | Ground Investigation                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.07.03  | Topographical Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.07.04  | Environmental Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.07.05  | Feasibility Study                                    |          | hrs        | £    | - £        | -        |
| 3.01.01.07.06  | Option Selection Study                               |          | hrs        | £    | - £        | -        |
| 3.01.01.07.07  | Single Option Development                            |          | hrs        | £    | - £        | -        |
| 3.01.01.07.08  | Design Development                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.09  | Outline Design                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.07.10  | Detailed Design                                      |          | hrs        | £    | - £        | -        |
| 3.01.01.07.11  | Post contract Design                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.07.12  | Design - As Built Documentation                      |          | hrs        | £    | - £        | -        |
| 3.01.01.07.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.08</b>  | <b>Enabling Works Design</b>                         |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.08.01  | Site investigation                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.02  | Ground Investigation                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.08.03  | Topographical Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.08.04  | Environmental Survey                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.08.05  | Feasibility Study                                    |          | hrs        | £    | - £        | -        |
| 3.01.01.08.06  | Option Selection Study                               |          | hrs        | £    | - £        | -        |
| 3.01.01.08.07  | Single Option Development                            |          | hrs        | £    | - £        | -        |
| 3.01.01.08.08  | Design Development                                   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.09  | Outline Design                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.08.10  | Detailed Design                                      |          | hrs        | £    | - £        | -        |
| 3.01.01.08.11  | Post contract Design                                 |          | hrs        | £    | - £        | -        |
| 3.01.01.08.12  | Design - As Built Documentation                      |          | hrs        | £    | - £        | -        |
| 3.01.01.08.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>Page Total</b>  |  |          |            |      | <b>£ -</b> |          |
| <b>Oracle Project No.</b>  | <b>141982</b>  |          |            |      |            |          |
| <b>Project Description</b>   | <b>Liverpool Street Station Option 1: Platform 0</b> |          |            |      |            |          |
|  |  |          |            |      |            |          |
| Ref  | Description  | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                 |          |            |      |            |          |
| <b>3.01.02</b>   | <b>Employer's procured design fees</b>               |          | <b>Sum</b> |      | <b>£ -</b> |          |

| Southern  |   |          |            |      |            |  |
|---|---|----------|------------|------|------------|--|
| Ref   | Description   | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01.02.01 Railway Control Systems Design</b>  |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.01.01                                     | Site investigation                                  |          | hrs        | £    | -          | -  |
| 3.01.02.01.02                                     | Ground Investigation                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.03                                     | Topographical Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.04                                     | Environmental Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.05                                     | Feasibility Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.01.06                                     | Option Selection Study                              |          | hrs        | £    | -          | -  |
| 3.01.02.01.07                                     | Single Option Development                           |          | hrs        | £    | -          | -  |
| 3.01.02.01.08                                     | Design Development                                  |          | hrs        | £    | -          | -  |
| 3.01.02.01.09                                     | Outline Design                                      |          | hrs        | £    | -          | -  |
| 3.01.02.01.10                                     | Detailed Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.11                                     | Post contract Design                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.12                                     | Design - As Built Documentation                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.01.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.02 Train Power Systems Design</b>      |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.02.01                                     | Site investigation                                  |          | hrs        | £    | -          | -  |
| 3.01.02.02.02                                     | Ground Investigation                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.03                                     | Topographical Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.04                                     | Environmental Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.05                                     | Feasibility Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.02.06                                     | Option Selection Study                              |          | hrs        | £    | -          | -  |
| 3.01.02.02.07                                     | Single Option Development                           |          | hrs        | £    | -          | -  |
| 3.01.02.02.08                                     | Design Development                                  |          | hrs        | £    | -          | -  |
| 3.01.02.02.09                                     | Outline Design                                      |          | hrs        | £    | -          | -  |
| 3.01.02.02.10                                     | Detailed Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.11                                     | Post contract Design                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.12                                     | Design - As Built Documentation                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.02.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.03 Electric Power and Plant Design</b> |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.03.01                                     | Site investigation                                  |          | hrs        | £    | -          | -  |
| 3.01.02.03.02                                     | Ground Investigation                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.03                                     | Topographical Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.04                                     | Environmental Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.05                                     | Feasibility Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.03.06                                     | Option Selection Study                              |          | hrs        | £    | -          | -  |
| 3.01.02.03.07                                     | Single Option Development                           |          | hrs        | £    | -          | -  |
| 3.01.02.03.08                                     | Design Development                                  |          | hrs        | £    | -          | -  |
| 3.01.02.03.09                                     | Outline Design                                      |          | hrs        | £    | -          | -  |
| 3.01.02.03.10                                     | Detailed Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.11                                     | Post contract Design                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.12                                     | Design - As Built Documentation                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.03.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.04 Permanent Way Design</b>            |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.04.01                                     | Site investigation                                  |          | hrs        | £    | -          | -  |
| 3.01.02.04.02                                     | Ground Investigation                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.03                                     | Topographical Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.04                                     | Environmental Survey                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.05                                     | Feasibility Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.04.06                                     | Option Selection Study                              |          | hrs        | £    | -          | -  |
| 3.01.02.04.07                                     | Single Option Development                           |          | hrs        | £    | -          | -  |
| 3.01.02.04.08                                     | Design Development                                  |          | hrs        | £    | -          | -  |
| 3.01.02.04.09                                     | Outline Design                                      |          | hrs        | £    | -          | -  |
| 3.01.02.04.10                                     | Detailed Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.11                                     | Post contract Design                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.12                                     | Design - As Built Documentation                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.04.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>Page Total</b>                                 |   |          |            |      | <b>£ -</b> |  |
| Oracle Project No.                                | 141982  |          |            |      |            |  |
| Project Description                               | Liverpool Street Station Option 1: Platform 0       |          |            |      |            |  |
| Ref   | Description   | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01</b>                                       | <b>Design Team Fees (continued).</b>                |          |            |      |            |  |
| <b>3.01.02</b>                                    | <b>Employer's procured design fees (continued).</b> |          | <b>Sum</b> |      |            |  |
| <b>3.01.02.05</b>                                 | <b>Operational Telecomms System Design</b>          |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.05.01                                     | Site investigation                                  |          | hrs        | £    | -          | -  |
| 3.01.02.05.02                                     | Ground Investigation                                |          | hrs        | £    | -          | -  |

| Southern   |  |          |            |      |          |          |
|--|--|----------|------------|------|----------|----------|
| Ref  | Description  | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.02.05.03  | Topographical Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.05.04  | Environmental Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.05.05  | Feasibility Study                                    |          | hrs        | £    | -        | -        |
| 3.01.02.05.06  | Option Selection Study                               |          | hrs        | £    | -        | -        |
| 3.01.02.05.07  | Single Option Development                            |          | hrs        | £    | -        | -        |
| 3.01.02.05.08  | Design Development                                   |          | hrs        | £    | -        | -        |
| 3.01.02.05.09  | Outline Design                                       |          | hrs        | £    | -        | -        |
| 3.01.02.05.10  | Detailed Design                                      |          | hrs        | £    | -        | -        |
| 3.01.02.05.11  | Post contract Design                                 |          | hrs        | £    | -        | -        |
| 3.01.02.05.12  | Design - As Built Documentation                      |          | hrs        | £    | -        | -        |
| 3.01.02.05.13  | Correlation  |          | hrs        | £    | -        | -        |
| 3.01.02.05.14  | Other  |          | hrs        | £    | -        | -        |
| <b>3.01.02.06</b>  | <b>Buildings and Property Design</b>                 |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.06.01  | Site Investigation                                   |          | hrs        | £    | -        | -        |
| 3.01.02.06.02  | Ground Investigation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.06.03  | Topographical Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.06.04  | Environmental Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.06.05  | Feasibility Study                                    |          | hrs        | £    | -        | -        |
| 3.01.02.06.06  | Option Selection Study                               |          | hrs        | £    | -        | -        |
| 3.01.02.06.07  | Single Option Development                            |          | hrs        | £    | -        | -        |
| 3.01.02.06.08  | Design Development                                   |          | hrs        | £    | -        | -        |
| 3.01.02.06.09  | Outline Design                                       |          | hrs        | £    | -        | -        |
| 3.01.02.06.10  | Detailed Design                                      |          | hrs        | £    | -        | -        |
| 3.01.02.06.11  | Post contract Design                                 |          | hrs        | £    | -        | -        |
| 3.01.02.06.12  | Design - As Built Documentation                      |          | hrs        | £    | -        | -        |
| 3.01.02.06.13  | Correlation  |          | hrs        | £    | -        | -        |
| 3.01.02.06.14  | Other  |          | hrs        | £    | -        | -        |
| <b>3.01.02.07</b>  | <b>Civil Engineering Design</b>                      |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.07.01  | Site Investigation                                   |          | hrs        | £    | -        | -        |
| 3.01.02.07.02  | Ground Investigation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.07.03  | Topographical Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.07.04  | Environmental Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.07.05  | Feasibility Study                                    |          | hrs        | £    | -        | -        |
| 3.01.02.07.06  | Option Selection Study                               |          | hrs        | £    | -        | -        |
| 3.01.02.07.07  | Single Option Development                            |          | hrs        | £    | -        | -        |
| 3.01.02.07.08  | Design Development                                   |          | hrs        | £    | -        | -        |
| 3.01.02.07.09  | Outline Design                                       |          | hrs        | £    | -        | -        |
| 3.01.02.07.10  | Detailed Design                                      |          | hrs        | £    | -        | -        |
| 3.01.02.07.11  | Post contract Design                                 |          | hrs        | £    | -        | -        |
| 3.01.02.07.12  | Design - As Built Documentation                      |          | hrs        | £    | -        | -        |
| 3.01.02.07.13  | Correlation  |          | hrs        | £    | -        | -        |
| 3.01.02.07.14  | Other  |          | hrs        | £    | -        | -        |
| <b>3.01.02.08</b>  | <b>Enabling Works Design</b>                         |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.08.01  | Site Investigation                                   |          | hrs        | £    | -        | -        |
| 3.01.02.08.02  | Ground Investigation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.08.03  | Topographical Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.08.04  | Environmental Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.02.08.05  | Feasibility Study                                    |          | hrs        | £    | -        | -        |
| 3.01.02.08.06  | Option Selection Study                               |          | hrs        | £    | -        | -        |
| 3.01.02.08.07  | Single Option Development                            |          | hrs        | £    | -        | -        |
| 3.01.02.08.08  | Design Development                                   |          | hrs        | £    | -        | -        |
| 3.01.02.08.09  | Outline Design                                       |          | hrs        | £    | -        | -        |
| 3.01.02.08.10  | Detailed Design                                      |          | hrs        | £    | -        | -        |
| 3.01.02.08.11  | Post contract Design                                 |          | hrs        | £    | -        | -        |
| 3.01.02.08.12  | Design - As Built Documentation                      |          | hrs        | £    | -        | -        |
| 3.01.02.08.13  | Correlation  |          | hrs        | £    | -        | -        |
| 3.01.02.08.14  | Other  |          | hrs        | £    | -        | -        |
| <b>Page Total</b>  |  |          |            |      | <b>£</b> | <b>-</b> |
| <b>Oracle Project No.</b>  | <b>141982</b>  |          |            |      |          |          |
| <b>Project Description</b>   | <b>Liverpool Street Station Option 1: Platform 0</b> |          |            |      |          |          |
|  |  |          |            |      |          |          |
| Ref  | Description  | Quantity | Unit       | Rate | Cost     | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                 |          |            |      |          |          |
| <b>3.01.03</b>   | <b>Contractor design fees</b>                        |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| <b>3.01.03.01</b>  | <b>Railway Control Systems Design</b>                |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.01.01  | Site Investigation                                   |          | hrs        | £    | -        | -        |
| 3.01.03.01.02  | Ground Investigation                                 |          | hrs        | £    | -        | -        |
| 3.01.03.01.03  | Topographical Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.03.01.04  | Environmental Survey                                 |          | hrs        | £    | -        | -        |
| 3.01.03.01.05  | Feasibility Study                                    |          | hrs        | £    | -        | -        |
| 3.01.03.01.06  | Option Selection Study                               |          | hrs        | £    | -        | -        |
| 3.01.03.01.07  | Single Option Development                            |          | hrs        | £    | -        | -        |

| Southern            |   |          |            |      |          |  |
|---------------------|---|----------|------------|------|----------|--|
| Ref                 | Description                                   | Quantity | Unit       | Rate | Cost     | Comments   |
| 3.01.03.01.08       | Design Development                            |          | hrs        | £    | -        | -  |
| 3.01.03.01.09       | Outline Design                                |          | hrs        | £    | -        | -  |
| 3.01.03.01.10       | Detailed Design                               |          | hrs        | £    | -        | -  |
| 3.01.03.01.11       | Post contract Design                          |          | hrs        | £    | -        | -  |
| 3.01.03.01.12       | Design - As Built Documentation               |          | hrs        | £    | -        | -  |
| 3.01.03.01.13       | Correlation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.01.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.02</b>   | <b>Train Power Systems Design</b>             |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.02.01       | Site investigation                            |          | hrs        | £    | -        | -  |
| 3.01.03.02.02       | Ground Investigation                          |          | hrs        | £    | -        | -  |
| 3.01.03.02.03       | Topographical Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.02.04       | Environmental Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.02.05       | Feasibility Study                             |          | hrs        | £    | -        | -  |
| 3.01.03.02.06       | Option Selection Study                        |          | hrs        | £    | -        | -  |
| 3.01.03.02.07       | Single Option Development                     |          | hrs        | £    | -        | -  |
| 3.01.03.02.08       | Design Development                            |          | hrs        | £    | -        | -  |
| 3.01.03.02.09       | Outline Design                                |          | hrs        | £    | -        | -  |
| 3.01.03.02.10       | Detailed Design                               |          | hrs        | £    | -        | -  |
| 3.01.03.02.11       | Post contract Design                          |          | hrs        | £    | -        | -  |
| 3.01.03.02.12       | Design - As Built Documentation               |          | hrs        | £    | -        | -  |
| 3.01.03.02.13       | Correlation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.02.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.03</b>   | <b>Electric Power and Plant Design</b>        |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.03.01       | Site investigation                            |          | hrs        | £    | -        | -  |
| 3.01.03.03.02       | Ground Investigation                          |          | hrs        | £    | -        | -  |
| 3.01.03.03.03       | Topographical Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.03.04       | Environmental Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.03.05       | Feasibility Study                             |          | hrs        | £    | -        | -  |
| 3.01.03.03.06       | Option Selection Study                        |          | hrs        | £    | -        | -  |
| 3.01.03.03.07       | Single Option Development                     |          | hrs        | £    | -        | -  |
| 3.01.03.03.08       | Design Development                            |          | hrs        | £    | -        | -  |
| 3.01.03.03.09       | Outline Design                                |          | hrs        | £    | -        | -  |
| 3.01.03.03.10       | Detailed Design                               |          | hrs        | £    | -        | -  |
| 3.01.03.03.11       | Post contract Design                          |          | hrs        | £    | -        | -  |
| 3.01.03.03.12       | Design - As Built Documentation               |          | hrs        | £    | -        | -  |
| 3.01.03.03.13       | Correlation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.03.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.04</b>   | <b>Permanent Way Design</b>                   |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.04.01       | Site investigation                            |          | hrs        | £    | -        | -  |
| 3.01.03.04.02       | Ground Investigation                          |          | hrs        | £    | -        | -  |
| 3.01.03.04.03       | Topographical Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.04.04       | Environmental Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.04.05       | Feasibility Study                             |          | hrs        | £    | -        | -  |
| 3.01.03.04.06       | Option Selection Study                        |          | hrs        | £    | -        | -  |
| 3.01.03.04.07       | Single Option Development                     |          | hrs        | £    | -        | -  |
| 3.01.03.04.08       | Design Development                            |          | hrs        | £    | -        | -  |
| 3.01.03.04.09       | Outline Design                                |          | hrs        | £    | -        | -  |
| 3.01.03.04.10       | Detailed Design                               |          | hrs        | £    | -        | -  |
| 3.01.03.04.11       | Post contract Design                          |          | hrs        | £    | -        | -  |
| 3.01.03.04.12       | Design - As Built Documentation               |          | hrs        | £    | -        | -  |
| 3.01.03.04.13       | Correlation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.04.14       | Other   |          | hrs        | £    | -        | -  |
| <b>Page Total</b>   |   |          |            |      | <b>£</b> | <b>-</b>   |
| Oracle Project No.  | 141982  |          |            |      |          |  |
| Project Description | Liverpool Street Station Option 1: Platform 0 |          |            |      |          |  |
| Ref                 | Description                                   | Quantity | Unit       | Rate | Cost     | Comments   |
| <b>3.01</b>         | <b>Design Team Fees (continued).</b>          |          |            |      |          |  |
| <b>3.01.03</b>      | <b>Contractor design fees (continued).</b>    |          | <b>Sum</b> |      |          |  |
| <b>3.01.03.05</b>   | <b>Operational Telecomms System Design</b>    |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.05.01       | Site investigation                            |          | hrs        | £    | -        | -  |
| 3.01.03.05.02       | Ground Investigation                          |          | hrs        | £    | -        | -  |
| 3.01.03.05.03       | Topographical Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.05.04       | Environmental Survey                          |          | hrs        | £    | -        | -  |
| 3.01.03.05.05       | Feasibility Study                             |          | hrs        | £    | -        | -  |
| 3.01.03.05.06       | Option Selection Study                        |          | hrs        | £    | -        | -  |
| 3.01.03.05.07       | Single Option Development                     |          | hrs        | £    | -        | -  |
| 3.01.03.05.08       | Design Development                            |          | hrs        | £    | -        | -  |
| 3.01.03.05.09       | Outline Design                                |          | hrs        | £    | -        | -  |
| 3.01.03.05.10       | Detailed Design                               |          | hrs        | £    | -        | -  |
| 3.01.03.05.11       | Post contract Design                          |          | hrs        | £    | -        | -  |

| <i>Southern</i>   |                                      |          |            |      |          |          |
|-------------------|--------------------------------------|----------|------------|------|----------|----------|
| Ref               | Description                          | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.03.05.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.05.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.05.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.06</b> | <b>Buildings and Property Design</b> |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.06.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.06.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.06.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.06.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.06.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.06.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.06.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.06.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.07</b> | <b>Civil Engineering Design</b>      |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.07.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.07.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.07.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.07.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.07.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.07.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.07.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.07.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.08</b> | <b>Enabling Works Design</b>         |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.08.01     | Site investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.08.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.08.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.08.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.08.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.08.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.08.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.08.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>Page Total</b> |                                      |          |            |      | <b>£</b> | <b>-</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects                       |            |              |                     |   |  |
|---------------------------|--|---|------------|--------------|---------------------|---|---|
| Project Description       |  | Liverpool Street Station Option 1: Platform 0 |            |              |                     |   |   |
| Ref                       | Description  | Quantity                                      | Unit       | Rate         | Cost                | Comments  |   |
| <b>3.02</b>               | <b>Project Management Team Fees</b>                                |   |            | <b>TOTAL</b> | <b>£ 249,883.56</b> |   |   |
| <b>3.02.xx</b>            | <b>Allowance where Development Costs have not been quantified.</b> |   | <b>Sum</b> |              | <b>£ 249,883.56</b> |   |   |
| 3.02.xx.01                | NR Project Management and Sponsor                                  | 1   | Sum        | £ 249,883.56 | £ 249,883.56        | From percentage allowance; see "indirects" tab. |   |
| <b>3.02.01</b>            | <b>Employer's Project costs</b>                                    |   | <b>Sum</b> |              | <b>£ -</b>          |   |   |
| <b>3.02.01.01</b>         | <b>Employer's staff costs</b>                                      |   | <b>Sum</b> |              | <b>£ -</b>          |   |   |
| 3.02.01.01.01             | Output definition phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.02             | Feasibility phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.03             | Option selection phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.04             | Single option development phase                                    |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.05             | Detailed design phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.06             | Implementation phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.07             | Handback phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.08             | Close out phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.01.01.09             | Other  |   | hrs        | £ -          | £ -                 |   |   |
| <b>3.02.02</b>            | <b>Employer's Procured costs</b>                                   |   | <b>Sum</b> |              | <b>£ -</b>          |   |   |
| <b>3.02.02.02</b>         | <b>Employer's procured staff costs</b>                             |   | <b>Sum</b> |              | <b>£ -</b>          |   |   |
| 3.02.02.02.01             | Output definition phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.02             | Feasibility phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.03             | Option selection phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.04             | Single option development phase                                    |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.05             | Detailed design phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.06             | Implementation phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.07             | Handback phase   |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.08             | Close out phase  |   | hrs        | £ -          | £ -                 |   |   |
| 3.02.02.02.09             | Other  |   | hrs        | £ -          | £ -                 |   |   |
|                           | <b>Page Total</b>  |   |            |              | <b>£ 249,883.56</b> |   |   |

| Oracle Project No.  | 141982   |                   | Infrastructure Projects |              |                     |          |  |
|---------------------|--|-------------------|-------------------------|--------------|---------------------|----------|---|
| Project Description | Liverpool Street Station Option 1: Platform 0                        |                   | Southern                |              |                     |          |   |
| Ref                 | Description  | Quantity          | Unit                    | Rate         | Cost                | Comments |   |
| <b>3.03</b>         | <b>Other Project Costs</b>   |                   |                         | <b>TOTAL</b> | <b>£ 399,553.40</b> |          |   |
| <b>3.03.01</b>      | <b>Other Project Costs</b>   |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| <b>3.03.01.01</b>   | <b>Land Costs</b>  |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.01.01       | Acquisition of land  |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.01.02       | Rights of way and way leaves   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.01.03       | Fees : associated with acquisition of land or rights of way          |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.02</b>   | <b>Fees to statutory and public bodies</b>                           |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.02.01       | Planning fees  |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.02.02       | Building control fees  |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.02.03       | Fees to neighbouring land owners and users to facilitate the project | 1                 | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.03</b>   | <b>Payments to public and statutory bodies</b>                       |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.03.01       | Adoption charges in connection with highways and bridges             |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.03.02       | Maintenance charges in connection with highways and bridges          |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.03.03       | Planning contributions   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.04</b>   | <b>Sponsor's agent fees</b>  |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.04.01       | Planning   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.04.02       | Lobbying and public consultation                                     |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.04.03       | Legal services   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.04.04       | Taxation and financial services                                      |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.04.05       | Collaboration, business relationship management systems              |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.04.06       | Facilitation services  |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.05</b>   | <b>Employer's office &amp; supplied plant costs</b>                  |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.05.01       | Employer's main office costs   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.05.02       | Employer's project office costs                                      |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.05.03       | Employer's site office costs   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.05.04       | Employer owned plant   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.06</b>   | <b>Research for innovative products</b>                              |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.06.01       | Concept design   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.06.02       | Testing  |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.03.01.06.03       | Piloting   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.07</b>   | <b>Finance costs</b>   |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.03.01.07.01       | Commitment fees  |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.02.05.03.02       | Interest   |                   | Sum                     | £ -          | £ -                 |          |   |
| 3.02.05.03.03       | Credit charges   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.08</b>   | <b>Marketing</b>   |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.02.01.08.01       | Fees   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.09</b>   | <b>Stakeholder management</b>  |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.02.01.09.01       | Fees   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.10</b>   | <b>Archaeological</b>  |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.02.01.10.01       | Fees   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.11</b>   | <b>Insurance</b>   |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.02.01.11.01       | Fees   |                   | Sum                     | £ -          | £ -                 |          |   |
| <b>3.03.01.12</b>   | <b>Other</b>   |                   | <b>Sum</b>              |              | <b>£ -</b>          |          |   |
| 3.02.01.12.01       | Fees   |                   | Sum                     | £ -          | £ -                 |          |   |
|                     |  | <b>Page Total</b> |                         |              | <b>£ -</b>          |          |   |

| Ref                 | Description   | Quantity | Unit       | Rate         | Cost                | Comments                                   |
|---------------------|---|----------|------------|--------------|---------------------|--|
| Oracle Project No.  | 141982  |          |            |              |                     |  |
| Project Description | Liverpool Street Station Option 1: Platform 0               |          |            |              |                     |  |
| Ref                 | Description   | Quantity | Unit       | Rate         | Cost                | Comments                                   |
| 3.03                | <b>Other project costs (continued).</b>                     |          |            |              |                     |  |
| 3.03.02             | <b>Disruption of asset use</b>                              |          | <b>Sum</b> |              | <b>£ 399,553.40</b> |  |
| 3.03.02.01          | <b>Employer's costs</b>                                     |          | <b>Sum</b> |              | <b>£ 104,118.15</b> |  |
| 3.03.02.01.01       | Possessions   |          | Nr         | £ -          | £ -                 |  |
| 3.03.02.01.02       | Isolations  | 1        | Nr         | £ 104,118.15 | £ 104,118.15        | Allowance 5% of indirect construction cost |
| 3.03.02.02          | <b>Decanting and relocation costs</b>                       |          | <b>Sum</b> |              | <b>£ -</b>          |  |
| 3.03.02.02.01       | Temporary relocation costs                                  |          | Sum        | £ -          | £ -                 |  |
| 3.03.02.02.02       | Rents and other running costs                               |          | Sum        | £ -          | £ -                 |  |
| 3.03.02.02.03       | Compensation costs  |          | Sum        | £ -          | £ -                 |  |
| 3.03.02.02.04       | Payments for interruption or disturbance of use             |          | Sum        | £ -          | £ -                 |  |
| 3.03.02.03          | <b>Interruption of use</b>                                  |          | <b>Sum</b> |              | <b>£ 295,435.25</b> |  |
| 3.03.02.03.01       | Payments to asset users : planned                           | 1        | Sum        | £ 295,435.25 | £ 295,435.25        | TOC/FOC compensation?                      |
| 3.03.02.03.02       | Costs of diversionary routes or alternative lines of supply |          | Sum        | £ -          | £ -                 |  |
|                     | <b>Page Total</b>   |          |            |              | <b>£ 399,553.40</b> |  |

| Oracle Project No. 141982 |   | Infrastructure Projects                       |            |                |                       | NetworkRail                        |  |
|---------------------------|---|---|------------|----------------|-----------------------|------------------------------------|--|
| Project Description       |   | Liverpool Street Station Option 1: Platform 0 |            |                |                       |                                    |  |
| Ref                       | Description   | Quantity                                      | Unit       | Rate           | Cost                  | Comments                           |  |
| 4.01                      | <b>Risk</b>   |   |            | <b>TOTAL</b>   | <b>£ 1,906,012.88</b> |                                    |  |
| 4.01.xx                   | <b>Allowance where risks have not been quantified.</b>    |   | <b>Sum</b> |                | <b>£ 1,906,012.88</b> |                                    |  |
| Y                         | Pre Grip  | 50  | %          | £ 3,812,025.77 | £ 1,906,012.88        | Select "Y" dependant on Grip stage |  |
| N                         | Grip 1  | 40  | %          | £ 3,812,025.77 | £                     | Select "Y" dependant on Grip stage |  |
| N                         | Grip 2  | 30  | %          | £ 3,812,025.77 | £                     | Select "Y" dependant on Grip stage |  |
| N                         | Grip 3  | 20  | %          | £ 3,812,025.77 | £                     | Select "Y" dependant on Grip stage |  |
| N                         | Grip 4  | 15  | %          | £ 3,812,025.77 | £                     | Select "Y" dependant on Grip stage |  |
| N                         | Grip 5  | 10  | %          | £ 3,812,025.77 | £                     | Select "Y" dependant on Grip stage |  |
| 4.01.01                   | <b>Total Risk Allowance</b>                               |   | <b>Sum</b> |                | <b>£ -</b>            |                                    |  |
| 4.01.01.01                | <b>Design development risks</b>                           |   | <b>Sum</b> |                | <b>£ -</b>            |                                    |  |
| 4.01.01.01.01             | Inadequate or unclear Project Brief                       |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.02             | Unclear Design Team Responsibilities                      |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.03             | Unrealistic Design Programme                              |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.04             | Inadequate Site Investigation                             |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.05             | Planning Constraints                                      |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.06             | Appropriateness of Design                                 |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.07             | Degree of Novelty   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.08             | Ineffective Design Co-Ordination                          |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.09             | Reliability of Estimating Data                            |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.10             | Design Management   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.01.11             | Other   |   | Sum        | £              | - £                   | -                                  |  |
|                           | <b>Page Total</b>   |   |            |                | <b>£ 1,906,012.88</b> |                                    |  |
|                           |   |   |            |                |                       |                                    |  |
| Oracle Project No. 141982 |   |   |            |                |                       |                                    |  |
| Project Description       |   | Liverpool Street Station Option 1: Platform 0 |            |                |                       |                                    |  |
| Ref                       | Description   | Quantity                                      | Unit       | Rate           | Cost                  | Comments                           |  |
| 4.01                      | <b>Risk (continued).</b>                                  |   |            |                |                       |                                    |  |
| 4.01.01.02                | <b>Construction risks</b>                                 |   | <b>Sum</b> |                | <b>£ -</b>            |                                    |  |
| 4.01.01.02.01             | Inadequate Site Investigation                             |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.02             | Archaeological remains                                    |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.03             | Underground obstructions                                  |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.04             | Contaminated ground                                       |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.05             | Adjacent structures                                       |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.06             | Geotechnical problems                                     |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.07             | Ground water  |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.08             | Asbestos and other hazardous materials                    |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.09             | Invasive plant growth                                     |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.10             | Tree preservation orders                                  |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.11             | Ecological issues   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.12             | Environmental impact                                      |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.13             | Physical Access to site                                   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.14             | Existing occupancies / users                              |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.15             | Restricted working hours / routines                       |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.16             | Maintaining access  |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.17             | Maintaining existing services                             |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.18             | Additional infrastructure                                 |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.19             | Existing services   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.20             | Location of existing services                             |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.21             | Relocation of existing services                           |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.22             | Statutory undertakers                                     |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.23             | Uncertainty over the source and availability of materials |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.24             | Appropriateness of specification                          |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.25             | Incomplete design   |   | Sum        | £              | - £                   | -                                  |  |
| 4.01.01.02.26             | Weather and seasonal implications                         |   | Sum        | £              | - £                   | -                                  |  |

| Ref               | Description   | Southern |            |          | Cost     | Comments   |
|-------------------|---|----------|------------|----------|----------|------------|
|                   |   | Quantity | Unit       | Rate     |          |            |
| 4.01.01.02.27     | Industrial relations  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.28     | Remote site   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.29     | Competence of contractor and sub-contractors                                    |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.30     | Health and safety   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.31     | Ineffective quality management  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.32     | Phasing requirements  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.33     | Ineffective handover procedures   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.34     | Disputes and claims   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.35     | Effect of changes / variations on construction programme                        |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.36     | Cumulative effect of changes / variations on the construction programme         |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.37     | Defects   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.38     | Accident / injury   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.39     | Access to site  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.40     | Human relations   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.41     | Other   |          | Sum        | £        | -        | £ -        |
| <b>4.01.01.03</b> | <b>Employer change risks</b>  |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>-</b>   |
| 4.01.01.03.01     | Specific changes in requirements  |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.02     | Changes in quality  |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.03     | Changes in time   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.04     | Employer driven changes / variations introduced during the implementation stage |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.05     | Effect of construction duration   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.06     | Cumulative effect of numerous changes   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.07     | Other   |          | Sum        | £        | -        | £ -        |
| <b>4.01.01.04</b> | <b>Employer other risks</b>   |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>-</b>   |
| 4.01.01.04.01     | Project brief   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.02     | Timescales  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.03     | Inadequate Asset Information  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.04     | Management  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.05     | Funding   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.06     | Third parties   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.07     | Other   |          | Sum        | £        | -        | £ -        |
|                   | <b>Page Total</b>   |          |            |          |          | <b>£ -</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects                       |            |                |          | Network Rail      |  |
|---------------------------|--|---|------------|----------------|----------|-------------------|--|
| Project Description       |  | Liverpool Street Station Option 1: Platform 0 |            |                |          |                   |  |
|                           |  | Southern                                      |            |                |          |                   |  |
| Ref                       | Description  | Quantity                                      | Unit       | Rate           | Cost     | Comments          |  |
| <b>5.01</b>               | <b>Inflation</b>   |   |            | <b>TOTAL</b>   | <b>£</b> | <b>923,960.91</b> |  |
| <b>5.01.xx</b>            | <b>Allowance where Inflation Costs have not been quantified.</b>     |   | <b>Sum</b> |                | <b>£</b> | <b>923,960.91</b> |  |
| 5.01.xx.01                | Inflation year 1   | 2.75%   | %          | £ 3,812,025.77 | £        | 104,830.71        |  |
|                           | Inflation year 2   | 2.75%   | %          | £ 3,916,856.48 | £        | 107,713.55        |  |
|                           | Inflation year 3   | 2.75%   | %          | £ 4,024,570.03 | £        | 110,675.68        |  |
|                           | Inflation year 4   | 2.75%   | %          | £ 4,135,245.70 | £        | 113,719.26        |  |
|                           | Inflation year 5   | 2.75%   | %          | £ 4,248,964.96 | £        | 116,846.54        |  |
|                           | Inflation year 6   | 2.75%   | %          | £ 4,365,811.50 | £        | 120,059.82        |  |
|                           | Inflation year 7   | 2.75%   | %          | £ 4,485,871.31 | £        | 123,361.46        |  |
|                           | Inflation year 8   | 2.75%   | %          | £ 4,609,232.77 | £        | 126,753.90        |  |
|                           |  | 710398733%                                    |            |                |          |                   |  |
| <b>5.01.01</b>            | <b>Inflation</b>   |   | <b>Sum</b> |                | <b>£</b> | <b>-</b>          |  |
| <b>5.01.01.01</b>         | <b>Tender inflation</b>  |   | <b>Sum</b> |                | <b>£</b> | <b>-</b>          |  |
| 5.01.01.01.01             | Inflation : date of estimate to tender return                        |   | Sum        | £              | -        | £ -               |  |
| 5.01.01.01.02             | Inflation : delays in procurement programme                          |   | Sum        | £              | -        | £ -               |  |
| <b>5.01.01.02</b>         | <b>Construction inflation</b>  |   | <b>Sum</b> |                | <b>£</b> | <b>-</b>          |  |
| 5.01.01.02.01             | Inflation : date of commencement to mid-point of construction period |   | Sum        | £              | -        | £ -               |  |
| 5.01.01.02.02             | Exceptional inflation  |   | Sum        | £              | -        | £ -               |  |
|                           | <b>Page Total</b>  |   |            |                | <b>£</b> | <b>923,960.91</b> |  |

| Oracle Project No. 141982                     |   | Infrastructure Projects |            |              |          |          | NetworkRail |
|---|---|-------------------------|------------|--------------|----------|----------|-------------|
| Project Description                           |   | Southern                |            |              |          |          |             |
| Liverpool Street Station Option 1: Platform 0 |   |                         |            |              |          |          |             |
| Ref   | Description                               | Quantity                | Unit       | Rate         | Cost     | Comments |             |
| <b>6.01</b>                                   | <b>Tax Allowances and Grants</b>          |                         |            | <b>TOTAL</b> | <b>£</b> | <b>-</b> |             |
| <b>6.01.01</b>                                | <b>Tax allowances and grants</b>          |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| <b>6.01.01.01</b>                             | <b>Capital allowances</b>                 |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.01.01                                 | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.02                                 | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.03                                 | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.04                                 | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.02</b>                             | <b>Grants</b>                             |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.02.01                                 | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.02                                 | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.03                                 | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.04                                 | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.03</b>                             | <b>VAT - Value Added Tax</b>              |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.03.01                                 | Input tax : non recoverable               |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.03.02                                 | Output tax chargeable to users or tenants |                         | Sum        | £            | -        | £ -      |             |
|   | <b>Page Total</b>                         |                         |            |              | <b>£</b> | <b>-</b> |             |

## BOQ - Carried fwd / Brought fwd - Gross

| Item    | Bill Code | SMM code      | Bill description  | Unit | Bill quantity | Gross     |           |
|---------|-----------|---------------|---|------|---------------|-----------|-----------|
|         |           |               |   |      |               | Rate      | Amount    |
|         |           |               | <p><i>Liverpool Street Station Train Capacity</i></p> <p><i>Pre Ggrip Estimate</i></p> <p><i>Option 1: Platform 0</i></p> <p><i>Assumptions:</i></p> <p><i>Our prices are based on the assumption that the new platform 0 will be 157m in length.</i></p> <p><i>We have assumed that platform 1 is currently 242m long and this will be curtailed to 157m in length.</i></p> <p><i>Average length of each carriage is assumed to be 20m.</i></p> <p><i>Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team and dealt separately to this estimate.</i></p> <p><i>All works are assumed to be carried out in the station operational environment.</i></p> <p><i>No allowance have been made for any passion or isolation management.</i></p> <p><i>All platform extension works are assumed to be cast in situ works.</i></p> <p><i>We have assumed hit &amp; miss method along with hydro-demolition for demolition of the wall.</i></p> <p style="text-align: right;">Carried to summary</p> |      |               |           | 0.00      |
| 1       |           |               | DIRECT CONSTRUCTION WORKS   |      |               |           |           |
| 101     |           |               | Railway Control Systems   |      |               |           |           |
| 10101   |           |               | <u>Signalling Systems</u>   |      |               |           |           |
|         |           | 1.01.01.04.01 | 4 aspects LED signal  | nr   | 1             | 9,442.99  | 9,442.99  |
| 1010105 |           |               | <u>Train Detection Systems</u>  |      |               |           |           |
|         |           | 1.01.01.05.01 | Track Circuits  | nr   | 1             | 7,076.90  | 7,076.90  |
|         |           | 1.01.01.05.05 | Insulated Block Joints (IBJs)   | nr   | 2             | 11,276.84 | 22,553.68 |
|         |           | 1.01.01.05.06 | Impedance Bonds   | nr   | 1             | 9,276.84  | 9,276.84  |
| 1010106 |           |               | <u>Train Protection Systems</u>   |      |               |           |           |
|         |           | 1.01.01.06.01 | Automatic Warning system (AWS)  | nr   | 1             | 1,541.07  | 1,541.07  |
| 1010108 |           |               | <u>Cables and Containment</u>   |      |               |           |           |
|         |           | 1.01.01.08.01 | Cables  | m    | 300           | 20.00     | 6,000.00  |
|         |           |               | <i>Allowance</i>  |      |               |           |           |
|         |           | 1.01.01.08.02 | Containment   | m    | 500           | 61.94     | 30,970.00 |
| 1010110 |           |               | <u>Equipment Housings, Platforms and Foundations</u>  |      |               |           |           |
|         |           | 1.01.01.10.01 | Location case, complete with racking and equipment: type stated   | nr   | 1             | 1,603.17  | 1,603.17  |
| 1010116 |           |               | <u>Abandonment, Recovery and Disposal of Redundant Equipment</u>  |      |               |           |           |
|         |           | 1.01.01.16.04 | Signals and indicators  | nr   | 1             | 1,595.39  | 1,595.39  |
|         |           | 1.01.01.16.05 | Train detection systems   | nr   | 1             | 2,612.46  | 2,612.46  |
|         |           | 1.01.01.16.06 | Train protection systems  | nr   | 1             | 233.41    | 233.41    |
|         |           | 1.01.01.16.08 | Cables and containment  | nr   | 500           | 26.82     | 13,410.00 |
|         |           |               | <i>Allowance</i>  |      |               |           |           |
|         |           | 1.01.01.16.09 | Signals support structures and foundations  | nr   | 5             | 2,830.35  | 14,151.75 |
|         |           | 1.01.01.16.10 | Equipment housings, platforms and foundations   | nr   | 20            | 670.55    | 13,411.00 |
| 10201   |           |               | <i>Power Distribution</i>   |      |               |           |           |
| 10202   |           |               | <i>Overhead Line Equipment (OLE)</i>  |      |               |           |           |
|         |           | 1.02.02.01.09 | OLE support structure: fixings to tunnels   | nr   | 8             | 12,050.00 | 96,400.00 |
|         |           | 1.02.02.01.06 | OLE support structure: CANTILIVER STC cantilever member   | nr   | 8             | 12,050.00 | 96,400.00 |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code      | SMM code      | Bill description  | Unit           | Bill quantity | Gross      |            |
|------|----------------|---------------|---|----------------|---------------|------------|------------|
|      |                |               |   |                |               | Rate       | Amount     |
| 103  |                |               | Electric Power and Plant                                    |                |               |            |            |
|      | <i>10301</i>   |               | <i>Primary Power Supply</i>                                 |                |               |            |            |
|      | <u>1030105</u> |               | <u>Small Power for Equipment</u>                            |                |               |            |            |
|      |                | 1.03.01.05.01 | DNO power cubicle   | nr             | 1             | 12,500.00  | 12,500.00  |
| 104  |                |               | Permanent Way   |                |               |            |            |
|      | <i>10401</i>   |               | <i>Plain Line</i>   |                |               |            |            |
|      |                | 1.04.01.03.01 | Jointed Track( Plain Line Track Works)                      | m              | 200           | 1,215.00   | 243,000.00 |
|      | <i>10404</i>   |               | <i>Track Drainage</i>                                       |                |               |            |            |
|      |                | 1.04.04.01.01 | Drainage below ground: trench & pipe work : depth stated    | m              | 200           | 102.00     | 20,400.00  |
|      | <u>1040402</u> |               | <u>Inspection Chambers</u>                                  |                |               |            |            |
|      |                | 1.04.04.02.02 | Interceptors (Catchpit 30 m centers)                        | nr             | 7             | 1,300.00   | 9,100.00   |
|      | <i>10402</i>   |               | <i>Switches &amp; Crossings (S&amp;C)</i>                   |                |               |            |            |
|      | <u>1040203</u> |               | <u>Turnouts and Crossings</u>                               |                |               |            |            |
|      |                | 1.04.02.03.01 | Standard Turnout  | nr             | 1             | 325,000.00 | 325,000.00 |
|      | <u>1040301</u> |               | <u>Buffer Stops</u>   |                |               |            |            |
|      |                | 1.04.03.01.03 | Sliding Buffer  | nr             | 1             | 15,000.00  | 15,000.00  |
| 105  |                |               | Operational Telecommunication Systems                       |                |               |            |            |
|      | <i>10501</i>   |               | <i>Information Transmission Systems</i>                     |                |               |            |            |
|      | <i>10503</i>   |               | <i>Station Information and Surveillance Systems (SISS)</i>  |                |               |            |            |
|      |                | 1.05.03.01.01 | PA system - station   | nr             | 17            | 750.00     | 12,750.00  |
|      | <u>1050303</u> |               | <u>Closed Circuit Television (CCTV)</u>                     |                |               |            |            |
|      |                | 1.05.03.03.01 | Cameras : remote  | nr             | 6             | 5,936.00   | 35,616.00  |
|      | <i>10504</i>   |               | <i>Operational Management Systems</i>                       |                |               |            |            |
|      | <u>1050402</u> |               | <u>Train Monitoring Systems</u>                             |                |               |            |            |
|      |                | 1.05.04.02.01 | Visual display units  | nr             | 2             | 7,000.00   | 14,000.00  |
| 106  |                |               | Buildings & Property  |                |               |            |            |
|      | <u>1060002</u> |               | <u>Major Demolition Works</u>                               |                |               |            |            |
|      |                | 1.06.00.02.01 | Demolition work(Shortening of platform 1 from 242m to 157m) | m3             | 638           | 42.90      | 27,370.20  |
|      | <i>10602</i>   |               | <i>Superstructure</i>                                       |                |               |            |            |
|      | <u>1060202</u> |               | <u>Upper Floors</u>   |                |               |            |            |
|      |                | 1.06.02.02.04 | Platform 0  | sum            | 1             | 270,175.50 | 270,175.50 |
|      |                |               | Sun Street raising allowance                                | sum            | 1             | 30,000.00  | 30,000.00  |
|      | <i>10605</i>   |               | <i>Services</i>   |                |               |            |            |
|      |                | 1.06.05.02.01 | Services equipment ( Gate Line)                             | nr             | 4             | 58,500.00  | 234,000.00 |
|      | <u>1060508</u> |               | <u>Electrical Installations</u>                             |                |               |            |            |
|      |                | 1.06.05.08.03 | Lighting installations                                      | m <sup>2</sup> | 392           | 195.00     | 76,440.00  |
| 107  |                |               | Civil Engineering   |                |               |            |            |
|      | <i>10701</i>   |               | <i>Earthworks</i>   |                |               |            |            |
|      |                | 1.07.01.01.01 | General excavation( shoping area excavation)                | m <sup>3</sup> | 1,177.5       | 61.75      | 72,710.63  |
|      |                | 1.07.01.01.02 | Disposal  | m <sup>3</sup> | 1,815         | 25.00      | 45,375.00  |
|      | <u>1070306</u> |               | <u>Smoke Ventilation Systems</u>                            |                |               |            |            |
|      |                | 1.07.03.06.01 | Fans Ventilation System                                     | sum            | 1             | 90,000.00  | 90,000.00  |
| 108  |                |               | Enabling Works  |                |               |            |            |

## BOQ - Carried fwd / Brought fwd - Gross

| Item  | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross        |              |
|-------|-----------|---------------|--|------|---------------|--------------|--------------|
|       |           |               |  |      |               | Rate         | Amount       |
| 10802 |           |               | <i>Site Clearance and Preparation Works</i>  |      |               |              |              |
| 10803 |           |               | <i>Structure Specific Enabling Works</i>   |      |               |              |              |
|       |           | 1.08.03.01.02 | Demolition - partial structures (Brick Wall removal by Hydro Demolition using Hit and Miss Method) | sum  | 1             | 222,248.00   | 222,248.00   |
|       |           |               | Carried to summary   |      |               |              | 2,082,363.99 |
| 2     |           |               | INDIRECT CONSTRUCTION WORKS  |      |               |              |              |
| 20101 |           |               | <i>Contractor's Preliminaries</i>  |      |               |              |              |
|       |           |               | Contractor's Perlim (25% of direct cost)   | sum  | 1             | 520,591.25   | 520,591.25   |
| 202   |           |               | Overheads and Profit   |      |               |              |              |
|       |           |               | overhead and profits   | sum  | 1             | 351,399.16   | 351,399.16   |
|       |           |               | Carried to summary   |      |               |              | 871,990.41   |
| 3     |           |               | EMPLOYER'S INDIRECT COSTS  |      |               |              |              |
|       |           |               | Network rails Project team fee 12% on contractors and design cost                                  | sum  | 1             | 249,883.86   | 249,883.86   |
| 301   |           |               | Design Team Fees   |      |               |              |              |
|       |           |               | Design team fees   | sum  | 1             | 208,236.55   | 208,236.55   |
| 30301 |           |               | <i>Other Project Costs</i>   |      |               |              |              |
|       |           |               | Other project cost   | sum  | 1             | 399,553.40   | 399,553.40   |
|       |           |               | Carried to summary   |      |               |              | 857,673.81   |
| 4     |           |               | RISK   |      |               |              |              |
| 401   |           |               | Risk   |      |               |              |              |
|       |           |               | Risk   | sum  | 1             | 1,906,014.85 | 1,906,014.85 |
|       |           |               | Carried to summary   |      |               |              | 1,906,014.85 |
| 5     |           |               | INFLATION  |      |               |              |              |
|       |           |               | Mid of CP6 @ rate of 24.24%  | sum  | 1             | 924,035.05   | 924,035.05   |
|       |           |               | Carried to summary   |      |               |              | 924,035.05   |

BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code | Bill description            | Unit | Bill quantity | Gross |              |
|------|-----------|----------|-----------------------------|------|---------------|-------|--------------|
|      |           |          |                             |      |               | Rate  | Amount       |
|      |           |          |                             |      |               |       | 0.00         |
|      |           |          | DIRECT CONSTRUCTION WORKS   |      |               |       | 2,082,363.99 |
|      |           |          | INDIRECT CONSTRUCTION WORKS |      |               |       | 871,990.41   |
|      |           |          | EMPLOYER'S INDIRECT COSTS   |      |               |       | 857,673.81   |
|      |           |          | RISK                        |      |               |       | 1,906,014.85 |
|      |           |          | INFLATION                   |      |               |       | 924,035.05   |
|      |           |          | TOTAL                       |      |               |       | 6,642,078.11 |

**Projects Estimating**

**Oracle Project No.:**

**Project Description:**

**Estimate Stage:**

| <b>Issue and Revision Record:</b> |             |                    |                |                    |
|-----------------------------------|-------------|--------------------|----------------|--------------------|
| <b>Rev.</b>                       | <b>Date</b> | <b>Prepared by</b> | <b>Checked</b> | <b>Description</b> |
| 0                                 | 1-Aug-14    | K.Siddiqui         |                | Original           |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |

Estimate Stage: Grip 0  
Oracle Project No.: 141982  
Project Description: Liverpool Street Station Option 2: New Platforms between 10-11

Estimate Document Contents

|   |                           |
|---|---------------------------|
| I   | Assumptions               |
| II  | Estimate Summary Report   |
| 1. Direct Construction Works                          |                           |
| 1.01  | Railway Control Systems   |
| 1.02  | Train Power Systems       |
| 1.03  | Electric Power and Plant  |
| 1.04  | Permanent Way             |
| 1.05  | Telecommunication Systems |
| 1.06  | Buildings and Property    |
| 1.07  | Civil Engineering         |
| 1.08  | Enabling Works            |
| 2. Indirect Construction Works                        |                           |
| 2.01  | Preliminaries             |
| 2.02  | Overhead and Profit       |
| 3. Project / design Team Fees and Other Project Costs |                           |
| 3.01  | Design Team Fees          |
| 3.02  | Project Team fees         |
| 3.03  | Other Project Costs       |
| 4. Risk   |                           |
| 4.01  | Total Risk Allowance      |
| 5. Inflation  |                           |
| 5.01  | Inflation                 |
| 6. Taxation and Grants                                |                           |
| 6.01  | Tax allowances and grants |
| III   | Indirects                 |
| IV  | Escalation Calculator     |



## Infrastructure Projects

Southern

**Estimate Stage:** Grip 0  
**Oracle Project No.:** 141982  
**Project Description:** Liverpool Street Station Option 2: New Platforms between 10-11

### Clarifications

#### General / Assumptions / Drawings & Documents / Exclusions / Revisions

##### General

- G1 The estimate base date is 3Q 2014 using rates.
- G2 The value of cost escalation has calculated using RPI and it is assumed that the mid point of construction will be 2Q 2022  
Escalation has been included within the Project AFC as the works is assumed to be mid point
- G3 2Qtr 2022 using compound interest at 2.75%
- G4 An uplift factor for contingency of 50% has been applied in consultation with the Estimating Manager for cost and scope uncertainty, in line with the Estimating procedure and Grip Stage .
- G5 Costs exclude VAT

##### Assumptions

- A1 Assume no over and above allowance for Bank Holiday working
- A2 Fees for Sponsor, Network Rail Management and Design allowances are based on a percentage of Total Construction Costs.
- A3 We have assumed at this stage no contribution to Network rails Fee Fund
- A4 We have assumed at this stage no contribution to Industry Risk Fund
- A5 Our prices are based on the assumption that the new platforms 12,13&14 will be 260m in length
- A6 We have assumed a provisional sum for 30k for a minimal construction required to provide a small taxi rank area. This would further be clarified once the design is further developed.
- A7 Average length of each carriage is assumed to be 20m.
- A8 Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team and dealt separately to this estimate.
- A9 Our prices are based on the assumption that disposal of uncontaminated material.
- A10 All works are assumed to be carried out in the station operational environment.
- A11 No allowance has been made for any possession or isolation management
- A12 All platform extension works are assumed to be cast in situ works.
- A13 Our cost based on assumption that all work done in 8 hr shift

- A14 We have assumed a provisional sum of 100k for relocation of mechanical and electrical equipment under the vehicular access ramp in the absence of details of the equipments.
- A15 Our prices are based on the assumption that no impact will occur on the existing HV substation
- A16 Our prices are based on assumption that no allowance has been made for lift, escalator and
- A17 No cost has been allowed for the 9 day station disruption for testing of Signalling Works.
- A18 No cost has been allowed for increasing the capacity of traction power supply for West Anglia and Great Western line.

#### **Drawings & Documents**

The following documents have been used in the preparation of this estimate:

SOU-141892-EAR-DRG-IAB-001.pdf

Liverpool St Station 6326-023 92).pdf

Liverpool St Station 6326-024 92).pdf

#### **Exclusions**

E1

#### **Revisions**

The following revisions have been applied

R1

**ESTIMATE SUMMARY REPORT**

|                          |  |                   |        |                |        |
|--------------------------|--|-------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505   | Revision          | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14  | Price 'Base date' | 3Q2014 |                |        |
| Anticipated Start Date   | Anticipated Finish Date  |                   |        |                |        |
| Project No.              | 141982   |                   |        |                |        |
| Project Title / Location | Liverpool Street Station Option 2: New Platforms between 10-11 |                   |        |                |        |

| WBS      | Estimate Breakdown  | Value                  | %age of Point Estimate | Remarks  |
|----------|---|------------------------|------------------------|--|
| <b>1</b> | <b>Direct Construction works -</b>                              |                        |                        |  |
| 1.01     | Railway Control Systems   | £ 1,539,116.19         | 11.2%                  |  |
| 1.02     | Train Power Systems   | £ -                    | 0.0%                   |  |
| 1.03     | Electric Power and Plant  | £ 37,500.00            | 0.3%                   |  |
| 1.04     | Permanent Way   | £ 2,707,600.00         | 19.7%                  |  |
| 1.05     | Operational Telecommunication Systems                           | £ 207,348.00           | 1.5%                   |  |
| 1.06     | Buildings and Property  | £ 2,291,044.67         | 16.7%                  |  |
| 1.07     | Civil Engineering   | £ 552,105.91           | 4.0%                   |  |
| 1.08     | Enabling Works  | £ 180,000.00           | 1.3%                   |  |
|          | <b>Direct Construction works :</b>                              | <b>£ 7,514,714.77</b>  | <b>54.6%</b>           |  |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                        |                        |  |
| 2.01     | Preliminaries   | £ 1,878,678.69         | 13.7%                  |  |
| 2.02     | Overheads and Profit  | £ 1,268,108.12         | 9.2%                   | If zero, included within the rates   |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 3,146,786.81</b>  | <b>22.9%</b>           |  |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 10,661,501.58</b> | <b>77.5%</b>           |  |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                        |                        |  |
| 3.01     | Design Team Fees  | £ 751,471.48           | 5.5%                   |  |
| 3.02     | Project Team Fees   | £ 901,765.77           | 6.6%                   |  |
| 3.03     | Other Project Costs   | £ 1,441,885.90         | 10.5%                  |  |
| 3.04     | Cost of work done (COWD)  | £ -                    | 0.0%                   |  |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 3,095,123.15</b>  | <b>22.5%</b>           |  |
|          | <b>Point Estimate :</b>   | <b>£ 13,756,624.73</b> | <b>100.0%</b>          |  |
| <b>4</b> | <b>Risk</b>   |                        |                        | 50.00%   |
| 4.01     | Risk  | £ 6,878,312.36         |                        |  |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 6,878,312.36</b>  |                        |  |
| <b>5</b> | <b>Inflation</b>  |                        |                        | When included within the project AFC, less COWD.<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 3,334,338.29         |                        |  |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 3,334,338.29</b>  |                        |  |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                        |                        | If Applicable  |
| 6.01     | Tax allowances and Grants                                       | £ -                    |                        |  |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>             |                        |  |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 23,969,275.38</b> |                        |  |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         |                         |                         |
| Date :-     | 01 August 2014          |                         |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase  
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under 'Other Costs to the Customer'
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

ESTIMATE SUMMARY REPORT

|                          |  |                   |        |                |        |
|--------------------------|--|-------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505   | Revision          | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14  | Price 'Base date' | 3Q2014 |                |        |
| Anticipated Start Date   | Anticipated Finish Date  |                   |        |                |        |
| Project No.              | 141982   |                   |        |                |        |
| Project Title / Location | Liverpool Street Station Option 2: New Platforms between 10-11 |                   |        |                |        |

| WBS  | Estimate Breakdown                                       | Value                  | %age of Point Estimate | Remarks  |
|------|--|------------------------|------------------------|--|
| 1    | Direct Construction works -                              |                        |                        |  |
| 1.01 | Railway Control Systems                                  | £ 1,539,115.19         | 11.2%                  |  |
| 1.02 | Train Power Systems                                      | £ -                    | 0.0%                   |  |
| 1.03 | Electric Power and Plant                                 | £ 37,500.00            | 0.3%                   |  |
| 1.04 | Permanent Way  | £ 2,707,600.00         | 19.7%                  |  |
| 1.05 | Operational Telecommunication Systems                    | £ 207,348.00           | 1.5%                   |  |
| 1.06 | Buildings and Property                                   | £ 2,291,044.67         | 16.7%                  |  |
| 1.07 | Civil Engineering  | £ 552,105.91           | 4.0%                   |  |
| 1.08 | Enabling Works   | £ 180,000.00           | 1.3%                   |  |
|      | <b>Direct Construction works :</b>                       | <b>£ 7,514,714.77</b>  | <b>54.6%</b>           |  |
| 2    | Indirect Construction Costs -                            |                        |                        |  |
| 2.01 | Preliminaries  | £ 1,878,678.69         | 13.7%                  |  |
| 2.02 | Overheads and Profit                                     | £ 1,268,105.12         | 9.2%                   | If zero, included within the rates   |
|      | <b>Indirect Construction Costs :</b>                     | <b>£ 3,146,786.81</b>  | <b>22.9%</b>           |  |
|      | <b>Total Base Construction Cost :</b>                    | <b>£ 10,661,501.58</b> | <b>77.5%</b>           |  |
| 3    | Project / Design Team Fees and other development costs - |                        |                        |  |
| 3.01 | Design Team Fees   | £ 751,471.48           | 5.5%                   |  |
| 3.02 | Project Team Fees  | £ 901,765.77           | 6.6%                   |  |
| 3.03 | Other Project Costs                                      | £ 1,441,865.90         | 10.5%                  |  |
| 3.04 | Cost of work done (COWD)                                 | £ -                    | 0.0%                   |  |
|      | <b>Employer Indirect Costs :</b>                         | <b>£ 3,095,123.15</b>  | <b>22.5%</b>           |  |
|      | <b>Point Estimate :</b>                                  | <b>£ 13,756,624.73</b> | <b>100.0%</b>          |  |
| 4    | Risk   |                        |                        | 50.00%   |
| 4.01 | Risk   | £ 6,878,312.36         |                        |  |
|      | <b>Cost Limit Excluding Inflation :</b>                  | <b>£ 6,878,312.36</b>  |                        |  |
| 5    | Inflation  |                        |                        | When included within the project AFC, less COWD.<br>Mid of CP6 @ of 24.24% |
| 5.01 | Inflation  | £ 3,334,336.29         |                        |  |
|      | <b>Total Inflation Allowance :</b>                       | <b>£ 3,334,336.29</b>  |                        |  |
| 6    | Taxation and Grants                                      |                        |                        | If Applicable  |
| 6.01 | Tax allowances and Grants                                | £ -                    |                        |  |
|      | <b>Total Taxation and Grants Cost :</b>                  | <b>£ -</b>             |                        |  |
|      | <b>Project Anticipated Final Cost (AFC) :</b>            | <b>£ 23,969,275.38</b> |                        |  |

APPROVAL & ENDORSEMENT

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         | <i>Neal Evans</i>       |                         |
| Date :-     | 01 August 2014          | <i>Neal Evans</i>       |                         |

Notes:-

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration, escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase. Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under "Other Costs to the Customer".
- An 'Adjustment' for risk has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided, the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value).



|                     |  |   |
|---------------------|--|---|
| Estimate Stage:     | Grip 0   | <i>Infrastructure Projects</i><br><b>Southern</b> |
| Oracle Project No.: | 141982   |   |
| Project Name:       | Liverpool Street Station Option 2: New Platforms between 10-11 |   |

**Calculation of Contractors and Network Rail's Indirect Costs**

| Asset                     | Total Direct Costs | %     | Preliminaries  | %     | Design       | %     | OH & P         | %     | Network Rail Management | %    | Sponsor |
|---------------------------|--------------------|-------|----------------|-------|--------------|-------|----------------|-------|-------------------------|------|---------|
| Railway Control Systems   | £ 1,539,116.19     | 25.0% | £ 384,779.05   | 10.0% | £ 153,911.62 | 12.5% | £ 259,725.86   | 12.0% | £ 184,693.94            | 3.0% |         |
| Train Power Systems       |                    | 25.0% | £ -            | 10.0% | £ -          | 12.5% | £ -            | 12.0% | £ -                     | 3.0% |         |
| Electric Power and Plant  | £ 37,500.00        | 25.0% | £ 9,375.00     | 10.0% | £ 3,750.00   | 12.5% | £ 6,328.13     | 12.0% | £ 4,500.00              | 3.0% |         |
| Permanent Way             | £ 2,707,600.00     | 25.0% | £ 676,900.00   | 10.0% | £ 270,760.00 | 12.5% | £ 456,907.50   | 12.0% | £ 324,912.00            | 3.0% |         |
| Telecommunication Systems | £ 207,348.00       | 25.0% | £ 51,837.00    | 10.0% | £ 20,734.80  | 12.5% | £ 34,989.98    | 12.0% | £ 24,881.76             | 3.0% |         |
| Buildings and Property    | £ 2,291,044.67     | 25.0% | £ 572,761.17   | 10.0% | £ 229,104.47 | 12.5% | £ 386,613.79   | 12.0% | £ 274,925.36            | 3.0% |         |
| Civil Engineering         | £ 552,105.91       | 25.0% | £ 138,026.48   | 10.0% | £ 55,210.59  | 12.5% | £ 93,167.87    | 12.0% | £ 66,252.71             | 3.0% |         |
| Enabling Works            | £ 180,000.00       | 25.0% | £ 45,000.00    | 10.0% | £ 18,000.00  | 12.5% | £ 30,375.00    | 12.0% | £ 21,600.00             | 3.0% |         |
|                           |                    |       | £ 1,878,678.69 |       | £ 751,471.48 |       | £ 1,268,108.12 |       | £ 901,765.77            |      | £ -     |

**Allowance for TOC / FOC Compensation - calculator**

|                |                |                |
|----------------|----------------|----------------|
| £ 7,514,714.77 | £ 1,878,678.69 | £ 1,268,108.12 |
|----------------|----------------|----------------|

TOTAL £ 10,661,501.58

Allowance for TOC / FOC compensation (%) 10% £ 1,066,150.16



| Oracle Project No. 141982 |   | Infrastructure Projects  |            |                |                       | NetworkRail                                     |  |
|---------------------------|---|--|------------|----------------|-----------------------|---|--|
| Project Description       |   | Liverpool Street Station Option 2: New Platforms between 10-11 |            |                |                       |   |  |
| Ref                       | Description   | Quantity   | Unit       | Rate           | Cost                  | Comments  |  |
| <b>2.02</b>               | <b>Overheads and profit</b>                               |  |            | <b>TOTAL</b>   | <b>£ 1,268,108.12</b> |   |  |
| <b>2.02.xx</b>            | <b>Allowance where OH&amp;P have not been quantified.</b> |  | <b>Sum</b> |                | <b>£ 1,268,108.12</b> |   |  |
| 2.02.xx.01                | Overheads and profit allowance                            | 1  | Sum        | £ 1,268,108.12 | £ 1,268,108.12        | From percentage allowance; see "indirects" tab. |  |
| <b>2.02.01</b>            | <b>Contractor's overheads and profit</b>                  |  | <b>Sum</b> |                | <b>£ -</b>            |   |  |
| <b>2.02.01.01</b>         | <b>Head office costs proportioned to contract</b>         |  | <b>Sum</b> |                | <b>£ -</b>            |   |  |
| 2.02.01.01.01             | Overheads   |  | Sum        | £ -            | £ -                   |   |  |
| 2.02.01.01.02             | Administration  |  | Sum        | £ -            | £ -                   |   |  |
| <b>2.02.01.02</b>         | <b>Profit</b>   |  | <b>Sum</b> |                | <b>£ -</b>            |   |  |
| 2.02.01.02.01             | Profit on cost  |  | Sum        | £ -            | £ -                   |   |  |
|                           | <b>Page Total</b>   |  |            |                | <b>£ 1,268,108.12</b> |   |  |

| Oracle Project No. 141982 |  | Infrastructure Projects  |            |              |                     | NetworkRail |  |
|---------------------------|--|--|------------|--------------|---------------------|-------------|--|
| Project Description       |  | Liverpool Street Station Option 2: New Platforms between 10-11 |            |              |                     |             |  |
| Ref                       | Description  | Quantity   | Unit       | Rate         | Cost                | Comments    |  |
| <b>3.01</b>               | <b>Design Team Fees</b>                                      |  |            | <b>TOTAL</b> | <b>£ 751,471.48</b> |             |  |
| <b>3.01.xx</b>            | <b>Allowance where Design Fees have not been quantified.</b> |  | <b>Sum</b> |              | <b>£ 751,471.48</b> |             |  |
| 3.01.xx.01                | From percentage allowance; see "Indirects" tab.              | 1  | Sum        | £ 751,471.48 | £ 751,471.48        |             |  |
| <b>3.01.01</b>            | <b>Employer's own design fees</b>                            |  | <b>Sum</b> |              | <b>£ -</b>          |             |  |
| <b>3.01.01.01</b>         | <b>Railway Control Systems Design</b>                        |  | <b>Sum</b> |              | <b>£ -</b>          |             |  |
| 3.01.01.01.01             | Site investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.02             | Ground Investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.03             | Topographical Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.04             | Environmental Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.05             | Feasibility Study  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.06             | Option Selection Study                                       |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.07             | Single Option Development                                    |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.08             | Design Development   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.09             | Outline Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.10             | Detailed Design  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.11             | Post contract Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.12             | Design - As Built Documentation                              |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.13             | Correlation  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.01.14             | Other  |  | hrs        | £ -          | £ -                 |             |  |
| <b>3.01.01.02</b>         | <b>Train Power Systems Design</b>                            |  | <b>Sum</b> |              | <b>£ -</b>          |             |  |
| 3.01.01.02.01             | Site investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.02             | Ground Investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.03             | Topographical Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.04             | Environmental Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.05             | Feasibility Study  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.06             | Option Selection Study                                       |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.07             | Single Option Development                                    |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.08             | Design Development   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.09             | Outline Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.10             | Detailed Design  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.11             | Post contract Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.12             | Design - As Built Documentation                              |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.13             | Correlation  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.02.14             | Other  |  | hrs        | £ -          | £ -                 |             |  |
| <b>3.01.01.03</b>         | <b>Electric Power and Plant Design</b>                       |  | <b>Sum</b> |              | <b>£ -</b>          |             |  |
| 3.01.01.03.01             | Site investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.02             | Ground Investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.03             | Topographical Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.04             | Environmental Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.05             | Feasibility Study  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.06             | Option Selection Study                                       |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.07             | Single Option Development                                    |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.08             | Design Development   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.09             | Outline Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.10             | Detailed Design  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.11             | Post contract Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.12             | Design - As Built Documentation                              |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.13             | Correlation  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.03.14             | Other  |  | hrs        | £ -          | £ -                 |             |  |
| <b>3.01.01.04</b>         | <b>Permanent Way Design</b>                                  |  | <b>Sum</b> |              | <b>£ -</b>          |             |  |
| 3.01.01.04.01             | Site investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.02             | Ground Investigation   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.03             | Topographical Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.04             | Environmental Survey   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.05             | Feasibility Study  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.06             | Option Selection Study                                       |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.07             | Single Option Development                                    |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.08             | Design Development   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.09             | Outline Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.10             | Detailed Design  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.11             | Post contract Design   |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.12             | Design - As Built Documentation                              |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.13             | Correlation  |  | hrs        | £ -          | £ -                 |             |  |
| 3.01.01.04.14             | Other  |  | hrs        | £ -          | £ -                 |             |  |
| <b>Page Total</b>         |  |  |            |              | <b>£ 751,471.48</b> |             |  |

|                     |  |                         |  |                     |  |
|---------------------|--|-------------------------|--|---------------------|--|
| Oracle Project No.  | 141982   | Infrastructure Projects |  | NetworkRail         |  |
| Project Description | Liverpool Street Station Option 2: New Platforms between 10-11 | Southern                |  | Summit & North East |  |

| Southern   |   |          |            |      |            |          |
|--|---|----------|------------|------|------------|----------|
| Ref  | Description   | Quantity | Unit       | Rate | Cost       | Comments |
| Ref  | Description   | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                                  |          |            |      |            |          |
| <b>3.01.01</b>   | <b>Employer's own design fees (continued).</b>                        |          | <b>Sum</b> |      |            |          |
| <b>3.01.01.05</b>  | <b>Operational Telecomms System Design</b>                            |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.05.01  | Site investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.02  | Ground Investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.03  | Topographical Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.04  | Environmental Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.05  | Feasibility Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.06  | Option Selection Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.07  | Single Option Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.08  | Design Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.09  | Outline Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.10  | Detailed Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.11  | Post contract Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.12  | Design - As Built Documentation                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.05.13  | Correlation   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.14  | Other   |          | hrs        | £    | - £        | -        |
| <b>3.01.01.06</b>  | <b>Buildings and Property Design</b>                                  |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.06.01  | Site investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.02  | Ground Investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.03  | Topographical Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.04  | Environmental Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.05  | Feasibility Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.06  | Option Selection Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.07  | Single Option Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.08  | Design Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.09  | Outline Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.10  | Detailed Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.11  | Post contract Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.12  | Design - As Built Documentation                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.06.13  | Correlation   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.14  | Other   |          | hrs        | £    | - £        | -        |
| <b>3.01.01.07</b>  | <b>Civil Engineering Design</b>                                       |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.07.01  | Site investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.02  | Ground Investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.03  | Topographical Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.04  | Environmental Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.05  | Feasibility Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.06  | Option Selection Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.07  | Single Option Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.08  | Design Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.09  | Outline Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.10  | Detailed Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.11  | Post contract Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.12  | Design - As Built Documentation                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.07.13  | Correlation   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.14  | Other   |          | hrs        | £    | - £        | -        |
| <b>3.01.01.08</b>  | <b>Enabling Works Design</b>  |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.08.01  | Site investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.02  | Ground Investigation  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.03  | Topographical Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.04  | Environmental Survey  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.05  | Feasibility Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.06  | Option Selection Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.07  | Single Option Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.08  | Design Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.09  | Outline Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.10  | Detailed Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.11  | Post contract Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.12  | Design - As Built Documentation                                       |          | hrs        | £    | - £        | -        |
| 3.01.01.08.13  | Correlation   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.14  | Other   |          | hrs        | £    | - £        | -        |
| <b>Page Total</b>  |   |          |            |      | <b>£ -</b> |          |
| <b>Oracle Project No.</b>  | <b>141982</b>   |          |            |      |            |          |
| <b>Project Description</b>   | <b>Liverpool Street Station Option 2: New Platforms between 10-11</b> |          |            |      |            |          |
|  |   |          |            |      |            |          |
| Ref  | Description   | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                                  |          |            |      |            |          |
| <b>3.01.02</b>   | <b>Employer's procured design fees</b>                                |          | <b>Sum</b> |      | <b>£ -</b> |          |

| Ref   | Description  | Quantity | Unit       | Rate | Cost       | Comments   |
|---|--|----------|------------|------|------------|--|
| <b>3.01.02.01 Railway Control Systems Design</b>  |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.01.01                                     | Site investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.01.02                                     | Ground Investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.01.03                                     | Topographical Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.01.04                                     | Environmental Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.01.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.01.06                                     | Option Selection Study   |          | hrs        | £    | -          | -  |
| 3.01.02.01.07                                     | Single Option Development                                      |          | hrs        | £    | -          | -  |
| 3.01.02.01.08                                     | Design Development   |          | hrs        | £    | -          | -  |
| 3.01.02.01.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.01.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.01.11                                     | Post contract Design   |          | hrs        | £    | -          | -  |
| 3.01.02.01.12                                     | Design - As Built Documentation                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.01.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.02 Train Power Systems Design</b>      |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.02.01                                     | Site investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.02.02                                     | Ground Investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.02.03                                     | Topographical Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.02.04                                     | Environmental Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.02.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.02.06                                     | Option Selection Study   |          | hrs        | £    | -          | -  |
| 3.01.02.02.07                                     | Single Option Development                                      |          | hrs        | £    | -          | -  |
| 3.01.02.02.08                                     | Design Development   |          | hrs        | £    | -          | -  |
| 3.01.02.02.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.02.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.02.11                                     | Post contract Design   |          | hrs        | £    | -          | -  |
| 3.01.02.02.12                                     | Design - As Built Documentation                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.02.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.03 Electric Power and Plant Design</b> |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.03.01                                     | Site investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.03.02                                     | Ground Investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.03.03                                     | Topographical Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.03.04                                     | Environmental Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.03.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.03.06                                     | Option Selection Study   |          | hrs        | £    | -          | -  |
| 3.01.02.03.07                                     | Single Option Development                                      |          | hrs        | £    | -          | -  |
| 3.01.02.03.08                                     | Design Development   |          | hrs        | £    | -          | -  |
| 3.01.02.03.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.03.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.03.11                                     | Post contract Design   |          | hrs        | £    | -          | -  |
| 3.01.02.03.12                                     | Design - As Built Documentation                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.03.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.04 Permanent Way Design</b>            |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.04.01                                     | Site investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.04.02                                     | Ground Investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.04.03                                     | Topographical Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.04.04                                     | Environmental Survey   |          | hrs        | £    | -          | -  |
| 3.01.02.04.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.04.06                                     | Option Selection Study   |          | hrs        | £    | -          | -  |
| 3.01.02.04.07                                     | Single Option Development                                      |          | hrs        | £    | -          | -  |
| 3.01.02.04.08                                     | Design Development   |          | hrs        | £    | -          | -  |
| 3.01.02.04.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.04.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.04.11                                     | Post contract Design   |          | hrs        | £    | -          | -  |
| 3.01.02.04.12                                     | Design - As Built Documentation                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.04.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>Page Total</b>                                 |  |          |            |      | <b>£ -</b> |  |
| Oracle Project No.                                | 141982   |          |            |      |            |  |
| Project Description                               | Liverpool Street Station Option 2: New Platforms between 10-11 |          |            |      |            |  |
| Ref   | Description  | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01</b>                                       | <b>Design Team Fees (continued).</b>                           |          |            |      |            |  |
| <b>3.01.02</b>                                    | <b>Employer's procured design fees (continued).</b>            |          | <b>Sum</b> |      |            |  |
| <b>3.01.02.05</b>                                 | <b>Operational Telecomms System Design</b>                     |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.05.01                                     | Site investigation   |          | hrs        | £    | -          | -  |
| 3.01.02.05.02                                     | Ground Investigation   |          | hrs        | £    | -          | -  |

| Ref                        | Description   | Quantity | Unit       | Rate     | Cost     | Comments   |  |
|----------------------------|---|----------|------------|----------|----------|--|--|
| 3.01.02.05.03              | Topographical Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.04              | Environmental Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.05              | Feasibility Study   |          | hrs        | £        | -        |  |  |
| 3.01.02.05.06              | Option Selection Study  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.07              | Single Option Development   |          | hrs        | £        | -        |  |  |
| 3.01.02.05.08              | Design Development  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.09              | Outline Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.10              | Detailed Design   |          | hrs        | £        | -        |  |  |
| 3.01.02.05.11              | Post contract Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.05.12              | Design - As Built Documentation                                       |          | hrs        | £        | -        |  |  |
| 3.01.02.05.13              | Correlation   |          | hrs        | £        | -        |  |  |
| 3.01.02.05.14              | Other   |          | hrs        | £        | -        |  |  |
| <b>3.01.02.06</b>          | <b>Buildings and Property Design</b>                                  |          | <b>Sum</b> | <b>£</b> | <b>-</b> |  |  |
| 3.01.02.06.01              | Site investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.02              | Ground Investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.03              | Topographical Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.04              | Environmental Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.05              | Feasibility Study   |          | hrs        | £        | -        |  |  |
| 3.01.02.06.06              | Option Selection Study  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.07              | Single Option Development   |          | hrs        | £        | -        |  |  |
| 3.01.02.06.08              | Design Development  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.09              | Outline Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.10              | Detailed Design   |          | hrs        | £        | -        |  |  |
| 3.01.02.06.11              | Post contract Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.06.12              | Design - As Built Documentation                                       |          | hrs        | £        | -        |  |  |
| 3.01.02.06.13              | Correlation   |          | hrs        | £        | -        |  |  |
| 3.01.02.06.14              | Other   |          | hrs        | £        | -        |  |  |
| <b>3.01.02.07</b>          | <b>Civil Engineering Design</b>                                       |          | <b>Sum</b> | <b>£</b> | <b>-</b> |  |  |
| 3.01.02.07.01              | Site investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.02              | Ground Investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.03              | Topographical Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.04              | Environmental Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.05              | Feasibility Study   |          | hrs        | £        | -        |  |  |
| 3.01.02.07.06              | Option Selection Study  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.07              | Single Option Development   |          | hrs        | £        | -        |  |  |
| 3.01.02.07.08              | Design Development  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.09              | Outline Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.10              | Detailed Design   |          | hrs        | £        | -        |  |  |
| 3.01.02.07.11              | Post contract Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.07.12              | Design - As Built Documentation                                       |          | hrs        | £        | -        |  |  |
| 3.01.02.07.13              | Correlation   |          | hrs        | £        | -        |  |  |
| 3.01.02.07.14              | Other   |          | hrs        | £        | -        |  |  |
| <b>3.01.02.08</b>          | <b>Enabling Works Design</b>  |          | <b>Sum</b> | <b>£</b> | <b>-</b> |  |  |
| 3.01.02.08.01              | Site investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.02              | Ground Investigation  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.03              | Topographical Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.04              | Environmental Survey  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.05              | Feasibility Study   |          | hrs        | £        | -        |  |  |
| 3.01.02.08.06              | Option Selection Study  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.07              | Single Option Development   |          | hrs        | £        | -        |  |  |
| 3.01.02.08.08              | Design Development  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.09              | Outline Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.10              | Detailed Design   |          | hrs        | £        | -        |  |  |
| 3.01.02.08.11              | Post contract Design  |          | hrs        | £        | -        |  |  |
| 3.01.02.08.12              | Design - As Built Documentation                                       |          | hrs        | £        | -        |  |  |
| 3.01.02.08.13              | Correlation   |          | hrs        | £        | -        |  |  |
| 3.01.02.08.14              | Other   |          | hrs        | £        | -        |  |  |
| <b>Page Total</b>          |   |          |            |          | <b>£</b> | <b>-</b>   |  |
| <b>Oracle Project No.</b>  | <b>141982</b>   |          |            |          |          |  |  |
| <b>Project Description</b> | <b>Liverpool Street Station Option 2: New Platforms between 10-11</b> |          |            |          |          |  |  |
| Ref                        | Description   | Quantity | Unit       | Rate     | Cost     | Comments   |  |
| <b>3.01</b>                | <b>Design Team Fees (continued)</b>                                   |          |            |          |          |  |  |
| <b>3.01.03</b>             | <b>Contractor design fees</b>   |          | <b>Sum</b> | <b>£</b> | <b>-</b> |  |  |
| <b>3.01.03.01</b>          | <b>Railway Control Systems Design</b>                                 |          | <b>Sum</b> | <b>£</b> | <b>-</b> |  |  |
| 3.01.03.01.01              | Site investigation  |          | hrs        | £        | -        |  |  |
| 3.01.03.01.02              | Ground Investigation  |          | hrs        | £        | -        |  |  |
| 3.01.03.01.03              | Topographical Survey  |          | hrs        | £        | -        |  |  |
| 3.01.03.01.04              | Environmental Survey  |          | hrs        | £        | -        |  |  |
| 3.01.03.01.05              | Feasibility Study   |          | hrs        | £        | -        |  |  |
| 3.01.03.01.06              | Option Selection Study  |          | hrs        | £        | -        |  |  |
| 3.01.03.01.07              | Single Option Development   |          | hrs        | £        | -        |  |  |

| Ref  | Description                                | Quantity | Unit       | Rate | Cost       | Comments |
|--|--|----------|------------|------|------------|----------|
| 3.01.03.01.08  | Design Development                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.09  | Outline Design                             |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.10  | Detailed Design                            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.11  | Post contract Design                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.12  | Design - As Built Documentation            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.13  | Correlation                                |          | hrs        | £ -  | £ -        |          |
| 3.01.03.01.14  | Other                                      |          | hrs        | £ -  | £ -        |          |
| <b>3.01.03.02</b>  | <b>Train Power Systems Design</b>          |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.03.02.01  | Site investigation                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.02  | Ground Investigation                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.03  | Topographical Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.04  | Environmental Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.05  | Feasibility Study                          |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.06  | Option Selection Study                     |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.07  | Single Option Development                  |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.08  | Design Development                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.09  | Outline Design                             |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.10  | Detailed Design                            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.11  | Post contract Design                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.12  | Design - As Built Documentation            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.13  | Correlation                                |          | hrs        | £ -  | £ -        |          |
| 3.01.03.02.14  | Other                                      |          | hrs        | £ -  | £ -        |          |
| <b>3.01.03.03</b>  | <b>Electric Power and Plant Design</b>     |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.03.03.01  | Site investigation                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.02  | Ground Investigation                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.03  | Topographical Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.04  | Environmental Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.05  | Feasibility Study                          |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.06  | Option Selection Study                     |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.07  | Single Option Development                  |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.08  | Design Development                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.09  | Outline Design                             |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.10  | Detailed Design                            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.11  | Post contract Design                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.12  | Design - As Built Documentation            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.13  | Correlation                                |          | hrs        | £ -  | £ -        |          |
| 3.01.03.03.14  | Other                                      |          | hrs        | £ -  | £ -        |          |
| <b>3.01.03.04</b>  | <b>Permanent Way Design</b>                |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.03.04.01  | Site investigation                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.02  | Ground Investigation                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.03  | Topographical Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.04  | Environmental Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.05  | Feasibility Study                          |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.06  | Option Selection Study                     |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.07  | Single Option Development                  |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.08  | Design Development                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.09  | Outline Design                             |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.10  | Detailed Design                            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.11  | Post contract Design                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.12  | Design - As Built Documentation            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.13  | Correlation                                |          | hrs        | £ -  | £ -        |          |
| 3.01.03.04.14  | Other                                      |          | hrs        | £ -  | £ -        |          |
| <b>Page Total</b>  |  |          |            |      | <b>£ -</b> |          |
| Oracle Project No. 141982  |  |          |            |      |            |          |
| Project Description Liverpool Street Station Option 2: New Platforms between 10-11   |  |          |            |      |            |          |
|  |  |          |            |      |            |          |
| Ref  | Description                                | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>       |          |            |      |            |          |
| <b>3.01.03</b>   | <b>Contractor design fees (continued).</b> |          | <b>Sum</b> |      |            |          |
| <b>3.01.03.05</b>  | <b>Operational Telecomms System Design</b> |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.03.05.01  | Site investigation                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.02  | Ground Investigation                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.03  | Topographical Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.04  | Environmental Survey                       |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.05  | Feasibility Study                          |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.06  | Option Selection Study                     |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.07  | Single Option Development                  |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.08  | Design Development                         |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.09  | Outline Design                             |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.10  | Detailed Design                            |          | hrs        | £ -  | £ -        |          |
| 3.01.03.05.11  | Post contract Design                       |          | hrs        | £ -  | £ -        |          |

| <i>Southern</i>   |                                      |          |            |      |          |          |
|-------------------|--------------------------------------|----------|------------|------|----------|----------|
| Ref               | Description                          | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.03.05.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.05.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.05.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.06</b> | <b>Buildings and Property Design</b> |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.06.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.06.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.06.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.06.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.06.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.06.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.06.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.06.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.07</b> | <b>Civil Engineering Design</b>      |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.07.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.07.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.07.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.07.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.07.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.07.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.07.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.07.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.08</b> | <b>Enabling Works Design</b>         |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.08.01     | Site investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.08.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.08.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.08.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.08.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.08.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.08.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.08.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>Page Total</b> |                                      |          |            |      | <b>£</b> | <b>-</b> |

| Oracle Project No.  | 141982   |          | Infrastructure Projects |              |          |                   | NetworkRail                                     |
|---------------------|--|----------|-------------------------|--------------|----------|-------------------|---|
| Project Description | Liverpool Street Station Option 2: New Platforms between 10-11     |          | Southern                |              |          |                   |   |
| Ref                 | Description  | Quantity | Unit                    | Rate         | Cost     |                   | Comments  |
| <b>3.02</b>         | <b>Project Management Team Fees</b>                                |          |                         | <b>TOTAL</b> | <b>£</b> | <b>901,765.77</b> |   |
| <b>3.02.xx</b>      | <b>Allowance where Development Costs have not been quantified.</b> |          | <b>Sum</b>              |              | <b>£</b> | <b>901,765.77</b> |   |
| 3.02.xx.01          | NR Project Management and Sponsor                                  | 1        | Sum                     | £ 901,765.77 | £        | 901,765.77        | From percentage allowance; see "indirects" tab. |
| <b>3.02.01</b>      | <b>Employer's Project costs</b>                                    |          | <b>Sum</b>              |              | <b>£</b> | <b>-</b>          |   |
| <b>3.02.01.01</b>   | <b>Employer's staff costs</b>                                      |          | <b>Sum</b>              |              | <b>£</b> | <b>-</b>          |   |
| 3.02.01.01.01       | Output definition phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.02       | Feasibility phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.03       | Option selection phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.04       | Single option development phase                                    |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.05       | Detailed design phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.06       | Implementation phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.07       | Handback phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.08       | Close out phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.01.01.09       | Other  |          | hrs                     | £ -          | £        | -                 |   |
| <b>3.02.02</b>      | <b>Employer's Procured costs</b>                                   |          | <b>Sum</b>              |              | <b>£</b> | <b>-</b>          |   |
| <b>3.02.02.02</b>   | <b>Employer's procured staff costs</b>                             |          | <b>Sum</b>              |              | <b>£</b> | <b>-</b>          |   |
| 3.02.02.02.01       | Output definition phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.02       | Feasibility phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.03       | Option selection phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.04       | Single option development phase                                    |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.05       | Detailed design phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.06       | Implementation phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.07       | Handback phase   |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.08       | Close out phase  |          | hrs                     | £ -          | £        | -                 |   |
| 3.02.02.02.09       | Other  |          | hrs                     | £ -          | £        | -                 |   |
|                     | <b>Page Total</b>  |          |                         |              | <b>£</b> | <b>901,765.77</b> |   |

| Oracle Project No.  | 141982   |          | Infrastructure Projects |              |                       |          |  |
|---------------------|--|----------|-------------------------|--------------|-----------------------|----------|---|
| Project Description | Liverpool Street Station Option 2: New Platforms between 10-11       |          | Southern                |              |                       |          |   |
| Ref                 | Description  | Quantity | Unit                    | Rate         | Cost                  | Comments |   |
| <b>3.03</b>         | <b>Other Project Costs</b>   |          |                         | <b>TOTAL</b> | <b>£ 1,441,885.90</b> |          |   |
| <b>3.03.01</b>      | <b>Other Project Costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| <b>3.03.01.01</b>   | <b>Land Costs</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.01.01       | Acquisition of land  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.02       | Rights of way and way leaves   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.03       | Fees : associated with acquisition of land or rights of way          |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.02</b>   | <b>Fees to statutory and public bodies</b>                           |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.02.01       | Planning fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.02       | Building control fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.03       | Fees to neighbouring land owners and users to facilitate the project | 1        | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.03</b>   | <b>Payments to public and statutory bodies</b>                       |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.03.01       | Adoption charges in connection with highways and bridges             |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.02       | Maintenance charges in connection with highways and bridges          |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.03       | Planning contributions   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.04</b>   | <b>Sponsor's agent fees</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.04.01       | Planning   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.02       | Lobbying and public consultation                                     |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.03       | Legal services   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.04       | Taxation and financial services                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.05       | Collaboration, business relationship management systems              |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.06       | Facilitation services  |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.05</b>   | <b>Employer's office &amp; supplied plant costs</b>                  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.05.01       | Employer's main office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.02       | Employer's project office costs                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.03       | Employer's site office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.04       | Employer owned plant   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.06</b>   | <b>Research for innovative products</b>                              |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.06.01       | Concept design   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.02       | Testing  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.03       | Piloting   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.07</b>   | <b>Finance costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.07.01       | Commitment fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.02       | Interest   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.03       | Credit charges   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.08</b>   | <b>Marketing</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.08.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.09</b>   | <b>Stakeholder management</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.09.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.10</b>   | <b>Archaeological</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.10.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.11</b>   | <b>Insurance</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.11.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.12</b>   | <b>Other</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.12.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
|                     | <b>Page Total</b>  |          |                         |              | <b>£ -</b>            |          |   |

| Ref                 | Description  | Quantity | Unit       | Rate           | Cost                  | Comments  |
|---------------------|--|----------|------------|----------------|-----------------------|---|
| Oracle Project No.  | 141982   |          |            |                |                       |   |
| Project Description | Liverpool Street Station Option 2: New Platforms between 10-11 |          |            |                |                       |  |
| Ref                 | Description  | Quantity | Unit       | Rate           | Cost                  | Comments  |
| <b>3.03</b>         | <b>Other project costs (continued).</b>                        |          |            |                |                       |   |
| <b>3.03.02</b>      | <b>Disruption of asset use</b>                                 |          | <b>Sum</b> |                | <b>£ 1,441,885.90</b> |   |
| <b>3.03.02.01</b>   | <b>Employer's costs</b>  |          | <b>Sum</b> |                | <b>£ 375,735.74</b>   |   |
| 3.03.02.01.01       | Possessions  |          | Nr         | £ -            | £ -                   |   |
| 3.03.02.01.02       | Isolations   | 1        | Nr         | £ 375,735.74   | £ 375,735.74          | Allowance 5% of indirect construction cost  |
| <b>3.03.02.02</b>   | <b>Decanting and relocation costs</b>                          |          | <b>Sum</b> |                | <b>£ -</b>            |   |
| 3.03.02.02.01       | Temporary relocation costs                                     |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.02       | Rents and other running costs                                  |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.03       | Compensation costs   |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.04       | Payments for interruption or disturbance of use                |          | Sum        | £ -            | £ -                   |   |
| <b>3.03.02.03</b>   | <b>Interruption of use</b>                                     |          | <b>Sum</b> |                | <b>£ 1,066,150.16</b> |   |
| 3.03.02.03.01       | Payments to asset users : planned                              | 1        | Sum        | £ 1,066,150.16 | £ 1,066,150.16        | TOC/FOC compensation?   |
| 3.03.02.03.02       | Costs of diversionary routes or alternative lines of supply    |          | Sum        | £ -            | £ -                   |   |
|                     | <b>Page Total</b>  |          |            |                | <b>£ 1,441,885.90</b> |   |

| Oracle Project No. 141982 |   | Infrastructure Projects  |            |                 |                       | NetworkRail                        |  |
|---------------------------|---|--|------------|-----------------|-----------------------|------------------------------------|--|
| Project Description       |   | Liverpool Street Station Option 2: New Platforms between 10-11 |            |                 |                       |                                    |  |
|                           |   | Southern   |            |                 |                       |                                    |  |
| Ref                       | Description   | Quantity   | Unit       | Rate            | Cost                  | Comments                           |  |
| 4.01                      | <b>Risk</b>   |  |            | <b>TOTAL</b>    | <b>£ 6,878,312.36</b> |                                    |  |
| 4.01.xx                   | <b>Allowance where risks have not been quantified.</b>    |  | <b>Sum</b> |                 | <b>£ 6,878,312.36</b> |                                    |  |
| Y                         | Pre Grip  | 50   | %          | £ 13,756,624.73 | £ 6,878,312.36        | Select "Y" dependant on Grip stage |  |
| N                         | Grip 1  | 40   | %          | £ 13,756,624.73 | £ -                   | Select "Y" dependant on Grip stage |  |
| N                         | Grip 2  | 30   | %          | £ 13,756,624.73 | £ -                   | Select "Y" dependant on Grip stage |  |
| N                         | Grip 3  | 20   | %          | £ 13,756,624.73 | £ -                   | Select "Y" dependant on Grip stage |  |
| N                         | Grip 4  | 15   | %          | £ 13,756,624.73 | £ -                   | Select "Y" dependant on Grip stage |  |
| N                         | Grip 5  | 10   | %          | £ 13,756,624.73 | £ -                   | Select "Y" dependant on Grip stage |  |
| 4.01.01                   | <b>Total Risk Allowance</b>                               |  | <b>Sum</b> |                 | <b>£ -</b>            |                                    |  |
| 4.01.01.01                | <b>Design development risks</b>                           |  | <b>Sum</b> |                 | <b>£ -</b>            |                                    |  |
| 4.01.01.01.01             | Inadequate or unclear Project Brief                       |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.02             | Unclear Design Team Responsibilities                      |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.03             | Unrealistic Design Programme                              |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.04             | Inadequate Site Investigation                             |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.05             | Planning Constraints                                      |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.06             | Appropriateness of Design                                 |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.07             | Degree of Novelty   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.08             | Ineffective Design Co-Ordination                          |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.09             | Reliability of Estimating Data                            |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.10             | Design Management   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.01.11             | Other   |  | Sum        | £ -             | £ -                   |                                    |  |
|                           | <b>Page Total</b>   |  |            |                 | <b>£ 6,878,312.36</b> |                                    |  |
|                           |   |  |            |                 |                       |                                    |  |
| Oracle Project No. 141982 |   |  |            |                 |                       |                                    |  |
| Project Description       |   | Liverpool Street Station Option 2: New Platforms between 10-11 |            |                 |                       |                                    |  |
| Ref                       | Description   | Quantity   | Unit       | Rate            | Cost                  | Comments                           |  |
| 4.01                      | <b>Risk (continued).</b>                                  |  |            |                 |                       |                                    |  |
| 4.01.01.02                | <b>Construction risks</b>                                 |  | <b>Sum</b> |                 | <b>£ -</b>            |                                    |  |
| 4.01.01.02.01             | Inadequate Site Investigation                             |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.02             | Archaeological remains                                    |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.03             | Underground obstructions                                  |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.04             | Contaminated ground                                       |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.05             | Adjacent structures                                       |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.06             | Geotechnical problems                                     |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.07             | Ground water  |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.08             | Asbestos and other hazardous materials                    |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.09             | Invasive plant growth                                     |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.10             | Tree preservation orders                                  |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.11             | Ecological issues   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.12             | Environmental impact                                      |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.13             | Physical Access to site                                   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.14             | Existing occupancies / users                              |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.15             | Restricted working hours / routines                       |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.16             | Maintaining access  |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.17             | Maintaining existing services                             |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.18             | Additional infrastructure                                 |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.19             | Existing services   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.20             | Location of existing services                             |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.21             | Relocation of existing services                           |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.22             | Statutory undertakers                                     |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.23             | Uncertainty over the source and availability of materials |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.24             | Appropriateness of specification                          |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.25             | Incomplete design   |  | Sum        | £ -             | £ -                   |                                    |  |
| 4.01.01.02.26             | Weather and seasonal implications                         |  | Sum        | £ -             | £ -                   |                                    |  |

| Ref               | Description   | Southern |            |          | Cost     | Comments   |
|-------------------|---|----------|------------|----------|----------|------------|
|                   |   | Quantity | Unit       | Rate     |          |            |
| 4.01.01.02.27     | Industrial relations  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.28     | Remote site   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.29     | Competence of contractor and sub-contractors                                    |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.30     | Health and safety   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.31     | Ineffective quality management  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.32     | Phasing requirements  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.33     | Ineffective handover procedures   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.34     | Disputes and claims   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.35     | Effect of changes / variations on construction programme                        |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.36     | Cumulative effect of changes / variations on the construction programme         |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.37     | Defects   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.38     | Accident / injury   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.39     | Access to site  |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.40     | Human relations   |          | Sum        | £        | -        | £ -        |
| 4.01.01.02.41     | Other   |          | Sum        | £        | -        | £ -        |
| <b>4.01.01.03</b> | <b>Employer change risks</b>  |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>-</b>   |
| 4.01.01.03.01     | Specific changes in requirements  |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.02     | Changes in quality  |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.03     | Changes in time   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.04     | Employer driven changes / variations introduced during the implementation stage |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.05     | Effect of construction duration   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.06     | Cumulative effect of numerous changes   |          | Sum        | £        | -        | £ -        |
| 4.01.01.03.07     | Other   |          | Sum        | £        | -        | £ -        |
| <b>4.01.01.04</b> | <b>Employer other risks</b>   |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>-</b>   |
| 4.01.01.04.01     | Project brief   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.02     | Timescales  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.03     | Inadequate Asset Information  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.04     | Management  |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.05     | Funding   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.06     | Third parties   |          | Sum        | £        | -        | £ -        |
| 4.01.01.04.07     | Other   |          | Sum        | £        | -        | £ -        |
|                   | <b>Page Total</b>   |          |            |          |          | <b>£ -</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects  |            |                 |          | Network Rail        |  |
|---------------------------|--|--|------------|-----------------|----------|---------------------|--|
| Project Description       |  | Liverpool Street Station Option 2: New Platforms between 10-11 |            |                 |          |                     |  |
| Ref                       | Description  | Quantity   | Unit       | Rate            | Cost     | Comments            |  |
| <b>5.01</b>               | <b>Inflation</b>   |  |            | <b>TOTAL</b>    | <b>£</b> | <b>3,334,338.29</b> |  |
| <b>5.01.xx</b>            | <b>Allowance where Inflation Costs have not been quantified.</b>     |  | <b>Sum</b> |                 | <b>£</b> | <b>3,334,338.29</b> |  |
| 5.01.xx.01                | Inflation year 1   | 2.75%  | %          | £ 13,756,624.73 | £        | 378,307.18          |  |
|                           | Inflation year 2   | 2.75%  | %          | £ 14,134,931.91 | £        | 388,710.63          |  |
|                           | Inflation year 3   | 2.75%  | %          | £ 14,523,642.53 | £        | 399,400.17          |  |
|                           | Inflation year 4   | 2.75%  | %          | £ 14,923,042.70 | £        | 410,383.67          |  |
|                           | Inflation year 5   | 2.75%  | %          | £ 15,333,426.38 | £        | 421,669.23          |  |
|                           | Inflation year 6   | 2.75%  | %          | £ 15,755,095.60 | £        | 433,265.13          |  |
|                           | Inflation year 7   | 2.75%  | %          | £ 16,188,360.73 | £        | 445,179.92          |  |
|                           | Inflation year 8   | 2.75%  | %          | £ 16,633,540.65 | £        | 457,422.37          |  |
|                           |  | 710398733%   |            |                 |          |                     |  |
| <b>5.01.01</b>            | <b>Inflation</b>   |  | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| <b>5.01.01.01</b>         | <b>Tender inflation</b>  |  | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| 5.01.01.01.01             | Inflation : date of estimate to tender return                        |  | Sum        | £               | -        | £ -                 |  |
| 5.01.01.01.02             | Inflation : delays in procurement programme                          |  | Sum        | £               | -        | £ -                 |  |
| <b>5.01.01.02</b>         | <b>Construction inflation</b>  |  | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| 5.01.01.02.01             | Inflation : date of commencement to mid-point of construction period |  | Sum        | £               | -        | £ -                 |  |
| 5.01.01.02.02             | Exceptional inflation  |  | Sum        | £               | -        | £ -                 |  |
|                           | <b>Page Total</b>  |  |            |                 | <b>£</b> | <b>3,334,338.29</b> |  |

| Oracle Project No. 141982                                      |   | Infrastructure Projects |            |              |          |          | NetworkRail |
|--|---|-------------------------|------------|--------------|----------|----------|-------------|
| Project Description  |   | Southern                |            |              |          |          |             |
| Liverpool Street Station Option 2: New Platforms between 10-11 |   |                         |            |              |          |          |             |
| Ref  | Description                               | Quantity                | Unit       | Rate         | Cost     | Comments |             |
| <b>6.01</b>  | <b>Tax Allowances and Grants</b>          |                         |            | <b>TOTAL</b> | <b>£</b> | <b>-</b> |             |
| <b>6.01.01</b>   | <b>Tax allowances and grants</b>          |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| <b>6.01.01.01</b>  | <b>Capital allowances</b>                 |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.01.01  | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.02  | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.03  | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.04  | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.02</b>  | <b>Grants</b>                             |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.02.01  | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.02  | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.03  | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.04  | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.03</b>  | <b>VAT - Value Added Tax</b>              |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.03.01  | Input tax : non recoverable               |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.03.02  | Output tax chargeable to users or tenants |                         | Sum        | £            | -        | £ -      |             |
|  | <b>Page Total</b>                         |                         |            |              | <b>£</b> | <b>-</b> |             |

## BOQ - Carried fwd / Brought fwd - Gross

| Item    | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross     |              |
|---------|-----------|---------------|--|------|---------------|-----------|--------------|
|         |           |               |  |      |               | Rate      | Amount       |
|         |           |               | <p><i>Liverpool Street Station Train Capacity</i></p> <p><i>Pre Ggrip Estimate</i></p> <p><i>Option 2: 3 New Platforms between 10-11</i></p> <p><i>Assumptions:</i></p> <p><i>We haven't include the business displacement allowance because this still need to be confirmed by asset management team.</i></p> <p><i>We have assumed a provisional sum for 30k for a minimal construction required to provide a small taxi rank area. This would further be clarified once the design is further developed.</i></p> <p><i>Our Prices are based on the assumptions that new platform 12,13 &amp; 14 will be 260m in length</i></p> <p><i>Average length of each carriage to be 20m</i></p> <p style="text-align: right;">Carried to summary</p> |      |               |           | 0.00         |
| 1       |           |               | DIRECT CONSTRUCTION WORKS  |      |               |           |              |
| 101     |           |               | Railway Control Systems  |      |               |           |              |
| 10101   |           |               | <u>Signalling Systems</u>  |      |               |           |              |
|         |           | 1.01.01.04.01 | 4 aspects LED signal   | nr   | 3             | 9,442.99  | 28,328.97    |
| 1010105 |           |               | <u>Train Detection Systems</u>   |      |               |           |              |
|         |           | 1.01.01.05.01 | Track Circuits   | nr   | 3             | 7,076.90  | 21,230.70    |
|         |           | 1.01.01.05.05 | Insulated Block Joints (IBJs)  | nr   | 6             | 11,276.84 | 67,661.04    |
|         |           | 1.01.01.05.06 | Impedance Bonds  | nr   | 3             | 9,276.84  | 27,830.52    |
| 1010106 |           |               | <u>Train Protection Systems</u>  |      |               |           |              |
|         |           | 1.01.01.06.01 | Automatic Warning system (AWS)   | nr   | 3             | 1,541.07  | 4,623.21     |
| 1010108 |           |               | <u>Cables and Containment</u>  |      |               |           |              |
|         |           | 1.01.01.08.01 | Cables   | m    | 900           | 20.00     | 18,000.00    |
|         |           |               | <i>Allowance</i>   |      |               |           |              |
|         |           | 1.01.01.08.02 | Containment  | m    | 1,500         | 61.94     | 92,910.00    |
| 1010110 |           |               | <u>Equipment Housings, Platforms and Foundations</u>   |      |               |           |              |
|         |           | 1.01.01.10.01 | Location case, complete with racking and equipment: type stated  | nr   | 3             | 1,603.17  | 4,809.51     |
| 1010116 |           |               | <u>Abandonment, Recovery and Disposal of Redundant Equipment</u>   |      |               |           |              |
|         |           | 1.01.01.16.04 | Signals and indicators   | nr   | 1             | 1,595.39  | 1,595.39     |
|         |           | 1.01.01.16.05 | Train detection systems  | nr   | 1             | 2,612.46  | 2,612.46     |
|         |           | 1.01.01.16.06 | Train protection systems   | nr   | 1             | 233.41    | 233.41       |
|         |           | 1.01.01.16.08 | Cables and containment   | nr   | 500           | 26.82     | 13,410.00    |
|         |           |               | <i>Allowance</i>   |      |               |           |              |
|         |           | 1.01.01.16.09 | Signals support structures and foundations   | nr   | 15            | 2,830.35  | 42,455.25    |
|         |           | 1.01.01.16.10 | Equipment housings, platforms and foundations  | nr   | 20            | 670.55    | 13,411.00    |
| 10201   |           |               | <u>Power Distribution</u>  |      |               |           |              |
| 10202   |           |               | <u>Overhead Line Equipment (OLE)</u>   |      |               |           |              |
|         |           | 1.02.02.01.06 | OLE with support structure   | nr   | 48            | 25,000.00 | 1,200,000.00 |
| 103     |           |               | Electric Power and Plant   |      |               |           |              |
| 10301   |           |               | <u>Primary Power Supply</u>  |      |               |           |              |
| 1030105 |           |               | <u>Small Power for Equipment</u>   |      |               |           |              |
|         |           | 1.03.01.05.01 | DNO power cubicle  | nr   | 3             | 12,500.00 | 37,500.00    |
| 104     |           |               | Permanent Way  |      |               |           |              |
| 10401   |           |               | <u>Plain Line</u>  |      |               |           |              |
|         |           | 1.04.01.03.01 | Jointed Track( Plain Line Track Works)   | m    | 900           | 1,215.00  | 1,093,500.00 |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code      | SMM code      | Bill description   | Unit | Bill quantity | Gross        |              |
|------|----------------|---------------|--|------|---------------|--------------|--------------|
|      |                |               |  |      |               | Rate         | Amount       |
|      | <u>1040203</u> |               | <u>Turnouts and Crossings</u>                                      |      |               |              |              |
|      |                | 1.04.02.04.03 | Switch Crossing: Single Slip (new crossover)                       | nr   | 1             | 475,000.00   | 475,000.00   |
|      |                | 1.04.02.03.01 | Standard Turnout   | nr   | 3             | 325,000.00   | 975,000.00   |
|      |                | 1.04.03.01.03 | Sliding Buffer   | nr   | 3             | 15,000.00    | 45,000.00    |
|      | <i>10404</i>   |               | <i>Track Drainage</i>  |      |               |              |              |
|      |                | 1.04.04.01.01 | Drainage below ground: trench & pipe work : depth stated           | m    | 900           | 102.00       | 91,800.00    |
|      | <u>1040402</u> |               | <u>Inspection Chambers</u>   |      |               |              |              |
|      |                | 1.04.04.02.02 | Interceptors (Catchpit 30 m centers)                               | nr   | 21            | 1,300.00     | 27,300.00    |
|      | <i>10402</i>   |               | <i>Switches &amp; Crossings (S&amp;C)</i>                          |      |               |              |              |
|      | <u>1040203</u> |               | <u>Turnouts and Crossings</u>                                      |      |               |              |              |
|      | 105            |               | Operational Telecommunication Systems                              |      |               |              |              |
|      | <i>10501</i>   |               | <i>Information Transmission Systems</i>                            |      |               |              |              |
|      | <i>10503</i>   |               | <i>Station Information and Surveillance Systems (SISS)</i>         |      |               |              |              |
|      |                | 1.05.03.01.01 | PA system - station  | nr   | 50            | 750.00       | 37,500.00    |
|      | <u>1050303</u> |               | <u>Closed Circuit Television (CCTV)</u>                            |      |               |              |              |
|      |                | 1.05.03.03.01 | Cameras : remote   | nr   | 18            | 5,936.00     | 106,848.00   |
|      | <i>10504</i>   |               | <i>Operational Management Systems</i>                              |      |               |              |              |
|      | <u>1050402</u> |               | <u>Train Monitoring Systems</u>                                    |      |               |              |              |
|      |                | 1.05.04.02.01 | Visual display units   | nr   | 9             | 7,000.00     | 63,000.00    |
|      | 106            |               | Buildings & Property   |      |               |              |              |
|      | <u>1060002</u> |               | <u>Major Demolition Works</u>                                      |      |               |              |              |
|      |                | 1.06.00.02.01 | Demolition works(For Mezzanine area)                               | m3   | 5,632         | 26.81        | 150,993.92   |
|      |                |               | Platform 12 shortening to 253m                                     | m3   | 270           | 42.89        | 11,580.30    |
|      |                |               | Platform 10 shorteneng to 253m                                     | m3   | 270           | 42.89        | 11,580.30    |
|      | <i>10602</i>   |               | <i>Superstructure</i>  |      |               |              |              |
|      | <u>1060202</u> |               | <u>Upper Floors</u>  |      |               |              |              |
|      |                | 1.06.02.02.04 | Platforms12,13,14 &single line platform adjacent to platform10     | sum  | 1             | 1,706,053.50 | 1,706,053.50 |
|      |                | 1.06.02.02.01 | Floors(NEW extended Mezzanine area)                                | m3   | 1             | 225,920.00   | 225,920.00   |
|      |                |               | Allowance for shope fitout in Mezzanine area.                      | sum  | 1             | 50,000.00    | 50,000.00    |
|      | <i>10605</i>   |               | <i>Services</i>  |      |               |              |              |
|      |                | 1.06.05.02.01 | Services equipment (GATE LINES)                                    | nr   | 1             | 58,500.00    | 58,500.00    |
|      | <u>1060508</u> |               | <u>Electrical Installations</u>                                    |      |               |              |              |
|      |                | 1.06.05.08.03 | Lighting installations   | m²   | 392           | 195.00       | 76,440.00    |
|      | 107            |               | Civil Engineering  |      |               |              |              |
|      | <i>10701</i>   |               | <i>Earthworks</i>  |      |               |              |              |
|      |                | 1.07.01.01.01 | General excavation(Area in front of Platform 12,13 & 14 for track) | m³   | 4,290         | 42.90        | 184,041.00   |
|      |                | 1.07.01.01.02 | Disposal   | m³   | 9,922         | 25.00        | 248,050.00   |
|      | <u>1070306</u> |               | <u>Smoke Ventilation Systems</u>                                   |      |               |              |              |
|      |                | 1.07.03.06.01 | Fans Ventilation System  | sum  | 1             | 90,000.00    | 90,000.00    |
|      | <u>1071101</u> |               | <u>Roads</u>   |      |               |              |              |
|      |                | 1.07.11.01.03 | Surfaced access ways : vehicular (TAXI RANK ALLOWANCE)             | sum  | 1             | 30,000.00    | 30,000.00    |
|      | 108            |               | Enabling Works   |      |               |              |              |
|      | <i>10802</i>   |               | <i>Site Clearance and Preparation Works</i>                        |      |               |              |              |

BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross        |              |
|------|-----------|---------------|--|------|---------------|--------------|--------------|
|      |           |               |  |      |               | Rate         | Amount       |
|      |           | 1.08.02.01.01 | General clearance(including Electrical & Mechanical equipment under the vehicle access ramp) | sum  | 1             | 150,000.00   | 150,000.00   |
|      |           |               | Storage Room Replacement allowance   | sum  | 1             | 30,000.00    | 30,000.00    |
|      |           |               | Carried to summary   |      |               |              | 7,514,718.48 |
| 2    |           |               | INDIRECT CONSTRUCTION WORKS  |      |               |              |              |
| 201  |           |               | Preliminaries  |      |               |              |              |
|      |           |               | Preliminaries of direct cost.  | sum  | 1             | 1,878,678.69 | 1,878,678.69 |
| 202  |           |               | Overheads and Profit   |      |               |              |              |
|      |           |               | Overhead and Profits   | sum  | 1             | 1,268,108.12 | 1,268,108.12 |
|      |           |               | Carried to summary   |      |               |              | 3,146,786.81 |
| 3    |           |               | EMPLOYER'S INDIRECT COSTS  |      |               |              |              |
|      |           |               | Network rails project team fees  | sum  | 1             | 901,765.77   | 901,765.77   |
| 301  |           |               | Design Team Fees   |      |               |              |              |
|      |           |               | Design team fee  | sum  | 1             | 751,471.48   | 751,471.48   |
| 303  |           |               | Other Project Costs  |      |               |              |              |
|      |           |               | other project cost   | sum  | 1             | 1,441,885.90 | 1,441,885.90 |
|      |           |               | Carried to summary   |      |               |              | 3,095,123.15 |
| 4    |           |               | RISK   |      |               |              |              |
|      |           |               | RISK   | sum  | 1             | 6,878,312.50 | 6,878,312.50 |
|      |           |               | Carried to summary   |      |               |              | 6,878,312.50 |
| 5    |           |               | INFLATION  |      |               |              |              |
|      |           |               | Inflation till mid of CP6 @ 24.24%   | sum  | 1             | 3,334,605.90 | 3,334,605.90 |
|      |           |               | Carried to summary   |      |               |              | 3,334,605.90 |

BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code | Bill description            | Unit | Bill quantity | Gross |               |
|------|-----------|----------|-----------------------------|------|---------------|-------|---------------|
|      |           |          |                             |      |               | Rate  | Amount        |
|      |           |          |                             |      |               |       | 0.00          |
|      |           |          | DIRECT CONSTRUCTION WORKS   |      |               |       | 7,514,718.48  |
|      |           |          | INDIRECT CONSTRUCTION WORKS |      |               |       | 3,146,786.81  |
|      |           |          | EMPLOYER'S INDIRECT COSTS   |      |               |       | 3,095,123.15  |
|      |           |          | RISK                        |      |               |       | 6,878,312.50  |
|      |           |          | INFLATION                   |      |               |       | 3,334,605.90  |
|      |           |          | TOTAL                       |      |               |       | 23,969,546.84 |

**Projects Estimating**

**Oracle Project No.:**

**Project Description:**

**Estimate Stage:**

| <b>Issue and Revision Record:</b> |             |                    |                |                    |
|-----------------------------------|-------------|--------------------|----------------|--------------------|
| <b>Rev.</b>                       | <b>Date</b> | <b>Prepared by</b> | <b>Checked</b> | <b>Description</b> |
| 0                                 | 1-Aug-14    | K.Siddiqui         |                | Original           |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |

Estimate Stage: Grip 0  
Oracle Project No.: 141982  
Project Description: Liverpool Street Station Option 3: Remodel Platform 1-10

Estimate Document Contents

|   |                           |
|---|---------------------------|
| I   | Assumptions               |
| II  | Estimate Summary Report   |
| 1. Direct Construction Works                          |                           |
| 1.01  | Railway Control Systems   |
| 1.02  | Train Power Systems       |
| 1.03  | Electric Power and Plant  |
| 1.04  | Permanent Way             |
| 1.05  | Telecommunication Systems |
| 1.06  | Buildings and Property    |
| 1.07  | Civil Engineering         |
| 1.08  | Enabling Works            |
| 2. Indirect Construction Works                        |                           |
| 2.01  | Preliminaries             |
| 2.02  | Overhead and Profit       |
| 3. Project / design Team Fees and Other Project Costs |                           |
| 3.01  | Design Team Fees          |
| 3.02  | Project Team fees         |
| 3.03  | Other Project Costs       |
| 4. Risk   |                           |
| 4.01  | Total Risk Allowance      |
| 5. Inflation  |                           |
| 5.01  | Inflation                 |
| 6. Taxation and Grants                                |                           |
| 6.01  | Tax allowances and grants |
| III   | Indirects                 |
| IV  | Escalation Calculator     |



## Infrastructure Projects

Southern

**Estimate Stage:** Grip 0  
**Oracle Project No.:** 141982  
**Project Description:** Liverpool Street Station Option 3: Remodel Platform 1-10

### Clarifications

#### General / Assumptions / Drawings & Documents / Exclusions / Revisions

##### General

- G1 The estimate base date is 3Q 2014 using rates.
- G2 The value of cost escalation has calculated using RPI and it is assumed that the mid point of construction will be 2Q 2022
- G3 Escalation has been included within the Project AFC as the works is assumed to be mid point 2Qtr 2022 using compound interest at 2.75%
- G4 An uplift factor for contingency of 50% has been applied in consultation with the Estimating Manager for cost and scope uncertainty, in line with the Estimating procedure and Grip Stage .
- G5 Costs exclude VAT

##### Assumptions

- A1 Assume no over and above allowance for Bank Holiday working
- A2 Fees for Sponsor, Network Rail Management and Design allowances are based on a percentage of Total Construction Costs.
- A3 We have assumed at this stage no contribution to Network rails Fee Fund
- A4 We have assumed at this stage no contribution to Industry Risk Fund
- A5 Our prices are based on the assumption that the new platforms 12,13&14 will be 260m in length
- A6 We have assumed a provisional sum for 30k for a minimal construction required to provide a small taxi rank area. This would further be clarified once the design is further developed.
- A7 Average length of each carriage is assumed to be 20m.
- A8 Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team and dealt separately to this estimate.
- A9 Our prices are based on the assumption that disposal of uncontaminated material.
- A10 All works are assumed to be carried out in the station operational environment.
- A11 No allowance has been made for any possession or isolation management
- A12 All platform extension works are assumed to be cast in situ works.
- A13 Our cost based on assumption that all work done in 8 hr shift

- A14 We have assumed a provisional sum of 100k for relocation of mechanical and electrical equipment under the vehical access ramp in the absence of details of the equipments.
- A15 Our prices are based on the assumption that no impact will occur on the existing HV substation
- A16 Our prices are based on assumption that no allowance has been made for lift, escalator and ventilation.
- A17 No cost has been allowed for the 9 day station desruption for testing of Signalling Works.
- A18 No cost has been allowed for increasing the capacity of traction power supply for West Anglia and Great Western line.
- A19 We have made an allowance of 30k within our pricing for putting hoardings at Sun Street.

### **Drawings & Documents**

The following documents have been used in the preparation of this estimate:

SOU-141892-EAR-DRG-IAB-001.pdf  
Liverpool St Station 6326-023 92).pdf  
Liverpool St Station 6326-024 92).pdf

### **Exclusions**

E1

### **Revisions**

The following revisions have been applied

**ESTIMATE SUMMARY REPORT**

|                          |  |                   |        |                |        |
|--------------------------|--|-------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505   | Revision          | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14  | Price 'Base date' | 3Q2014 |                |        |
| Anticipated Start Date   | Anticipated Finish Date                                  |                   |        |                |        |
| Project No.              | 141982   |                   |        |                |        |
| Project Title / Location | Liverpool Street Station Option 3: Remodel Platform 1-10 |                   |        |                |        |

| WBS      | Estimate Breakdown  | Value                  | %age of Point Estimate | Remarks  |
|----------|---|------------------------|------------------------|--|
| <b>1</b> | <b>Direct Construction works -</b>                              |                        |                        |  |
| 1.01     | Railway Control Systems   | £ 1,903,669.72         | 8.7%                   |  |
| 1.02     | Train Power Systems   | £ -                    | 0.0%                   |  |
| 1.03     | Electric Power and Plant  | £ 62,500.00            | 0.3%                   |  |
| 1.04     | Permanent Way   | £ 5,350,850.00         | 24.4%                  |  |
| 1.05     | Operational Telecommunication Systems                           | £ 334,272.00           | 1.5%                   |  |
| 1.06     | Buildings and Property  | £ 3,504,637.89         | 16.0%                  |  |
| 1.07     | Civil Engineering   | £ 429,117.84           | 2.0%                   |  |
| 1.08     | Enabling Works  | £ 372,248.00           | 1.7%                   |  |
|          | <b>Direct Construction works :</b>                              | <b>£ 11,957,295.45</b> | <b>54.6%</b>           |  |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                        |                        |  |
| 2.01     | Preliminaries   | £ 2,989,323.86         | 13.7%                  |  |
| 2.02     | Overheads and Profit  | £ 2,017,793.61         | 9.2%                   | If zero, included within the rates   |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 5,007,117.47</b>  | <b>22.9%</b>           |  |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 16,964,412.92</b> | <b>77.5%</b>           |  |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                        |                        |  |
| 3.01     | Design Team Fees  | £ 1,195,729.55         | 5.5%                   |  |
| 3.02     | Project Team Fees   | £ 1,434,875.45         | 6.6%                   |  |
| 3.03     | Other Project Costs   | £ 2,294,306.06         | 10.5%                  |  |
| 3.04     | Cost of work done (COWD)  | £ -                    | 0.0%                   |  |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 4,924,911.06</b>  | <b>22.5%</b>           |  |
|          | <b>Point Estimate :</b>   | <b>£ 21,889,323.98</b> | <b>100.0%</b>          |  |
| <b>4</b> | <b>Risk</b>   |                        |                        | 50.00%   |
| 4.01     | Risk  | £ 10,944,661.99        |                        |  |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 10,944,661.99</b> |                        |  |
| <b>5</b> | <b>Inflation</b>  |                        |                        | When included within the project AFC, less COWD.<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 5,305,546.43         |                        |  |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 5,305,546.43</b>  |                        |  |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                        |                        | If Applicable  |
| 6.01     | Tax allowances and Grants                                       | £ -                    |                        |  |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>             |                        |  |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 38,139,532.40</b> |                        |  |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         |                         |                         |
| Date :-     | 01 August 2014          |                         |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase  
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under 'Other Costs to the Customer'
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

ESTIMATE SUMMARY REPORT

|                          |  |                         |        |                |        |
|--------------------------|--|-------------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505   | Revision                | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14  | Price 'Base date'       | 3Q2014 |                |        |
| Anticipated Start Date   |  | Anticipated Finish Date |        |                |        |
| Project No.              | 141982   |                         |        |                |        |
| Project Title / Location | Liverpool Street Station Option 3: Remodel Platform 1-10 |                         |        |                |        |

| WBS      | Estimate Breakdown  | Value                  | %age of Point Estimate | Remarks   |
|----------|---|------------------------|------------------------|---|
| <b>1</b> | <b>Direct Construction works -</b>                              |                        |                        |   |
| 1.01     | Railway Control Systems   | £ 1,903,669.72         | 8.7%                   |   |
| 1.02     | Train Power Systems   | £ -                    | 0.0%                   |   |
| 1.03     | Electric Power and Plant  | £ 62,500.00            | 0.3%                   |   |
| 1.04     | Permanent Way   | £ 5,350,650.00         | 24.4%                  |   |
| 1.05     | Operational Telecommunication Systems                           | £ 334,272.00           | 1.5%                   |   |
| 1.06     | Buildings and Property  | £ 3,504,637.89         | 16.0%                  |   |
| 1.07     | Civil Engineering   | £ 429,117.84           | 2.0%                   |   |
| 1.08     | Enabling Works  | £ 372,248.00           | 1.7%                   |   |
|          | <b>Direct Construction works :</b>                              | <b>£ 11,957,295.45</b> | <b>54.6%</b>           |   |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                        |                        |   |
| 2.01     | Preliminaries   | £ 2,989,323.88         | 13.7%                  |   |
| 2.02     | Overheads and Profit  | £ 2,017,793.61         | 9.2%                   | If zero, included within the rates  |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 5,007,117.47</b>  | <b>22.9%</b>           |   |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 16,964,412.92</b> | <b>77.5%</b>           |   |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                        |                        |   |
| 3.01     | Design Team Fees  | £ 1,195,729.56         | 5.5%                   |   |
| 3.02     | Project Team Fees   | £ 1,434,875.45         | 6.5%                   |   |
| 3.03     | Other Project Costs   | £ 2,294,306.06         | 10.5%                  |   |
| 3.04     | Cost of work done (COWD)  | £ -                    | 0.0%                   |   |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 4,924,911.06</b>  | <b>22.5%</b>           |   |
|          | <b>Point Estimate:</b>  | <b>£ 21,889,323.98</b> | <b>100.0%</b>          |   |
| <b>4</b> | <b>Risk</b>   |                        |                        | 50.00%  |
| 4.01     | Risk  | £ 10,944,661.99        |                        |   |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 10,944,661.99</b> |                        |   |
| <b>5</b> | <b>Inflation</b>  |                        |                        | When included within the project AFC, less COWD<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 5,305,546.43         |                        |   |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 5,305,546.43</b>  |                        |   |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                        |                        | If Applicable   |
| 6.01     | Tax allowances and Grants                                       | £ -                    |                        |   |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>             |                        |   |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 38,139,532.40</b> |                        |   |

APPROVAL & ENDORSEMENT

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         | <i>PP Neal Even,</i>    |                         |
| Date :-     | 01 August 2014          | <i>Neal Even</i>        |                         |

Notes:-

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration, escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase. Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under 'Other Costs to the Customer'
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided, the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)



|                     |  |   |
|---------------------|--|---|
| Estimate Stage:     | Grip 0   | <i>Infrastructure Projects</i><br><i>Southern</i> |
| Oracle Project No.: | 141982   |   |
| Project Name:       | Liverpool Street Station Option 3: Remodel Platform 1-10 |   |

**Calculation of Contractors and Network Rail's Indirect Costs**

| Asset                     | Total Direct Costs | %     | Preliminaries  | %     | Design         | %     | OH & P         | %     | Network Rail Management | %    | Sponsor |
|---------------------------|--------------------|-------|----------------|-------|----------------|-------|----------------|-------|-------------------------|------|---------|
| Railway Control Systems   | £ 1,903,669.72     | 25.0% | £ 475,917.43   | 10.0% | £ 190,366.97   | 12.5% | £ 321,244.27   | 12.0% | £ 228,440.37            | 3.0% |         |
| Train Power Systems       |                    | 25.0% | £ -            | 10.0% | £ -            | 12.5% | £ -            | 12.0% | £ -                     | 3.0% |         |
| Electric Power and Plant  | £ 62,500.00        | 25.0% | £ 15,625.00    | 10.0% | £ 6,250.00     | 12.5% | £ 10,546.88    | 12.0% | £ 7,500.00              | 3.0% |         |
| Permanent Way             | £ 5,350,850.00     | 25.0% | £ 1,337,712.50 | 10.0% | £ 535,085.00   | 12.5% | £ 902,955.94   | 12.0% | £ 642,102.00            | 3.0% |         |
| Telecommunication Systems | £ 334,272.00       | 25.0% | £ 83,568.00    | 10.0% | £ 33,427.20    | 12.5% | £ 56,408.40    | 12.0% | £ 40,112.64             | 3.0% |         |
| Buildings and Property    | £ 3,504,637.89     | 25.0% | £ 876,159.47   | 10.0% | £ 350,463.79   | 12.5% | £ 591,407.64   | 12.0% | £ 420,556.55            | 3.0% |         |
| Civil Engineering         | £ 429,117.84       | 25.0% | £ 107,279.46   | 10.0% | £ 42,911.78    | 12.5% | £ 72,413.64    | 12.0% | £ 51,494.14             | 3.0% |         |
| Enabling Works            | £ 372,248.00       | 25.0% | £ 93,062.00    | 10.0% | £ 37,224.80    | 12.5% | £ 62,816.85    | 12.0% | £ 44,669.76             | 3.0% |         |
|                           |                    |       | £ 2,989,323.86 |       | £ 1,195,729.55 |       | £ 2,017,793.61 |       | £ 1,434,875.45          |      | £ -     |

**Allowance for TOC / FOC Compensation - calculator**

|                 |                |                |
|-----------------|----------------|----------------|
| £ 11,957,295.45 | £ 2,989,323.86 | £ 2,017,793.61 |
|-----------------|----------------|----------------|

TOTAL £ 16,964,412.92

Allowance for TOC / FOC compensation (%) 10% £ 1,696,441.29

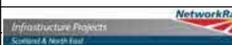


| Oracle Project No. 141982                                |   | Infrastructure Projects |            |                |                       | NetworkRail                                     |
|--|---|-------------------------|------------|----------------|-----------------------|---|
| Project Description                                      |   | Southern                |            |                |                       |   |
| Liverpool Street Station Option 3: Remodel Platform 1-10 |   |                         |            |                |                       |   |
| Ref  | Description   | Quantity                | Unit       | Rate           | Cost                  | Comments  |
| <b>2.02</b>  | <b>Overheads and profit</b>                               |                         |            | <b>TOTAL</b>   | <b>£ 2,017,793.61</b> |   |
| <b>2.02.xx</b>   | <b>Allowance where OH&amp;P have not been quantified.</b> |                         | <b>Sum</b> |                | <b>£ 2,017,793.61</b> |   |
| 2.02.xx.01   | Overheads and profit allowance                            | 1                       | Sum        | £ 2,017,793.61 | £ 2,017,793.61        | From percentage allowance; see "indirects" tab. |
| <b>2.02.01</b>   | <b>Contractor's overheads and profit</b>                  |                         | <b>Sum</b> |                | <b>£ -</b>            |   |
| <b>2.02.01.01</b>  | <b>Head office costs proportioned to contract</b>         |                         | <b>Sum</b> |                | <b>£ -</b>            |   |
| 2.02.01.01.01  | Overheads   |                         | Sum        | £ -            | £ -                   |   |
| 2.02.01.01.02  | Administration  |                         | Sum        | £ -            | £ -                   |   |
| <b>2.02.01.02</b>  | <b>Profit</b>   |                         | <b>Sum</b> |                | <b>£ -</b>            |   |
| 2.02.01.02.01  | Profit on cost  |                         | Sum        | £ -            | £ -                   |   |
|  | <b>Page Total</b>   |                         |            |                | <b>£ 2,017,793.61</b> |   |

| Oracle Project No. 141982                                |  | Infrastructure Projects |            |                |                       | NetworkRail             |  |
|--|--|-------------------------|------------|----------------|-----------------------|-------------------------|--|
| Project Description                                      |  | Southern                |            |                |                       | Infrastructure Projects |  |
| Liverpool Street Station Option 3: Remodel Platform 1-10 |  | Southern & North End    |            |                |                       | NetworkRail             |  |
| Ref  | Description  | Quantity                | Unit       | Rate           | Cost                  | Comments                |  |
| <b>3.01</b>  | <b>Design Team Fees</b>                                      |                         |            | <b>TOTAL</b>   | <b>£ 1,195,729.55</b> |                         |  |
| <b>3.01.xx</b>   | <b>Allowance where Design Fees have not been quantified.</b> |                         | <b>Sum</b> |                | <b>£ 1,195,729.55</b> |                         |  |
| 3.01.xx.01   | From percentage allowance, see "indirects" tab.              | 1                       | Sum        | £ 1,195,729.55 | £ 1,195,729.55        |                         |  |
| <b>3.01.01</b>   | <b>Employer's own design fees</b>                            |                         | <b>Sum</b> |                | <b>£ -</b>            |                         |  |
| <b>3.01.01.01</b>  | <b>Railway Control Systems Design</b>                        |                         | <b>Sum</b> |                | <b>£ -</b>            |                         |  |
| 3.01.01.01.01  | Site investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.02  | Ground Investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.03  | Topographical Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.04  | Environmental Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.05  | Feasibility Study  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.06  | Option Selection Study                                       |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.07  | Single Option Development                                    |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.08  | Design Development   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.09  | Outline Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.10  | Detailed Design  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.11  | Post contract Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.12  | Design - As Built Documentation                              |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.13  | Correlation  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.01.14  | Other  |                         | hrs        | £ -            | £ -                   |                         |  |
| <b>3.01.01.02</b>  | <b>Train Power Systems Design</b>                            |                         | <b>Sum</b> |                | <b>£ -</b>            |                         |  |
| 3.01.01.02.01  | Site investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.02  | Ground Investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.03  | Topographical Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.04  | Environmental Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.05  | Feasibility Study  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.06  | Option Selection Study                                       |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.07  | Single Option Development                                    |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.08  | Design Development   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.09  | Outline Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.10  | Detailed Design  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.11  | Post contract Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.12  | Design - As Built Documentation                              |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.13  | Correlation  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.02.14  | Other  |                         | hrs        | £ -            | £ -                   |                         |  |
| <b>3.01.01.03</b>  | <b>Electric Power and Plant Design</b>                       |                         | <b>Sum</b> |                | <b>£ -</b>            |                         |  |
| 3.01.01.03.01  | Site investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.02  | Ground Investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.03  | Topographical Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.04  | Environmental Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.05  | Feasibility Study  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.06  | Option Selection Study                                       |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.07  | Single Option Development                                    |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.08  | Design Development   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.09  | Outline Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.10  | Detailed Design  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.11  | Post contract Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.12  | Design - As Built Documentation                              |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.13  | Correlation  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.03.14  | Other  |                         | hrs        | £ -            | £ -                   |                         |  |
| <b>3.01.01.04</b>  | <b>Permanent Way Design</b>                                  |                         | <b>Sum</b> |                | <b>£ -</b>            |                         |  |
| 3.01.01.04.01  | Site investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.02  | Ground Investigation   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.03  | Topographical Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.04  | Environmental Survey   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.05  | Feasibility Study  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.06  | Option Selection Study                                       |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.07  | Single Option Development                                    |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.08  | Design Development   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.09  | Outline Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.10  | Detailed Design  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.11  | Post contract Design   |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.12  | Design - As Built Documentation                              |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.13  | Correlation  |                         | hrs        | £ -            | £ -                   |                         |  |
| 3.01.01.04.14  | Other  |                         | hrs        | £ -            | £ -                   |                         |  |
| <b>Page Total</b>  |  |                         |            |                | <b>£ 1,195,729.55</b> |                         |  |

| Southern                   |   |                 |             |             |             |  |
|----------------------------|---|-----------------|-------------|-------------|-------------|--|
| Ref                        | Description   | Quantity        | Unit        | Rate        | Cost        | Comments   |
| <b>3.01</b>                | <b>Design Team Fees (continued).</b>                            |                 |             |             |             |  |
| <b>3.01.01</b>             | <b>Employer's own design fees (continued).</b>                  |                 | <b>Sum</b>  |             |             |  |
| <b>3.01.01.05</b>          | <b>Operational Telecomms System Design</b>                      |                 | <b>Sum</b>  |             | <b>£ -</b>  |  |
| 3.01.01.05.01              | Site investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.02              | Ground Investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.03              | Topographical Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.04              | Environmental Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.05              | Feasibility Study   |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.06              | Option Selection Study  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.07              | Single Option Development                                       |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.08              | Design Development  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.09              | Outline Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.10              | Detailed Design   |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.11              | Post contract Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.12              | Design - As Built Documentation                                 |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.13              | Correlation   |                 | hrs         | £           | - £         | -  |
| 3.01.01.05.14              | Other   |                 | hrs         | £           | - £         | -  |
| <b>3.01.01.06</b>          | <b>Buildings and Property Design</b>                            |                 | <b>Sum</b>  |             | <b>£ -</b>  |  |
| 3.01.01.06.01              | Site investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.02              | Ground Investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.03              | Topographical Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.04              | Environmental Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.05              | Feasibility Study   |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.06              | Option Selection Study  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.07              | Single Option Development                                       |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.08              | Design Development  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.09              | Outline Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.10              | Detailed Design   |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.11              | Post contract Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.12              | Design - As Built Documentation                                 |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.13              | Correlation   |                 | hrs         | £           | - £         | -  |
| 3.01.01.06.14              | Other   |                 | hrs         | £           | - £         | -  |
| <b>3.01.01.07</b>          | <b>Civil Engineering Design</b>                                 |                 | <b>Sum</b>  |             | <b>£ -</b>  |  |
| 3.01.01.07.01              | Site investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.02              | Ground Investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.03              | Topographical Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.04              | Environmental Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.05              | Feasibility Study   |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.06              | Option Selection Study  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.07              | Single Option Development                                       |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.08              | Design Development  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.09              | Outline Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.10              | Detailed Design   |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.11              | Post contract Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.12              | Design - As Built Documentation                                 |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.13              | Correlation   |                 | hrs         | £           | - £         | -  |
| 3.01.01.07.14              | Other   |                 | hrs         | £           | - £         | -  |
| <b>3.01.01.08</b>          | <b>Enabling Works Design</b>                                    |                 | <b>Sum</b>  |             | <b>£ -</b>  |  |
| 3.01.01.08.01              | Site investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.02              | Ground Investigation  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.03              | Topographical Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.04              | Environmental Survey  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.05              | Feasibility Study   |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.06              | Option Selection Study  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.07              | Single Option Development                                       |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.08              | Design Development  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.09              | Outline Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.10              | Detailed Design   |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.11              | Post contract Design  |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.12              | Design - As Built Documentation                                 |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.13              | Correlation   |                 | hrs         | £           | - £         | -  |
| 3.01.01.08.14              | Other   |                 | hrs         | £           | - £         | -  |
| <b>Page Total</b>          |   |                 |             |             | <b>£ -</b>  |  |
| <b>Oracle Project No.</b>  | <b>141982</b>   |                 |             |             |             |  |
| <b>Project Description</b> | <b>Liverpool Street Station Option 3: Remodel Platform 1-10</b> |                 |             |             |             |  |
| <b>Ref</b>                 | <b>Description</b>  | <b>Quantity</b> | <b>Unit</b> | <b>Rate</b> | <b>Cost</b> | <b>Comments</b>  |
| <b>3.01</b>                | <b>Design Team Fees (continued).</b>                            |                 |             |             |             |  |
| <b>3.01.02</b>             | <b>Employer's procured design fees</b>                          |                 | <b>Sum</b>  |             | <b>£ -</b>  |  |

| Southern  |  |          |            |      |            |  |
|---|--|----------|------------|------|------------|--|
| Ref   | Description  | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01.02.01 Railway Control Systems Design</b>  |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.01.01                                     | Site investigation                                       |          | hrs        | £    | -          | -  |
| 3.01.02.01.02                                     | Ground Investigation                                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.03                                     | Topographical Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.04                                     | Environmental Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.01.06                                     | Option Selection Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.01.07                                     | Single Option Development                                |          | hrs        | £    | -          | -  |
| 3.01.02.01.08                                     | Design Development                                       |          | hrs        | £    | -          | -  |
| 3.01.02.01.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.01.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.01.11                                     | Post contract Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.01.12                                     | Design - As Built Documentation                          |          | hrs        | £    | -          | -  |
| 3.01.02.01.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.01.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.02 Train Power Systems Design</b>      |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.02.01                                     | Site investigation                                       |          | hrs        | £    | -          | -  |
| 3.01.02.02.02                                     | Ground Investigation                                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.03                                     | Topographical Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.04                                     | Environmental Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.02.06                                     | Option Selection Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.02.07                                     | Single Option Development                                |          | hrs        | £    | -          | -  |
| 3.01.02.02.08                                     | Design Development                                       |          | hrs        | £    | -          | -  |
| 3.01.02.02.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.02.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.02.11                                     | Post contract Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.02.12                                     | Design - As Built Documentation                          |          | hrs        | £    | -          | -  |
| 3.01.02.02.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.02.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.03 Electric Power and Plant Design</b> |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.03.01                                     | Site investigation                                       |          | hrs        | £    | -          | -  |
| 3.01.02.03.02                                     | Ground Investigation                                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.03                                     | Topographical Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.04                                     | Environmental Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.03.06                                     | Option Selection Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.03.07                                     | Single Option Development                                |          | hrs        | £    | -          | -  |
| 3.01.02.03.08                                     | Design Development                                       |          | hrs        | £    | -          | -  |
| 3.01.02.03.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.03.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.03.11                                     | Post contract Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.03.12                                     | Design - As Built Documentation                          |          | hrs        | £    | -          | -  |
| 3.01.02.03.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.03.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>3.01.02.04 Permanent Way Design</b>            |  |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.04.01                                     | Site investigation                                       |          | hrs        | £    | -          | -  |
| 3.01.02.04.02                                     | Ground Investigation                                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.03                                     | Topographical Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.04                                     | Environmental Survey                                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.05                                     | Feasibility Study  |          | hrs        | £    | -          | -  |
| 3.01.02.04.06                                     | Option Selection Study                                   |          | hrs        | £    | -          | -  |
| 3.01.02.04.07                                     | Single Option Development                                |          | hrs        | £    | -          | -  |
| 3.01.02.04.08                                     | Design Development                                       |          | hrs        | £    | -          | -  |
| 3.01.02.04.09                                     | Outline Design   |          | hrs        | £    | -          | -  |
| 3.01.02.04.10                                     | Detailed Design  |          | hrs        | £    | -          | -  |
| 3.01.02.04.11                                     | Post contract Design                                     |          | hrs        | £    | -          | -  |
| 3.01.02.04.12                                     | Design - As Built Documentation                          |          | hrs        | £    | -          | -  |
| 3.01.02.04.13                                     | Correlation  |          | hrs        | £    | -          | -  |
| 3.01.02.04.14                                     | Other  |          | hrs        | £    | -          | -  |
| <b>Page Total</b>                                 |  |          |            |      | <b>£ -</b> |  |
| Oracle Project No.                                | 141982   |          |            |      |            |  |
| Project Description                               | Liverpool Street Station Option 3: Remodel Platform 1-10 |          |            |      |            |  |
| Ref   | Description  | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01</b>                                       | <b>Design Team Fees (continued).</b>                     |          |            |      |            |  |
| <b>3.01.02</b>                                    | <b>Employer's procured design fees (continued).</b>      |          | <b>Sum</b> |      |            |  |
| <b>3.01.02.05</b>                                 | <b>Operational Telecomms System Design</b>               |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.05.01                                     | Site investigation                                       |          | hrs        | £    | -          | -  |
| 3.01.02.05.02                                     | Ground Investigation                                     |          | hrs        | £    | -          | -  |

| Southern   |   |          |            |      |          |          |
|--|---|----------|------------|------|----------|----------|
| Ref  | Description   | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.02.05.03  | Topographical Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.05.04  | Environmental Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.05.05  | Feasibility Study   |          | hrs        | £    | -        | -        |
| 3.01.02.05.06  | Option Selection Study  |          | hrs        | £    | -        | -        |
| 3.01.02.05.07  | Single Option Development                                       |          | hrs        | £    | -        | -        |
| 3.01.02.05.08  | Design Development  |          | hrs        | £    | -        | -        |
| 3.01.02.05.09  | Outline Design  |          | hrs        | £    | -        | -        |
| 3.01.02.05.10  | Detailed Design   |          | hrs        | £    | -        | -        |
| 3.01.02.05.11  | Post contract Design  |          | hrs        | £    | -        | -        |
| 3.01.02.05.12  | Design - As Built Documentation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.05.13  | Correlation   |          | hrs        | £    | -        | -        |
| 3.01.02.05.14  | Other   |          | hrs        | £    | -        | -        |
| <b>3.01.02.06</b>  | <b>Buildings and Property Design</b>                            |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.06.01  | Site investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.06.02  | Ground Investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.06.03  | Topographical Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.06.04  | Environmental Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.06.05  | Feasibility Study   |          | hrs        | £    | -        | -        |
| 3.01.02.06.06  | Option Selection Study  |          | hrs        | £    | -        | -        |
| 3.01.02.06.07  | Single Option Development                                       |          | hrs        | £    | -        | -        |
| 3.01.02.06.08  | Design Development  |          | hrs        | £    | -        | -        |
| 3.01.02.06.09  | Outline Design  |          | hrs        | £    | -        | -        |
| 3.01.02.06.10  | Detailed Design   |          | hrs        | £    | -        | -        |
| 3.01.02.06.11  | Post contract Design  |          | hrs        | £    | -        | -        |
| 3.01.02.06.12  | Design - As Built Documentation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.06.13  | Correlation   |          | hrs        | £    | -        | -        |
| 3.01.02.06.14  | Other   |          | hrs        | £    | -        | -        |
| <b>3.01.02.07</b>  | <b>Civil Engineering Design</b>                                 |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.07.01  | Site investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.07.02  | Ground Investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.07.03  | Topographical Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.07.04  | Environmental Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.07.05  | Feasibility Study   |          | hrs        | £    | -        | -        |
| 3.01.02.07.06  | Option Selection Study  |          | hrs        | £    | -        | -        |
| 3.01.02.07.07  | Single Option Development                                       |          | hrs        | £    | -        | -        |
| 3.01.02.07.08  | Design Development  |          | hrs        | £    | -        | -        |
| 3.01.02.07.09  | Outline Design  |          | hrs        | £    | -        | -        |
| 3.01.02.07.10  | Detailed Design   |          | hrs        | £    | -        | -        |
| 3.01.02.07.11  | Post contract Design  |          | hrs        | £    | -        | -        |
| 3.01.02.07.12  | Design - As Built Documentation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.07.13  | Correlation   |          | hrs        | £    | -        | -        |
| 3.01.02.07.14  | Other   |          | hrs        | £    | -        | -        |
| <b>3.01.02.08</b>  | <b>Enabling Works Design</b>                                    |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.08.01  | Site investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.08.02  | Ground Investigation  |          | hrs        | £    | -        | -        |
| 3.01.02.08.03  | Topographical Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.08.04  | Environmental Survey  |          | hrs        | £    | -        | -        |
| 3.01.02.08.05  | Feasibility Study   |          | hrs        | £    | -        | -        |
| 3.01.02.08.06  | Option Selection Study  |          | hrs        | £    | -        | -        |
| 3.01.02.08.07  | Single Option Development                                       |          | hrs        | £    | -        | -        |
| 3.01.02.08.08  | Design Development  |          | hrs        | £    | -        | -        |
| 3.01.02.08.09  | Outline Design  |          | hrs        | £    | -        | -        |
| 3.01.02.08.10  | Detailed Design   |          | hrs        | £    | -        | -        |
| 3.01.02.08.11  | Post contract Design  |          | hrs        | £    | -        | -        |
| 3.01.02.08.12  | Design - As Built Documentation                                 |          | hrs        | £    | -        | -        |
| 3.01.02.08.13  | Correlation   |          | hrs        | £    | -        | -        |
| 3.01.02.08.14  | Other   |          | hrs        | £    | -        | -        |
| <b>Page Total</b>  |   |          |            |      | <b>£</b> | <b>-</b> |
| <b>Oracle Project No.</b>  | <b>141982</b>   |          |            |      |          |          |
| <b>Project Description</b>   | <b>Liverpool Street Station Option 3: Remodel Platform 1-10</b> |          |            |      |          |          |
|  |   |          |            |      |          |          |
| Ref  | Description   | Quantity | Unit       | Rate | Cost     | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                            |          |            |      |          |          |
| <b>3.01.03</b>   | <b>Contractor design fees</b>                                   |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| <b>3.01.03.01</b>  | <b>Railway Control Systems Design</b>                           |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.01.01  | Site investigation  |          | hrs        | £    | -        | -        |
| 3.01.03.01.02  | Ground Investigation  |          | hrs        | £    | -        | -        |
| 3.01.03.01.03  | Topographical Survey  |          | hrs        | £    | -        | -        |
| 3.01.03.01.04  | Environmental Survey  |          | hrs        | £    | -        | -        |
| 3.01.03.01.05  | Feasibility Study   |          | hrs        | £    | -        | -        |
| 3.01.03.01.06  | Option Selection Study  |          | hrs        | £    | -        | -        |
| 3.01.03.01.07  | Single Option Development                                       |          | hrs        | £    | -        | -        |

| Southern   |  |          |            |      |          |          |
|--|--|----------|------------|------|----------|----------|
| Ref  | Description                                | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.03.01.08  | Design Development                         |          | hrs        | £    | -        | -        |
| 3.01.03.01.09  | Outline Design                             |          | hrs        | £    | -        | -        |
| 3.01.03.01.10  | Detailed Design                            |          | hrs        | £    | -        | -        |
| 3.01.03.01.11  | Post contract Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.01.12  | Design - As Built Documentation            |          | hrs        | £    | -        | -        |
| 3.01.03.01.13  | Correlation                                |          | hrs        | £    | -        | -        |
| 3.01.03.01.14  | Other                                      |          | hrs        | £    | -        | -        |
| <b>3.01.03.02</b>  | <b>Train Power Systems Design</b>          |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.02.01  | Site investigation                         |          | hrs        | £    | -        | -        |
| 3.01.03.02.02  | Ground Investigation                       |          | hrs        | £    | -        | -        |
| 3.01.03.02.03  | Topographical Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.02.04  | Environmental Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.02.05  | Feasibility Study                          |          | hrs        | £    | -        | -        |
| 3.01.03.02.06  | Option Selection Study                     |          | hrs        | £    | -        | -        |
| 3.01.03.02.07  | Single Option Development                  |          | hrs        | £    | -        | -        |
| 3.01.03.02.08  | Design Development                         |          | hrs        | £    | -        | -        |
| 3.01.03.02.09  | Outline Design                             |          | hrs        | £    | -        | -        |
| 3.01.03.02.10  | Detailed Design                            |          | hrs        | £    | -        | -        |
| 3.01.03.02.11  | Post contract Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.02.12  | Design - As Built Documentation            |          | hrs        | £    | -        | -        |
| 3.01.03.02.13  | Correlation                                |          | hrs        | £    | -        | -        |
| 3.01.03.02.14  | Other                                      |          | hrs        | £    | -        | -        |
| <b>3.01.03.03</b>  | <b>Electric Power and Plant Design</b>     |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.03.01  | Site investigation                         |          | hrs        | £    | -        | -        |
| 3.01.03.03.02  | Ground Investigation                       |          | hrs        | £    | -        | -        |
| 3.01.03.03.03  | Topographical Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.03.04  | Environmental Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.03.05  | Feasibility Study                          |          | hrs        | £    | -        | -        |
| 3.01.03.03.06  | Option Selection Study                     |          | hrs        | £    | -        | -        |
| 3.01.03.03.07  | Single Option Development                  |          | hrs        | £    | -        | -        |
| 3.01.03.03.08  | Design Development                         |          | hrs        | £    | -        | -        |
| 3.01.03.03.09  | Outline Design                             |          | hrs        | £    | -        | -        |
| 3.01.03.03.10  | Detailed Design                            |          | hrs        | £    | -        | -        |
| 3.01.03.03.11  | Post contract Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.03.12  | Design - As Built Documentation            |          | hrs        | £    | -        | -        |
| 3.01.03.03.13  | Correlation                                |          | hrs        | £    | -        | -        |
| 3.01.03.03.14  | Other                                      |          | hrs        | £    | -        | -        |
| <b>3.01.03.04</b>  | <b>Permanent Way Design</b>                |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.04.01  | Site investigation                         |          | hrs        | £    | -        | -        |
| 3.01.03.04.02  | Ground Investigation                       |          | hrs        | £    | -        | -        |
| 3.01.03.04.03  | Topographical Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.04.04  | Environmental Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.04.05  | Feasibility Study                          |          | hrs        | £    | -        | -        |
| 3.01.03.04.06  | Option Selection Study                     |          | hrs        | £    | -        | -        |
| 3.01.03.04.07  | Single Option Development                  |          | hrs        | £    | -        | -        |
| 3.01.03.04.08  | Design Development                         |          | hrs        | £    | -        | -        |
| 3.01.03.04.09  | Outline Design                             |          | hrs        | £    | -        | -        |
| 3.01.03.04.10  | Detailed Design                            |          | hrs        | £    | -        | -        |
| 3.01.03.04.11  | Post contract Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.04.12  | Design - As Built Documentation            |          | hrs        | £    | -        | -        |
| 3.01.03.04.13  | Correlation                                |          | hrs        | £    | -        | -        |
| 3.01.03.04.14  | Other                                      |          | hrs        | £    | -        | -        |
| <b>Page Total</b>  |  |          |            |      | <b>£</b> | <b>-</b> |
| Oracle Project No. 141982  |  |          |            |      |          |          |
| Project Description Liverpool Street Station Option 3: Remodel Platform 1-10         |  |          |            |      |          |          |
|  |  |          |            |      |          |          |
| Ref  | Description                                | Quantity | Unit       | Rate | Cost     | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>       |          |            |      |          |          |
| <b>3.01.03</b>   | <b>Contractor design fees (continued).</b> |          | <b>Sum</b> |      |          |          |
| <b>3.01.03.05</b>  | <b>Operational Telecomms System Design</b> |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.05.01  | Site investigation                         |          | hrs        | £    | -        | -        |
| 3.01.03.05.02  | Ground Investigation                       |          | hrs        | £    | -        | -        |
| 3.01.03.05.03  | Topographical Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.05.04  | Environmental Survey                       |          | hrs        | £    | -        | -        |
| 3.01.03.05.05  | Feasibility Study                          |          | hrs        | £    | -        | -        |
| 3.01.03.05.06  | Option Selection Study                     |          | hrs        | £    | -        | -        |
| 3.01.03.05.07  | Single Option Development                  |          | hrs        | £    | -        | -        |
| 3.01.03.05.08  | Design Development                         |          | hrs        | £    | -        | -        |
| 3.01.03.05.09  | Outline Design                             |          | hrs        | £    | -        | -        |
| 3.01.03.05.10  | Detailed Design                            |          | hrs        | £    | -        | -        |
| 3.01.03.05.11  | Post contract Design                       |          | hrs        | £    | -        | -        |

| <i>Southern</i>   |                                      |          |            |          |          |          |
|-------------------|--------------------------------------|----------|------------|----------|----------|----------|
| Ref               | Description                          | Quantity | Unit       | Rate     | Cost     | Comments |
| 3.01.03.05.12     | Design - As Built Documentation      |          | hrs        | £        | -        | -        |
| 3.01.03.05.13     | Correlation                          |          | hrs        | £        | -        | -        |
| 3.01.03.05.14     | Other                                |          | hrs        | £        | -        | -        |
| <b>3.01.03.06</b> | <b>Buildings and Property Design</b> |          | <b>Sum</b> | <b>£</b> | <b>-</b> |          |
| 3.01.03.06.01     | Site Investigation                   |          | hrs        | £        | -        | -        |
| 3.01.03.06.02     | Ground Investigation                 |          | hrs        | £        | -        | -        |
| 3.01.03.06.03     | Topographical Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.06.04     | Environmental Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.06.05     | Feasibility Study                    |          | hrs        | £        | -        | -        |
| 3.01.03.06.06     | Option Selection Study               |          | hrs        | £        | -        | -        |
| 3.01.03.06.07     | Single Option Development            |          | hrs        | £        | -        | -        |
| 3.01.03.06.08     | Design Development                   |          | hrs        | £        | -        | -        |
| 3.01.03.06.09     | Outline Design                       |          | hrs        | £        | -        | -        |
| 3.01.03.06.10     | Detailed Design                      |          | hrs        | £        | -        | -        |
| 3.01.03.06.11     | Post contract Design                 |          | hrs        | £        | -        | -        |
| 3.01.03.06.12     | Design - As Built Documentation      |          | hrs        | £        | -        | -        |
| 3.01.03.06.13     | Correlation                          |          | hrs        | £        | -        | -        |
| 3.01.03.06.14     | Other                                |          | hrs        | £        | -        | -        |
| <b>3.01.03.07</b> | <b>Civil Engineering Design</b>      |          | <b>Sum</b> | <b>£</b> | <b>-</b> |          |
| 3.01.03.07.01     | Site Investigation                   |          | hrs        | £        | -        | -        |
| 3.01.03.07.02     | Ground Investigation                 |          | hrs        | £        | -        | -        |
| 3.01.03.07.03     | Topographical Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.07.04     | Environmental Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.07.05     | Feasibility Study                    |          | hrs        | £        | -        | -        |
| 3.01.03.07.06     | Option Selection Study               |          | hrs        | £        | -        | -        |
| 3.01.03.07.07     | Single Option Development            |          | hrs        | £        | -        | -        |
| 3.01.03.07.08     | Design Development                   |          | hrs        | £        | -        | -        |
| 3.01.03.07.09     | Outline Design                       |          | hrs        | £        | -        | -        |
| 3.01.03.07.10     | Detailed Design                      |          | hrs        | £        | -        | -        |
| 3.01.03.07.11     | Post contract Design                 |          | hrs        | £        | -        | -        |
| 3.01.03.07.12     | Design - As Built Documentation      |          | hrs        | £        | -        | -        |
| 3.01.03.07.13     | Correlation                          |          | hrs        | £        | -        | -        |
| 3.01.03.07.14     | Other                                |          | hrs        | £        | -        | -        |
| <b>3.01.03.08</b> | <b>Enabling Works Design</b>         |          | <b>Sum</b> | <b>£</b> | <b>-</b> |          |
| 3.01.03.08.01     | Site investigation                   |          | hrs        | £        | -        | -        |
| 3.01.03.08.02     | Ground Investigation                 |          | hrs        | £        | -        | -        |
| 3.01.03.08.03     | Topographical Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.08.04     | Environmental Survey                 |          | hrs        | £        | -        | -        |
| 3.01.03.08.05     | Feasibility Study                    |          | hrs        | £        | -        | -        |
| 3.01.03.08.06     | Option Selection Study               |          | hrs        | £        | -        | -        |
| 3.01.03.08.07     | Single Option Development            |          | hrs        | £        | -        | -        |
| 3.01.03.08.08     | Design Development                   |          | hrs        | £        | -        | -        |
| 3.01.03.08.09     | Outline Design                       |          | hrs        | £        | -        | -        |
| 3.01.03.08.10     | Detailed Design                      |          | hrs        | £        | -        | -        |
| 3.01.03.08.11     | Post contract Design                 |          | hrs        | £        | -        | -        |
| 3.01.03.08.12     | Design - As Built Documentation      |          | hrs        | £        | -        | -        |
| 3.01.03.08.13     | Correlation                          |          | hrs        | £        | -        | -        |
| 3.01.03.08.14     | Other                                |          | hrs        | £        | -        | -        |
| <b>Page Total</b> |                                      |          |            |          | <b>£</b> | <b>-</b> |

| Oracle Project No. 141982                                |  | Infrastructure Projects |            |                |                       |   |  |
|--|--|-------------------------|------------|----------------|-----------------------|---|---|
| Project Description                                      |  | Southern                |            |                |                       |   |   |
| Liverpool Street Station Option 3: Remodel Platform 1-10 |  |                         |            |                |                       |   |   |
| Ref  | Description  | Quantity                | Unit       | Rate           | Cost                  | Comments  |   |
| <b>3.02</b>  | <b>Project Management Team Fees</b>                                |                         |            | <b>TOTAL</b>   | <b>£ 1,434,875.45</b> |   |   |
| <b>3.02.xx</b>   | <b>Allowance where Development Costs have not been quantified.</b> |                         | <b>Sum</b> |                | <b>£ 1,434,875.45</b> |   |   |
| 3.02.xx.01   | NR Project Management and Sponsor                                  | 1                       | Sum        | £ 1,434,875.45 | £ 1,434,875.45        | From percentage allowance; see "indirects" tab. |   |
| <b>3.02.01</b>   | <b>Employer's Project costs</b>                                    |                         | <b>Sum</b> |                | <b>£ -</b>            |   |   |
| <b>3.02.01.01</b>  | <b>Employer's staff costs</b>                                      |                         | <b>Sum</b> |                | <b>£ -</b>            |   |   |
| 3.02.01.01.01  | Output definition phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.02  | Feasibility phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.03  | Option selection phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.04  | Single option development phase                                    |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.05  | Detailed design phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.06  | Implementation phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.07  | Handback phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.08  | Close out phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.01.01.09  | Other  |                         | hrs        | £ -            | £ -                   |   |   |
| <b>3.02.02</b>   | <b>Employer's Procured costs</b>                                   |                         | <b>Sum</b> |                | <b>£ -</b>            |   |   |
| <b>3.02.02.02</b>  | <b>Employer's procured staff costs</b>                             |                         | <b>Sum</b> |                | <b>£ -</b>            |   |   |
| 3.02.02.02.01  | Output definition phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.02  | Feasibility phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.03  | Option selection phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.04  | Single option development phase                                    |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.05  | Detailed design phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.06  | Implementation phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.07  | Handback phase   |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.08  | Close out phase  |                         | hrs        | £ -            | £ -                   |   |   |
| 3.02.02.02.09  | Other  |                         | hrs        | £ -            | £ -                   |   |   |
|  | <b>Page Total</b>  |                         |            |                | <b>£ 1,434,875.45</b> |   |   |

| Oracle Project No.  | 141982   |          | Infrastructure Projects |              |                       |          |  |
|---------------------|--|----------|-------------------------|--------------|-----------------------|----------|---|
| Project Description | Liverpool Street Station Option 3: Remodel Platform 1-10             |          | Southern                |              |                       |          |   |
| Ref                 | Description  | Quantity | Unit                    | Rate         | Cost                  | Comments |   |
| <b>3.03</b>         | <b>Other Project Costs</b>   |          |                         | <b>TOTAL</b> | <b>£ 2,294,306.06</b> |          |   |
| <b>3.03.01</b>      | <b>Other Project Costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| <b>3.03.01.01</b>   | <b>Land Costs</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.01.01       | Acquisition of land  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.02       | Rights of way and way leaves   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.03       | Fees : associated with acquisition of land or rights of way          |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.02</b>   | <b>Fees to statutory and public bodies</b>                           |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.02.01       | Planning fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.02       | Building control fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.03       | Fees to neighbouring land owners and users to facilitate the project | 1        | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.03</b>   | <b>Payments to public and statutory bodies</b>                       |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.03.01       | Adoption charges in connection with highways and bridges             |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.02       | Maintenance charges in connection with highways and bridges          |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.03       | Planning contributions   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.04</b>   | <b>Sponsor's agent fees</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.04.01       | Planning   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.02       | Lobbying and public consultation                                     |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.03       | Legal services   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.04       | Taxation and financial services                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.05       | Collaboration, business relationship management systems              |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.06       | Facilitation services  |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.05</b>   | <b>Employer's office &amp; supplied plant costs</b>                  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.05.01       | Employer's main office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.02       | Employer's project office costs                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.03       | Employer's site office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.04       | Employer owned plant   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.06</b>   | <b>Research for innovative products</b>                              |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.06.01       | Concept design   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.02       | Testing  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.03       | Piloting   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.07</b>   | <b>Finance costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.07.01       | Commitment fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.02       | Interest   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.03       | Credit charges   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.08</b>   | <b>Marketing</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.08.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.09</b>   | <b>Stakeholder management</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.09.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.10</b>   | <b>Archaeological</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.10.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.11</b>   | <b>Insurance</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.11.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.12</b>   | <b>Other</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.12.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
|                     | <b>Page Total</b>  |          |                         |              | <b>£ -</b>            |          |   |

| Ref                 | Description   | Quantity | Unit       | Rate           | Cost                  | Comments  |
|---------------------|---|----------|------------|----------------|-----------------------|---|
| Oracle Project No.  | 141982  |          |            |                |                       |   |
| Project Description | Liverpool Street Station Option 3: Remodel Platform 1-10    |          |            |                |                       |  |
| Ref                 | Description   | Quantity | Unit       | Rate           | Cost                  | Comments  |
| 3.03                | <b>Other project costs (continued).</b>                     |          |            |                |                       |   |
| 3.03.02             | <b>Disruption of asset use</b>                              |          | <b>Sum</b> |                | <b>£ 2,294,306.06</b> |   |
| 3.03.02.01          | <b>Employer's costs</b>                                     |          | <b>Sum</b> |                | <b>£ 597,864.77</b>   |   |
| 3.03.02.01.01       | Possessions   |          | Nr         | £ -            | £ -                   |   |
| 3.03.02.01.02       | Isolations  | 1        | Nr         | £ 597,864.77   | £ 597,864.77          | Allowance 5% of indirect construction cost  |
| 3.03.02.02          | <b>Decanting and relocation costs</b>                       |          | <b>Sum</b> |                | <b>£ -</b>            |   |
| 3.03.02.02.01       | Temporary relocation costs                                  |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.02       | Rents and other running costs                               |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.03       | Compensation costs  |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.04       | Payments for interruption or disturbance of use             |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.03          | <b>Interruption of use</b>                                  |          | <b>Sum</b> |                | <b>£ 1,696,441.29</b> |   |
| 3.03.02.03.01       | Payments to asset users : planned                           | 1        | Sum        | £ 1,696,441.29 | £ 1,696,441.29        | TOC/FOC compensation?   |
| 3.03.02.03.02       | Costs of diversionary routes or alternative lines of supply |          | Sum        | £ -            | £ -                   |   |
|                     | <b>Page Total</b>   |          |            |                | <b>£ 2,294,306.06</b> |   |

| Oracle Project No. 141982 |   | Infrastructure Projects                                  |            |                 |                        | NetworkRail                        |  |
|---------------------------|---|--|------------|-----------------|------------------------|------------------------------------|--|
| Project Description       |   | Liverpool Street Station Option 3: Remodel Platform 1-10 |            |                 |                        |                                    |  |
| Ref                       | Description   | Southern   |            |                 |                        |                                    |  |
|                           |   | Quantity   | Unit       | Rate            | Cost                   | Comments                           |  |
| <b>4.01</b>               | <b>Risk</b>   |  |            | <b>TOTAL</b>    | <b>£ 10,944,661.99</b> |                                    |  |
| <b>4.01.xx</b>            | <b>Allowance where risks have not been quantified.</b>    |  | <b>Sum</b> |                 | <b>£ 10,944,661.99</b> |                                    |  |
| Y                         | Pre Grip  | 50   | %          | £ 21,889,323.98 | £ 10,944,661.99        | Select "Y" dependant on Grip stage |  |
| N                         | Grip 1  | 40   | %          | £ 21,889,323.98 | £ -                    | Select "Y" dependant on Grip stage |  |
| N                         | Grip 2  | 30   | %          | £ 21,889,323.98 | £ -                    | Select "Y" dependant on Grip stage |  |
| N                         | Grip 3  | 20   | %          | £ 21,889,323.98 | £ -                    | Select "Y" dependant on Grip stage |  |
| N                         | Grip 4  | 15   | %          | £ 21,889,323.98 | £ -                    | Select "Y" dependant on Grip stage |  |
| N                         | Grip 5  | 10   | %          | £ 21,889,323.98 | £ -                    | Select "Y" dependant on Grip stage |  |
| <b>4.01.01</b>            | <b>Total Risk Allowance</b>                               |  | <b>Sum</b> |                 | <b>£ -</b>             |                                    |  |
| <b>4.01.01.01</b>         | <b>Design development risks</b>                           |  | <b>Sum</b> |                 | <b>£ -</b>             |                                    |  |
| 4.01.01.01.01             | Inadequate or unclear Project Brief                       |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.02             | Unclear Design Team Responsibilities                      |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.03             | Unrealistic Design Programme                              |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.04             | Inadequate Site Investigation                             |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.05             | Planning Constraints                                      |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.06             | Appropriateness of Design                                 |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.07             | Degree of Novelty   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.08             | Ineffective Design Co-Ordination                          |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.09             | Reliability of Estimating Data                            |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.10             | Design Management   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.01.11             | Other   |  | Sum        | £ -             | £ -                    |                                    |  |
|                           | <b>Page Total</b>   |  |            |                 | <b>£ 10,944,661.99</b> |                                    |  |
|                           |   |  |            |                 |                        |                                    |  |
| Oracle Project No. 141982 |   | Liverpool Street Station Option 3: Remodel Platform 1-10 |            |                 |                        |                                    |  |
| Project Description       |   | Liverpool Street Station Option 3: Remodel Platform 1-10 |            |                 |                        |                                    |  |
| Ref                       | Description   | Quantity   | Unit       | Rate            | Cost                   | Comments                           |  |
| <b>4.01</b>               | <b>Risk (continued).</b>                                  |  |            |                 |                        |                                    |  |
| <b>4.01.01.02</b>         | <b>Construction risks</b>                                 |  | <b>Sum</b> |                 | <b>£ -</b>             |                                    |  |
| 4.01.01.02.01             | Inadequate Site Investigation                             |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.02             | Archaeological remains                                    |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.03             | Underground obstructions                                  |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.04             | Contaminated ground                                       |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.05             | Adjacent structures                                       |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.06             | Geotechnical problems                                     |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.07             | Ground water  |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.08             | Asbestos and other hazardous materials                    |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.09             | Invasive plant growth                                     |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.10             | Tree preservation orders                                  |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.11             | Ecological issues   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.12             | Environmental impact                                      |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.13             | Physical Access to site                                   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.14             | Existing occupancies / users                              |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.15             | Restricted working hours / routines                       |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.16             | Maintaining access  |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.17             | Maintaining existing services                             |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.18             | Additional infrastructure                                 |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.19             | Existing services   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.20             | Location of existing services                             |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.21             | Relocation of existing services                           |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.22             | Statutory undertakers                                     |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.23             | Uncertainty over the source and availability of materials |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.24             | Appropriateness of specification                          |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.25             | Incomplete design   |  | Sum        | £ -             | £ -                    |                                    |  |
| 4.01.01.02.26             | Weather and seasonal implications                         |  | Sum        | £ -             | £ -                    |                                    |  |

| Ref               | Description   | Southern |            |      | Cost     | Comments |          |
|-------------------|---|----------|------------|------|----------|----------|----------|
|                   |   | Quantity | Unit       | Rate |          |          |          |
| 4.01.01.02.27     | Industrial relations  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.28     | Remote site   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.29     | Competence of contractor and sub-contractors                                    |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.30     | Health and safety   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.31     | Ineffective quality management  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.32     | Phasing requirements  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.33     | Ineffective handover procedures   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.34     | Disputes and claims   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.35     | Effect of changes / variations on construction programme                        |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.36     | Cumulative effect of changes / variations on the construction programme         |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.37     | Defects   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.38     | Accident / injury   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.39     | Access to site  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.40     | Human relations   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.02.41     | Other   |          | Sum        | £    | -        | £        | -        |
| <b>4.01.01.03</b> | <b>Employer change risks</b>  |          | <b>Sum</b> |      | <b>£</b> |          | <b>-</b> |
| 4.01.01.03.01     | Specific changes in requirements  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.02     | Changes in quality  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.03     | Changes in time   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.04     | Employer driven changes / variations introduced during the implementation stage |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.05     | Effect of construction duration   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.06     | Cumulative effect of numerous changes   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.03.07     | Other   |          | Sum        | £    | -        | £        | -        |
| <b>4.01.01.04</b> | <b>Employer other risks</b>   |          | <b>Sum</b> |      | <b>£</b> |          | <b>-</b> |
| 4.01.01.04.01     | Project brief   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.02     | Timescales  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.03     | Inadequate Asset Information  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.04     | Management  |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.05     | Funding   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.06     | Third parties   |          | Sum        | £    | -        | £        | -        |
| 4.01.01.04.07     | Other   |          | Sum        | £    | -        | £        | -        |
|                   | <b>Page Total</b>   |          |            |      |          | <b>£</b> | <b>-</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects<br>Southern                      |            |                 |                       |          | Network Rail |
|---------------------------|--|--|------------|-----------------|-----------------------|----------|--------------|
| Project Description       |  | Liverpool Street Station Option 3: Remodel Platform 1-10 |            |                 |                       |          |              |
| Ref                       | Description  | Quantity   | Unit       | Rate            | Cost                  | Comments |              |
| <b>5.01</b>               | <b>Inflation</b>   |  |            | <b>TOTAL</b>    | <b>£ 5,305,546.43</b> |          |              |
| <b>5.01.xx</b>            | <b>Allowance where Inflation Costs have not been quantified.</b>     |  | <b>Sum</b> |                 | <b>£ 5,305,546.43</b> |          |              |
| 5.01.xx.01                | Inflation year 1   | 2.75%  | %          | £ 21,889,323.98 | £ 601,956.41          |          |              |
|                           | Inflation year 2   | 2.75%  | %          | £ 22,491,280.39 | £ 618,510.21          |          |              |
|                           | Inflation year 3   | 2.75%  | %          | £ 23,109,790.60 | £ 635,519.24          |          |              |
|                           | Inflation year 4   | 2.75%  | %          | £ 23,745,309.85 | £ 652,996.02          |          |              |
|                           | Inflation year 5   | 2.75%  | %          | £ 24,398,305.87 | £ 670,953.41          |          |              |
|                           | Inflation year 6   | 2.75%  | %          | £ 25,069,259.28 | £ 689,404.63          |          |              |
|                           | Inflation year 7   | 2.75%  | %          | £ 25,758,663.91 | £ 708,363.26          |          |              |
|                           | Inflation year 8   | 2.75%  | %          | £ 26,467,027.16 | £ 727,843.25          |          |              |
|                           |  | 710398733%   |            |                 |                       |          |              |
| <b>5.01.01</b>            | <b>Inflation</b>   |  | <b>Sum</b> |                 | <b>£ -</b>            |          |              |
| <b>5.01.01.01</b>         | <b>Tender inflation</b>  |  | <b>Sum</b> |                 | <b>£ -</b>            |          |              |
| 5.01.01.01.01             | Inflation : date of estimate to tender return                        |  | Sum        | £ -             | £ -                   |          |              |
| 5.01.01.01.02             | Inflation : delays in procurement programme                          |  | Sum        | £ -             | £ -                   |          |              |
| <b>5.01.01.02</b>         | <b>Construction inflation</b>  |  | <b>Sum</b> |                 | <b>£ -</b>            |          |              |
| 5.01.01.02.01             | Inflation : date of commencement to mid-point of construction period |  | Sum        | £ -             | £ -                   |          |              |
| 5.01.01.02.02             | Exceptional inflation  |  | Sum        | £ -             | £ -                   |          |              |
|                           | <b>Page Total</b>  |  |            |                 | <b>£ 5,305,546.43</b> |          |              |

| Oracle Project No. 141982                                |   | Infrastructure Projects |            |              |          |          | NetworkRail |
|--|---|-------------------------|------------|--------------|----------|----------|-------------|
| Project Description                                      |   | Southern                |            |              |          |          |             |
| Liverpool Street Station Option 3: Remodel Platform 1-10 |   |                         |            |              |          |          |             |
| Ref  | Description                               | Quantity                | Unit       | Rate         | Cost     | Comments |             |
| <b>6.01</b>  | <b>Tax Allowances and Grants</b>          |                         |            | <b>TOTAL</b> | <b>£</b> | <b>-</b> |             |
| <b>6.01.01</b>   | <b>Tax allowances and grants</b>          |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| <b>6.01.01.01</b>  | <b>Capital allowances</b>                 |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.01.01  | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.02  | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.03  | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.04  | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.02</b>  | <b>Grants</b>                             |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.02.01  | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.02  | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.03  | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.04  | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.03</b>  | <b>VAT - Value Added Tax</b>              |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.03.01  | Input tax : non recoverable               |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.03.02  | Output tax chargeable to users or tenants |                         | Sum        | £            | -        | £ -      |             |
|  | <b>Page Total</b>                         |                         |            |              | <b>£</b> | <b>-</b> |             |

BOQ - Carried fwd / Brought fwd - Gross

| Item    | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross     |              |
|---------|-----------|---------------|--|------|---------------|-----------|--------------|
|         |           |               |  |      |               | Rate      | Amount       |
|         |           |               | <p><i>Liverpool Street Station Train Capacity</i></p> <p><i>Pre Ggrip Estimate</i></p> <p><i>Option 3: Remodel Platforms 1-10</i></p> <p><i>This option builds upon the previous platform0(option1) and new platform between existing platform 10 and 11(option2).</i></p> <p><i>Assumptions:</i></p> <p><i>We have assumed that In remodelling there will be 12 carriage length 12 platform, 10 carriage length 2 platform &amp; length of a carriages would be 20m</i></p> <p><i>Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team and dealt separately to this estimate.</i></p> <p><i>All works are assumed to be carried out in the station operational environment.</i></p> <p><i>No allowance have been made for any passion or isolation management.</i></p> <p><i>All platform extension works are assumed to be cast in situ works.</i></p> <p><i>We have assumed hit &amp; miss method along with hydro-demolition for demolition of the wall.</i></p> |      |               |           |              |
|         |           |               | Carried to summary   |      |               |           | 0.00         |
| 1       |           |               | <b>DIRECT CONSTRUCTION WORKS</b>   |      |               |           |              |
| 101     |           |               | <b>Railway Control Systems</b>   |      |               |           |              |
| 10101   |           |               | <u>Signalling Systems</u>  |      |               |           |              |
|         |           | 1.01.01.04.01 | 4 aspects LED signal   | nr   | 5             | 9,442.99  | 47,214.95    |
| 1010105 |           |               | <u>Train Detection Systems</u>   |      |               |           |              |
|         |           | 1.01.01.05.01 | Track Circuits   | nr   | 5             | 7,076.90  | 35,384.50    |
|         |           | 1.01.01.05.05 | Insulated Block Joints (IBJs)  | nr   | 10            | 11,276.84 | 112,768.40   |
|         |           | 1.01.01.05.06 | Impedance Bonds  | nr   | 5             | 9,276.84  | 46,384.20    |
| 1010106 |           |               | <u>Train Protection Systems</u>  |      |               |           |              |
|         |           | 1.01.01.06.01 | Automatic Warning system (AWS)   | nr   | 5             | 1,541.07  | 7,705.35     |
| 1010108 |           |               | <u>Cables and Containment</u>  |      |               |           |              |
|         |           | 1.01.01.08.01 | Cables   | m    | 1,500         | 20.00     | 30,000.00    |
|         |           |               | <i>Allowance</i>   |      |               |           |              |
|         |           | 1.01.01.08.02 | Containment  | m    | 2,000         | 61.94     | 123,880.00   |
| 1010110 |           |               | <u>Equipment Housings, Platforms and Foundations</u>   |      |               |           |              |
|         |           | 1.01.01.10.01 | Location case, complete with racking and equipment: type stated  | nr   | 5             | 1,603.17  | 8,015.85     |
| 1010116 |           |               | <u>Abandonment, Recovery and Disposal of Redundant Equipment</u>   |      |               |           |              |
|         |           | 1.01.01.16.04 | Signals and indicators   | nr   | 2             | 1,595.39  | 3,190.78     |
|         |           | 1.01.01.16.05 | Train detection systems  | nr   | 2             | 2,612.46  | 5,224.92     |
|         |           | 1.01.01.16.06 | Train protection systems   | nr   | 2             | 233.41    | 466.82       |
|         |           | 1.01.01.16.08 | Cables and containment   | nr   | 500           | 26.82     | 13,410.00    |
|         |           |               | <i>Allowance</i>   |      |               |           |              |
|         |           | 1.01.01.16.09 | Signals support structures and foundations   | nr   | 20            | 2,830.35  | 56,607.00    |
|         |           | 1.01.01.16.10 | Equipment housings, platforms and foundations  | nr   | 20            | 670.55    | 13,411.00    |
| 10201   |           |               | <i>Power Distribution</i>  |      |               |           |              |
| 10202   |           |               | <i>Overhead Line Equipment (OLE)</i>   |      |               |           |              |
|         |           | 1.02.02.01.06 | OLE with support structure   | nr   | 56            | 25,000.00 | 1,400,000.00 |
| 103     |           |               | <b>Electric Power and Plant</b>  |      |               |           |              |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code      | SMM code      | Bill description   | Unit | Bill quantity | Gross        |              |
|------|----------------|---------------|--|------|---------------|--------------|--------------|
|      |                |               |  |      |               | Rate         | Amount       |
|      | 10301          |               | <i>Primary Power Supply</i>  |      |               |              |              |
|      | <u>1030105</u> |               | <u>Small Power for Equipment</u>   |      |               |              |              |
|      |                | 1.03.01.05.01 | DNO power cubicle  | nr   | 5             | 12,500.00    | 62,500.00    |
|      | 104            |               | <i>Permanent Way</i>   |      |               |              |              |
|      | <u>10401</u>   |               | <u>Plain Line</u>  |      |               |              |              |
|      |                | 1.04.01.03.01 | Jointed Track( Plain Line Track Works)   | m    | 1,250         | 1,215.00     | 1,518,750.00 |
|      |                | 1.04.03.01.03 | Sliding Buffer   | nr   | 5             | 15,000.00    | 75,000.00    |
|      | <u>10404</u>   |               | <u>Track Drainage</u>  |      |               |              |              |
|      |                | 1.04.04.01.01 | Drainage below ground: trench & pipe work : depth stated                                       | m    | 1,250         | 102.00       | 127,500.00   |
|      | <u>1040402</u> |               | <u>Inspection Chambers</u>   |      |               |              |              |
|      |                | 1.04.04.02.02 | Interceptors (Catchpit 30 m centers)   | nr   | 42            | 1,300.00     | 54,600.00    |
|      | <u>10402</u>   |               | <u>Switches &amp; Crossings (S&amp;C)</u>  |      |               |              |              |
|      | <u>1040203</u> |               | <u>Turnouts and Crossings</u>  |      |               |              |              |
|      |                | 1.04.02.03.01 | Standard Turnout   | nr   | 11            | 325,000.00   | 3,575,000.00 |
|      | 105            |               | <i>Operational Telecommunication Systems</i>   |      |               |              |              |
|      | <u>10501</u>   |               | <u>Information Transmission Systems</u>  |      |               |              |              |
|      | <u>10503</u>   |               | <u>Station Information and Surveillance Systems (SISS)</u>                                     |      |               |              |              |
|      |                | 1.05.03.01.01 | PA system - station  | nr   | 92            | 750.00       | 69,000.00    |
|      | <u>1050303</u> |               | <u>Closed Circuit Television (CCTV)</u>  |      |               |              |              |
|      |                | 1.05.03.03.01 | Cameras : remote   | nr   | 27            | 5,936.00     | 160,272.00   |
|      | <u>10504</u>   |               | <u>Operational Management Systems</u>  |      |               |              |              |
|      | <u>1050402</u> |               | <u>Train Monitoring Systems</u>  |      |               |              |              |
|      |                | 1.05.04.02.01 | Visual display units   | nr   | 15            | 7,000.00     | 105,000.00   |
|      | 106            |               | <i>Buildings &amp; Property</i>  |      |               |              |              |
|      | <u>1060002</u> |               | <u>Major Demolition Works</u>  |      |               |              |              |
|      |                | 1.06.00.02.01 | Demolition works(For Mezzanine area)   | m3   | 5,632         | 61.03        | 343,720.96   |
|      | <u>10602</u>   |               | <u>Superstructure</u>  |      |               |              |              |
|      | <u>1060202</u> |               | <u>Upper Floors</u>  |      |               |              |              |
|      |                | 1.06.02.02.04 | Platforms 1-2 & 12-13-14, 7-8  | sum  | 1             | 2,070,120.00 | 2,070,120.00 |
|      |                |               | Sun Street raising allowance   | sum  | 1             | 30,000.00    | 30,000.00    |
|      | <u>10605</u>   |               | <u>Services</u>  |      |               |              |              |
|      |                | 1.06.05.02.01 | Services equipmen (GATE LINES)   | nr   | 6             | 58,500.00    | 351,000.00   |
|      | <u>1060508</u> |               | <u>Electrical Installations</u>  |      |               |              |              |
|      |                | 1.06.05.08.03 | Lighting installations   | m2   | 3,640         | 195.00       | 709,800.00   |
|      | 107            |               | <i>Civil Engineering</i>   |      |               |              |              |
|      | <u>10701</u>   |               | <u>Earthworks</u>  |      |               |              |              |
|      |                | 1.07.01.01.01 | General excavation(Area in front of Platform 12,13 & 14 for track and shortening of platform 1 | m3   | 4,995         | 42.89        | 214,235.55   |
|      |                | 1.07.01.01.02 | Disposal   | m3   | 4,995         | 25.00        | 124,875.00   |
|      | <u>1070306</u> |               | <u>Smoke Ventilation Systems</u>   |      |               |              |              |
|      |                | 1.07.03.06.01 | FansVentilation System   | sum  | 1             | 90,000.00    | 90,000.00    |
|      | 108            |               | <i>Enabling Works</i>  |      |               |              |              |
|      | <u>10802</u>   |               | <u>Site Clearance and Preparation Works</u>  |      |               |              |              |
|      |                | 1.08.03.01.02 | Demolition - partial structures Brick Wall removal By (Hydro Demolition Hit & Miss Method)     | nr   | 1             | 222,248.00   | 222,248.00   |

BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross         |               |
|------|-----------|---------------|--|------|---------------|---------------|---------------|
|      |           |               |  |      |               | Rate          | Amount        |
|      |           | 1.08.02.01.01 | General clearance(including Electrical & Mechanical equipment under the vehicle access ramp) | sum  | 1             | 150,000.00    | 150,000.00    |
|      |           |               | Carried to summary   |      |               |               | 11,957,285.28 |
| 2    |           |               | INDIRECT CONSTRUCTION WORKS  |      |               |               |               |
| 201  |           |               | Preliminaries  |      |               |               |               |
|      |           |               | Preliminaries  | SUM  | 1             | 2,989,323.86  | 2,989,323.86  |
| 202  |           |               | Overheads and Profit   |      |               |               |               |
|      |           |               | Overhead and profit  | SUM  | 1             | 2,017,793.61  | 2,017,793.61  |
|      |           |               | Carried to summary   |      |               |               | 5,007,117.47  |
| 3    |           |               | EMPLOYER'S INDIRECT COSTS  |      |               |               |               |
|      |           |               | Network Rail Project Fee   | SUM  | 1             | 1,434,875.45  | 1,434,875.45  |
| 301  |           |               | Design Team Fees   |      |               |               |               |
|      |           |               | Design Team Fee  | SUM  | 1             | 1,195,729.55  | 1,195,729.55  |
| 303  |           |               | Other Project Costs  |      |               |               |               |
|      |           |               | Other Project cost   | sum  | 1             | 2,294,306.06  | 2,294,306.06  |
|      |           |               | Carried to summary   |      |               |               | 4,924,911.06  |
| 4    |           |               | RISK   |      |               |               |               |
|      |           |               | Risk   | SUM  | 1             | 10,944,661.99 | 10,944,661.99 |
|      |           |               | Carried to summary   |      |               |               | 10,944,661.99 |
| 5    |           |               | INFLATION  |      |               |               |               |
|      |           |               | Inflation Mid Of CP6 @ 24.24%  | SUM  | 1             | 5,305,972.13  | 5,305,972.13  |
|      |           |               | Carried to summary   |      |               |               | 5,305,972.13  |

BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code | Bill description            | Unit | Bill quantity | Gross |               |
|------|-----------|----------|-----------------------------|------|---------------|-------|---------------|
|      |           |          |                             |      |               | Rate  | Amount        |
|      |           |          |                             |      |               |       | 0.00          |
|      |           |          | DIRECT CONSTRUCTION WORKS   |      |               |       | 11,957,285.28 |
|      |           |          | INDIRECT CONSTRUCTION WORKS |      |               |       | 5,007,117.47  |
|      |           |          | EMPLOYER'S INDIRECT COSTS   |      |               |       | 4,924,911.06  |
|      |           |          | RISK                        |      |               |       | 10,944,661.99 |
|      |           |          | INFLATION                   |      |               |       | 5,305,972.13  |
|      |           |          | TOTAL                       |      |               |       | 38,139,947.93 |

**Projects Estimating**

**Oracle Project No.:**

**Project Description:**

**Estimate Stage:**

| <b>Issue and Revision Record:</b> |             |                    |                |                    |
|-----------------------------------|-------------|--------------------|----------------|--------------------|
| <b>Rev.</b>                       | <b>Date</b> | <b>Prepared by</b> | <b>Checked</b> | <b>Description</b> |
| 0                                 | 1-Aug-14    | K.Siddiqui         |                | Original           |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |
|                                   |             |                    |                |                    |

Estimate Stage: Grip 0  
Oracle Project No.: 141982  
Project Description: Liverpool Street Station Option 4: New Shorditch Terminus Station

Estimate Document Contents

|   |                           |
|---|---------------------------|
| I   | Assumptions               |
| II  | Estimate Summary Report   |
| 1. Direct Construction Works                          |                           |
| 1.01  | Railway Control Systems   |
| 1.02  | Train Power Systems       |
| 1.03  | Electric Power and Plant  |
| 1.04  | Permanent Way             |
| 1.05  | Telecommunication Systems |
| 1.06  | Buildings and Property    |
| 1.07  | Civil Engineering         |
| 1.08  | Enabling Works            |
| 2. Indirect Construction Works                        |                           |
| 2.01  | Preliminaries             |
| 2.02  | Overhead and Profit       |
| 3. Project / design Team Fees and Other Project Costs |                           |
| 3.01  | Design Team Fees          |
| 3.02  | Project Team fees         |
| 3.03  | Other Project Costs       |
| 4. Risk   |                           |
| 4.01  | Total Risk Allowance      |
| 5. Inflation  |                           |
| 5.01  | Inflation                 |
| 6. Taxation and Grants                                |                           |
| 6.01  | Tax allowances and grants |
| III   | Indirects                 |
| IV  | Escalation Calculator     |



## Infrastructure Projects

Southern

**Estimate Stage:** Grip 0  
**Oracle Project No.:** 141982  
**Project Description:** Liverpool Street Station Option 4: New Shorditch Terminus Station

### Clarifications

#### General / Assumptions / Drawings & Documents / Exclusions / Revisions

##### General

- G1 The estimate base date is 3Q 2014 using rates.
- G2 The value of cost escalation has calculated using RPI and it is assumed that the mid point of construction will be 2Q 2022  
Escalation has been included within the Project AFC as the works is assumed to be mid point
- G3 2Qtr 2022 using compound interest at 2.75%
- G4 An uplift factor for contingency of 50% has been applied in consultation with the Estimating Manager for cost and scope uncertainty, in line with the Estimating procedure and Grip Stage .
- G5 Costs exclude VAT

##### Assumptions

- A1 Assume no over and above allowance for Bank Holiday working
- A2 Fees for Sponsor, Network Rail Management and Design allowances are based on a percentage of Total Construction Costs.
- A3 We have assumed at this stage no contribution to Network rails Fee Fund
- A4 We have assumed at this stage no contribution to Industry Risk Fund
- A5 Our prices are based on assumption that In new station there will be 2 Island platforms of 240m length.
- A6 We have not allowed any cost for strengthening of Braithwaite viaduct.
- A7 Our prices are based on the assumption that Braithwaite viaduct has sufficient capacity to bear the load of new operational railway platform without any modification to the structure.
- A8 Our prices are based on the assumption that all the works related to Shoreditch new terminus will  
Our prices do not include for any allowance related to business displacement related to this project. It is assumed that such allowances need to be confirmed by asset management team and dealt separately to this estimate.
- A9
- A10 We have assumed that the ticket office will be based at the ground level.
- A11 Our prices are based on the assumption that disposal of uncontaminated material.
- A12 Within our pricing we have assumed the ticket office area to be 60m2.

- A13 No allowance has been made for any possession or isolation management
- A14 All platform extension works are assumed to be cast in situ works.
- A15 Average length of each carriage is assumed to be 20m.
- A16 We have assumed in our prices 10k allowance for access platform.
- A17 We have assumed in our prices 180k allowance for power supply.
- A18 We assumed in our prices the cost of single span steel bridge structure.

### **Drawings & Documents**

The following documents have been used in the preparation of this estimate:

SOU-141892-EAR-DRG-IAB-001.pdf

Liverpool St Station 6326-023 92).pdf

Liverpool St Station 6326-024 92).pdf

### **Exclusions**

E1

### **Revisions**

The following revisions have been applied

**ESTIMATE SUMMARY REPORT**

|                          |   |                   |        |                |        |
|--------------------------|---|-------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505  | Revision          | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14   | Price 'Base date' | 3Q2014 |                |        |
| Anticipated Start Date   | Anticipated Finish Date   |                   |        |                |        |
| Project No.              | 141982  |                   |        |                |        |
| Project Title / Location | Liverpool Street Station Option 4: New Shorditch Terminus Station |                   |        |                |        |

| WBS      | Estimate Breakdown  | Value                  | %age of Point Estimate | Remarks  |
|----------|---|------------------------|------------------------|--|
| <b>1</b> | <b>Direct Construction works -</b>                              |                        |                        |  |
| 1.01     | Railway Control Systems   | £ 1,300,660.11         | 6.1%                   |  |
| 1.02     | Train Power Systems   | £ -                    | 0.0%                   |  |
| 1.03     | Electric Power and Plant  | £ 192,500.00           | 0.9%                   |  |
| 1.04     | Permanent Way   | £ 2,342,400.00         | 11.0%                  |  |
| 1.05     | Operational Telecommunication Systems                           | £ 99,616.00            | 0.5%                   |  |
| 1.06     | Buildings and Property  | £ 4,104,424.06         | 19.3%                  |  |
| 1.07     | Civil Engineering   | £ 3,514,080.00         | 16.6%                  |  |
| 1.08     | Enabling Works  | £ 40,000.00            | 0.2%                   |  |
|          | <b>Direct Construction works :</b>                              | <b>£ 11,593,680.17</b> | <b>54.6%</b>           |  |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                        |                        |  |
| 2.01     | Preliminaries   | £ 2,898,420.04         | 13.7%                  |  |
| 2.02     | Overheads and Profit  | £ 1,956,433.53         | 9.2%                   | If zero, included within the rates   |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 4,854,853.57</b>  | <b>22.9%</b>           |  |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 16,448,533.74</b> | <b>77.5%</b>           |  |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                        |                        |  |
| 3.01     | Design Team Fees  | £ 1,159,368.02         | 5.5%                   |  |
| 3.02     | Project Team Fees   | £ 1,391,241.62         | 6.6%                   |  |
| 3.03     | Other Project Costs   | £ 2,224,537.38         | 10.5%                  |  |
| 3.04     | Cost of work done (COWD)  | £ -                    | 0.0%                   |  |
|          | <b>Employer Indirect Costs :</b>                                | <b>£ 4,775,147.02</b>  | <b>22.5%</b>           |  |
|          | <b>Point Estimate :</b>   | <b>£ 21,223,680.76</b> | <b>100.0%</b>          |  |
| <b>4</b> | <b>Risk</b>   |                        |                        | 50.00%   |
| 4.01     | Risk  | £ 10,611,840.38        |                        |  |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 10,611,840.38</b> |                        |  |
| <b>5</b> | <b>Inflation</b>  |                        |                        | When included within the project AFC, less COWD.<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 5,144,207.46         |                        |  |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 5,144,207.46</b>  |                        |  |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                        |                        | If Applicable  |
| 6.01     | Tax allowances and Grants                                       | £ -                    |                        |  |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>             |                        |  |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 36,979,728.60</b> |                        |  |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         |                         |                         |
| Date :-     | 01 August 2014          |                         |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase  
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under 'Other Costs to the Customer'
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

**ESTIMATE SUMMARY REPORT**

|                          |   |                         |        |                |        |
|--------------------------|---|-------------------------|--------|----------------|--------|
| Estimate No.             | 1405MA0505  | Revision                | 0      | Estimate Stage | Grip 0 |
| Estimate Date            | 01-Aug-14   | Price 'Base date'       | 3Q2014 |                |        |
| Anticipated Start Date   |   | Anticipated Finish Date |        |                |        |
| Project No.              | 141982  |                         |        |                |        |
| Project Title / Location | Liverpool Street Station Option 4: New Shorditch Terminus Station |                         |        |                |        |

| WBS      | Estimate Breakdown  | Value                  | %age of Point Estimate | Remarks   |
|----------|---|------------------------|------------------------|---|
| <b>1</b> | <b>Direct Construction works -</b>                              |                        |                        |   |
| 1.01     | Railway Control Systems   | £ 1,300,660.11         | 5.1%                   |   |
| 1.02     | Train Power Systems   | £ -                    | 0.0%                   |   |
| 1.03     | Electric Power and Plant  | £ 192,600.00           | 0.9%                   |   |
| 1.04     | Permanent Way   | £ 2,342,400.00         | 11.0%                  |   |
| 1.05     | Operational Telecommunication Systems                           | £ 99,616.00            | 0.5%                   |   |
| 1.06     | Buildings and Property  | £ 4,104,424.06         | 19.3%                  |   |
| 1.07     | Civil Engineering   | £ 3,514,080.00         | 16.6%                  |   |
| 1.08     | Enabling Works  | £ 40,000.00            | 0.2%                   |   |
|          | <b>Direct Construction works :</b>                              | <b>£ 11,593,680.17</b> | <b>54.6%</b>           |   |
| <b>2</b> | <b>Indirect Construction Costs -</b>                            |                        |                        |   |
| 2.01     | Preliminaries   | £ 2,898,420.04         | 13.7%                  |   |
| 2.02     | Overheads and Profit  | £ 1,956,433.53         | 9.2%                   | if zero, included within the rates  |
|          | <b>Indirect Construction Costs :</b>                            | <b>£ 4,854,853.57</b>  | <b>22.9%</b>           |   |
|          | <b>Total Base Construction Cost :</b>                           | <b>£ 16,448,533.74</b> | <b>77.5%</b>           |   |
| <b>3</b> | <b>Project / Design Team Fees and other development costs -</b> |                        |                        |   |
| 3.01     | Design Team Fees  | £ 1,159,368.02         | 5.5%                   |   |
| 3.02     | Project Team Fees   | £ 1,391,241.62         | 6.6%                   |   |
| 3.03     | Other Project Costs   | £ 2,224,537.38         | 10.5%                  |   |
| 3.04     | Cost of work done (COWD)  | £ -                    | 0.0%                   |   |
|          | <b>Employer indirect Costs :</b>                                | <b>£ 4,775,147.02</b>  | <b>22.5%</b>           |   |
|          | <b>Point Estimate :</b>   | <b>£ 21,223,680.76</b> | <b>100.0%</b>          |   |
| <b>4</b> | <b>Risk</b>   |                        |                        | 50.00%  |
| 4.01     | Risk  | £ 10,611,840.38        |                        |   |
|          | <b>Cost Limit Excluding Inflation :</b>                         | <b>£ 10,611,840.38</b> |                        |   |
| <b>5</b> | <b>Inflation</b>  |                        |                        | When included within the project AFC, less COWD<br>Mid of CP6 @ of 24.24% |
| 5.01     | Inflation   | £ 5,144,207.46         |                        |   |
|          | <b>Total Inflation Allowance :</b>                              | <b>£ 5,144,207.46</b>  |                        |   |
| <b>6</b> | <b>Taxation and Grants</b>                                      |                        |                        | if Applicable   |
| 6.01     | Tax allowances and Grants                                       | £ -                    |                        |   |
|          | <b>Total Taxation and Grants Cost :</b>                         | <b>£ -</b>             |                        |   |
|          | <b>Project Anticipated Final Cost (AFC) :</b>                   | <b>£ 36,979,728.60</b> |                        |   |

**APPROVAL & ENDORSEMENT**

|             | Estimate Produced by :- | Estimate Approved by :- | Estimate Endorsed by :- |
|-------------|-------------------------|-------------------------|-------------------------|
| Name :-     | Kamran Siddiqui         |                         |                         |
| Position :- | Estimator               | Estimating Manager      |                         |
| Signed :-   |                         | <i>PP Neil Evans</i>    |                         |
| Date :-     | 01 August 2014          | <i>Neil Evans</i>       |                         |

**Notes:-**

- Inflation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase. Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under "Other Costs to the Customer".
- An 'Adjustment for risk' has been applied in accordance with the Guidance Notes on Estimating. The basis for applying the uplift value seen herein is as detailed in the risk tab.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value).



|                     |   |   |
|---------------------|---|---|
| Estimate Stage:     | Grip 0  | <b>Infrastructure Projects</b><br><i>Southern</i> |
| Oracle Project No.: | 141982  |   |
| Project Name:       | Liverpool Street Station Option 4: New Shorditch Terminus Station |   |

**Calculation of Contractors and Network Rail's Indirect Costs**

| Asset                     | Total Direct Costs | %     | Preliminaries  | %     | Design         | %     | OH & P         | %     | Network Rail Management | %    | Sponsor |
|---------------------------|--------------------|-------|----------------|-------|----------------|-------|----------------|-------|-------------------------|------|---------|
| Railway Control Systems   | £ 1,300,660.11     | 25.0% | £ 325,165.03   | 10.0% | £ 130,066.01   | 12.5% | £ 219,486.39   | 12.0% | £ 156,079.21            | 3.0% |         |
| Train Power Systems       |                    | 25.0% | £ -            | 10.0% | £ -            | 12.5% | £ -            | 12.0% | £ -                     | 3.0% |         |
| Electric Power and Plant  | £ 192,500.00       | 25.0% | £ 48,125.00    | 10.0% | £ 19,250.00    | 12.5% | £ 32,484.38    | 12.0% | £ 23,100.00             | 3.0% |         |
| Permanent Way             | £ 2,342,400.00     | 25.0% | £ 585,600.00   | 10.0% | £ 234,240.00   | 12.5% | £ 395,280.00   | 12.0% | £ 281,088.00            | 3.0% |         |
| Telecommunication Systems | £ 99,616.00        | 25.0% | £ 24,904.00    | 10.0% | £ 9,961.60     | 12.5% | £ 16,810.20    | 12.0% | £ 11,953.92             | 3.0% |         |
| Buildings and Property    | £ 4,104,424.06     | 25.0% | £ 1,026,106.02 | 10.0% | £ 410,442.41   | 12.5% | £ 692,621.56   | 12.0% | £ 492,530.89            | 3.0% |         |
| Civil Engineering         | £ 3,514,080.00     | 25.0% | £ 878,520.00   | 10.0% | £ 351,408.00   | 12.5% | £ 593,001.00   | 12.0% | £ 421,689.60            | 3.0% |         |
| Enabling Works            | £ 40,000.00        | 25.0% | £ 10,000.00    | 10.0% | £ 4,000.00     | 12.5% | £ 6,750.00     | 12.0% | £ 4,800.00              | 3.0% |         |
|                           |                    |       | £ 2,898,420.04 |       | £ 1,159,368.02 |       | £ 1,956,433.53 |       | £ 1,391,241.62          |      | £ -     |

**Allowance for TOC / FOC Compensation - calculator**

|  |                |                |
|--|----------------|----------------|
| £ 11,593,680.17                          | £ 2,898,420.04 | £ 1,956,433.53 |
| TOTAL                                    |                |                |
| £ 16,448,533.74                          |                |                |
| Allowance for TOC / FOC compensation (%) |                |                |
| 10% £ 1,644,853.37                       |                |                |

| Oracle Project No.  | 141982  |                   | Infrastructure Projects<br>Southern |                |                       |   |  |
|---------------------|---|-------------------|-------------------------------------|----------------|-----------------------|---|---|
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station |                   |                                     |                |                       |   |   |
| Ref                 | Description   | Quantity          | Unit                                | Rate           | Cost                  | Comments  |   |
| <b>2.01</b>         | <b>Preliminaries</b>  |                   |                                     | <b>TOTAL</b>   | <b>£ 2,898,420.04</b> |   |   |
| <b>2.01.xx</b>      | <b>Allowance where Preliminaries have not been quantified.</b>    |                   | <b>Sum</b>                          |                | <b>£ 2,898,420.04</b> |   |   |
| 2.01.0xx.01         | Preliminaries allowance   | 1                 | Sum                                 | £ 2,898,420.04 | £ 2,898,420.04        | From percentage allowance; see "indirects" tab. |   |
| <b>2.01.01</b>      | <b>Contractor's preliminaries</b>                                 |                   | <b>Sum</b>                          |                | <b>£ -</b>            |   |   |
| <b>2.01.01.01</b>   | <b>Employers requirements</b>                                     |                   | <b>Sum</b>                          |                | <b>£ -</b>            |   |   |
| 2.01.01.01.01.      | Insurance, bonds, guarantees and warranties                       |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.01.02       | Site accommodation for the employer and Employer's representative |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.01.03       | Site records  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.01.04       | Completion and post completion requirements                       |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.01.05       | Other   |                   | Sum                                 | £ -            | £ -                   |   |   |
| <b>2.01.01.02</b>   | <b>Contractor's cost items</b>                                    |                   | <b>Sum</b>                          |                | <b>£ -</b>            |   |   |
| 2.01.01.02.01       | Management and staff  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.02       | Site establishment  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.03       | Security  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.04       | Safety and environmental protection                               |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.05       | Control and protection  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.06       | Site records  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.07       | Completion and taking over requirements                           |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.08       | Cleaning  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.09       | Fees and charges  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.10       | Works and other insurances  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.02.11       | Other   |                   | Sum                                 | £ -            | £ -                   |   |   |
| <b>2.01.01.03</b>   | <b>Temporary works and services</b>                               |                   | <b>Sum</b>                          |                | <b>£ -</b>            |   |   |
| 2.01.01.03.01       | Access scaffolding / encapsulation                                |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.03.02       | Temporary works and diversions                                    |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.03.03       | Temporary services  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.03.04       | Other   |                   | Sum                                 | £ -            | £ -                   |   |   |
| <b>2.01.01.04</b>   | <b>Safety and environmental protection</b>                        |                   | <b>Sum</b>                          |                | <b>£ -</b>            |   |   |
| 2.01.01.04.01       | Safety of workpeople  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.04.03       | Possessions   |                   | Sum                                 | £ -            | £ -                   |   |   |
| 3.01.01.04.03       | Isolations  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 3.01.01.04.04       | Protecting the environment  |                   | Sum                                 | £ -            | £ -                   |   |   |
| 2.01.01.04.05       | Other   |                   | Sum                                 | £ -            | £ -                   |   |   |
|                     |   | <b>Page Total</b> |                                     |                | <b>£ 2,898,420.04</b> |   |   |

| Oracle Project No. 141982   |   | Infrastructure Projects |            |                |                       |   | NetworkRail |
|---|---|-------------------------|------------|----------------|-----------------------|---|-------------|
| Project Description   |   | Southern                |            |                |                       |   |             |
| Liverpool Street Station Option 4: New Shorditch Terminus Station |   | Quantity                | Unit       | Rate           | Cost                  | Comments  |             |
| Ref   | Description   |                         |            |                |                       |   |             |
| <b>2.02</b>   | <b>Overheads and profit</b>                               |                         |            | <b>TOTAL</b>   | <b>£ 1,956,433.53</b> |   |             |
| <b>2.02.xx</b>  | <b>Allowance where OH&amp;P have not been quantified.</b> |                         | <b>Sum</b> |                | <b>£ 1,956,433.53</b> |   |             |
| 2.02.xx.01  | Overheads and profit allowance                            | 1                       | Sum        | £ 1,956,433.53 | £ 1,956,433.53        | From percentage allowance; see "indirects" tab. |             |
| <b>2.02.01</b>  | <b>Contractor's overheads and profit</b>                  |                         | <b>Sum</b> |                | <b>£ -</b>            |   |             |
| <b>2.02.01.01</b>   | <b>Head office costs proportioned to contract</b>         |                         | <b>Sum</b> |                | <b>£ -</b>            |   |             |
| 2.02.01.01.01   | Overheads   |                         | Sum        | £ -            | £ -                   |   |             |
| 2.02.01.01.02   | Administration  |                         | Sum        | £ -            | £ -                   |   |             |
| <b>2.02.01.02</b>   | <b>Profit</b>   |                         | <b>Sum</b> |                | <b>£ -</b>            |   |             |
| 2.02.01.02.01   | Profit on cost  |                         | Sum        | £ -            | £ -                   |   |             |
|   | <b>Page Total</b>   |                         |            |                | <b>£ 1,956,433.53</b> |   |             |

| Oracle Project No. 141982 |  | Infrastructure Projects   |            |                |                       | NetworkRail |  |
|---------------------------|--|---|------------|----------------|-----------------------|-------------|--|
| Project Description       |  | Liverpool Street Station Option 4: New Shorditch Terminus Station |            |                |                       |             |  |
| Ref                       | Description  | Quantity  | Unit       | Rate           | Cost                  | Comments    |  |
| <b>3.01</b>               | <b>Design Team Fees</b>                                      |   |            | <b>TOTAL</b>   | <b>£ 1,159,368.02</b> |             |  |
| <b>3.01.xx</b>            | <b>Allowance where Design Fees have not been quantified.</b> |   | <b>Sum</b> |                | <b>£ 1,159,368.02</b> |             |  |
| 3.01.xx.01                | From percentage allowance; see "Indirects" tab.              | 1   | Sum        | £ 1,159,368.02 | £ 1,159,368.02        |             |  |
| <b>3.01.01</b>            | <b>Employer's own design fees</b>                            |   | <b>Sum</b> |                | <b>£ -</b>            |             |  |
| <b>3.01.01.01</b>         | <b>Railway Control Systems Design</b>                        |   | <b>Sum</b> |                | <b>£ -</b>            |             |  |
| 3.01.01.01.01             | Site investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.02             | Ground Investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.03             | Topographical Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.04             | Environmental Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.05             | Feasibility Study  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.06             | Option Selection Study                                       |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.07             | Single Option Development                                    |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.08             | Design Development   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.09             | Outline Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.10             | Detailed Design  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.11             | Post contract Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.12             | Design - As Built Documentation                              |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.13             | Correlation  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.01.14             | Other  |   | hrs        | £ -            | £ -                   |             |  |
| <b>3.01.01.02</b>         | <b>Train Power Systems Design</b>                            |   | <b>Sum</b> |                | <b>£ -</b>            |             |  |
| 3.01.01.02.01             | Site investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.02             | Ground Investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.03             | Topographical Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.04             | Environmental Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.05             | Feasibility Study  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.06             | Option Selection Study                                       |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.07             | Single Option Development                                    |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.08             | Design Development   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.09             | Outline Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.10             | Detailed Design  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.11             | Post contract Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.12             | Design - As Built Documentation                              |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.13             | Correlation  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.02.14             | Other  |   | hrs        | £ -            | £ -                   |             |  |
| <b>3.01.01.03</b>         | <b>Electric Power and Plant Design</b>                       |   | <b>Sum</b> |                | <b>£ -</b>            |             |  |
| 3.01.01.03.01             | Site investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.02             | Ground Investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.03             | Topographical Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.04             | Environmental Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.05             | Feasibility Study  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.06             | Option Selection Study                                       |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.07             | Single Option Development                                    |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.08             | Design Development   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.09             | Outline Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.10             | Detailed Design  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.11             | Post contract Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.12             | Design - As Built Documentation                              |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.13             | Correlation  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.03.14             | Other  |   | hrs        | £ -            | £ -                   |             |  |
| <b>3.01.01.04</b>         | <b>Permanent Way Design</b>                                  |   | <b>Sum</b> |                | <b>£ -</b>            |             |  |
| 3.01.01.04.01             | Site investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.02             | Ground Investigation   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.03             | Topographical Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.04             | Environmental Survey   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.05             | Feasibility Study  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.06             | Option Selection Study                                       |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.07             | Single Option Development                                    |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.08             | Design Development   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.09             | Outline Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.10             | Detailed Design  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.11             | Post contract Design   |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.12             | Design - As Built Documentation                              |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.13             | Correlation  |   | hrs        | £ -            | £ -                   |             |  |
| 3.01.01.04.14             | Other  |   | hrs        | £ -            | £ -                   |             |  |
| <b>Page Total</b>         |  |   |            |                | <b>£ 1,159,368.02</b> |             |  |

|                     |   |                         |  |                     |  |
|---------------------|---|-------------------------|--|---------------------|--|
| Oracle Project No.  | 141982  | Infrastructure Projects |  | NetworkRail         |  |
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station | Southern                |  | Summit & North East |  |

| Southern   |  |          |            |      |            |          |
|--|--|----------|------------|------|------------|----------|
| Ref  | Description  | Quantity | Unit       | Rate | Cost       | Comments |
| Ref  | Description  | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                                     |          |            |      |            |          |
| <b>3.01.01</b>   | <b>Employer's own design fees (continued).</b>                           |          | <b>Sum</b> |      |            |          |
| <b>3.01.01.05</b>  | <b>Operational Telecomms System Design</b>                               |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.05.01  | Site investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.02  | Ground Investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.03  | Topographical Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.04  | Environmental Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.05  | Feasibility Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.06  | Option Selection Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.07  | Single Option Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.08  | Design Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.09  | Outline Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.10  | Detailed Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.11  | Post contract Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.05.12  | Design - As Built Documentation  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.05.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.06</b>  | <b>Buildings and Property Design</b>                                     |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.06.01  | Site investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.02  | Ground Investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.03  | Topographical Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.04  | Environmental Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.05  | Feasibility Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.06  | Option Selection Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.07  | Single Option Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.08  | Design Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.09  | Outline Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.10  | Detailed Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.11  | Post contract Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.06.12  | Design - As Built Documentation  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.06.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.07</b>  | <b>Civil Engineering Design</b>  |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.07.01  | Site investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.02  | Ground Investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.03  | Topographical Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.04  | Environmental Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.05  | Feasibility Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.06  | Option Selection Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.07  | Single Option Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.08  | Design Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.09  | Outline Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.10  | Detailed Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.11  | Post contract Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.07.12  | Design - As Built Documentation  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.07.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>3.01.01.08</b>  | <b>Enabling Works Design</b>   |          | <b>Sum</b> |      | <b>£ -</b> |          |
| 3.01.01.08.01  | Site investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.02  | Ground Investigation   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.03  | Topographical Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.04  | Environmental Survey   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.05  | Feasibility Study  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.06  | Option Selection Study   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.07  | Single Option Development  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.08  | Design Development   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.09  | Outline Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.10  | Detailed Design  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.11  | Post contract Design   |          | hrs        | £    | - £        | -        |
| 3.01.01.08.12  | Design - As Built Documentation  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.13  | Correlation  |          | hrs        | £    | - £        | -        |
| 3.01.01.08.14  | Other  |          | hrs        | £    | - £        | -        |
| <b>Page Total</b>  |  |          |            |      | <b>£ -</b> |          |
| <b>Oracle Project No.</b>  | <b>141982</b>  |          |            |      |            |          |
| <b>Project Description</b>   | <b>Liverpool Street Station Option 4: New Shorditch Terminus Station</b> |          |            |      |            |          |
|  |  |          |            |      |            |          |
| Ref  | Description  | Quantity | Unit       | Rate | Cost       | Comments |
| <b>3.01</b>  | <b>Design Team Fees (continued).</b>                                     |          |            |      |            |          |
| <b>3.01.02</b>   | <b>Employer's procured design fees</b>                                   |          | <b>Sum</b> |      | <b>£ -</b> |          |

| Ref   | Description   | Quantity | Unit       | Rate | Cost       | Comments   |
|---|---|----------|------------|------|------------|--|
| <b>3.01.02.01 Railway Control Systems Design</b>  |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.01.01                                     | Site investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.01.02                                     | Ground Investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.01.03                                     | Topographical Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.01.04                                     | Environmental Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.01.05                                     | Feasibility Study   |          | hrs        | £    | -          | -  |
| 3.01.02.01.06                                     | Option Selection Study  |          | hrs        | £    | -          | -  |
| 3.01.02.01.07                                     | Single Option Development   |          | hrs        | £    | -          | -  |
| 3.01.02.01.08                                     | Design Development  |          | hrs        | £    | -          | -  |
| 3.01.02.01.09                                     | Outline Design  |          | hrs        | £    | -          | -  |
| 3.01.02.01.10                                     | Detailed Design   |          | hrs        | £    | -          | -  |
| 3.01.02.01.11                                     | Post contract Design  |          | hrs        | £    | -          | -  |
| 3.01.02.01.12                                     | Design - As Built Documentation                                   |          | hrs        | £    | -          | -  |
| 3.01.02.01.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.01.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.02 Train Power Systems Design</b>      |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.02.01                                     | Site investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.02.02                                     | Ground Investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.02.03                                     | Topographical Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.02.04                                     | Environmental Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.02.05                                     | Feasibility Study   |          | hrs        | £    | -          | -  |
| 3.01.02.02.06                                     | Option Selection Study  |          | hrs        | £    | -          | -  |
| 3.01.02.02.07                                     | Single Option Development   |          | hrs        | £    | -          | -  |
| 3.01.02.02.08                                     | Design Development  |          | hrs        | £    | -          | -  |
| 3.01.02.02.09                                     | Outline Design  |          | hrs        | £    | -          | -  |
| 3.01.02.02.10                                     | Detailed Design   |          | hrs        | £    | -          | -  |
| 3.01.02.02.11                                     | Post contract Design  |          | hrs        | £    | -          | -  |
| 3.01.02.02.12                                     | Design - As Built Documentation                                   |          | hrs        | £    | -          | -  |
| 3.01.02.02.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.02.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.03 Electric Power and Plant Design</b> |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.03.01                                     | Site investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.03.02                                     | Ground Investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.03.03                                     | Topographical Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.03.04                                     | Environmental Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.03.05                                     | Feasibility Study   |          | hrs        | £    | -          | -  |
| 3.01.02.03.06                                     | Option Selection Study  |          | hrs        | £    | -          | -  |
| 3.01.02.03.07                                     | Single Option Development   |          | hrs        | £    | -          | -  |
| 3.01.02.03.08                                     | Design Development  |          | hrs        | £    | -          | -  |
| 3.01.02.03.09                                     | Outline Design  |          | hrs        | £    | -          | -  |
| 3.01.02.03.10                                     | Detailed Design   |          | hrs        | £    | -          | -  |
| 3.01.02.03.11                                     | Post contract Design  |          | hrs        | £    | -          | -  |
| 3.01.02.03.12                                     | Design - As Built Documentation                                   |          | hrs        | £    | -          | -  |
| 3.01.02.03.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.03.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>3.01.02.04 Permanent Way Design</b>            |   |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.04.01                                     | Site investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.04.02                                     | Ground Investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.04.03                                     | Topographical Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.04.04                                     | Environmental Survey  |          | hrs        | £    | -          | -  |
| 3.01.02.04.05                                     | Feasibility Study   |          | hrs        | £    | -          | -  |
| 3.01.02.04.06                                     | Option Selection Study  |          | hrs        | £    | -          | -  |
| 3.01.02.04.07                                     | Single Option Development   |          | hrs        | £    | -          | -  |
| 3.01.02.04.08                                     | Design Development  |          | hrs        | £    | -          | -  |
| 3.01.02.04.09                                     | Outline Design  |          | hrs        | £    | -          | -  |
| 3.01.02.04.10                                     | Detailed Design   |          | hrs        | £    | -          | -  |
| 3.01.02.04.11                                     | Post contract Design  |          | hrs        | £    | -          | -  |
| 3.01.02.04.12                                     | Design - As Built Documentation                                   |          | hrs        | £    | -          | -  |
| 3.01.02.04.13                                     | Correlation   |          | hrs        | £    | -          | -  |
| 3.01.02.04.14                                     | Other   |          | hrs        | £    | -          | -  |
| <b>Page Total</b>                                 |   |          |            |      | <b>£ -</b> |  |
| Oracle Project No.                                | 141982  |          |            |      |            |  |
| Project Description                               | Liverpool Street Station Option 4: New Shorditch Terminus Station |          |            |      |            |  |
| Ref   | Description   | Quantity | Unit       | Rate | Cost       | Comments   |
| <b>3.01</b>                                       | <b>Design Team Fees (continued).</b>                              |          |            |      |            |  |
| <b>3.01.02</b>                                    | <b>Employer's procured design fees (continued).</b>               |          | <b>Sum</b> |      |            |  |
| <b>3.01.02.05</b>                                 | <b>Operational Telecomms System Design</b>                        |          | <b>Sum</b> |      | <b>£ -</b> |  |
| 3.01.02.05.01                                     | Site investigation  |          | hrs        | £    | -          | -  |
| 3.01.02.05.02                                     | Ground Investigation  |          | hrs        | £    | -          | -  |

| Southern            |   |  |            |      |          |          |
|---------------------|---|--|------------|------|----------|----------|
| Ref                 | Description   | Quantity   | Unit       | Rate | Cost     | Comments |
| 3.01.02.05.03       | Topographical Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.05.04       | Environmental Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.05.05       | Feasibility Study   |  | hrs        | £    | -        | -        |
| 3.01.02.05.06       | Option Selection Study  |  | hrs        | £    | -        | -        |
| 3.01.02.05.07       | Single Option Development   |  | hrs        | £    | -        | -        |
| 3.01.02.05.08       | Design Development  |  | hrs        | £    | -        | -        |
| 3.01.02.05.09       | Outline Design  |  | hrs        | £    | -        | -        |
| 3.01.02.05.10       | Detailed Design   |  | hrs        | £    | -        | -        |
| 3.01.02.05.11       | Post contract Design  |  | hrs        | £    | -        | -        |
| 3.01.02.05.12       | Design - As Built Documentation                                   |  | hrs        | £    | -        | -        |
| 3.01.02.05.13       | Correlation   |  | hrs        | £    | -        | -        |
| 3.01.02.05.14       | Other   |  | hrs        | £    | -        | -        |
| <b>3.01.02.06</b>   | <b>Buildings and Property Design</b>                              |  | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.06.01       | Site investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.06.02       | Ground Investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.06.03       | Topographical Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.06.04       | Environmental Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.06.05       | Feasibility Study   |  | hrs        | £    | -        | -        |
| 3.01.02.06.06       | Option Selection Study  |  | hrs        | £    | -        | -        |
| 3.01.02.06.07       | Single Option Development   |  | hrs        | £    | -        | -        |
| 3.01.02.06.08       | Design Development  |  | hrs        | £    | -        | -        |
| 3.01.02.06.09       | Outline Design  |  | hrs        | £    | -        | -        |
| 3.01.02.06.10       | Detailed Design   |  | hrs        | £    | -        | -        |
| 3.01.02.06.11       | Post contract Design  |  | hrs        | £    | -        | -        |
| 3.01.02.06.12       | Design - As Built Documentation                                   |  | hrs        | £    | -        | -        |
| 3.01.02.06.13       | Correlation   |  | hrs        | £    | -        | -        |
| 3.01.02.06.14       | Other   |  | hrs        | £    | -        | -        |
| <b>3.01.02.07</b>   | <b>Civil Engineering Design</b>                                   |  | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.07.01       | Site investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.07.02       | Ground Investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.07.03       | Topographical Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.07.04       | Environmental Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.07.05       | Feasibility Study   |  | hrs        | £    | -        | -        |
| 3.01.02.07.06       | Option Selection Study  |  | hrs        | £    | -        | -        |
| 3.01.02.07.07       | Single Option Development   |  | hrs        | £    | -        | -        |
| 3.01.02.07.08       | Design Development  |  | hrs        | £    | -        | -        |
| 3.01.02.07.09       | Outline Design  |  | hrs        | £    | -        | -        |
| 3.01.02.07.10       | Detailed Design   |  | hrs        | £    | -        | -        |
| 3.01.02.07.11       | Post contract Design  |  | hrs        | £    | -        | -        |
| 3.01.02.07.12       | Design - As Built Documentation                                   |  | hrs        | £    | -        | -        |
| 3.01.02.07.13       | Correlation   |  | hrs        | £    | -        | -        |
| 3.01.02.07.14       | Other   |  | hrs        | £    | -        | -        |
| <b>3.01.02.08</b>   | <b>Enabling Works Design</b>                                      |  | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.02.08.01       | Site investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.08.02       | Ground Investigation  |  | hrs        | £    | -        | -        |
| 3.01.02.08.03       | Topographical Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.08.04       | Environmental Survey  |  | hrs        | £    | -        | -        |
| 3.01.02.08.05       | Feasibility Study   |  | hrs        | £    | -        | -        |
| 3.01.02.08.06       | Option Selection Study  |  | hrs        | £    | -        | -        |
| 3.01.02.08.07       | Single Option Development   |  | hrs        | £    | -        | -        |
| 3.01.02.08.08       | Design Development  |  | hrs        | £    | -        | -        |
| 3.01.02.08.09       | Outline Design  |  | hrs        | £    | -        | -        |
| 3.01.02.08.10       | Detailed Design   |  | hrs        | £    | -        | -        |
| 3.01.02.08.11       | Post contract Design  |  | hrs        | £    | -        | -        |
| 3.01.02.08.12       | Design - As Built Documentation                                   |  | hrs        | £    | -        | -        |
| 3.01.02.08.13       | Correlation   |  | hrs        | £    | -        | -        |
| 3.01.02.08.14       | Other   |  | hrs        | £    | -        | -        |
| <b>Page Total</b>   |   |  |            |      | <b>£</b> | <b>-</b> |
| Oracle Project No.  | 141982  |  |            |      |          |          |
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station |  |            |      |          |          |
| Ref                 | Description   | Quantity   | Unit       | Rate | Cost     | Comments |
| <b>3.01</b>         | <b>Design Team Fees (continued).</b>                              |  |            |      |          |          |
| <b>3.01.03</b>      | <b>Contractor design fees</b>                                     |  | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| <b>3.01.03.01</b>   | <b>Railway Control Systems Design</b>                             |  | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.01.01       | Site investigation  |  | hrs        | £    | -        | -        |
| 3.01.03.01.02       | Ground Investigation  |  | hrs        | £    | -        | -        |
| 3.01.03.01.03       | Topographical Survey  |  | hrs        | £    | -        | -        |
| 3.01.03.01.04       | Environmental Survey  |  | hrs        | £    | -        | -        |
| 3.01.03.01.05       | Feasibility Study   |  | hrs        | £    | -        | -        |
| 3.01.03.01.06       | Option Selection Study  |  | hrs        | £    | -        | -        |
| 3.01.03.01.07       | Single Option Development   |  | hrs        | £    | -        | -        |

| Southern            |   |          |            |      |          |  |
|---------------------|---|----------|------------|------|----------|--|
| Ref                 | Description   | Quantity | Unit       | Rate | Cost     | Comments   |
| 3.01.03.01.08       | Design Development  |          | hrs        | £    | -        | -  |
| 3.01.03.01.09       | Outline Design  |          | hrs        | £    | -        | -  |
| 3.01.03.01.10       | Detailed Design   |          | hrs        | £    | -        | -  |
| 3.01.03.01.11       | Post contract Design  |          | hrs        | £    | -        | -  |
| 3.01.03.01.12       | Design - As Built Documentation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.01.13       | Correlation   |          | hrs        | £    | -        | -  |
| 3.01.03.01.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.02</b>   | <b>Train Power Systems Design</b>                                 |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.02.01       | Site investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.02.02       | Ground Investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.02.03       | Topographical Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.02.04       | Environmental Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.02.05       | Feasibility Study   |          | hrs        | £    | -        | -  |
| 3.01.03.02.06       | Option Selection Study  |          | hrs        | £    | -        | -  |
| 3.01.03.02.07       | Single Option Development   |          | hrs        | £    | -        | -  |
| 3.01.03.02.08       | Design Development  |          | hrs        | £    | -        | -  |
| 3.01.03.02.09       | Outline Design  |          | hrs        | £    | -        | -  |
| 3.01.03.02.10       | Detailed Design   |          | hrs        | £    | -        | -  |
| 3.01.03.02.11       | Post contract Design  |          | hrs        | £    | -        | -  |
| 3.01.03.02.12       | Design - As Built Documentation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.02.13       | Correlation   |          | hrs        | £    | -        | -  |
| 3.01.03.02.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.03</b>   | <b>Electric Power and Plant Design</b>                            |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.03.01       | Site investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.03.02       | Ground Investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.03.03       | Topographical Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.03.04       | Environmental Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.03.05       | Feasibility Study   |          | hrs        | £    | -        | -  |
| 3.01.03.03.06       | Option Selection Study  |          | hrs        | £    | -        | -  |
| 3.01.03.03.07       | Single Option Development   |          | hrs        | £    | -        | -  |
| 3.01.03.03.08       | Design Development  |          | hrs        | £    | -        | -  |
| 3.01.03.03.09       | Outline Design  |          | hrs        | £    | -        | -  |
| 3.01.03.03.10       | Detailed Design   |          | hrs        | £    | -        | -  |
| 3.01.03.03.11       | Post contract Design  |          | hrs        | £    | -        | -  |
| 3.01.03.03.12       | Design - As Built Documentation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.03.13       | Correlation   |          | hrs        | £    | -        | -  |
| 3.01.03.03.14       | Other   |          | hrs        | £    | -        | -  |
| <b>3.01.03.04</b>   | <b>Permanent Way Design</b>                                       |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.04.01       | Site investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.04.02       | Ground Investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.04.03       | Topographical Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.04.04       | Environmental Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.04.05       | Feasibility Study   |          | hrs        | £    | -        | -  |
| 3.01.03.04.06       | Option Selection Study  |          | hrs        | £    | -        | -  |
| 3.01.03.04.07       | Single Option Development   |          | hrs        | £    | -        | -  |
| 3.01.03.04.08       | Design Development  |          | hrs        | £    | -        | -  |
| 3.01.03.04.09       | Outline Design  |          | hrs        | £    | -        | -  |
| 3.01.03.04.10       | Detailed Design   |          | hrs        | £    | -        | -  |
| 3.01.03.04.11       | Post contract Design  |          | hrs        | £    | -        | -  |
| 3.01.03.04.12       | Design - As Built Documentation                                   |          | hrs        | £    | -        | -  |
| 3.01.03.04.13       | Correlation   |          | hrs        | £    | -        | -  |
| 3.01.03.04.14       | Other   |          | hrs        | £    | -        | -  |
| <b>Page Total</b>   |   |          |            |      | <b>£</b> | <b>-</b>   |
| Oracle Project No.  | 141982  |          |            |      |          |  |
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station |          |            |      |          |  |
| Ref                 | Description   | Quantity | Unit       | Rate | Cost     | Comments   |
| <b>3.01</b>         | <b>Design Team Fees (continued).</b>                              |          |            |      |          |  |
| <b>3.01.03</b>      | <b>Contractor design fees (continued).</b>                        |          | <b>Sum</b> |      |          |  |
| <b>3.01.03.05</b>   | <b>Operational Telecomms System Design</b>                        |          | <b>Sum</b> |      | <b>£</b> | <b>-</b>   |
| 3.01.03.05.01       | Site investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.05.02       | Ground Investigation  |          | hrs        | £    | -        | -  |
| 3.01.03.05.03       | Topographical Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.05.04       | Environmental Survey  |          | hrs        | £    | -        | -  |
| 3.01.03.05.05       | Feasibility Study   |          | hrs        | £    | -        | -  |
| 3.01.03.05.06       | Option Selection Study  |          | hrs        | £    | -        | -  |
| 3.01.03.05.07       | Single Option Development   |          | hrs        | £    | -        | -  |
| 3.01.03.05.08       | Design Development  |          | hrs        | £    | -        | -  |
| 3.01.03.05.09       | Outline Design  |          | hrs        | £    | -        | -  |
| 3.01.03.05.10       | Detailed Design   |          | hrs        | £    | -        | -  |
| 3.01.03.05.11       | Post contract Design  |          | hrs        | £    | -        | -  |

| <i>Southern</i>   |                                      |          |            |      |          |          |
|-------------------|--------------------------------------|----------|------------|------|----------|----------|
| Ref               | Description                          | Quantity | Unit       | Rate | Cost     | Comments |
| 3.01.03.05.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.05.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.05.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.06</b> | <b>Buildings and Property Design</b> |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.06.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.06.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.06.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.06.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.06.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.06.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.06.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.06.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.06.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.06.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.07</b> | <b>Civil Engineering Design</b>      |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.07.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.07.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.07.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.07.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.07.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.07.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.07.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.07.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.07.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.07.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>3.01.03.08</b> | <b>Enabling Works Design</b>         |          | <b>Sum</b> |      | <b>£</b> | <b>-</b> |
| 3.01.03.08.01     | Site Investigation                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.02     | Ground Investigation                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.03     | Topographical Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.04     | Environmental Survey                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.05     | Feasibility Study                    |          | hrs        | £    | -        | -        |
| 3.01.03.08.06     | Option Selection Study               |          | hrs        | £    | -        | -        |
| 3.01.03.08.07     | Single Option Development            |          | hrs        | £    | -        | -        |
| 3.01.03.08.08     | Design Development                   |          | hrs        | £    | -        | -        |
| 3.01.03.08.09     | Outline Design                       |          | hrs        | £    | -        | -        |
| 3.01.03.08.10     | Detailed Design                      |          | hrs        | £    | -        | -        |
| 3.01.03.08.11     | Post contract Design                 |          | hrs        | £    | -        | -        |
| 3.01.03.08.12     | Design - As Built Documentation      |          | hrs        | £    | -        | -        |
| 3.01.03.08.13     | Correlation                          |          | hrs        | £    | -        | -        |
| 3.01.03.08.14     | Other                                |          | hrs        | £    | -        | -        |
| <b>Page Total</b> |                                      |          |            |      | <b>£</b> | <b>-</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects |            |                |                       |              |  |
|---------------------------|--|-------------------------|------------|----------------|-----------------------|--------------|---|
| Project Description       |  | Southern                |            |                |                       |              |   |
| Ref                       | Description  | Quantity                | Unit       | Rate           | Cost                  |              | Comments  |
| <b>3.02</b>               | <b>Project Management Team Fees</b>                                |                         |            | <b>TOTAL</b>   | <b>£ 1,391,241.62</b> |              |   |
| <b>3.02.xx</b>            | <b>Allowance where Development Costs have not been quantified.</b> |                         | <b>Sum</b> |                | <b>£ 1,391,241.62</b> |              |   |
| 3.02.xx.01                | NR Project Management and Sponsor                                  | 1                       | Sum        | £ 1,391,241.62 | £                     | 1,391,241.62 | From percentage allowance; see "indirects" tab.                                     |
| <b>3.02.01</b>            | <b>Employer's Project costs</b>                                    |                         | <b>Sum</b> |                | <b>£ -</b>            |              |   |
| <b>3.02.01.01</b>         | <b>Employer's staff costs</b>                                      |                         | <b>Sum</b> |                | <b>£ -</b>            |              |   |
| 3.02.01.01.01             | Output definition phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.02             | Feasibility phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.03             | Option selection phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.04             | Single option development phase                                    |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.05             | Detailed design phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.06             | Implementation phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.07             | Handback phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.08             | Close out phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.01.01.09             | Other  |                         | hrs        | £ -            | £ -                   | -            |   |
| <b>3.02.02</b>            | <b>Employer's Procured costs</b>                                   |                         | <b>Sum</b> |                | <b>£ -</b>            |              |   |
| <b>3.02.02.02</b>         | <b>Employer's procured staff costs</b>                             |                         | <b>Sum</b> |                | <b>£ -</b>            |              |   |
| 3.02.02.02.01             | Output definition phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.02             | Feasibility phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.03             | Option selection phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.04             | Single option development phase                                    |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.05             | Detailed design phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.06             | Implementation phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.07             | Handback phase   |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.08             | Close out phase  |                         | hrs        | £ -            | £ -                   | -            |   |
| 3.02.02.02.09             | Other  |                         | hrs        | £ -            | £ -                   | -            |   |
|                           | <b>Page Total</b>  |                         |            |                | <b>£ 1,391,241.62</b> |              |   |

| Oracle Project No.  | 141982   |          | Infrastructure Projects |              |                       |          |  |
|---------------------|--|----------|-------------------------|--------------|-----------------------|----------|---|
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station    |          | Southern                |              |                       |          |   |
| Ref                 | Description  | Quantity | Unit                    | Rate         | Cost                  | Comments |   |
| <b>3.03</b>         | <b>Other Project Costs</b>   |          |                         | <b>TOTAL</b> | <b>£ 2,224,537.38</b> |          |   |
| <b>3.03.01</b>      | <b>Other Project Costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| <b>3.03.01.01</b>   | <b>Land Costs</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.01.01       | Acquisition of land  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.02       | Rights of way and way leaves   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.01.03       | Fees : associated with acquisition of land or rights of way          |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.02</b>   | <b>Fees to statutory and public bodies</b>                           |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.02.01       | Planning fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.02       | Building control fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.02.03       | Fees to neighbouring land owners and users to facilitate the project | 1        | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.03</b>   | <b>Payments to public and statutory bodies</b>                       |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.03.01       | Adoption charges in connection with highways and bridges             |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.02       | Maintenance charges in connection with highways and bridges          |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.03.03       | Planning contributions   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.04</b>   | <b>Sponsor's agent fees</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.04.01       | Planning   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.02       | Lobbying and public consultation                                     |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.03       | Legal services   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.04       | Taxation and financial services                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.05       | Collaboration, business relationship management systems              |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.04.06       | Facilitation services  |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.05</b>   | <b>Employer's office &amp; supplied plant costs</b>                  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.05.01       | Employer's main office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.02       | Employer's project office costs                                      |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.03       | Employer's site office costs   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.05.04       | Employer owned plant   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.06</b>   | <b>Research for innovative products</b>                              |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.06.01       | Concept design   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.02       | Testing  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.03.01.06.03       | Piloting   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.07</b>   | <b>Finance costs</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.03.01.07.01       | Commitment fees  |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.02       | Interest   |          | Sum                     | £ -          | £ -                   |          |   |
| 3.02.05.03.03       | Credit charges   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.08</b>   | <b>Marketing</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.08.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.09</b>   | <b>Stakeholder management</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.09.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.10</b>   | <b>Archaeological</b>  |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.10.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.11</b>   | <b>Insurance</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.11.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
| <b>3.03.01.12</b>   | <b>Other</b>   |          | <b>Sum</b>              |              | <b>£ -</b>            |          |   |
| 3.02.01.12.01       | Fees   |          | Sum                     | £ -          | £ -                   |          |   |
|                     | <b>Page Total</b>  |          |                         |              | <b>£ -</b>            |          |   |

| Ref                 | Description   | Quantity | Unit       | Rate           | Cost                  | Comments  |
|---------------------|---|----------|------------|----------------|-----------------------|---|
| Oracle Project No.  | 141982  |          |            |                |                       |   |
| Project Description | Liverpool Street Station Option 4: New Shorditch Terminus Station |          |            |                |                       |  |
| Ref                 | Description   | Quantity | Unit       | Rate           | Cost                  | Comments  |
| 3.03                | <b>Other project costs (continued).</b>                           |          |            |                |                       |   |
| 3.03.02             | <b>Disruption of asset use</b>                                    |          | <b>Sum</b> |                | <b>£ 2,224,537.38</b> |   |
| 3.03.02.01          | <b>Employer's costs</b>   |          | <b>Sum</b> |                | <b>£ 579,684.01</b>   |   |
| 3.03.02.01.01       | Possessions   |          | Nr         | £ -            | £ -                   |   |
| 3.03.02.01.02       | Isolations  | 1        | Nr         | £ 579,684.01   | £ 579,684.01          | Allowance 5% of indirect construction cost  |
| 3.03.02.02          | <b>Decanting and relocation costs</b>                             |          | <b>Sum</b> |                | <b>£ -</b>            |   |
| 3.03.02.02.01       | Temporary relocation costs  |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.02       | Rents and other running costs                                     |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.03       | Compensation costs  |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.02.04       | Payments for interruption or disturbance of use                   |          | Sum        | £ -            | £ -                   |   |
| 3.03.02.03          | <b>Interruption of use</b>  |          | <b>Sum</b> |                | <b>£ 1,644,853.37</b> |   |
| 3.03.02.03.01       | Payments to asset users : planned                                 | 1        | Sum        | £ 1,644,853.37 | £ 1,644,853.37        | TOC/FOC compensation?   |
| 3.03.02.03.02       | Costs of diversionary routes or alternative lines of supply       |          | Sum        | £ -            | £ -                   |   |
|                     | <b>Page Total</b>   |          |            |                | <b>£ 2,224,537.38</b> |   |

| Oracle Project No. 141982   |   | Infrastructure Projects   |            |                 |                        | NetworkRail                        |
|---|---|---|------------|-----------------|------------------------|------------------------------------|
| Project Description   |   | Southern  |            |                 |                        |                                    |
| Liverpool Street Station Option 4: New Shorditch Terminus Station |   | Quantity  | Unit       | Rate            | Cost                   | Comments                           |
| Ref   | Description   |   |            |                 |                        |                                    |
| 4.01  | <b>Risk</b>   |   |            | <b>TOTAL</b>    | <b>£ 10,611,840.38</b> |                                    |
| 4.01.xx   | <b>Allowance where risks have not been quantified.</b>    |   | <b>Sum</b> |                 | <b>£ 10,611,840.38</b> |                                    |
| Y   | Pre Grip  | 50  | %          | £ 21,223,680.76 | £ 10,611,840.38        | Select "Y" dependant on Grip stage |
| N   | Grip 1  | 40  | %          | £ 21,223,680.76 | £                      | Select "Y" dependant on Grip stage |
| N   | Grip 2  | 30  | %          | £ 21,223,680.76 | £                      | Select "Y" dependant on Grip stage |
| N   | Grip 3  | 20  | %          | £ 21,223,680.76 | £                      | Select "Y" dependant on Grip stage |
| N   | Grip 4  | 15  | %          | £ 21,223,680.76 | £                      | Select "Y" dependant on Grip stage |
| N   | Grip 5  | 10  | %          | £ 21,223,680.76 | £                      | Select "Y" dependant on Grip stage |
| 4.01.01   | <b>Total Risk Allowance</b>                               |   | <b>Sum</b> |                 | <b>£ -</b>             |                                    |
| 4.01.01.01  | <b>Design development risks</b>                           |   | <b>Sum</b> |                 | <b>£ -</b>             |                                    |
| 4.01.01.01.01   | Inadequate or unclear Project Brief                       |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.02   | Unclear Design Team Responsibilities                      |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.03   | Unrealistic Design Programme                              |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.04   | Inadequate Site Investigation                             |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.05   | Planning Constraints                                      |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.06   | Appropriateness of Design                                 |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.07   | Degree of Novelty   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.08   | Ineffective Design Co-Ordination                          |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.09   | Reliability of Estimating Data                            |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.10   | Design Management   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.01.11   | Other   |   | Sum        | £               | £                      | -                                  |
| <b>Page Total</b>   |   |   |            |                 | <b>£ 10,611,840.38</b> |                                    |
|   |   |   |            |                 |                        |                                    |
| Oracle Project No. 141982   |   |   |            |                 |                        |                                    |
| Project Description   |   | Liverpool Street Station Option 4: New Shorditch Terminus Station |            |                 |                        |                                    |
| Ref   | Description   | Quantity  | Unit       | Rate            | Cost                   | Comments                           |
| 4.01  | <b>Risk (continued).</b>                                  |   |            |                 |                        |                                    |
| 4.01.01.02  | <b>Construction risks</b>                                 |   | <b>Sum</b> |                 | <b>£ -</b>             |                                    |
| 4.01.01.02.01   | Inadequate Site Investigation                             |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.02   | Archaeological remains                                    |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.03   | Underground obstructions                                  |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.04   | Contaminated ground                                       |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.05   | Adjacent structures                                       |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.06   | Geotechnical problems                                     |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.07   | Ground water  |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.08   | Asbestos and other hazardous materials                    |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.09   | Invasive plant growth                                     |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.10   | Tree preservation orders                                  |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.11   | Ecological issues   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.12   | Environmental impact                                      |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.13   | Physical Access to site                                   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.14   | Existing occupancies / users                              |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.15   | Restricted working hours / routines                       |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.16   | Maintaining access  |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.17   | Maintaining existing services                             |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.18   | Additional infrastructure                                 |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.19   | Existing services   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.20   | Location of existing services                             |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.21   | Relocation of existing services                           |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.22   | Statutory undertakers                                     |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.23   | Uncertainty over the source and availability of materials |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.24   | Appropriateness of specification                          |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.25   | Incomplete design   |   | Sum        | £               | £                      | -                                  |
| 4.01.01.02.26   | Weather and seasonal implications                         |   | Sum        | £               | £                      | -                                  |

| Ref               | Description   | Southern |            |          | Cost     | Comments |          |
|-------------------|---|----------|------------|----------|----------|----------|----------|
|                   |   | Quantity | Unit       | Rate     |          |          |          |
| 4.01.01.02.27     | Industrial relations  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.28     | Remote site   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.29     | Competence of contractor and sub-contractors                                    |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.30     | Health and safety   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.31     | Ineffective quality management  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.32     | Phasing requirements  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.33     | Ineffective handover procedures   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.34     | Disputes and claims   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.35     | Effect of changes / variations on construction programme                        |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.36     | Cumulative effect of changes / variations on the construction programme         |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.37     | Defects   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.38     | Accident / injury   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.39     | Access to site  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.40     | Human relations   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.02.41     | Other   |          | Sum        | £        | -        | £        | -        |
| <b>4.01.01.03</b> | <b>Employer change risks</b>  |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>£</b> | <b>-</b> |
| 4.01.01.03.01     | Specific changes in requirements  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.02     | Changes in quality  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.03     | Changes in time   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.04     | Employer driven changes / variations introduced during the implementation stage |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.05     | Effect of construction duration   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.06     | Cumulative effect of numerous changes   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.03.07     | Other   |          | Sum        | £        | -        | £        | -        |
| <b>4.01.01.04</b> | <b>Employer other risks</b>   |          | <b>Sum</b> | <b>£</b> | <b>-</b> | <b>£</b> | <b>-</b> |
| 4.01.01.04.01     | Project brief   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.02     | Timescales  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.03     | Inadequate Asset Information  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.04     | Management  |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.05     | Funding   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.06     | Third parties   |          | Sum        | £        | -        | £        | -        |
| 4.01.01.04.07     | Other   |          | Sum        | £        | -        | £        | -        |
|                   | <b>Page Total</b>   |          |            |          |          | <b>£</b> | <b>-</b> |

| Oracle Project No. 141982 |  | Infrastructure Projects   |            |                 |          | Network Rail        |  |
|---------------------------|--|---|------------|-----------------|----------|---------------------|--|
| Project Description       |  | Liverpool Street Station Option 4: New Shorditch Terminus Station |            |                 |          |                     |  |
|                           |  | Southern  |            |                 |          |                     |  |
| Ref                       | Description  | Quantity  | Unit       | Rate            | Cost     | Comments            |  |
| <b>5.01</b>               | <b>Inflation</b>   |   |            | <b>TOTAL</b>    | <b>£</b> | <b>5,144,207.46</b> |  |
| <b>5.01.xx</b>            | <b>Allowance where Inflation Costs have not been quantified.</b>     |   | <b>Sum</b> |                 | <b>£</b> | <b>5,144,207.46</b> |  |
| 5.01.xx.01                | Inflation year 1   | 2.75%   | %          | £ 21,223,680.76 | £        | 583,651.22          |  |
|                           | Inflation year 2   | 2.75%   | %          | £ 21,807,331.98 | £        | 599,701.63          |  |
|                           | Inflation year 3   | 2.75%   | %          | £ 22,407,033.61 | £        | 616,193.42          |  |
|                           | Inflation year 4   | 2.75%   | %          | £ 23,023,227.04 | £        | 633,138.74          |  |
|                           | Inflation year 5   | 2.75%   | %          | £ 23,656,365.78 | £        | 650,550.06          |  |
|                           | Inflation year 6   | 2.75%   | %          | £ 24,306,915.84 | £        | 668,440.19          |  |
|                           | Inflation year 7   | 2.75%   | %          | £ 24,975,356.02 | £        | 686,822.29          |  |
|                           | Inflation year 8   | 2.75%   | %          | £ 25,662,178.31 | £        | 705,709.90          |  |
|                           |  | 710398733%  |            |                 |          |                     |  |
| <b>5.01.01</b>            | <b>Inflation</b>   |   | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| <b>5.01.01.01</b>         | <b>Tender inflation</b>  |   | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| 5.01.01.01.01             | Inflation : date of estimate to tender return                        |   | Sum        | £               | -        | £ -                 |  |
| 5.01.01.01.02             | Inflation : delays in procurement programme                          |   | Sum        | £               | -        | £ -                 |  |
| <b>5.01.01.02</b>         | <b>Construction inflation</b>  |   | <b>Sum</b> |                 | <b>£</b> | <b>-</b>            |  |
| 5.01.01.02.01             | Inflation : date of commencement to mid-point of construction period |   | Sum        | £               | -        | £ -                 |  |
| 5.01.01.02.02             | Exceptional inflation  |   | Sum        | £               | -        | £ -                 |  |
|                           | <b>Page Total</b>  |   |            |                 | <b>£</b> | <b>5,144,207.46</b> |  |

| Oracle Project No. 141982   |   | Infrastructure Projects |            |              |          |          | NetworkRail |
|---|---|-------------------------|------------|--------------|----------|----------|-------------|
| Project Description   |   | Southern                |            |              |          |          |             |
| Liverpool Street Station Option 4: New Shorditch Terminus Station |   |                         |            |              |          |          |             |
| Ref   | Description                               | Quantity                | Unit       | Rate         | Cost     | Comments |             |
| <b>6.01</b>   | <b>Tax Allowances and Grants</b>          |                         |            | <b>TOTAL</b> | <b>£</b> | <b>-</b> |             |
| <b>6.01.01</b>  | <b>Tax allowances and grants</b>          |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| <b>6.01.01.01</b>   | <b>Capital allowances</b>                 |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.01.01   | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.02   | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.03   | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.01.04   | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.02</b>   | <b>Grants</b>                             |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.02.01   | Plant and equipment                       |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.02   | Other allowances : type stated            |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.03   | Protected buildings or structures         |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.02.04   | Other grants : type stated                |                         | Sum        | £            | -        | £ -      |             |
| <b>6.01.01.03</b>   | <b>VAT - Value Added Tax</b>              |                         | <b>Sum</b> |              | <b>£</b> | <b>-</b> |             |
| 6.01.01.03.01   | Input tax : non recoverable               |                         | Sum        | £            | -        | £ -      |             |
| 6.01.01.03.02   | Output tax chargeable to users or tenants |                         | Sum        | £            | -        | £ -      |             |
|   | <b>Page Total</b>                         |                         |            |              | <b>£</b> | <b>-</b> |             |

## BOQ - Carried fwd / Brought fwd - Gross

| Item    | Bill Code | SMM code      | Bill description   | Unit | Bill quantity | Gross      |              |
|---------|-----------|---------------|--|------|---------------|------------|--------------|
|         |           |               |  |      |               | Rate       | Amount       |
|         |           |               | <p><i>Liverpool Street Station Train Capacity</i></p> <p><i>Pre Ggrip Estimate</i></p> <p><i>Option 4: New Terminus Station</i></p> <p><i>Assumptions:</i></p> <p><i>We have not allowed any cost for strengthening of Braithwaite viaduct.</i></p> <p><i>Our prices are based on the assumption that Braithwaite viaduct has sufficient capacity to bear the load of new operational railway platform without any modification to the structure.</i></p> <p><i>Our prices are based on the assumption that all the works related to Shoreditch new terminus will suitably be accommodated within the area available on the Braithwaite Viaduct.</i></p> <p><i>We have assumed that the ticket office will be based at the ground level.</i></p> <p><i>Within our pricing we have assumed the ticket office area to be 60m2.</i></p> <p><i>Our Disposal prices are based on assumption that disposal of uncontaminated material.</i></p> |      |               |            |              |
|         |           |               | Carried to summary   |      |               |            | 0.00         |
| 1       |           |               | <b>DIRECT CONSTRUCTION WORKS</b>   |      |               |            |              |
| 101     |           |               | <b>Railway Control Systems</b>   |      |               |            |              |
| 10101   |           |               | <i>Signalling Systems</i>  |      |               |            |              |
|         |           | 1.01.01.04.01 | 4 aspects LED signal   | nr   | 1             | 9,442.99   | 9,442.99     |
| 1010105 |           |               | <u>Train Detection Systems</u>   |      |               |            |              |
|         |           | 1.01.01.05.01 | Track Circuits   | nr   | 1             | 7,076.90   | 7,076.90     |
|         |           | 1.01.01.05.05 | Insulated Block Joints (IBJs)  | nr   | 2             | 11,276.84  | 22,553.68    |
|         |           | 1.01.01.05.06 | Impedance Bonds  | nr   | 1             | 9,276.84   | 9,276.84     |
| 1010106 |           |               | <u>Train Protection Systems</u>  |      |               |            |              |
|         |           | 1.01.01.06.01 | Automatic Warning system (AWS)   | nr   | 1             | 1,541.07   | 1,541.07     |
| 1010108 |           |               | <u>Cables and Containment</u>  |      |               |            |              |
|         |           | 1.01.01.08.01 | Cables   | m    | 600           | 20.00      | 12,000.00    |
|         |           |               | <i>Allowance</i>   |      |               |            |              |
|         |           | 1.01.01.08.02 | Containment  | m    | 600           | 61.94      | 37,164.00    |
| 1010110 |           |               | <u>Equipment Housings, Platforms and Foundations</u>   |      |               |            |              |
|         |           | 1.01.01.10.01 | Location case, complete with racking and equipment: type stated  | nr   | 1             | 1,603.17   | 1,603.17     |
| 10201   |           |               | <i>Power Distribution</i>  |      |               |            |              |
| 10202   |           |               | <i>Overhead Line Equipment (OLE)</i>   |      |               |            |              |
|         |           | 1.02.02.01.06 | OLE support structure: cantilever member   | nr   | 48            | 25,000.00  | 1,200,000.00 |
| 103     |           |               | <b>Electric Power and Plant</b>  |      |               |            |              |
| 10301   |           |               | <i>Primary Power Supply</i>  |      |               |            |              |
| 1030105 |           |               | <u>Small Power for Equipment</u>   |      |               |            |              |
|         |           | 1.03.01.05.01 | DNO power cubicle  | nr   | 1             | 12,500.00  | 12,500.00    |
|         |           |               | Allowance for Power Supply   | Sum  | 1             | 180,000.00 | 180,000.00   |
| 104     |           |               | <b>Permanent Way</b>   |      |               |            |              |
| 10401   |           |               | <i>Plain Line</i>  |      |               |            |              |
|         |           | 1.04.01.03.01 | Jointed Track( Plain Line Track Works)   | m    | 1,200         | 1,215.00   | 1,458,000.00 |
|         |           | 1.04.03.01.03 | Sliding Buffer   | nr   | 4             | 15,000.00  | 60,000.00    |
| 10404   |           |               | <i>Track Drainage</i>  |      |               |            |              |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code      | SMM code      | Bill description  | Unit           | Bill quantity | Gross      |              |
|------|----------------|---------------|---|----------------|---------------|------------|--------------|
|      |                |               |   |                |               | Rate       | Amount       |
|      |                | 1.04.04.01.01 | Drainage below ground: trench & pipe work : depth stated                          | m              | 1,200         | 102.00     | 122,400.00   |
|      | <u>1040402</u> |               | <u>Inspection Chambers</u>  |                |               |            |              |
|      |                | 1.04.04.02.02 | Interceptors (Catchpit 30 m centers)  | nr             | 40            | 1,300.00   | 52,000.00    |
|      | 10402          |               | <i>Switches &amp; Crossings (S&amp;C)</i>   |                |               |            |              |
|      | <u>1040203</u> |               | <u>Turnouts and Crossings</u>   |                |               |            |              |
|      |                | 1.04.02.03.01 | Standard Turnout  | nr             | 2             | 325,000.00 | 650,000.00   |
|      | 105            |               | Operational Telecommunication Systems   |                |               |            |              |
|      | 10501          |               | <i>Information Transmission Systems</i>   |                |               |            |              |
|      | 10503          |               | <i>Station Information and Surveillance Systems (SISS)</i>                        |                |               |            |              |
|      |                | 1.05.03.01.01 | PA system - station   | nr             | 48            | 750.00     | 36,000.00    |
|      | <u>1050303</u> |               | <u>Closed Circuit Television (CCTV)</u>   |                |               |            |              |
|      |                | 1.05.03.03.01 | Cameras : remote  | nr             | 6             | 5,936.00   | 35,616.00    |
|      | 10504          |               | <i>Operational Management Systems</i>   |                |               |            |              |
|      | <u>1050402</u> |               | <u>Train Monitoring Systems</u>   |                |               |            |              |
|      |                | 1.05.04.02.01 | Visual display units  | nr             | 4             | 7,000.00   | 28,000.00    |
|      | 106            |               | Buildings & Property  |                |               |            |              |
|      | <u>1060002</u> |               | <u>Major Demolition Works</u>   |                |               |            |              |
|      |                | 1.06.00.02.01 | Demolition works for 4 arches from Brick lane side.                               | m <sup>2</sup> | 7,200         | 42.89      | 308,808.00   |
|      |                |               | Demolition works for unlisted portion of Braithwaite viaduct ( assumed 10m X 15m) | m <sup>2</sup> | 150           | 1,040.00   | 156,000.00   |
|      | 10602          |               | <i>Superstructure</i>   |                |               |            |              |
|      | <u>1060202</u> |               | <u>Upper Floors</u>   |                |               |            |              |
|      |                | 1.06.02.02.04 | Platforms   | sum            | 2             | 819,360.00 | 1,638,720.00 |
|      |                | 1.06.02.04.01 | Stair / ramp structures   | nr             | 1             | 100,000.00 | 100,000.00   |
|      | 10605          |               | <i>Services</i>   |                |               |            |              |
|      | <u>1060510</u> |               | <u>Lift and Conveyor Installations</u>  |                |               |            |              |
|      |                | 1.06.05.10.01 | Lift and enclosed hoists  | nr             | 1             | 337,000.00 | 337,000.00   |
|      | 10605          |               | <i>Services</i>   |                |               |            |              |
|      |                | 1.06.06.01.02 | Building units(ticket office)   | m <sup>2</sup> | 60            | 3,815.00   | 228,900.00   |
|      |                | 1.06.05.02.01 | Services equipment (Gate Lines)   | nr             | 4             | 58,500.00  | 234,000.00   |
|      |                | 1.06.04.01.03 | Special purpose fittings, furnishings and equipment (Ticket vending machine)      | nr             | 2             | 82,500.00  | 165,000.00   |
|      | <u>1060508</u> |               | <u>Electrical Installations</u>   |                |               |            |              |
|      |                | 1.06.05.08.03 | Lighting installations  | m <sup>2</sup> | 4,800         | 195.00     | 936,000.00   |
|      | 107            |               | Civil Engineering   |                |               |            |              |
|      |                |               | <i>Permenant Bridge works</i>   |                |               |            |              |
|      |                |               | Construction of Steel bridge  | m <sup>2</sup> | 552           | 5,000.00   | 2,760,000.00 |
|      |                |               | Demoliation of existing bridge  | m <sup>2</sup> | 552           | 1,040.00   | 574,080.00   |
|      | 10701          |               | <i>Earthworks</i>   |                |               |            |              |
|      |                | 1.07.01.01.02 | Disposal  | m <sup>3</sup> | 7,200         | 25.00      | 180,000.00   |
|      | 108            |               | Enabling Works  |                |               |            |              |
|      | 10802          |               | <i>Site Clearance and Preparation Works</i>                                       |                |               |            |              |
|      |                | 1.08.02.01.01 | General clearance   | sum            | 1             | 30,000.00  | 30,000.00    |
|      | 10803          |               | <i>Structure Specific Enabling Works</i>  |                |               |            |              |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code      | SMM code      | Bill description  | Unit | Bill quantity | Gross         |               |
|------|----------------|---------------|---|------|---------------|---------------|---------------|
|      |                |               |   |      |               | Rate          | Amount        |
|      |                | 1.08.03.03.06 | Platform and building furniture and equipment :( access Platform) | nr   | 2             | 5,000.00      | 10,000.00     |
|      |                |               | Carried to summary  |      |               |               | 11,593,682.65 |
| 2    |                |               | INDIRECT CONSTRUCTION WORKS                                       |      |               |               |               |
|      | <u>1080303</u> |               | <u>Temporary Alterations</u>                                      |      |               |               |               |
| 201  |                |               | Preliminaries   |      |               |               |               |
|      |                |               | Preliminaries   | sum  | 1             | 2,898,420.04  | 2,898,420.04  |
| 202  |                |               | Overheads and Profit  |      |               |               |               |
|      |                |               | Overhead & Profit   | sum  | 1             | 1,956,433.53  | 1,956,433.53  |
|      |                |               | Carried to summary  |      |               |               | 4,854,853.57  |
| 3    |                |               | EMPLOYER'S INDIRECT COSTS   |      |               |               |               |
| 301  |                |               | Design Team Fees  |      |               |               |               |
|      |                |               | Design Team Fee   | sum  | 1             | 1,159,368.00  | 1,159,368.00  |
|      |                |               | Network Rail Project team fee                                     | sum  | 1             | 1,391,241.60  | 1,391,241.60  |
| 303  |                |               | Other Project Costs   |      |               |               |               |
|      |                |               | Other Project cost  | sum  | 1             | 2,224,537.38  | 2,224,537.38  |
|      |                |               | Carried to summary  |      |               |               | 4,775,146.98  |
| 4    |                |               | RISK  |      |               |               |               |
|      |                |               | Risk  | sum  | 1             | 10,611,840.36 | 10,611,840.36 |
|      |                |               | Carried to summary  |      |               |               | 10,611,840.36 |
| 5    |                |               | INFLATION   |      |               |               |               |
|      |                |               | Inflation Mid of CP6  | sum  | 1             | 5,144,620.03  | 5,144,620.03  |
|      |                |               | Carried to summary  |      |               |               | 5,144,620.03  |

## BOQ - Carried fwd / Brought fwd - Gross

| Item | Bill Code | SMM code | Bill description            | Unit | Bill quantity | Gross |               |
|------|-----------|----------|-----------------------------|------|---------------|-------|---------------|
|      |           |          |                             |      |               | Rate  | Amount        |
|      |           |          |                             |      |               |       | 0.00          |
|      |           |          | DIRECT CONSTRUCTION WORKS   |      |               |       | 11,593,682.65 |
|      |           |          | INDIRECT CONSTRUCTION WORKS |      |               |       | 4,854,853.57  |
|      |           |          | EMPLOYER'S INDIRECT COSTS   |      |               |       | 4,775,146.98  |
|      |           |          | RISK                        |      |               |       | 10,611,840.36 |
|      |           |          | INFLATION                   |      |               |       | 5,144,620.03  |
|      |           |          | TOTAL                       |      |               |       | 36,980,143.59 |

## Liverpool Street to Bethnal Green –8 tracking

[NR –name withheld Reg 13(1)] Notes (to be read with evolving paper written by [NR –name withheld Reg 13(1)])

### Background and Schemes Development

There has been a prospective scheme for putting 8 tracks in at the approach to Liverpool Street station for some time.

Moving out from the station the following design and protection has been included in various schemes:

| Scheme                         | Location                                   | Built?                       | 8 tracking protected  | Power Used   | Cost / Notes  |
|--------------------------------|--|------------------------------|---|--|---|
| Liverpool Street Redevelopment | Platform areas                             | Yes                          | No  |  |   |
| Broadgate (original)           | Platforms and Throat                       | Yes                          | No  |  | No specific provision made, but 8 track / 22 platform scheme under Broadgate Phase 12/13 fits                                 |
| Broadgate Phase 12/13 raft     | Between Primrose and Worship Street        | Yes                          | Yes against prospective scheme for 8 track: 22 platform station | Railtrack Zone Executive Sign off, (presumably) accepted by Railtrack Property | Signed off by East Anglia Zone Executive 5/11/98. Estimated £2m extra cost in raft for greater beam spans etc                 |
| Northgate                      | Between Worship Street and Shoreditch High | No, only Planning Permission | Yes   | SRA  | Scheme in the early 2000s. Problem identified by Railtrack, protected using SRA powers. Development was required to include a |

|                            |  |                |                |               |   |
|----------------------------|--|----------------|----------------|---------------|---|
|                            | Street; west side of formation                         |                |                |               | subsurface level area which continued the 8 tracking strip from the location used for the Broadgate phase 12/13 work  |
| Bishopsgate Goods Yard     | Between Shoreditch High Street and Brick Lane (approx) | No             | Not closed     |               | Significant debate over the years about the scope for 8 tracking etc  |
| East London Line Extension | Brick Lane to Bethnal Green                            | About to start | No (then yes?) | SRA as Client | Original TWA made no provision for 8 tracking, but “flexicurve” quality sketch at the time suggested that it might be possible to put an extra 2 tracks in under the ELLX through the span to be used for the Code Street Extension. Later scheme plans altered to provide 8 tracking capability? |

## Route Strategy

The following comments are relevant:

- It is widely thought that the 8 tracking scheme was considered and rejected as part of the Liverpool Street Redevelopment in the late 1980s (but there are no records to check this). An outline scheme for 22 platforms at Liverpool Street was produced at that time but not taken up
- A review of requirements for extra paths into Liverpool Street was carried out as part of the development of the Broadgate Phase 12/13 work (between Primrose Street and Worship Street) in the late 1990s. at that time:

- It was possible to demonstrate that a demand could be demonstrated for additional capacity at Liverpool Street
- It is likely that extra tracks into Liverpool Street would also require extra platforms at the station itself. An initial sketch of what platforms could be provided at Liverpool Street suggested that an extra 3 12 car platforms, and 1 8 car platform (reducing one of the current platforms to 8 car length in the process) could be built. None of these platforms would be easy or cheap to build with significant disruption and in part some significant impact on current retail areas of the station
- There is considered to be a relatively strong link between 8 tracking and Crossrail. To some extent Crossrail might remove one of the key reasons for an 8 tracking scheme and would probably need additional tracks to the east of the tunnel portal. If Crossrail is not built the situation is less clear
- There are other route use issues which impact on requirements for an 8 tracking scheme –e.g. the possible diversion of West Anglia traffic to Stratford
- The Greater Anglia RUS will consider the matter further in early 2006

#### Finance and Scheme development

The following comments are relevant:

- Schemes for 8 tracking and new platforms at Liverpool Street are at no more than sketch plan stage (GRIP level negative)
- The only good scheming work was developing a track layout for an 8 track, 22 platform throat for Liverpool Street against which the columns for Broadgate Phase 12/13 were positioned. This is a relatively difficult layout (being on a

severe curve) which together with the placement of the columns will probably not change if the main scheme were to be put in place.

- Estimate for 8 tracking have similarly not progressed beyond a “fag packet” quality estimate produced in the mid 1990s based on broad rules of thumb (£X per mile of signalling). The estimate of £52m for the work between Liverpool Street and Bethnal Green is now expected to be significantly underestimated.
- Significant disruption would take place whilst an 8 tracking scheme was implemented. Particular problems might be in changing the layout in the station throat; extending some bridges, and in constructing the new retaining walls and adjusting the railway infrastructure through the Bishopsgate good yard area
- A Bishopsgate Good Yard scheme in the late 1990s did consider the structural capabilities of the covered way through which the West Anglia “subs” lines run.
- Bishopsgate Goods Yard was included in the property transactions with Railtrack Group as part of the introduction of Network Rail, although the final papers for this transaction may either not be complete or not available.

## **8-tracking proposal for the Liverpool Street to Bethnal Green Jn. section.**

### **Purpose of this paper**

This paper invites the Board to decide whether they wish to protect the possibility of eight-tracking the Liverpool Street Station to Bethnal Green Jn. section.

### **Executive summary**

The Great Eastern Route has a bottleneck between Bethnal Green Jn. and Liverpool Street Station caused by two four-track railways (West Anglia & Great Eastern) feeding into a six-track section. Historically, several schemes to increase that section to eight tracks have been proposed; during the SRA's time of sponsorship of the East London Line Project they were concerned that any work undertaken should not preclude eight-tracking. This is now a concern to TfL, current sponsors of the Project, as such protection involves them in extra costs.

All of the historical schemes have involved the use of part of the Bishopsgate Goods Yard site, currently the subject of a redevelopment scheme. This also impacts upon the currently ongoing dispute with TfL/LUL regarding compensation for the use of part of the site for the East London Line project. Network Rail has not proposed to carry out an 8-tracking scheme.

### Issues for consideration:

1. If Network Rail, or DfT in a strategic role, wish to make provision for eight-tracking within the current Bishopsgate Goods Yard redevelopment proposals, the cost will be in the order of £25-30m<sup>1</sup>.
2. Crossrail influence – If Crossrail is built it will, in effect, give an additional two tracks between Liverpool Street and Bethnal Green thus moving the need for an additional two 'surface' lines into the distant future.
3. The East London Line Project wish to modify the SRA sponsored plan to make passive provision for eight-tracking during the rebuilding of bridge GE19 (Shoreditch). Their intention to use a reinforced earth embankment in place of a Warren Truss girder bridge would, while not precluding eight-tracking, add extra cost should it ever be undertaken<sup>2</sup>.

### Notes:

- 1 – Refer to 'Scheme 1' below.
- 2 – Refer to 'Scheme 3' below.

## **Background**

At Bethnal Green Junction, the 'E' and Main Lines from Stratford join the Fast and Suburban lines from Hackney Downs. From Bethnal Green Junction to Liverpool Street there are no 'Fast' lines; from the track geometry the Fast lines combine with the Main lines. In practice however, Up traffic from both Fast and Suburban lines is combined at Bethnal Green North Jn. onto the Suburban lines, as no vacant paths exist on the Main Lines. The station at Bethnal Green has platforms on the Suburban lines only.

The relatively recent construction of the Stansted Airport branch, and the unexpectedly rapid growth in Airport traffic, has highlighted the fact that opportunities for growth (expressed as quantum of train paths) on the West Anglia Route do not exist. Although there are other 'bottlenecks', the fundamental constraints are:

- a. Liverpool Street Station itself (ability to receive & disperse passengers)
- b. Liverpool Street 'Throat' (ability to handle conflicting movements efficiently)
- c. Liverpool Street Throat to Bethnal Green East Junction (track capacity)

Although various proposals for enhancement of the Stansted route are being considered by BAA, none address these issues.

### Physical Provision

When the reconstruction of Liverpool Street station was being planned in the 1980s, considerable thought was given to possible future requirements. This culminated in a scheme for a 22-platform layout, deemed to be the maximum that could be built.

The second stage of the Broadgate development (sites 12 & 13), which was to construct a second raft over the 'throat' at Liverpool Street, would constrain the layout at Liverpool Street for the foreseeable future. Accordingly, the then East Anglia Zone again considered all possibilities for future development so that suitable provision could be made in the raft's supporting structure. These were built to accommodate the 22-platform layout referred to above, plus two extra tracks at the North side, at a cost of ca. £2m.

Outside of NR's boundary, a development known as 'Northgate' was proposed in 2001. As a result of pressure from NR, the design of its basement makes allowance for 8-tracking.

All of the above schemes assume that the additional tracks will commence to the North-East side of the existing 'throat'.

## **8-tracking proposals**

### Scheme 1

The method of construction involving least disruption to the operating railway involves construction of an additional pair of lines to the North of and roughly paralleling the existing Suburban lines. This would involve use of part of the Bishopsgate Goods Yard site, and acquisition of land for the remainder of the route to Bethnal Green. Such a scheme seems to have been developed by BR at least as far as ground plans in the early 1980s.

During the SRA's involvement in the West Anglia Route Modernisation proposals (2000-2001) some very limited development work of such a proposal was undertaken. A PDAM Level 0-1 cost of £75m for 8-tracking was suggested, but the proposal was not taken further.

To protect the route through the Bishopsgate Goods Yard site, currently the subject of development proposals, would involve works at a budget cost of £25-30m. It would also necessitate demolition of ca. 50% of the listed Braithwaite viaduct.

### Scheme 2

The British Railways (Liverpool Street Station) Act 1983 included powers to realign the existing railway between Liverpool Street and Bethnal Green (Work No.1), and powers to construct an additional railway between a new station on part of the Broad Street site and Bethnal Green (Work No.2). The latter seems to have been intended to replace the now closed line between Dalston Jn. and Broad Street. The scheme involved wholesale realignment of all lines, straightening out the S-curved approach and generally moving the railway to the Southern side of the Railway-owned corridor. Although the proposal would have used much of the Bishopsgate Goods Yard site, further to the East work No. 2 was not permitted to deviate outside the (then) BRB boundary.

### Scheme 3

Now disused, bridge GE19 carried the lines serving the former Bishopsgate Goods Yard over the GE Main Line. As the East London Line project has been developed, the necessity for demolition/replacement of GE19 has been established. During the SRA's time of sponsorship of the project, they were of the opinion that any works in the Liverpool Street to Bethnal Green area should not preclude 8-tracking at some time in the future. Accordingly Babbie produced a scheme for 8-tracking through the GE19 area. All existing tracks would be realigned; 5 tracks would be accommodated under the replacement GE19 bridge while the other 3 would pass under a second span South-East of the first. It is the provision of this second span that the Project currently wishes to avoid.

DRAFT

**Recommendation:**

That Network Rail seek DfT direction on whether these lands should be retained in such a way that does not preclude a viable scheme for 8-tracking at a future date.

*Note: The finished paper will include, as an attachment, a plan showing the Bishopsgate site as a minimum.*



Community Relations  
London & South East  
1<sup>st</sup> Floor  
40 Melton Street  
London NW1 2EE

Helpline: 08457 11 41 41



Our ref: [redacted]

28 November 2007

Dear [redacted]

Thank you for your call to our National Helpline regarding a possible 8-track railway system at Liverpool Street station.

At the present time, Network Rail has plans to renew the existing track at Liverpool Street station. This will occur at the same time as Transport for London demolish a 120 year old iron and brick bridge structure just outside Liverpool Street station and will be completed during a ten day closure of Liverpool Street station during the Christmas and New Year period.

Network Rail currently has no plans to build an 8 track railway system at Liverpool Street station.

However, plans are currently being drawn up under the proposed Crossrail railway system to expand Liverpool Street station. Further information can be found on this at the below website.

<http://www.crossrail.co.uk/>

I hope that this information is of use to you.

Yours sincerely



Community Relations Advisor



## EMAIL 1

---

From: [NR – name withheld Reg 13(1)]  
Sent: 26 July 2010 11:34  
To: [NR – name withheld Reg 13(1)]  
Cc: [NR – names withheld Reg 13(1)]  
Subject: RE: 8 track box

Hi [NR – name withheld Reg 13(1)],

I attach my sum knowledge on the 8-track box at Liverpool Street for your information.

The 8-track formation was 'safeguarded' under the Broadgate Phases 12 & 13 rafts and in the East London Line Extension project: Bridge 19 (the girder bridge that crosses the Great Eastern Main Line outside Liverpool Street station) has a forced earth embankment through which an additional two tracks can be pushed through when required.

Although Crossrail would remove a number of the current services from Liverpool Street station as they will be diverted down the Pudding Mill Tunnel Portal near Bow, there will still be a residual peak service into Liverpool Street from the GEML and additional services are likely to fill the void from the West Anglia route. I should point out from a strategic point of view that just because Network Rail does not need an eight track throat in the immediate future it does not mean to say that we won't need it in the long term future. The only problem with dispensing with 'safeguarded' things is once it's gone, it's gone for good and there are future potential benefits that an eight track formation into Liverpool Street can give with respect to platforming and eliminating crossing moves: Network Rail incidentally has also retained the possibility to construct two additional platforms between Platforms 10 and 11 and the pillars supporting the raft above the Liverpool Street station throat were positioned accordingly so that they would allow future access to those platforms if constructed.

I have no problem with either a Sponsor being appointed or Outside Parties progressing the scheme as an asset protection scheme provided, and as I note, that the "design involves reserving a space underneath a potential development by [company name withheld – Reg 12(5)(e)], for NR to have the potential to have two extra tracks going into Liverpool Street."

I hope both this and the attachment helps.

Kind regards

[NR – name withheld Reg 13(1)]

---

EMAIL 2

From: [NR – name withheld Reg 13(1)]  
Sent: 22 July 2010 12:18  
To: [NR – names withheld Reg 13(1)]  
Cc: [NR – names withheld Reg 13(1)]  
Subject: 8 track box

Dear All,

I met with the project team from Outside Parties/ ASPRO yesterday [NR – names withheld Reg 13(1)] reference the 8 track box project.

This is a summary of how I understand the project. I hope [NR – name withheld Reg 13(1)] will not hesitate to correct any of this information, if it is not quite right.

### **Background**

The background is a bit of a mystery. The project team think that track box works to date, was part of, and funded by, the nearby Bridge Deck project in liaison with [company name withheld – Reg 12(5)(e)], which originally was an outside parties and/or a commercial property project, the geographical location being on the corner of Worship Street and Norton Folgate, Nr Liverpool Street Station. I think that it is why it has arrived at Grip 4 without Sponsor involvement.

The Box design works are now considered to be a benefit to Network Rail, and so no longer can be deemed 'Outside Party works', or simple asset protection, but has to be considered as third party works, and therefore requires a Sponsor to obtain funds and move the designs forward.

The design involves reserving a space underneath a potential development by [company name withheld – Reg 12(5)(e)], for NR to have the potential to have two extra tracks going into Liverpool Street. It will be a type of future proofing for extra capacity at Liverpool Street Station.

[company name withheld – Reg 12(5)(e)] are undertaking the design works, with NR reviewing all the documents. The designs currently sitting at Grip 4 Form A, having had an initial Cat 3 check

[company name withheld – Reg 12(5)(e)] are eager to move the project forward, and have contacted the project team [NR – names withheld Reg 13(1)] to get things moving. They wish to complete the review of the Grip 4 works and then fund the subsequent detailed design works or 'Form Bs', which NR will also be required to review. They would like to have these designs in readiness for favourable market conditions to commence construction, perhaps as early as 2011.

### **Requirements**

#### **Funds**

A project estimate for this review is being drafted by [NR – name withheld Reg 13(1)] to cover NRs review of these documents. Estimate TBA. But less than £100k

#### **Contract Agreements**

A BAPA agreement is already in place for the Bridge Deck works but [NR – name withheld Reg 13(1)] and his team have been advised that a new BAPA will have to be drafted as the Bridge Deck works BAPA can not cover the track box works.

It is thought that current Leases between Network Rail and RT Group will cover the extent of works required to get to Form B, detailed design.

### **Interfaces**

### Crossrail –

With Crossrail potentially bringing new capacity to the Liverpool Street area, the immediate requirement for extra capacity that the 8 track box would deliver, may not be required in the medium term.

### Bridge Deck

The Bridge deck works still need to be concluded. I believe this is to provide bollard protection from the traffic on Norton Folgate which will require some interface with Borough council and the Highways Agency.

### Timescales

Observing Sponsor and current IP procedure it is not likely that we will secure funding for this until 20<sup>th</sup> October. Current programme suggests November 8<sup>th</sup> for Form B approval.

### Risks

Multiple re-iterations of consultant designs may use up Nr funds and contingency. Medium Design not fit for purpose once the development is completed. Low

### Recommendations/ way forward

Sponsor goes through IP processes to obtain funds.

Argue that Track Box is of no immediate benefit to NR due to on set of Crossrail, and Outside parties proceed with the works utilising outside parties processes.

Seek a quicker route to obtaining funds within governance – subject to discussion.

I look forward to receiving comments and especially how we may be able to collectively assist [company name withheld – Reg 12(5)(e)] with their programme.

Kind regards,

[NR – name withheld Reg 13(1)]

## 8-tracking proposal for the Liverpool Street to Bethnal Green Jn. section.

### Purpose of this paper

This paper invites the Board to decide whether they wish to protect the possibility of eight-tracking the Liverpool Street Station to Bethnal Green Jn. section.

### Executive summary

The Great Eastern Route has a bottleneck between Bethnal Green Jn. and Liverpool Street Station caused by two four-track railways (West Anglia & Great Eastern) feeding into a six-track section. Historically, several schemes to increase that section to eight tracks have been proposed; during the SRA's time of sponsorship of the East London Line Project they were concerned that any work undertaken should not preclude eight-tracking. This is now a concern to [withheld - reg 12(5)(e) EIR] [withheld - reg 12(5)(e) EIR]

All of the historical schemes have involved the use of part of the Bishopsgate Goods Yard site, currently the subject of a redevelopment scheme. This also impacts upon the currently ongoing dispute with [withheld - reg 12(5)(e) EIR] [withheld - reg 12(5)(e) EIR]

Network Rail has not proposed to carry out an 8-tracking scheme.

### Issues for consideration:

1. If Network Rail, or DfT in a strategic role, wish to make provision for eight-tracking within the current Bishopsgate Goods Yard redevelopment proposals, the cost will be in the order of £25-30m<sup>1</sup>.
2. Crossrail influence –If Crossrail is built it will, in effect, give an additional two tracks between Liverpool Street and Bethnal Green thus moving the need for an additional two 'surface' lines into the distant future.
3. The East London Line Project wish to modify the SRA sponsored plan to make passive provision for eight-tracking during the rebuilding of bridge GE19 (Shoreditch). Their intention to use a reinforced earth embankment in place of a Warren Truss girder bridge would, while not precluding eight-tracking, add extra cost should it ever be undertaken<sup>2</sup>.

### Notes:

1 –Refer to 'Scheme 1' below.

2 –Refer to 'Scheme 3' below.

## Background

At Bethnal Green Junction, the 'E' and Main Lines from Stratford join the Fast and Suburban lines from Hackney Downs. From Bethnal Green Junction to Liverpool Street there are no 'Fast' lines; from the track geometry the Fast lines combine with the Main lines. In practice however, Up traffic from both Fast and Suburban lines is combined at Bethnal Green North Jn. onto the Suburban lines, as no vacant paths exist on the Main Lines. The station at Bethnal Green has platforms on the Suburban lines only.

The relatively recent construction of the Stansted Airport branch, and the unexpectedly rapid growth in Airport traffic, has highlighted the fact that opportunities for growth (expressed as quantum of train paths) on the West Anglia Route do not exist. Although there are other 'bottlenecks', the fundamental constraints are:

- a. Liverpool Street Station itself (ability to receive & disperse passengers)
- b. Liverpool Street 'Throat' (ability to handle conflicting movements efficiently)
- c. Liverpool Street Throat to Bethnal Green East Junction (track capacity)

Although various proposals for enhancement of the Stansted route are being considered by BAA, none address these issues.

## Physical Provision

When the reconstruction of Liverpool Street station was being planned in the 1980s, considerable thought was given to possible future requirements. This culminated in a scheme for a 22-platform layout, deemed to be the maximum that could be built.

The second stage of the Broadgate development (sites 12 & 13), which was to construct a second raft over the 'throat' at Liverpool Street, would constrain the layout at Liverpool Street for the foreseeable future. Accordingly, the then East Anglia Zone again considered all possibilities for future development so that suitable provision could be made in the raft's supporting structure. These were built to accommodate the 22-platform layout referred to above, plus two extra tracks at the North side, at a cost of ca. £2m.

Outside of NR's boundary, a development known as 'Northgate' was proposed in 2001. As a result of pressure from NR, the design of its basement makes allowance for 8-tracking.

All of the above schemes assume that the additional tracks will commence to the North-East side of the existing 'throat'.

## 8-tracking proposals

### Scheme 1

The method of construction involving least disruption to the operating railway involves construction of an additional pair of lines to the North of and roughly paralleling the existing Suburban lines. This would involve use of part of the Bishopsgate Goods Yard site, and acquisition of land for the remainder of the route to Bethnal Green. Such a scheme seems to have been developed by BR at least as far as ground plans in the early 1980s.

During the SRA's involvement in the West Anglia Route Modernisation proposals (2000-2001) some very limited development work of such a proposal was undertaken. A PDAM Level 0-1 cost of £75m for 8-tracking was suggested, but the proposal was not taken further.

To protect the route through the Bishopsgate Goods Yard site, currently the subject of development proposals, would involve works at a budget cost of £25-30m. It would also necessitate demolition of ca. 50% of the listed Braithwaite viaduct.

### Scheme 2

The British Railways (Liverpool Street Station) Act 1983 included powers to realign the existing railway between Liverpool Street and Bethnal Green (Work No.1), and powers to construct an additional railway between a new station on part of the Broad Street site and Bethnal Green (Work No.2). The latter seems to have been intended to replace the now closed line between Dalston Jn. and Broad Street. The scheme involved wholesale realignment of all lines, straightening out the S-curved approach and generally moving the railway to the Southern side of the Railway-owned corridor. Although the proposal would have used much of the Bishopsgate Goods Yard site, further to the East work No. 2 was not permitted to deviate outside the (then) BRB boundary.

### Scheme 3

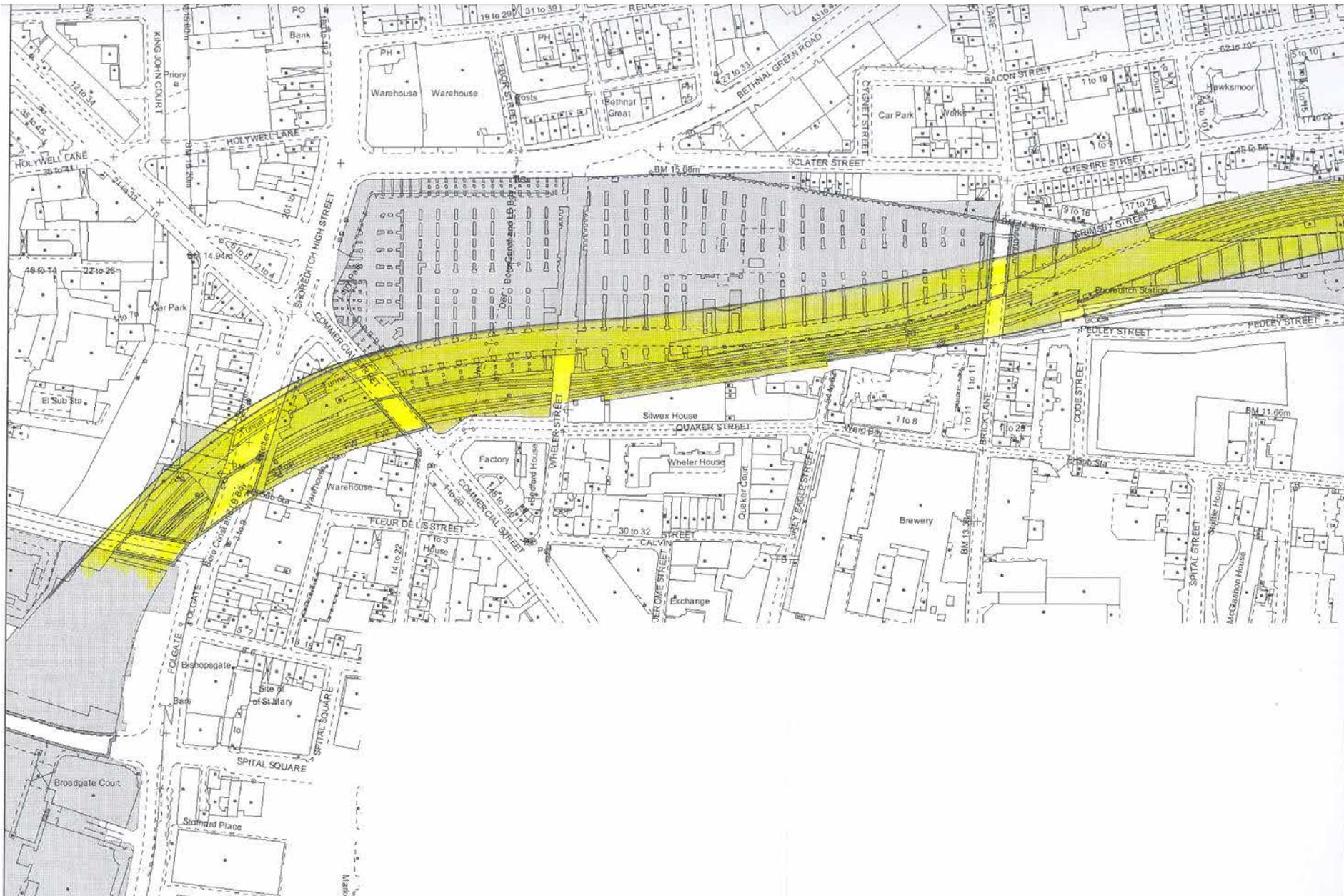
Now disused, bridge GE19 carried the lines serving the former Bishopsgate Goods Yard over the GE Main Line. As the East London Line project has been developed, the necessity for demolition/replacement of GE19 has been established. During the SRA's time of sponsorship of the project, they were of the opinion that any works in the Liverpool Street to Bethnal Green area should not preclude 8-tracking at some time in the future. Accordingly Babbie produced a scheme for 8-tracking through the GE19 area. All existing tracks would be realigned; 5 tracks would be accommodated under the replacement GE19 bridge while the other 3 would pass under a second span South-East of the first. It is the provision of this second span that the Project currently wishes to avoid.

DRAFT

**Recommendation:**

That Network Rail seek DfT direction on whether these lands should be retained in such a way that does not preclude a viable scheme for 8-tracking at a future date.

*Note: The finished paper will include, as an attachment, a plan showing the Bishopsgate site as a minimum.*



## Between Liverpool Street and Stratford

### Proposal for additional 2 tracks

#### Introduction

The following estimate is an order of cost estimate for the provision of an additional 2 tracks between Liverpool Street and Bethnal Green / Stratford together with a short summary of the principal areas of risk / doubt.

#### Liverpool Street to Stratford

| Item   | Length etc. | Unit Rate  | Total (£m) |
|--|-------------|------------|------------|
| <b>Transport and Works Act Fees and Lobbying plus Public Inquiry</b>   | unit        | say 5m     | 5          |
| <b>Land</b>  |             |            |            |
| Land Purchase  | 8 acres     | 125k/acre  | 2          |
| Land Compensation - Compulsory Purchase of say 200 houses plus say 4 factories; assume land available inwards from Grand Union Canal   | unit        | 40m        | 40         |
| <b>Civil Engineering</b>   |             |            |            |
| P Way Plain Line   | 10000 yards | 375/yard   | 3.75       |
| P Way S & C - say 12 leads   | 12          | 275k/lead  | 3.3        |
| Structures - Retaining Walls (Bridge 19 inwards)   | 1000m       | 2k/m       | 2          |
| Structures - Viaduct - 2500m long, 10m wide  | 25000 sq.m  | 1k/sq.m    | 25         |
| Structures - Widened bridges over roads and canals - say 12 bridges  | 12          | 1m         | 12         |
| Demolition - Bishopsgate Goods Yard covered way; Bridge 19; covered way retaining walls (includes some allowance for possessions)  | unit        | 7          | 7          |
| Earthworks - 1000 x 10 x 6m  | 60000       | 20/cubic m | 1.2        |
| Enabling Works - new ramp to replace the access over Bridge 19;  | unit        | 500k       | 0.5        |
| <b>Signalling</b>  |             |            |            |
| Interlocking   | unit        | 1.25m      | 1.25       |
| Extra Signals etc.   | unit        | 1.45m      | 1.45       |
| <b>Telecoms</b>  | unit        | say 1m     | 1          |
| <b>Electrification</b>   |             |            |            |
| Catenary   | 9 km        | 500k/km    | 4.5        |
| Power enhancement  | unit        | 2m         | 2          |
| <b>Ancillary Costs</b>   |             |            |            |
| Railway Possessions - say 1 x 3 day block at Liverpool Street; 1 x 3 day block for bridge 19 slewing; 1 x 3 day block for Bow Junction slewing; 1 x weekend for each of Bethnal Green West Junction; 1 x weekend for connections at Bow Junction plus O/Nights | 5           | 250        | 1.5        |
| Possession Personnel   | unit        | 500        | .5         |
| Road Possessions say 12 bridges  | 12          | 20k/bridge | 0.36       |
| Environmental works (partially in response to the requirements of the T&WA inquiries) assume some allowed for in the compensation costs - assume noise barriers all along the raised route plus contingency of £1m   | 5000m + £1m | 150/m      | 1.75       |
| Project Management etc. - say 20% of the cost of the   | 20%         | 66.7m      | 13.3       |

works

**PLUS CONTINGENCY**

**TOTAL**

**£129.4m**

**Liverpool Street to Bethnal Green**

| <b>Item</b>  | <b>Length etc.</b> | <b>Unit Rate</b> | <b>Total (£m)</b> |
|--|--------------------|------------------|-------------------|
| <b>Transport and Works Act Fees and Lobbying plus Public Inquiry</b>   | unit               | say 3m           | 3                 |
| <b>Land</b>  |                    |                  |                   |
| Land Purchase  | say 1 acre         | 125k/acre        | 0.25              |
| Land Compensation - Compulsory Purchase of say 5 houses - assume land generally available  | unit               | 1m               | 1                 |
| <b>Civil Engineering</b>   |                    |                  |                   |
| P Way Plain Line   | 3000 yards         | 375/yard         | 11.25             |
| P Way S & C - say 8 leads  | 8                  | 275k/lead        | 2.2               |
| Structures - Retaining Walls (Bridge 19 inwards)   | 1000m              | 2k/m             | 2                 |
| Structures - Viaduct - 500m long, 10m wide   | 5000 sq.m          | 1k/sq.m          | 5                 |
| Structures - Widened bridges over roads and canals - say 4 bridges   | 4                  | 1m               | 4                 |
| Demolition - Bishopsgate Goods Yard covered way; Bridge 19; covered way retaining walls (includes some allowance for possessions)  | unit               | 7                | 7                 |
| Earthworks - 1000 x 10 x 6m  | 60000              | 20/cubic m       | 1.2               |
| Enabling Works - new ramp to replace the access over Bridge 19;  | unit               | 500k             | 0.5               |
| <b>Signalling</b>  |                    |                  |                   |
| Interlocking   | unit               | 1.25m            | 1.25              |
| Extra Signals etc.   | unit               | 1.25M            | 1.25              |
| <b>Telecoms</b>  |                    |                  |                   |
|  | unit               | say 0.75m        | 0.75              |
| <b>Electrification</b>   |                    |                  |                   |
| Catenary   | 3 km               | 500k/km          | 1.5               |
| Power enhancement  | unit               | 1M               | 1                 |
| <b>Ancillary Costs</b>   |                    |                  |                   |
| Railway Possessions - say 1 x 3 day block at Liverpool Street; 1 x 3 day block for bridge 19 slewing; 1 x weekend for each of Bethnal Green West Junction plus O/Nights  | 3                  | 250              | 0.75              |
| Possession Personnel   | unit               | 300K             | 0.3               |
| Road Possessions say 4 bridges   | 4                  | 20k/bridge       | 0.1               |
| Environmental works (partially in response to the requirements of the T&WA inquiries) assume some allowed for in the compensation costs - assume noise barriers all along the raised route plus contingency of £1m | 1000m<br>+ £1m     | 150/m            | 1.3               |
| Project Management etc. - say 20% of the cost of the works   | 20%                | 40.2             | 8.0               |
| <b>PLUS CONTINGENCY</b>  |                    |                  |                   |
| <b>TOTAL</b>   |                    |                  | <b>£54.4m</b>     |

## **Assumptions**

The following general assumptions are relevant:-

1. The extra tracks are to the north of the existing formation between Liverpool Street and Bridge 19 at Shoreditch; and to the south between Bridge 19 and Bow Junction at 2m 68ch where the extra tracks are slewed such that they connect with the existing 6 track formation.
2. The provision of extra tracks outward from Liverpool Street is unlikely to provide significant extra capacity except with additional platforms at Liverpool Street being provided at Liverpool Street at the same time. The most obvious place for additional tracks at the station is the centre roadway for which a scheme has been developed previously. This could provide capacity for an extra 12 trains per hour.
3. No accuracy is claimed for the estimate or any part thereof; the estimate is solely intended to demonstrate the types of cost that are involved and to identify the likely orders of cost to suit. The costs are based on a desk study.

## Liverpool Street to Bethnal Green –8 tracking

Notes (to be read with evolving paper written by )

### Background and Schemes Development

There has been a prospective scheme for putting 8 tracks in at the approach to Liverpool Street station for some time. Moving out from the station the following design and protection has been included in various schemes:

| Scheme                         | Location  | Built?                       | 8 tracking protected  | Power Used   | Cost / Notes  |
|--------------------------------|---|------------------------------|---|--|---|
| Liverpool Street Redevelopment | Platform areas  | Yes                          | No  |  |   |
| Broadgate (original)           | Platforms and Throat  | Yes                          | No  |  | No specific provision made, but 8 track / 22 platform scheme under Broadgate Phase 12/13 fits   |
| Broadgate Phase 12/13 raft     | Between Primrose and Worship Street                                       | Yes                          | Yes against prospective scheme for 8 track: 22 platform station | Railtrack Zone Executive Sign off, (presumably) accepted by Railtrack Property | Signed off by East Anglia Zone Executive 5/11/98. Estimated £2m extra cost in raft for greater beam spans etc   |
| Northgate                      | Between Worship Street and Shoreditch High Street; west side of formation | No, only Planning Permission | Yes   | SRA  | Scheme in the early 2000s. Problem identified by Railtrack, protected using SRA powers. Development was required to include a subsurface level area which continued the 8 tracking strip from the location used for the Broadgate phase 12/13 work  |
| Bishopsgate Goods Yard         | Between Shoreditch High Street and Brick Lane (approx)                    | No                           | Not closed  |  | Significant debate over the years about the scope for 8 tracking etc  |
| East London Line Extension     | Brick Lane to Bethnal Green   | About to start               | No (then yes?)  | SRA as Client  | Original TWA made no provision for 8 tracking, but “flexicurve” quality sketch at the time suggested that it might be possible to put an extra 2 tracks in under the ELLX through the span to be used for the Code Street Extension. Later scheme plans altered to provide 8 tracking capability? |

## Route Strategy

The following comments are relevant:

It is widely thought that the 8 tracking scheme was considered and rejected as part of the Liverpool Street Redevelopment in the late 1980s (but there are no records to check this). An outline scheme for 22 platforms at Liverpool Street was produced at that time but not taken up

A review of requirements for extra paths into Liverpool Street was carried out as part of the development of the Broadgate Phase 12/13 work (between Primrose Street and Worship Street) in the late 1990s. at that time:

- It was possible to demonstrate that a demand could be demonstrated for additional capacity at Liverpool Street
- It is likely that extra tracks into Liverpool Street would also require extra platforms at the station itself. An initial sketch of what platforms could be provided at Liverpool Street suggested that an extra 3 12 car platforms, and 1 8 car platform (reducing one of the current platforms to 8 car length in the process) could be built. None of these platforms would be easy or cheap to build with significant disruption and in part some significant impact on current retail areas of the station

There is considered to be a relatively strong link between 8 tracking and Crossrail. To some extent Crossrail might remove one of the key reasons for an 8 tracking scheme and would probably need additional tracks to the east of the tunnel portal. If Crossrail is not built the situation is less clear

There are other route use issues which impact on requirements for an 8 tracking scheme –e.g. the possible diversion of West Anglia traffic to Stratford

The Greater Anglia RUS will consider the matter further in early 2006

## Finance and Scheme development

The following comments are relevant:

Schemes for 8 tracking and new platforms at Liverpool Street are at no more than sketch plan stage (GRIP level negative)

The only good scheming work was developing a track layout for an 8 track, 22 platform throat for Liverpool Street against which the columns for Broadgate Phase 12/13 were positioned. This is a relatively difficult layout (being on a severe curve) which together with the placement of the columns will probably not change if the main scheme were to be put in place.

Estimate for 8 tracking have similarly not progressed beyond a “fag packet” quality estimate produced in the mid 1990s based on broad rules of thumb (£X per mile of signalling). The estimate of £52m for the work between Liverpool Street and Bethnal Green is now expected to be significantly underestimated.

Significant disruption would take place whilst an 8 tracking scheme was implemented. Particular problems might be in changing the layout in the station throat; extending some bridges, and in constructing the new retaining walls and adjusting the railway infrastructure through the Bishopsgate good yard area

A Bishopsgate Good Yard scheme in the late 1990s did consider the structural capabilities of the covered way through which the West Anglia “subs” lines run.

Bishopsgate Goods Yard was included in the property transactions with Railtrack Group as part of the introduction of Network Rail, although the final papers for this transaction may either not be complete or not available.



Network Rail  
Freedom of Information  
The Quadrant  
Elder Gate  
Milton Keynes  
MK9 1EN



Mr P Ridley

By email: 

8<sup>th</sup> November 2017

Dear Mr Ridley

**Information request reference number:** FOI2017/01092

I write in response to your request of 13 September 2017 which asked for the following information:

1. Any existing or recent routes and business plans/business cases or similar that have been produced for providing eight tracks to Liverpool Street Station.
2. Any existing or recent safeguarding proposal for eight track routes through the existing Bishopsgate Goodsynd masterplan area.
3. Option 2 in the Anglia LTPP Route Study Liverpool St Station – Train Capacity Pre-GRIP Feasibility Report [5th August 2014] (disclosed to me in response to FOI2017/00623) shows two new tracks that appear to head East from Liverpool Street on a new alignment. I seek information about these two additional tracks shown in Option 2; please provide the rest of this alignment not shown in the report, and the business case and supporting documentation for the Option 2 alignment.
4. Please provide an outline and supporting documentation for any other solution that has been designed and considered to resolve the Bethnal Green bottleneck for the purpose of adding capacity to West Anglia mainline and suburban; such solutions may not necessarily relate to eight tracking. Please note that I do not require further information on the previous Bishopsgate Goodsynd terminus proposal.

Thank you for your patience while I have conducted searches for this information.

I have dealt with your request under the Environmental Information Regulations 2004.

I confirm that we hold some information relevant to your request, and I am providing this information in the attached disclosure documents. I will summarise this information below – I will also indicate where I have not been able to locate any relevant information.

I should first explain that there are some difficulties in searching for information from a number of years ago when staff changes will have occurred and the relevant individuals have moved to other roles or – particularly – left Network Rail. For this reason, such searches can be time-consuming – a consideration that must be borne in mind when dealing with any request under FOIA or EIR. While the searches I have undertaken have located some relevant information, I admit that these time considerations have meant that I have not been able to pursue every avenue of enquiry that could lead to the identification of further information that may be of interest to you.

I should also explain from the outset that none of the information located is ‘recent’. Rather, the information I have located dates from a number of years ago, and this disclosure must be placed in the context of more recent developments.

As noted in our previous responses to you, Network Rail’s preferred option at the present time for increasing train capacity and improving journey times in the WAML on the Anglia Route is Crossrail 2. Network Rail is still in the process of developing the case for Crossrail 2 to help enable improved capacity and journey times on the WAML. Crossrail 2 provides benefits to not just Anglia, but also providing additional capacity through Central London through to the Wessex routes, therefore providing wider strategic benefits.

*Points 1, 2 and 4:*

These parts of your request asked for any existing or recent routes and business plans/business cases or similar for providing eight tracks to Liverpool Street Station, any existing or recent safeguarding proposal for eight track routes through the existing Bishopsgate Goodsyrd masterplan area, and the outline and supporting documentation for any other solution that has been designed and considered to resolve the Bethnal Green bottleneck for the purpose of adding capacity to West Anglia mainline and suburban.

I have located one draft proposal which I consider falls fully within the scope of these questions. The draft proposal is dated to 2005 and was prepared with a view to submission to Network Rail’s Board. In our internal correspondence, the draft proposal is accompanied by a separate paper entitled ‘8 Tracking Comments’, and I consider that this paper also falls within the description of the information you are seeking. I have therefore considered both documents for disclosure.

Please note that my searches have located no further information indicating whether or not the draft proposal was finalised and submitted.

For additional context, I have copied the original email containing these documents below: please note that the names of the individuals included in the email have been withheld under regulation 13(1) for personal information.<sup>1</sup>

**From:** [Network Rail – Name withheld reg 13(1)]  
**Sent:** 19 December 2005 16:56  
**To:** [Network Rail – Names withheld reg 13(1)]  
**Cc:** [Network Rail – Name withheld reg 13(1)]  
**Subject:** 8-tracking

**Attachments:** 8 Tracking Comments 080805.doc; 8\_trackv2.doc  
Gentlemen

[Network Rail – Name withheld reg 13(1)] has asked me to pass copies of the attached to yourselves following your meeting with him today.

Could we please have any comments back by 3<sup>rd</sup> January please.

Regards  
[Network Rail – Name withheld reg 13(1)]

Please find the attachments mentioned in this email in Disclosure Documents 1 (8 Tracking Comments 080805) and 2 (8 track v2).

I have located no further business cases, proposals or similar relevant to parts 1, 2 and 4 of your request.

However, we do hold several subsequent emails which make reference to the 2005 draft proposal. Strictly speaking, these emails fall outside the scope of your request as these emails do not constitute a business plan, case or proposal, and on this basis, they do not need to be considered for disclosure. That being said, I hope to assist by providing the following details.

The references to the 2005 draft proposal occurred in emails prompted by an enquiry from an external third party individual in 2008. In his letter, the individual asked whether there were any proposals for 8-tracking at Liverpool Street and whether the route of the 8-track had been “safeguarded”.

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<sup>1</sup> This regulation applies when the information relates to a living identifiable individual and disclosure would breach one of the Data Protection Principles. In this case, the individuals are all below the most senior level and would have no reasonable expectation that their names would be disclosed; this is particularly so as Network Rail remained a private company at the time that the information was created. I therefore consider that disclosure of the names would be unfair, and therefore would breach the first data protection principle, that personal information should be processed fairly.

The third-party's enquiry followed a letter from Network Rail explaining our position at that time; I am providing a copy of Network Rail's letter in Disclosure Document 3. The internal correspondence that followed the enquiry – and which references the 2005 draft proposal – is provided in Disclosure Document 4. I am also providing the '8-tracking plan' mentioned in the emails; please see Disclosure Document 5.

Please note that searches of our email system did not locate a response to the third party enquiry.

The 2005 draft proposal is referenced again in an email and response from 2010 discussing a proposal from a third-party company for provision of an '8-track box' at Liverpool Street station.<sup>2</sup> Again, this email correspondence does not constitute a formal business plan/case or proposal and arguably falls outside the scope of your request. However, to assist, I am providing this information. Please find this correspondence attached in Disclosure Document 6. Please note that the document attached to these emails brings together the draft proposal, comments document and plan mentioned previously, and also contains a listing of estimated costs; I am providing this document as Disclosure Document 7.

With regard to Point 3 of your request, I have not located any additional information relevant to this part of your request.

If you have any enquiries about this response, or would like to discuss the response further please contact me in the first instance at [FOI@networkrail.co.uk](mailto:FOI@networkrail.co.uk) or on 01908 782405. Details of your appeal rights are below.

Please quote the reference number at the top of this letter in all future communications.

Yours sincerely

Lou Lander  
Head of Freedom of Information

The information supplied to you continues to be protected by copyright. You are free to use it for your own purposes, including for private study and non-commercial

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<sup>2</sup> Please note that I have withheld a small number of references to third parties under regulation 12(5)(e), which protects the confidentiality of commercial information. Again, due to the age of the material, third-parties dealing with Network Rail as a private company would have a high expectation of confidentiality around their commercial arrangements. I have therefore withheld the third-party names in order to provide the larger parts of the information to you. I hope this will be acceptable to you.

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### **Appeal Rights**

If you are unhappy with the way your request has been handled and wish to make a complaint or request a review of our decision, please write to the FOI Compliance and Appeals Manager at Network Rail, Freedom of Information, The Quadrant, Elder Gate, Milton Keynes, MK9 1EN, or by email at [foi@networkrail.co.uk](mailto:foi@networkrail.co.uk). Your request must be submitted within 40 working days of receipt of this letter.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office  
Wycliffe House  
Water Lane  
Wilmslow  
Cheshire SK9 5AF

EMAIL 1

From: [NR – name withheld reg 13(1)]  
Sent: 14 January 2008 08:07  
To: [NR – name withheld reg 13(1)]  
Cc: [NR – name withheld reg 13(1)]  
Subject: RE: Eight Track from Liverpool Street Station

Dear all,

Just for completeness of information, a plan showing the 8-track footprint is attached.

[NR – name withheld reg 13(1)]



Save a tree - please don't print this email unless you really need to

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EMAIL 2

From: [NR – name withheld reg 13(1)]  
Sent: 11 January 2008 17:11  
To: G[NR – name withheld reg 13(1)]  
Cc: [NR – name withheld reg 13(1)]  
Subject: RE: Eight Track from Liverpool Street Station

[NR – name withheld reg 13(1)]

This issue surfaces fairly regularly and our stance in the Route has always been (and continues to be) that given the level of growth forecast for East Anglia we should reserve our position on the issues at least until the final scope of Crossrail and Stansted developments are known. This position was supported by the SRA.

I attach some background notes and a paper on the matter which [NR – names withheld reg 13(1)] have put together over the last few years, which explain the current situation and provisions. I believe that the alignment favoured involved the extra tracks initially being on the north side and them moving across to the south side of the alignment further out. I am not sure of the extent of the demolition involved but do not recall it involving much more than arches in the goods yard, but the drawing that went with [NR – name withheld reg 13(1)] paper may show the detail.

I hope that this helps and clarifies the Route's view.

[NR – name withheld reg 13(1)]

[Attachments as per Disclosure Documents 1 & 2]



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**Re: Planning**

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**From** terry gander [REDACTED]**Date** Thu 18/12/2025 14:31**To** Phoebe Kamber [REDACTED]

THIS IS AN EXTERNAL EMAIL

Terry Gander  
Bridleway Cottage  
Mill Road  
Peasenhall  
Suffolk  
IP17 2LP

I do not live in the City but visit multiple times a year.  
As a disabled person, easy access to all areas is paramount to an enjoyable visit.

Thank you  
Terry Gander

Sent from [Outlook for Android](#)

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**From:** Phoebe Kamber [REDACTED]**Sent:** Thursday, December 18, 2025 2:25:42 PM**To:** terry gander [REDACTED]**Subject:** Re: Planning

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,  
Phoebe



---

Phoebe Kamber  
She/her | Planning Obligations Monitoring Officer (CIL and S106)

Environment Department | City of London Corporation | Guildhall | London | EC2V 7HH

[REDACTED]  
Katie Stewart – Executive Director Environment

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**From:** terry gander [REDACTED]  
**Sent:** 08 December 2025 15:26  
**To:** Liverpool Street Station [REDACTED]  
**Subject:** Planning

You don't often get email from [REDACTED] [Learn why this is important](#)

THIS IS AN EXTERNAL EMAIL

Please consider the tannoy system for announcements in clear English that is audible without echo, and with subtitles at various points around the station

Sent from [Outlook for Android](#)

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**Re: Liverpool Street station**

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From Tom Higginson [REDACTED]

Date Thu 18/12/2025 14:59

To Phoebe Kamber [REDACTED]

THIS IS AN EXTERNAL EMAIL

Phoebe.

Of course and thank you for contacting me.

My address is :

Rock Springs  
66 Sutton Street  
Flore  
NN7 4LE

[REDACTED]

Many thanks  
Tom Higginson  
Sent from my iPhone

On 18 Dec 2025, at 14:34, Phoebe Kamber [REDACTED]  
wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,  
Phoebe

---

<image.png> Phoebe Kamber  
She/her | Planning Obligations Monitoring Officer (CIL and S106)



[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Katie Stewart – Executive Director Environment

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**From:** Tom Higginson [Redacted]  
**Sent:** 08 December 2025 16:16  
**To:** Liverpool Street Station [Redacted]  
**Subject:** Liverpool Street station

[You don't often get email from [Redacted]. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification> ]

THIS IS AN EXTERNAL EMAIL

Thank you for reconsulting me. I continue to fully support the proposals to deliver essential station works to be funded by commercial development.

Tom Higginson

Sent from my iPhone

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Re: Consultation of Liverpool Street Station

From Rosy Moran [redacted]  
Date Thu 18/12/2025 15:11  
To Phoebe Kamber [redacted]

THIS IS AN EXTERNAL EMAIL

Dear Phoebe,

Thank you for your email regarding the above. I am happy to provide my address.

54 Brockwood Lane  
Welwyn Garden City  
AL8 7BG

Regards

Rosie Moran

Sent from [Outlook for Android](#)

**From:** Phoebe Kamber [redacted]  
**Sent:** Thursday, December 18, 2025 2:32:07 PM  
**To:** Rosy Moran [redacted]  
**Subject:** Re: Consultation of Liverpool Street Station

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,  
Phoebe



Phoebe Kamber  
She/her | Planning Obligations Monitoring Officer (CIL and S106)

Environment Department | City of London Corporation | Guildhall | London | EC2V 7HH



[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

Katie Stewart – Executive Director Environment

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**From:** Rosy Moran [REDACTED]  
**Sent:** 08 December 2025 15:43  
**To:** Liverpool Street Station [REDACTED]  
**Subject:** Consultation of Liverpool Street Station

You don't often get email from [REDACTED] [Learn why this is important](#)

THIS IS AN EXTERNAL EMAIL

Dear Mr McCallum,

With regard to the recent re-consultation, the basic facts underpinning my original objections to the scheme, as a whole, stand. That is, it is the fact that the whole historic and cultural importance of Liverpool Street Station as an edifice and community facility will be destroyed by this development.

As stressed above, the proposed development will negatively impact the nature of this historic building and the surrounding location of which it is a core feature.

Regards

R. Moran

Sent from [Outlook for Android](#)

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**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** RE: 25/00494/FULEIA - Re-consultation letter  
**Date:** 05 January 2026 19:49:33

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You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Hi,  
Thank you for your reply.  
My address is:  
5 Park grove Drive  
Edinburgh  
EH4 7QH

Thanks,  
Nicholas Parker

On 05/01/2026 10:05 GMT Liverpool Street Station  
<liverpoolstreetstation@cityoflondon.gov.uk> wrote:

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator

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Environment Department  
City of London Corporation

City of London Corporation | PO Box  
270 | London EC2P 2EJ

[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

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**From:** [REDACTED]  
**Sent:** 20 December 2025 20:38  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

Hello,

It's not entirely clear from your email, or the attached letter, what additional information has been provided.

It's therefore difficult to make any comment.

However, my understanding is that the substance of the application hasn't changed, in which case neither has my objection to it or the grounds for it.

Thanks

Nick Parker

On 08/12/2025 15:15 GMT Liverpool Street Station  
<[liverpoolstreetstation@cityoflondon.gov.uk](mailto:liverpoolstreetstation@cityoflondon.gov.uk)> wrote:

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to  
Liverpool Street Station (25/00494/FULEIA).

Reply with your comments to  
[LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of

Kieran McCallum

Environment Department

City of London

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Environmental Information Regulations 2004, it may need to  
disclose this e-mail. Website: <http://www.cityoflondon.gov.uk>

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Site comprising Liverpool Street Station: re-consultation - further representation  
**Date:** 12 January 2026 12:43:07

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You don't often get email from [REDACTED]

**THIS IS AN EXTERNAL EMAIL**

From: Mr Timothy C Parkes  
Flat 14, Priory House  
32 Folgate Street  
London E1 6UJ

Dear Sir or Madam,

I would like to register my further objection to the proposed commercial development over the top of Liverpool Street Station in light of the re-consultation which follows provision of additional information by the Applicants.

I continue to use the station very frequently and to work at Exchange House, Broadgate. The disruption expected, if the plan for this development proceeds, will last for many years. A simple refurbishment of the station concourse and entrances should be the aim of Network Rail and the City Corporation, with the minimum of disruption for those of us who live nearby and who use the station.

Furthermore, the design of the development shown in the plan remains completely at odds with the Victorian setting of the present station and the adjacent hotel, showing no attempt at a harmonious unification of architectural styles. It remains inappropriate and simply appears designed to maximise the commercial space that can be squeezed into an awkward site. The listing of the station alone should protect both spaces from the imposition of this extraordinary and regrettable project.

The glass roof of the station currently allows light into the station concourse, and any covering of the roof will give those using the station the feeling that it is underground. It will feel less open and more threatening. A glass roof allowing daylight into the public space is more appropriate for this very large waiting area - any closing off of this feeling of light and space will push more people outside and into the road space, rather than encourage them to use the shops and cafes available inside the station.

In summary, I do not consider that a case for this development is made out; it is unnecessary in light of the commercial and indeed residential space already available in the near proximity to the station and the design flouts the basis for the existing listing of the station.

I urge you not to approve this development.

Yours faithfully,

Tim Parkes

THIS IS AN EXTERNAL EMAIL

**25/00494/FULEIA** - Liverpool Street Station

Dear Sir / Madam,

I **strongly object** to this planning application as it would cause **substantial harm to nationally important heritage assets**, contrary to the National Planning Policy Framework (NPPF) and the City of London 2015 Plan.

The proposal to demolish the existing station concourse roof and insert extensive retail units, including two elevated galleries, would severely compromise the Grade II-listed station and 19th-century train shed.

The construction of a 20-storey tower above the concourse would harm the setting of the Grade II\*-listed hotel, the last continually operating 19th-century hotel in the City, and would materially detract from the character of the Bishopsgate Conservation Area, which is traditionally low- to medium-rise.

Additional impacts would affect multiple Grade I-listed Christopher Wren churches and nearby St Botolph's Church, diminishing their historic context. Paragraph 213 of the NPPF states that "**substantial harm to or loss of: a) grade II listed buildings... should be exceptional.**" The proposed scheme clearly constitutes substantial harm with no public benefit sufficient to outweigh it.

For these reasons, I urge the City to refuse this application in order to help protect the architectural and historic significance of these irreplaceable assets.

Yours sincerely,

Matthew Johnson  
1 Holywell Lane, EC2A 3ET

Dear Mr Sleigh

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse. **As the child of a Jew born in Berlin this hotel had a big impact on my family's story.**

The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.

The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.

The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.

In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

National Planning Policy Framework, Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Kind regards  
Hilary A Smith BA, MPhil

--

Hilary A Smith

Via Email  
Planning Department City of London  
Reference: 25/00494/FULEIA

Springbank  
4 Love Lane  
HARLESTON  
IP20 9DA

## Objection to Liverpool Street Station demolition and redevelopment proposals

Dear Sir or Madam

I write to object in the strongest possible terms to the proposals to demolish substantial and irreplaceable elements from the fabric of the award winning 1991 restored and rebuilt Liverpool Street Station. The application is technically flawed, policy-non-compliant, and based on a fundamentally inadequate assessment of heritage significance, operational need and environmental impact. It should be refused

The 1991 scheme, designed by the late Railway Architect Nick Derbyshire with Alastair Lansley, is a nationally significant historicist-led example of late-20th-century railway restoration and redevelopment. It successfully combined restored Victorian architecture with carefully judged modern interventions. The current proposals would cause substantial and irreversible harm to this listed heritage asset substantially undermining its value, and the applicant has failed to demonstrate any exceptional public benefit capable of justifying that harm.

The external public realm finished in 1991 — including decorative cast-stone boundary pillars with illuminated globes, Great Eastern Railway-style iron railings and gates, and the four landmark entrance towers — is historically accurate and integral to the station's landmark identity and heritage significance. Two towers carry clock faces and two display GER stone cartouches, reinstated as part of the 1991 works. The reconstruction of 50 Liverpool Street, harmonising with the Great Eastern Hotel and its own past incarnation, completes a coherent and historically respectful streetscape. The applicant's heritage assessment fails to recognise the architectural and evidential value of these elements, treating them as expendable rather than as integral components of the station's significance.

Internally, the 1991 concourse remains a highly successful piece of railway architecture built to last. It maximises natural light, provides generous circulation routes and integrates retail without compromising passenger flow. The new and restored brick and stonework, exposed ironwork, glass balustrades and polished white-and-blue Quiligotti terrazzo flooring form a coherent and elegant interior. The internal gull-wing platform canopies and rows of continuous illuminated globes create a unified visual language unique within the UK rail network. The applicant's documents fail to assess this interior as a whole design, to downplay its significance.

The applicant has not demonstrated that demolition on this scale is necessary. The operational issues cited are largely the result of issues relating to management, maintenance and clutter, not inherent design failure. Recent improvements, including decluttering and new continuous gatelines, have already drastically improved circulation. The applicant has not provided robust evidence that the existing station cannot be further enhanced through sensitive, heritage-led interventions. The claim that demolition is required is unsubstantiated. The proposals conflict with national and local planning policy.

Under the **National Planning Policy Framework:**

- Paragraph 199 requires “great weight” to be given to the conservation of heritage assets, regardless of the level of harm.
- Paragraph 200 states that substantial harm to a listed building should be “wholly exceptional”.
- Paragraph 202 requires that less than substantial harm be weighed against public benefits.

The applicant has not demonstrated exceptional public benefits. The claimed benefits are speculative, overstated and achievable through less harmful alternatives.

Under the **London Plan:**

- Policy HC1 requires development to conserve heritage significance and avoid harm.
- Policy D9 requires tall buildings to respect local character and avoid dominating sensitive heritage contexts. The proposed over-station massing fails this test.
- Policy SI2 requires minimisation of embodied carbon and prioritisation of retention and retrofit. The applicant has not provided a credible embodied-carbon assessment and has ignored the carbon cost of demolishing a functioning station.

Under the **City of London Local Plan:**

- Policy CS12 requires development to preserve and enhance heritage assets.
- Policy DM12.1 states that proposals causing harm to heritage significance will be resisted.
- Policy DM10.1 requires development to respond positively to local context and character.

The proposals clearly conflict with all of these policies.

The application also fails to comply with the NPPF’s emphasis on re-use of existing buildings (Paragraph 152). Demolishing large areas of a recently modernised station is environmentally irresponsible and contrary to the City of London’s Climate Action Strategy. The applicant has not provided a credible whole-life carbon assessment, nor have they demonstrated that demolition is the lowest-carbon option.

While I prefer the station is in the main left alone, with sensitive improvements and maintenance, keeping an open mind, a viable alternative worthy of consideration and further development exists. The proposal by John McAslan + Partners demonstrates that capacity improvements, circulation enhancements and operational upgrades can be delivered without causing irreversible and substantial harm to the 1991 fabric or forever overwhelming the station with an intrusive office block. This proves that the applicant’s approach is not the only option and the claimed benefits can be achieved without substantial and irreversible harm.

For these reasons, the application is technically unsound, policy-non-compliant and unjustified. I strongly urge the planning authority to refuse it. Liverpool Street Station is a Jewel thanks to its 1991 rework, it is functioning, and architecturally significant asset. Its loss would be unnecessary, unjustified and permanently damaging to one of London’s most important railway stations and the appearance of the conservation area.

The City of London deserves better.

Yours faithfully, Alexander Feaviour

For the attention of the Chair of the Planning & Transport Committee

Dear Mr Sleight,

I strongly object to the application (25/00494/FULEIA) affecting Liverpool Street station. It would cause substantial and irreversible harm to nationally important heritage assets and their settings. Essentially, it is in breach of the National Planning Policy Framework which states (Paragraph NPPF 213): “Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.” The proposal in no way provides justification for an ‘exceptional’ derogation.

More specifically, I raise objections to:

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. It is unjustifiable in itself and would also compromise the setting of the surviving 19th century train shed.
- The insertion of extensive amounts of new retail units within the 19th century train sheds, including the construction of two elevated retail galleries. This proposal would cause significant harm to the special interest and significance of the Grade II-listed heritage assets.
- The impact to the setting of surrounding listed heritage assets. In particular, the proposal would be very detrimental to the Grade II\*-listed hotel – the last continually functioning 19th century hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires that planning permission should be refused for tall buildings in inappropriate areas such as in Conservation Areas and the St. Paul’s Cathedral Heights area.
- The detrimental impact that, additionally, the scheme would have on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City

churches and nearby St Botolph's church.

I expect the Planning & Transport Committee to do its study and uphold the National Planning Policy Framework and the 2015 City Plan and, in so doing, demonstrate its ability to promote a vibrant conservation policy for current and future generations.

Kind regards,

Jeanne Golay-Evans

THIS IS AN EXTERNAL EMAIL

Dear City of London.gov.uk

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.
- In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.
- The National Planning Policy Framework paragraph 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.

Sincerely

Helen Papachristos

Dear Mr Sleigh

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets and would needlessly damage a beautiful building and its surroundings when alternative proposals have been made which would be significantly less costly and damaging. As you are aware, in the National Planning Policy Framework, clause 16, paragraph 213 states: "Substantial harm to or loss of: a) Grade II listed buildings, or Grade II registered parks or gardens, should be exceptional." A comprehensive, public and fully costed options appraisal should be the starting point for a complete reset of this process.

More specifically, I raise objections to:

- the substantial harm to the Grade II listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure (which would also compromise the setting of the surviving C19 train shed).
- the insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II listed heritage asset.

In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I listed Christopher Wren City churches, and nearby St Botolph's church.

Kind regards

Kate Kenyon

*If more of us valued food and cheer and song above hoarded gold, it would be a merrier world.*

~ J.R.R. Tolkien

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: Liverpool Street Station  
**Date:** 21 January 2026 14:17:49

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You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

1, Moiser Close,  
York YO32 4DR

Thanks  
Stan Young

On 21 Jan 2026, at 14:13, PLN - Comments  
<PLNComments@cityoflondon.gov.uk> wrote:

Hello,

Thank you for your comment. For it to be acknowledged, please provide your full address.

Thanks,  
Rianne

---

**From:** Stan Young [REDACTED] >  
**Sent:** 21 January 2026 12:37  
**To:** PLN - Comments <[PLNComments@cityoflondon.gov.uk](mailto:PLNComments@cityoflondon.gov.uk)>; Sleigh, Tom (Deputy) <[REDACTED]>  
**Subject:** Liverpool Street Station

You don't often get email from [REDACTED]

THIS IS AN EXTERNAL EMAIL

I object to the application for the partial demolition and damaging redevelopment of Liverpool Street Station which would cause substantial harm to the significance of nationally important heritage assets. We MUST look after our heritage, not sweep it away in the interests of 'progress' just because it is possible. Some judgement is needed!

I object

The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure, which would also compromise the setting of the surviving C19 train shed.

- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.
- In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.
- Make sure to reference the National Planning Policy Framework in your objection, otherwise your objection may be dismissed:  
Paragraph NPPF 213 states: "Substantial harm to or loss of:  
a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

Stan Young  
York

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Dear Mr Tom Sleigh,

I object to the current proposal to partially demolish and redevelop the historic, Grade II-listed Liverpool Street Station. This application would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to the proposed demolition of the roof structure and the construction of a 20-storey tower over the station concourse. These changes will greatly impact the setting of surrounding listed heritage assets and to the Bishopsgate Conservation Area. The scheme would substantially harm the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area. In addition, the proposal would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional." The current proposal would certainly, based on the previously listed reasons, cause exceptional harm to the Grade II-listed station, its surrounding area, and nearby heritage assets.

I hope you seriously consider these points when considering this planning application.

Kind regards,  
Adam Schell

Dear planning, Tom Sleight and everyone copied in.

Reference number: 25/00494/FULEIA

“I object to this application, (reference number: 25/00494/FULEIA) which, I believe, would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to the degrading of this cultural asset and please take note of my key issues listed below.

**The key issues to cover in my objection:**

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul’s Cathedral Heights area.
- In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph’s church.
- I would like to draw your attention the National Planning Policy Framework:  
Paragraph NPPF 213 states: “Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional.”

- I believe the information gathering used in this application was biased and the answers from the public consultation were used out of context.

I look forward to hearing back from you acknowledging receipt of my serious complaint to this overbearing and unsympathetic redevelopment.

Best wishes

Tony Broad

To whom it may concern,

As a new owner of a Victorian house with an interest in preserving Victorian and older buildings such as Liverpool street station, which are considered important to our nation heritage, I object to this application.

Specifically, I object to the harm to the special interest and significant Grade II-listed station by:

A planning to demolish the existing station concourse roof structure and replace it with a new structure which would compromise the setting of the surviving C19 train shed.

B inserting extensive amounts of new retail units within the C19 train sheds, including constructing two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.

C this building is part of the whole area and the impact to the setting of surrounding listed heritage assets must be taken into account. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower (!) over the station concourse.

D The effect this scheme would have to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, only 10 years old, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.

E In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

Most importantly Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be

exceptional.”

Thank you, Wendy Sayer

Sent from my iPad

To Chair of the Planning & Transport Committee: Mr Tom Sleigh RE:  
Planning application 25/00494/FULEIA Redevelopment of Liverpool  
Street train station

**from John Newson Address; 32 Alder Road, Balsall Heath,  
Birmingham, West Midlands B12 8BS UNITED KINGDOM**

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.
- In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.
- Make sure to reference the National Planning Policy Framework in your objection, otherwise your objection may be dismissed: Paragraph NPPF 213 states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."



**11 Orchard Road  
Upper Poppleton  
York  
YO26 6HF**

21st January 2026

Dear Sir or Madam,

**Planning application 25/00494/FULEIA. Liverpool Street Station**

Unfortunately the City Corporation's planning portal is not working properly and won't permit me to place my objections to the above scheme so I am emailing instead.

I object to this application, which would cause substantial harm to significant and nationally important heritage assets. Although writing from York where I now reside I lived in Ilford for 40 years and travelled almost daily to or through Liverpool Street. I still use the station when visiting London.

John Betjeman described Liverpool Street as the most picturesque and interesting of the London termini. (*London's Historic Railway Stations*. John Murray. 1972) That's still true today despite the previous demolition works at Liverpool Street which I remember. They harmed the character of the station and delivered few memorable improvements for passengers. Proposed developments this time are even more focussed on retail and office space, certainly not passenger benefits.

It appears that the proposed development ignores the National Planning Policy Framework. As you may be aware Paragraph 213 of that Framework states: "Substantial harm to or loss of: (a) grade II listed buildings, or (b) grade II registered parks or gardens, should be exceptional." I particularly object to:

- The very serious harm to the Grade II-listed station through the demolition of the existing station roof structure for the station concourse. The demolition and replacement with a new structure would seriously compromise the setting of the surviving nineteenth century train shed.
- The proposed new retail units on two elevated galleries seriously harm surroundings, interest and setting for the nationally significant Grade II heritage structure. The proposed 20 storey tower over the station concourse also harms the setting for the highly significant Great Eastern Hotel. That is the last functioning nineteenth century hotel in the City of London., a building retaining some dignity and a sense of its 19th century importance. That will be lost through this development.
- Furthermore the plans for a tall building would damage the Bishopsgate Conservation Area, one dominated by low and medium rise buildings. The plans are directly contrary to the 2025 City Plan which requires the refusal of planning permission for tall buildings in /near such inappropriate Conservation Areas. Further afield the scheme adversely affects the settings for heritage assets in the City and nearby in Tower Hamlets such as St Botolph's church and even many of the Grade I-listed Christopher Wren City churches.

Frankly, the scheme is a disgrace. It contradicts both National Planning Frameworks and indeed the City's

own Plan. I hope it is rejected so remains of an attractive and nationally significant Victorian station and hotel is preserved.

Yours faithfully

Roger Backhouse

THIS IS AN EXTERNAL EMAIL

I object to this application, which would cause substantial harm to the significance of nationally important heritage assets. More specifically, I raise objections to:

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure. which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact on the setting of the surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul’s Cathedral Heights area.
- In addition, the scheme would impact the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph’s church.

Paragraph 213 [of the National Planning Policy Framework](#) states:  
“Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional

Kind regards  
Ian Dinmore

**From:** [Paul Bayliss](#)  
**To:** [PLN - Comments](#)  
**Subject:** Liverpool Street Station  
**Date:** 22 January 2026 22:21:01

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THIS IS AN EXTERNAL EMAIL

I wish to object to the Planning Application to redevelop Liverpool Street Station and hotel.

I believe the intended redevelopment would result in substantial harm to an important Grade 11 listed building, contrary to NPPF 213.

We know from the redevelopment of St. Pancras that changes can be made which allow for far greater use to meet modern travel needs without causing such obvious damage. Partial destruction, especially of the hotel, and the erection of a high rise block behind the facade are plainly inappropriate.

Paul Bayliss

**From:**  
**To:**  
**Cc:**



**Subject:** Redevelopment proposals for Liverpool Street Station  
**Date:** 24 January 2026 18:25:21

**CAUTION:** This email is from outside the Corporation. Do not open attachments, click on links or scan QR codes in this email unless you recognise the sender's e-mail address and know the content is safe.

I wish to object in the strongest possible terms to the proposed redevelopment of Liverpool Street Station which poses a threat to nationally important heritage assets.

The application contravenes the terms of the National Planning Policy Framework, paragraph 213, which prohibits developments that would cause harm to or loss of Grade 2 Listed buildings.

Liverpool Street station is Grade 2 Listed. The application is for the construction of a 97-metre office tower over the station concourse and additional raised retail galleries, and for the destruction of the handsome high vaulted glazed roof which is included in the listing. There would no longer be natural light in the station. The proposed development would therefore cause serious damage to a nationally significant asset.

The station is within the Bishopsgate Conservation area, as are the adjoining former Great Eastern Hotel, which is Grade 2\* Listed, and the nearby St Botolph Church (completed in 1728), which is also Grade 2\*. These structures as well as the Bishopsgate streetscape would be severely impacted by the 19-storey tower block that forms part of the application.

Brigid Curtis  
Flat 12, Stanley Cohen House  
Golden Lane Estate  
London EC1Y 0RL

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter  
**Date:** 26 January 2026 16:28:59  
**Attachments:** [image001.png](#)

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You don't often get email from [REDACTED]

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Dear Davis,

Of course. My details are as follows,

Zi Ken Toh  
16 Greenford Avenue,  
London W7 3QP

Regards,  
Zi Ken

---

**From:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Sent:** 26 January 2026 16:14  
**To:** Zi Ken T <[REDACTED]>  
**Cc:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** RE: 25/00494/FULEIA - Re-consultation letter

Dear Sir or Madam,

Could you please re-send your personal details to enable us to register your new comment?

Kind regards,

**Davis Watson**  
Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation | PO Box  
270 | London EC2P 2EJ |  
[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

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**From:** Zi Ken T [REDACTED]  
**Sent:** 26 January 2026 16:08  
**To:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** Re: 25/00494/FULEIA - Re-consultation letter

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**CAUTION:** This email is from outside the Corporation. Do not open attachments, click on links or scan QR codes in this email unless you recognise the sender's e-mail address and know the content is safe.

Dear Mr McCallum,

Thank you for the re-consultation letter. Having reviewed the information, my representation made in my initial objection remains unchanged. Please take this email as a repeat of my initial response.

Likewise, my personal details, which I have previously provided remain the same, but do let me know if you require me to furnish them again.

Regards,  
Zi Ken Toh

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**From:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Sent:** 08 December 2025 15:13  
**Cc:** Liverpool Street Station <LiverpoolStreetStation@cityoflondon.gov.uk>  
**Subject:** 25/00494/FULEIA - Re-consultation letter

Dear Sir/Madam

Please find attached a re-consultation letter pertaining to Liverpool Street Station (25/00494/FULEIA).

Reply with your comments to [LiverpoolStreetStation@cityoflondon.gov.uk](mailto:LiverpoolStreetStation@cityoflondon.gov.uk)

Kind Regards

Planning Administration

On behalf of  
Kieran McCallum  
Environment Department  
City of London

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# Formal Objection to Planning Proposal: Demolition of Historic Building

Submitted to the Local Planning Authority

To Whom It May Concern,

I am writing to formally object to the planning proposal submitted by Network Rail for the demolition of the historic building located at **Liverpool Street Station**, as referenced in planning application 25/00494/FULEIA. This objection is made with a wish to see the historic and architectural character of our area preserved for present and future generations.

## Significance of the Historic Building

The building in question is of considerable historic and architectural value. As one of the few remaining examples of railway architecture in the locality, it contributes significantly to the area's unique character and heritage. The structure features original elements such as decorative brickwork, ironwork, columns, station concourse and many other distinctive details that are irreplaceable and form an integral part of the community's identity.

Furthermore, the building stands as a testament to the area's development and has served various important roles throughout its history. Its continued presence provides a tangible link to our shared past, which cannot be replicated once lost.

## Impact of Demolition

The proposed demolition would result in the permanent loss of a valued historic asset, eroding the distinctiveness and character of the local area. Such a loss cannot be justified, particularly given the building's contribution to local identity and the sense of place cherished by residents and visitors alike.

The removal of this structure would also diminish the architectural diversity of the neighbourhood and could set a concerning precedent for the treatment of other heritage buildings in the vicinity. The community and country stand to lose not only a piece of its history but also a unique feature that enhances the aesthetic and cultural richness of the area.

## Alternative Options

It is apparent that alternative, less intrusive options have not been adequately explored or presented by Network Rail. There are well-established precedents for retaining key elements of historic buildings, such as the façade or principal architectural features, which would allow for necessary development while respecting local heritage.

In addition, less impactful and more cost-effective solutions—such as sensitive refurbishment, adaptive reuse, or partial redevelopment—should be fully considered before resorting to such demolition as proposed. These alternatives would not only preserve the

building's unique features but also deliver the functional requirements of the proposed project.

## Recommendation for Listing

Given the building's distinctive character, architectural merit, and historical significance, I strongly urge the local authority to consider recommending the building for increasing the statutory listing. Such designation would provide appropriate recognition and protection, ensuring that any future changes are managed with due regard for preservation and community value.

The absence of satisfactory statutory listing at present does not diminish the building's importance. On the contrary, it underscores the urgency of taking proactive steps to safeguard our local heritage before it is irretrievably lost.

## Lack of Valid Grounds for Demolition

No compelling or exceptional grounds for demolition have been demonstrated in the planning application. The proposal fails to justify why the removal of this historic building is necessary, particularly in light of viable, less damaging alternatives. The case for demolition is therefore unsubstantiated and contrary to both local and national guidance on heritage conservation.

- The substantial harm to the Grade II-listed station through the demolition of the roof structure of the existing station concourse and its replacement with a new structure, which would also compromise the setting of the surviving C19 train shed.
- The insertion of extensive amounts of new retail units within the C19 train sheds, including the construction of two elevated retail galleries, causing a high level of harm to the special interest and significance of the Grade II-listed heritage asset.
- The impact to the setting of surrounding listed heritage assets. In particular, harm to the significance of the Grade II\*-listed hotel – the last continually functioning C19 hotel in the City – through the construction of a 20-storey tower over the station concourse.
- The substantial harm the scheme would cause to the Bishopsgate Conservation Area, by the imposition of a tall building in an area characterised by low- and medium-scale buildings. This is contrary to the 2015 City Plan, which requires the refusal of planning permission for tall buildings in inappropriate areas, such as in Conservation Areas and the St. Paul's Cathedral Heights area.
- In addition, the scheme would impact on the setting of numerous designated and undesignated heritage assets in the City and beyond, such as many of the Grade I-listed Christopher Wren City churches, and nearby St Botolph's church.

The loss of unique features would be especially regrettable and cannot be mitigated by the proposed development.

## Inappropriateness of Proposed Development

The design, scale, and intended use of the proposed development are incongruous with the established character of the site and surrounding area. Rather than complementing the existing urban fabric, the proposal risks undermining the distinctive sense of place and community cohesion that the historic building supports.

Approving this application would not only result in the needless destruction of a valued heritage asset, but also introduce a development that is fundamentally inappropriate for its context.

## Conclusion

In summary, I respectfully urge the local planning authority to refuse planning permission for the demolition of this historic building.

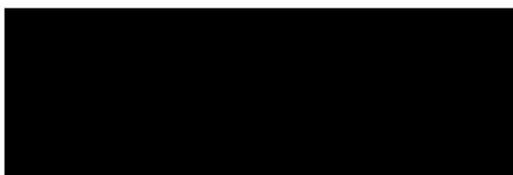
Paragraph NPPF 213 of the planning statutes states: "Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional."

This proposal is not exceptional under these rules, and the proposal should therefore be rejected.

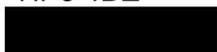
The proposal would result in the irretrievable loss of a unique and valued asset, without sufficient justification or consideration of alternative options. Instead, the building should be retained and appropriately protected, ensuring that the character and heritage of our area are preserved for generations to come.

Thank you for your attention to this matter. I trust that the concerns outlined above will be given full and proper consideration.

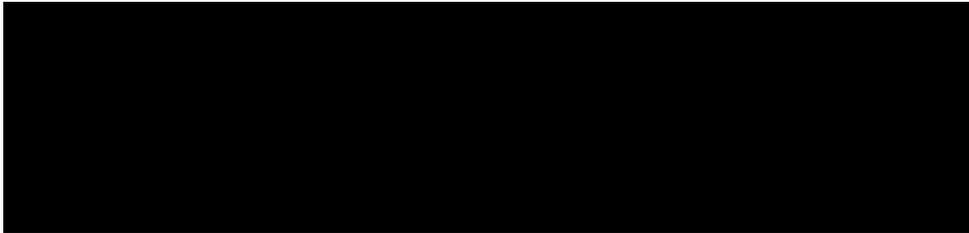
Yours faithfully,



Neil Mortimer  
Lane End  
8 Aran Heights  
Chalfont St Giles  
Buck  
HP8 4DZ



**From:**  
**To:**  
**Cc:**



**Subject:** Objection to 25/00494/FULEIA  
**Date:** 27 January 2026 01:20:48

Some people who received this message don't often get email from [REDACTED]

**CAUTION:**This email is from outside the Corporation. Do not open attachments, click on links or scan QR codes in this email unless you recognise the sender's e-mail address and know the content is safe.

To the Chair of the Planning & Transport Committee,

I object to this application (25/00494/FULEIA), which would cause substantial harm to the significance of nationally and internationally important heritage assets. This is not the first time that Liverpool Street Station has been subject to a wildly inappropriate redevelopment proposal, however, I very much hope it is the last. The City of London is responsible for one of the most important portfolios of heritage assets of any local planning authority anywhere in the world, and I very much hope it makes the right decision.

I raise specific objections to the following aspects of the proposed scheme:

First, the proposals would result in substantial harm to the Grade II-listed Liverpool Street Station through the demolition of the historic roof structure of the existing station concourse and its replacement with a new, enlarged structure. The concourse roof is a key element of the station's historic fabric and contributes materially to its architectural significance and legibility as a major 19th-century railway terminus. Its removal would represent an irreversible loss of historic material and would fundamentally undermine the relationship between the concourse and the surviving 19th-century train shed, severely compromising the setting and appreciation of that highly significant structure.

Secondly, the scheme proposes the insertion of extensive new retail accommodation within the 19th-century train sheds, including the construction of two elevated retail galleries. This level of commercial intrusion would cause a high degree of harm to the special interest of the listed building. The train sheds are defined by their remarkable scale, openness, and industrial character; the introduction of dense retail structures and additional floor levels would erode these qualities and transform the sheds into an enclosed shopping environment, fundamentally at odds with their historic function and architectural intent.

Thirdly, the proposals would cause serious harm to the setting of surrounding listed buildings, most notably the Grade II\*-listed Great Eastern Hotel. This building is of exceptional historic importance as the last continually functioning 19th-century hotel in the City of London. The construction of a 20-storey tower above the station concourse would dominate the hotel, diminish its historic prominence, and severely harm its setting. This level of impact is wholly inappropriate given the sensitivity and national importance of the asset affected.

The development would also cause substantial harm to the Bishopsgate Conservation Area. The imposition of a tall building in this location is entirely contrary to the established character of the Conservation Area, which is defined by low- and medium-scale historic development. The proposal directly conflicts with the City of London Local Plan (2015), which makes clear that planning permission should be refused for tall buildings in inappropriate locations, including Conservation Areas and areas protected by strategic height policies such as the St Paul's Cathedral Heights.

In addition, the scheme would harm the setting of numerous designated and undesignated heritage assets across the City and beyond. These include several Grade I-listed City churches designed by Sir Christopher Wren, as well as the nearby church of St Botolph-without-Bishopsgate. The cumulative effect of increased height, bulk, and visual intrusion would diminish the historic townscape and the ability to appreciate these assets in their established urban context.

Finally, the proposals are fundamentally at odds with national heritage policy. Paragraph 213 of the National Planning Policy Framework states that "substantial harm to or loss of grade II listed buildings... should be exceptional." In this case, the level of harm identified is clearly substantial, yet no exceptional justification has been demonstrated. The proposals prioritise commercial development and retail expansion at the expense of the conservation of irreplaceable heritage assets, contrary to the core principles of the NPPF. It has also become clear through the counter proposal provided by John McAslan that there are alternatives which would achieve the overwhelming majority of development objectives without anywhere near the same level of harm.

For these reasons, I consider that the application fails to meet both local and national planning policy requirements and should be refused. Future redevelopment of the site should retain the identified significance of the existing heritage assets and provide them with a suitable setting so as to maintain and conserve one of the City of London's most important public landmarks for the benefit of present and future generations.

Yours faithfully,

Lachlan Marshall  
SW13 0NX London

# JOHN MCASLAN + PARTNERS

Gwyn Richards  
Planning and Development Director  
Environment Department  
City of London  
PO Box 270  
Guildhall  
London EC2P 2EJ

By email to: [REDACTED]  
Also sent by hard copy

23.01.2026

Dear Gwyn Richards,

I am writing to express serious concerns about the proposed development at Liverpool Street Station, and to call on the planning committee to defer the application until they have had time to fully consider the enclosed alternative proposal.

The submitted scheme would cause years of disruption for passengers, would demolish the station's listed concourse (approximately 40 per cent of the station's roofplan) and is "not technically viable" according to Network Rail's advisors. This is not the only option for Liverpool Street, and we have created a viable alternative which retains the listed station buildings and offers much-needed station upgrades at approximately half the cost of the submitted scheme.

The McAslan alternative vision for Liverpool Street that:

- meets Network Rail's requirements to upgrade the country's busiest station, aiming to match the submitted scheme's accessibility and capacity improvements, including new lifts, escalators, waiting areas, accessible toilets and a cycle hub;
- declutters the concourse to ease passenger movement and future-proof the station to meet passenger growth forecasts;
- sensitively creates 52,000+ sqm (GIA) of A-grade office space, contributing towards the City Plan target of 1.2m sqm net additional office floorspace to support UK economic growth by 2040;
- Delivers a new public walkway above the Victorian Station railway sheds, and an integrated biodiversity strategy devised by Tim Smit, co-founder of the award winning Eden Project;
- embraces a low-carbon approach from the outset, reusing existing fabric and meeting requirements in the City Plan 2040 that "development proposals should minimise whole life-cycle carbon emissions";

**LONDON**  
29–31 Saffron Hill  
London EC1N 8FH, United Kingdom



**EDINBURGH**  
13 Great King Street  
Edinburgh EH3 6QW, United Kingdom



**SYDNEY**  
35 Buckingham Street  
Studio 8, Level 1  
Surry Hills NSW 2010, Australia



**NEW YORK CITY**  
Soho Works  
875 Washington Street  
New York City, NY 10014, United States



# JOHN MCASLAN + PARTNERS

- achieves this more quickly, and with far less disruption to passengers than the submitted scheme, avoiding upheaval caused by demolishing the roof or driving columns through the concourse to support a new office block above;
- achieves this at an estimated half the cost of the £1.2bn current scheme, based on current prices;
- achieves this with almost no demolition, protecting the listed station beneath and safeguarding the City's magnificent heritage;
- Retains the station's gateway quality and cathedral-like, light-filled space; and
- The alternative proposal achieves all of this with a viable scheme.

We would be delighted to meet with you to discuss our proposals in more detail.

In the light of the above we are requesting that the City of London planning committee defers the consideration of the submitted scheme until officers and Cllrs have had sufficient time to fully examine the merits of the alternative proposal.

Yours sincerely,



John McAslan

Enc: Liverpool Street Station: Initial Thoughts for Consideration

# Liverpool Street Station

## Initial Thoughts for Consideration

January 2026

**JOHN MCASLAN + PARTNERS**

Architecture

  
expedition

Engineering

targeting  
**zero**

Low Carbon  
Design  
Consultancy

eden  
project

Biodiversity

**C/5**  
core five

Construction  
Cost  
Consultancy

Paddy Pugh

Conservation  
Planning

Luke Lowings

Light Scoops

# Contents

## Introduction 3

### Context

- Historic station development 6
- Recent history 7
- Key issues 8
- King's Cross Station / Liverpool Street Station comparison 9
- JMP proposal and study model of current application scheme 10

### Developing a unified proposal:

- 'Exploded' axonometric aerial view 11
- Concept 12
- Engineering 13
- Access and construction 14
- Sustainability and environmental 15
- Biodiversity 16
- Designing low carbon office buildings 17

### Proposals:

- Underground tracks overlay 20
- Roof plan 21
- Aerial view 22
- Over-Station development cutaway diagram 23
- Over-Station development engineering diagram 24
- Liverpool Street entrance 25
- Trainshed interior 26
- Station concourse 27
- Sky Lobby looking south 28
- Over-Station development top floor 29
- Aerial view looking north 30
- KCS/LSS – Old into New 32

### JMP precedents – Old into New 33



# Introduction

Liverpool Street Station faces a conundrum. Necessary improvements to the station require significant investment, which appear to rely on funds raised from intensive development of its constrained site. Published proposals would see the loss of much of the listed structure and would appear to impact the station's historic setting while proposing significantly scaled new office buildings to fund the works. It is fair to say that this prospect has attracted severe criticism from national heritage organisations. A mutually satisfactory outcome might seem impossible.

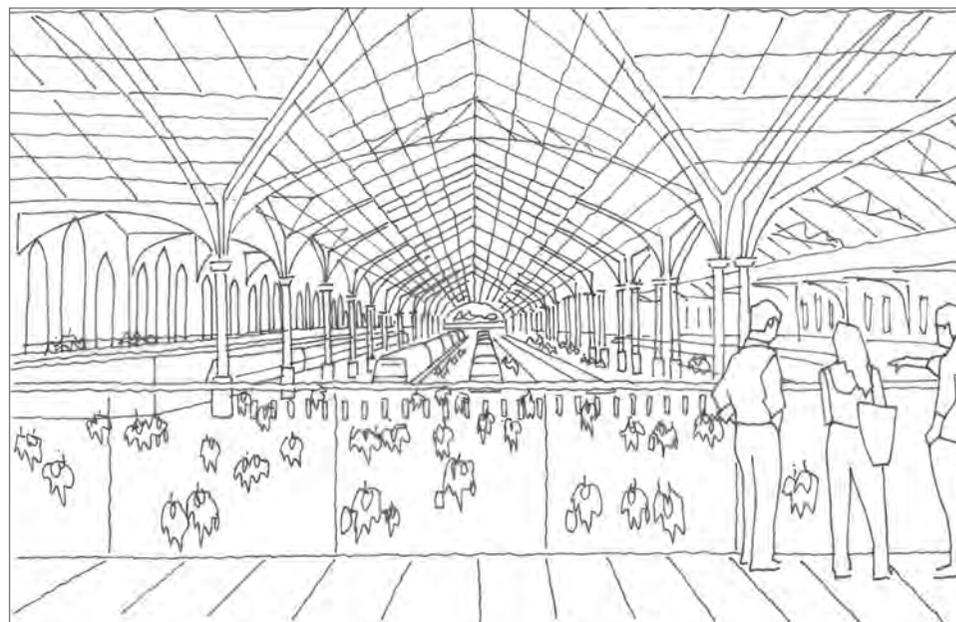
As architects with deep experience in heritage conservation and the transformation of major rail stations, both here and overseas, we felt compelled to consider the problem afresh: what development can be achieved without significant harm to this much-loved building and its setting? What is the appropriate balance of Old and New?

Our initial thoughts emerging from these considerations, and illustrated here, reflect clear priorities which:

- minimise congestion, increase capacity, enhance step-free access and future-proof the station
- respect the scale of the station building, its thresholds and its setting (A)
- retain and protect the station's historic character and trainshed interior (B)
- avoid any historic building demolitions and embark on fabric-first upgrades
- enhance the passengers' enjoyment of the daylight and cathedral-like station concourse



A: Liverpool Street Station proposal



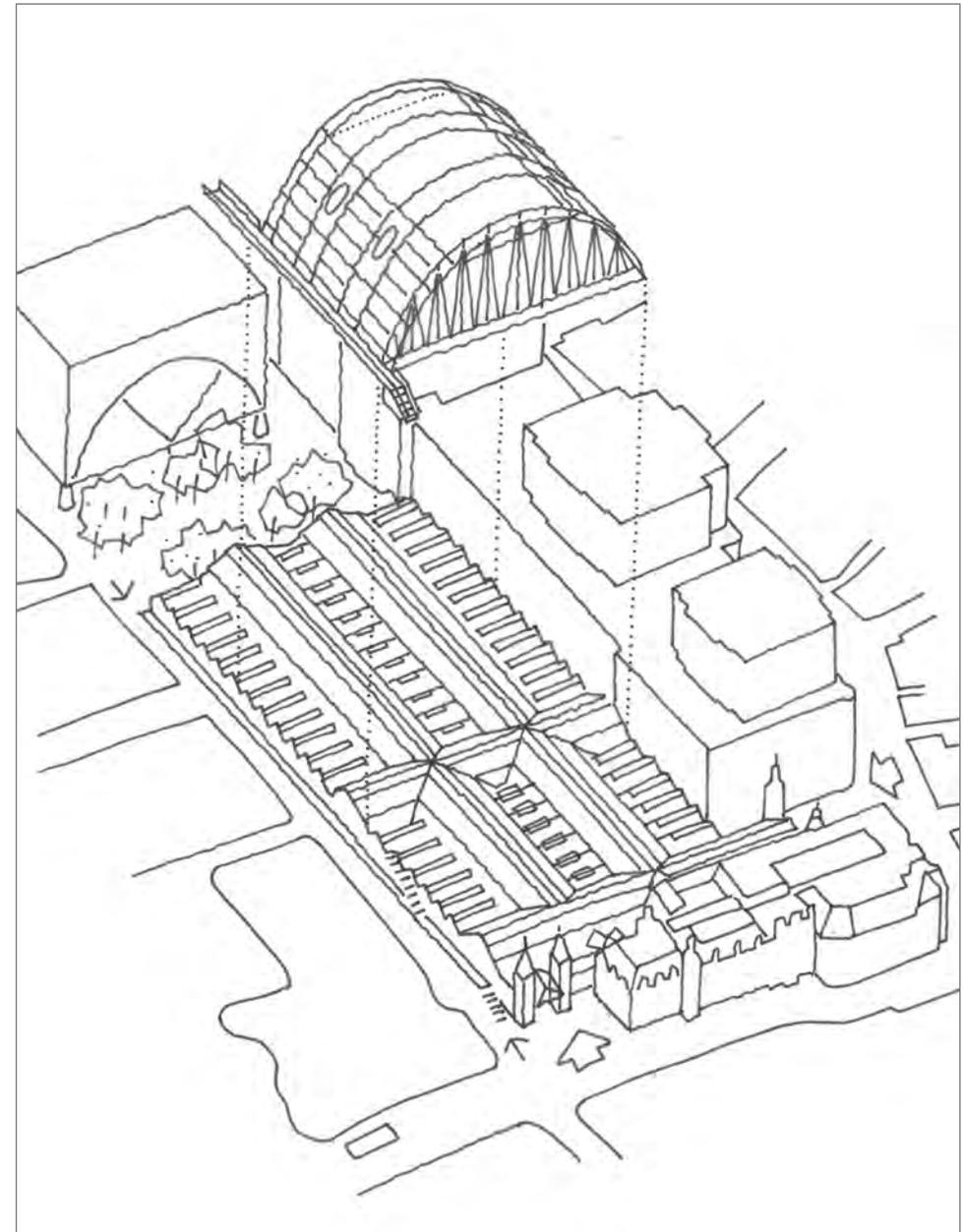
B: Trainshed interior proposal

- utilise new development and building retention scenarios which ensure City of London sustainability policies are met for operational and embodied carbon
- ensure any new development is appropriate in the context of its historic setting, is phasable, fundable and viable, and fully covers the costs of repair and capacity upgrades and are fully reversible
- minimise disruption to the operations of the station during all construction works

To this end, and accepting the need to incorporate the appropriate level of development to fully fund the required station enhancements, would require, in our view in the region of 560,000 sf GIA of offices. We illustrate the preferred option here in the form of an oversite arched structures sailing atop the trainshed towards its northern end with curved forms rising to just nine floors. Additionally we propose some 75,000 sf GIA of retail within the station and the potential inclusion of 36,000 sf GIA office reception and support spaces formed within the handsome grade II listed 50 Liverpool Street building.

We propose the new arched structures are set well back from the glass-roofed concourse and adjoining hotel, and are largely hidden on approach from surrounding streets (C). The vaults' principal façade addresses the elegant SOM designed Broadgate building and its plaza to the north (D). Further, we seek to preserve existing station entrances on Liverpool Street and Bishopsgate, and with them the intimate scale of the historic city.

While the new structures are wholly detached from the listed building, their architecture should honour that context. Vaulted roofs recall 19th-century trainsheds, and highly articulated façades evoke the intricacy of Victorian engineering.

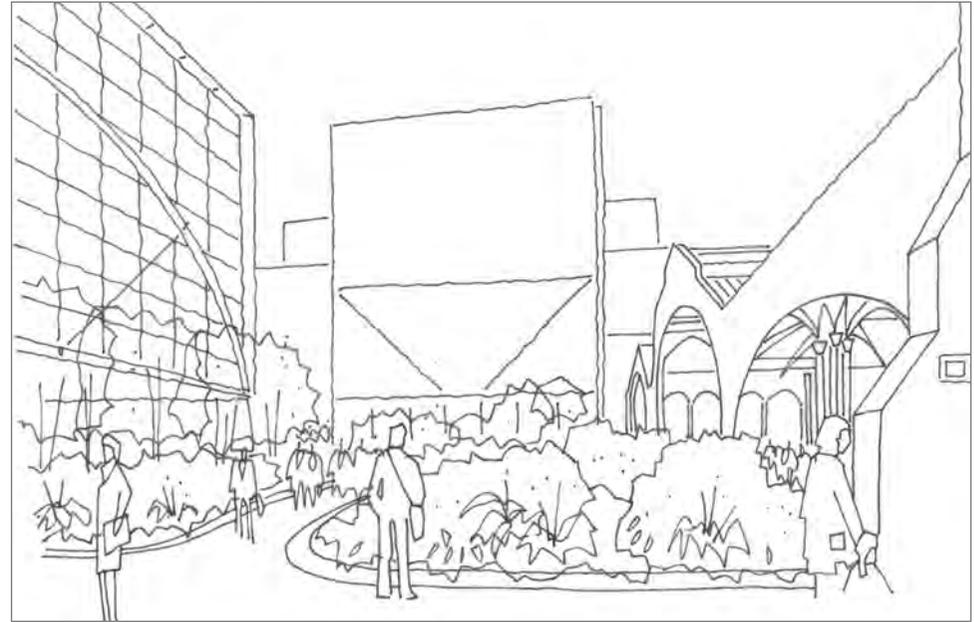


C: Oversite proposal

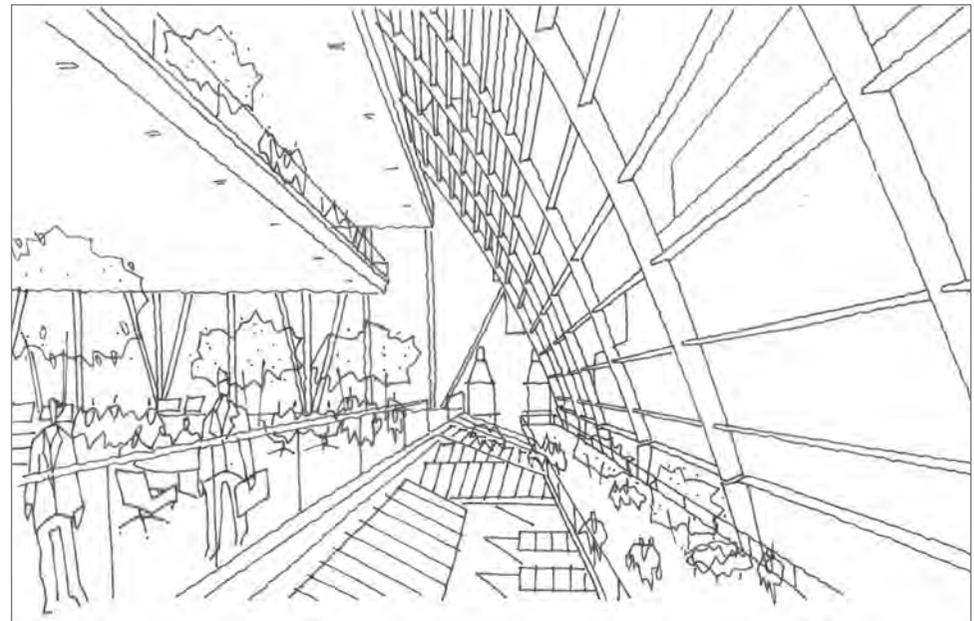
In our proposal, passengers entering the concourse will enjoy enhanced daylight and sky views through its high, fully restored glazed roof, but the station's delicate ironwork will be given even greater prominence in a cleaner, more ordered interior, by the removal of the elevated 1990's retail cluster. Ahead, the heroic trainshed will be fully revealed, and its long platforms will be illuminated by daylight funnelled down through the new building above and through the station rooflights (E).

Whilst still very much work in progress, our proposed design concept is studied, limited in scale, innovative, ecological but also pragmatic, with an elegance and ambition commensurate with its situation in the City. It addresses the commercial requirements of today with an intervention that could be fully reversed in future (as we achieved at King's Cross Station), and successfully safeguard a unique piece of architectural heritage. We believe this offers a 'win-win' answer to a 'win-lose' problem. At this critical moment we seek to reset debate on the development of the station, together with others who seek that positive outcome.

John McAslan



D: Exchange Square aspect



E: Sky Lobby proposal

# Context – Historic station development



# Context – Recent history



## Context – Key issues

Minimise congestion, increase capacity, enhance step-free access and permeability, future-proofing the station

Retain, protect and enhance the station's historic character and trainshed interior

Minimise disruption to the operations of the station during all construction works

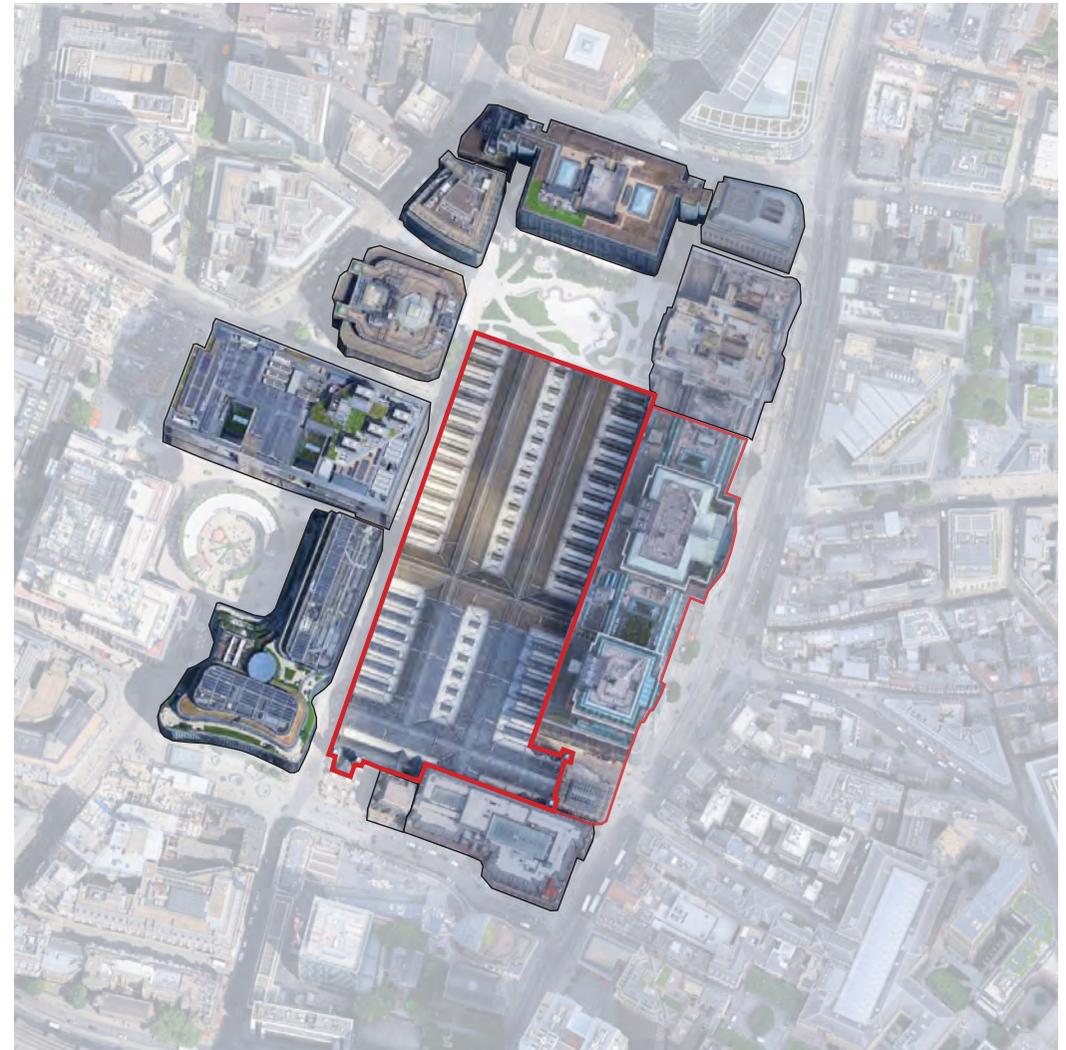
Minimise historic fabric demolitions and embark on fabric-first upgrades

Ensure C of L sustainability policies are met for operational and embodied carbon

Ensure any new development respects its historic context, is phasable, fundable and viable, covering all repair and capacity upgrade costs

# Context – King's Cross Station / Liverpool Street Station comparison

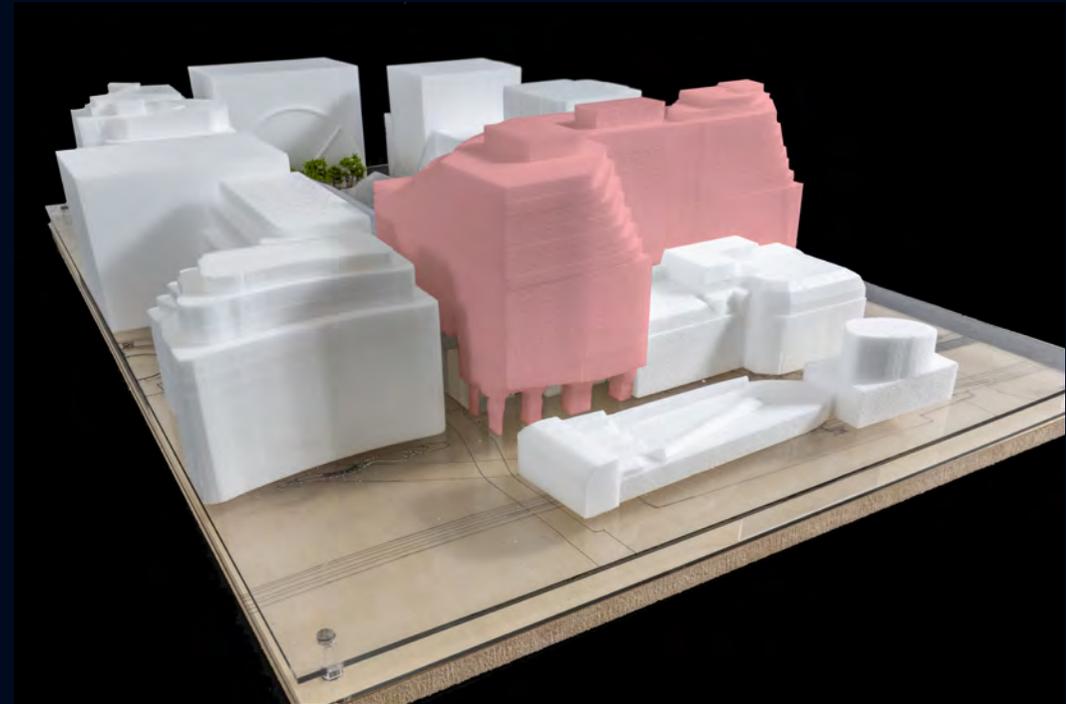
The elongated openness of King's Cross Station interestingly contrasts with the dense, compact and urbanistic nature of Liverpool Street Station. The latter's form has been instrumental in informing the concept proposal developed here.



# JMP proposal and study model of current application scheme

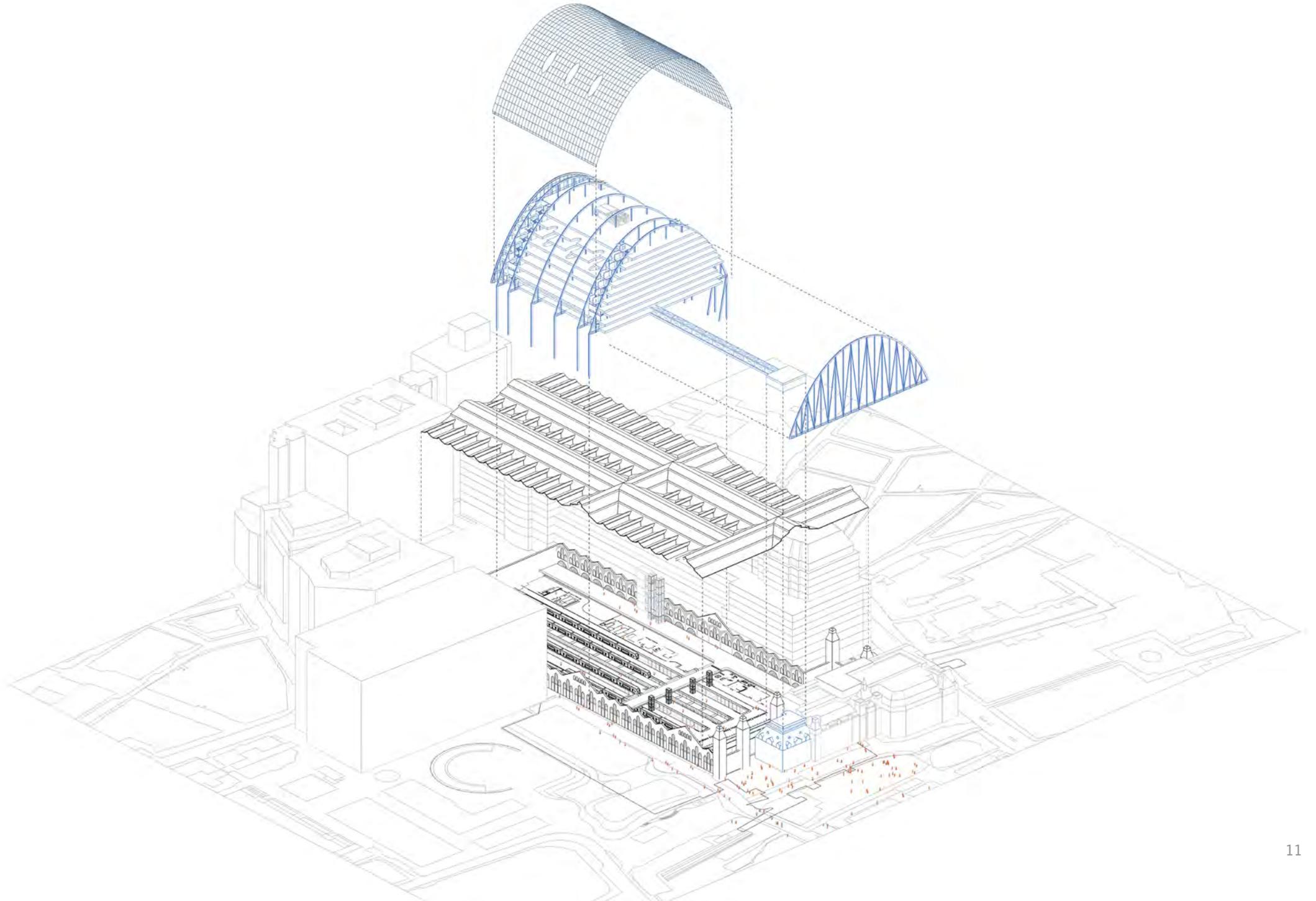


JMP proposal



Current planning application scheme

# Developing a unified proposal – ‘Exploded’ axonometric aerial view



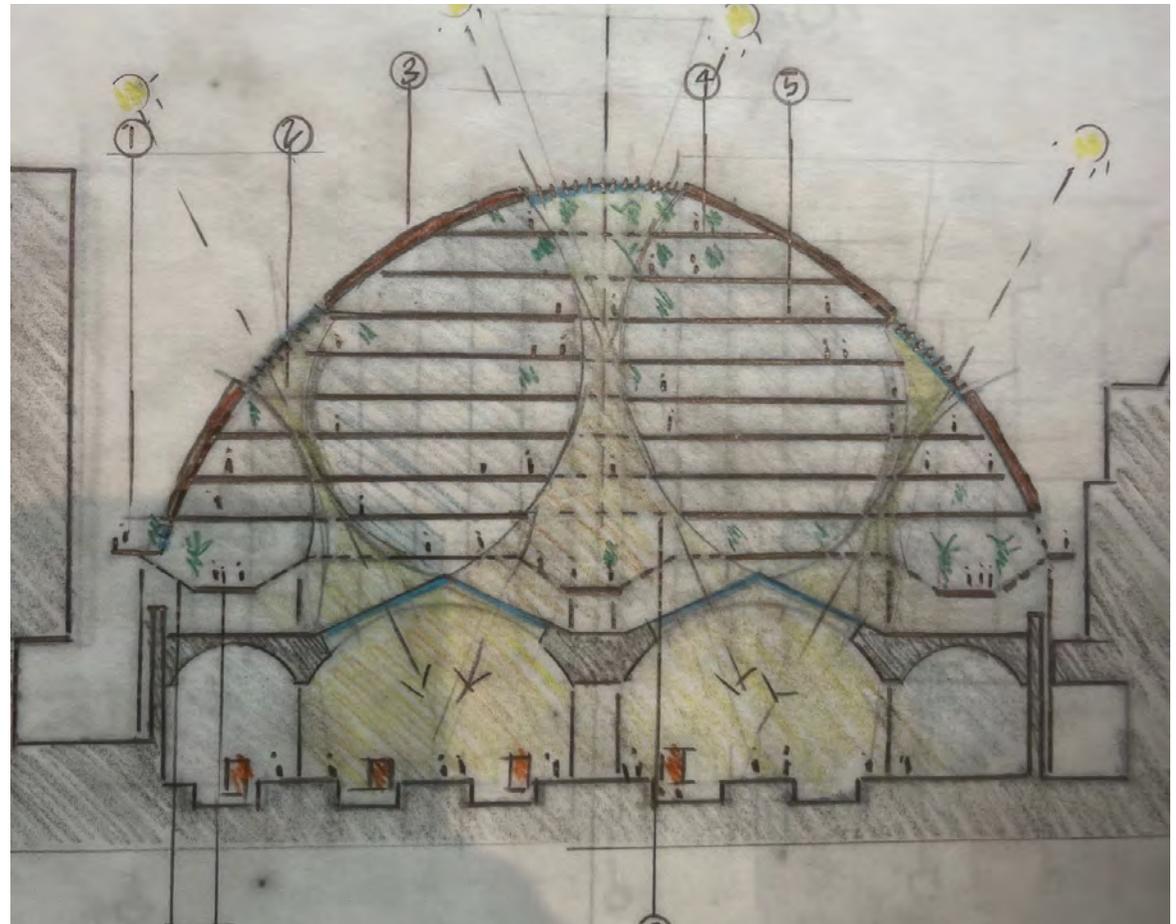
# Developing a unified proposal – Concept

Our proposal respects and reinforces the character of both the historic 1870's trainshed and the successful 1990's concourse and trainshed extension. It includes high quality commercial development with a sustainable focus while avoiding the need to demolish any of the historic or 1990's station.

Retaining the station concourse and reinstating its cathedral-like interior with clear access from both Liverpool Street and Bishopsgate, would reinstate the heart of the station. The two, arched, commercial structures would oversail the northern end of the 1870s trainshed, without imposing any structural loads upon it, enabling it to be removed in the future if circumstances changed. Light scoops would penetrate the new structures providing daylight and ventilation to both the commercial areas and station volumes below.

The Liverpool Street elevation would continue to provide a clear, major entrance to the station from a generous public space with a limited visibility of the new commercial structure.

Paddy Pugh, former Director of Planning and Conservation for London, English Heritage; Conservation Planning

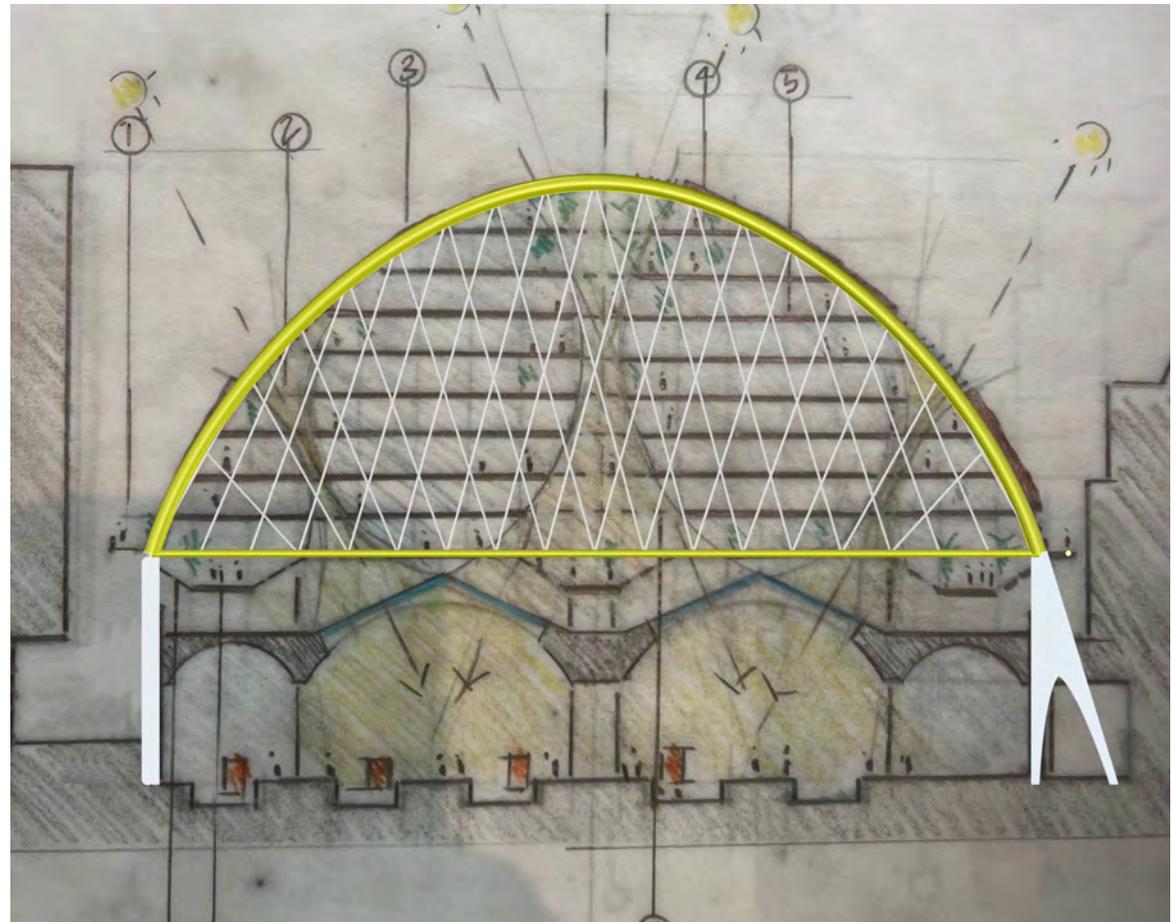


Design concept sketch, August 2025

# Developing a unified proposal – Engineering

The concept arched commercial structure is engineered as a bridging structure spanning over the 90 metre Victorian trainshed without impacting it. The 'bridge' is a parabolic arch, tied at its springing points. To control movements, the arch and its ties are trussed together. This system is called an arched network truss. The floors hang from the arches, which means the hangers are largest at the top, and smallest for the lower floors immediately over the trainshed roof. There is no need for floor supports to pass down through the trainshed. To stabilise the new building structure laterally, we use forked pairs of columns, which resist wind loads through push:pull action. Taken together, the arched trusses and their supports echo the tied arches of SOM's Broadgate Phase 11.

In our proposal, these twin arched macro-structures are required every 18m along the track. This is to keep the secondary floor structures to reasonable sizes, and to help spread the weight of the buildings evenly either side of the trainshed. An added benefit of these top-hung structures is to allow great freedom in the design of the walkways, balconies and decks which provide a delicate access network above the train hall. The network bracing also defines and frames the lightwells which allow daylight to flood down to the access decks and down through the train hall glazing.



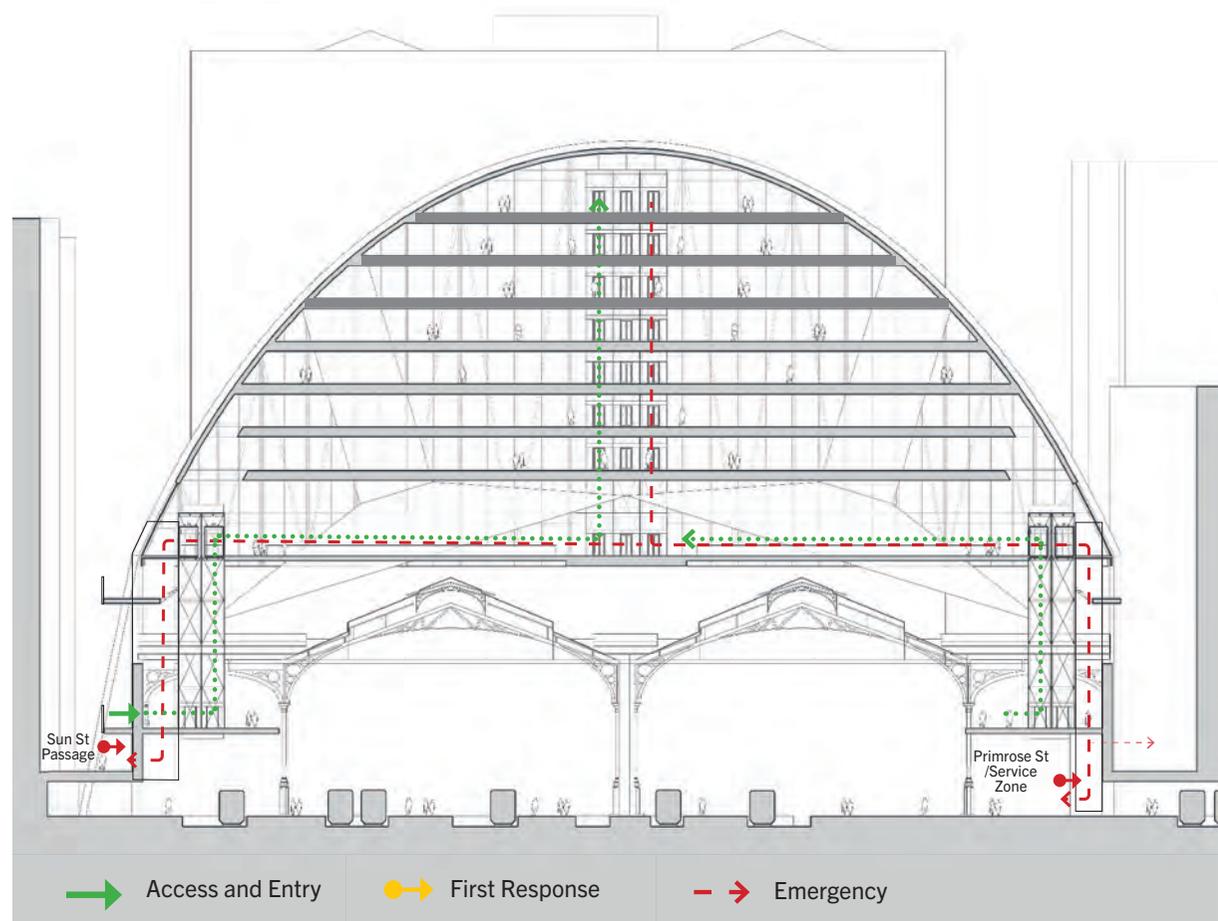
Engineering concept sketch, August 2025

Chris Wise, Expedition  
August 2025, Developed proposal

# Developing a unified proposal – Access and construction

Public access to the commercial development is separate from station operations via an elevated route from 50 Liverpool Street. Connecting to a Sky Lobby above the trainsheds, access transfers to a central core up to the Grade A offices above. Logistics and delivery routes are able to be separated and take advantage of street level access away from public access. With careful construction staging and phasing, and taking advantage of a transfer level crash deck, it is anticipated that construction could be carried out without operational impacts. Maintaining access to the current concourse and platforms by avoiding demolition of any of the trainshed structure would reduce the need for temporary works and disruptions.

Once works are complete, access and movement within the station would be strengthened through removal of obstacles and opening up of the existing concourse. The mezzanine levels within the concourse are proposed to be reconfigured to open long views through the station, cater for future capacity increases and to provide useful links through the station connecting from Liverpool Street to Exchange Square. A new E-W mid-station bridge link would reinstate the footbridge removed during the 90's work and provide additional step-free access routes to platforms. These routes would activate redundant and underused areas of the station, providing potential areas for retail, as would the re-working of the servicezone along the eastern edge of the trainshed.

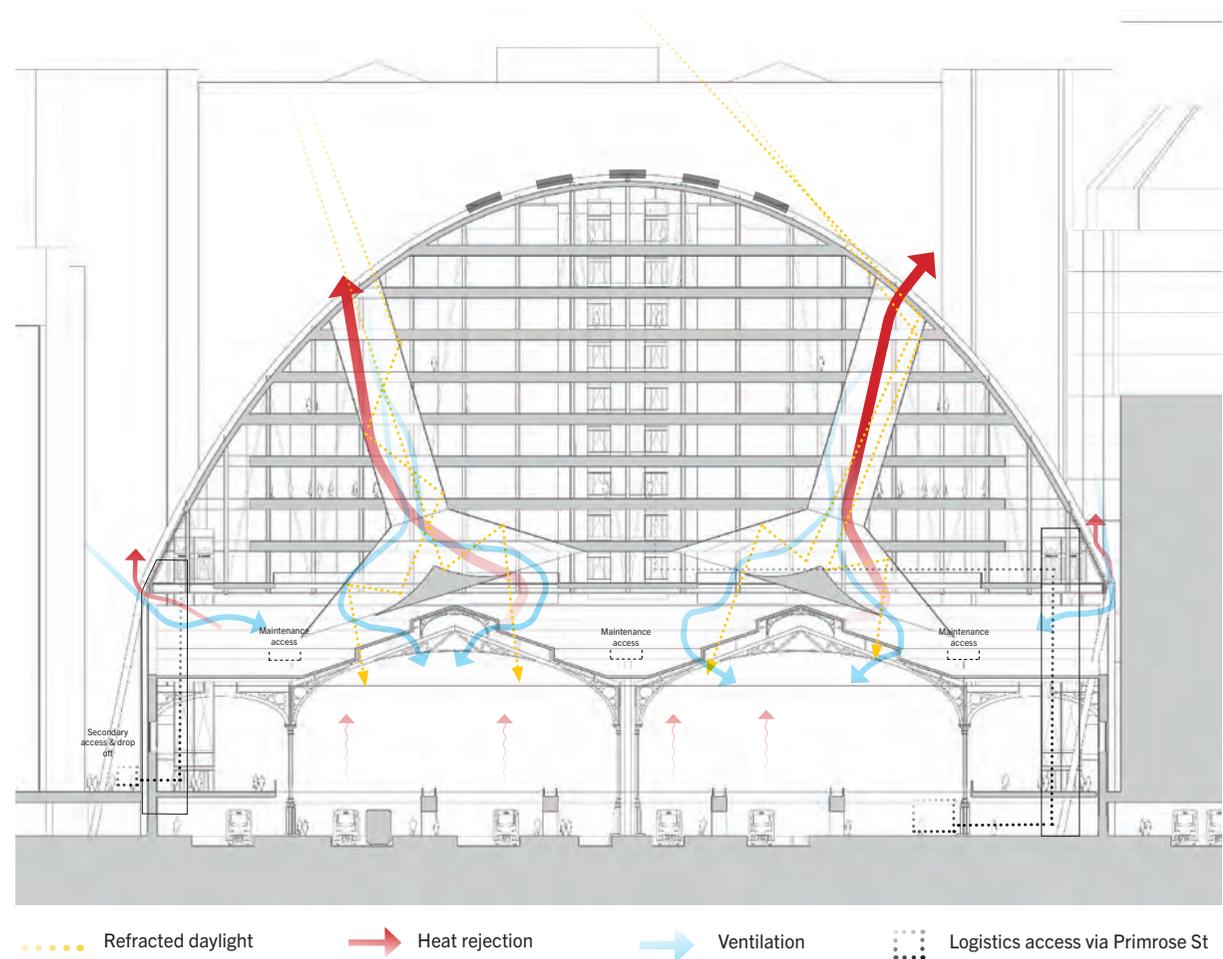


Generic option cross-section

# Developing a unified proposal – Sustainability and environmental

Targeting BREEAM Outstanding for the development, with lightweight structures and an efficient form factor, the lightweight bridging structures would reduce embodied carbon and target WELL Platinum certification. Key to the design intent is the use of light scoops to draw daylight down into the central office spaces as well as refracting light deeper through the trainshed roof and platforms below.

With innovative and functional considerations at the heart of our proposal, we retain the heritage context of the current station fabric and create the best connected address in the City, delivering high quality office space along with activation of redundant and underused parts of the existing station. The ongoing story of Liverpool Street Station as evolution, not revolution would therefore be delivered to meet current needs and growth for rail and multimodal interchanging.



Generic option cross-section

# Developing a unified proposal – Biodiversity

Eden Projects involvement in this project supports the proposed Liverpool Street Station scheme, recognising its sensitive balance of heritage conservation, innovation, and ecological design.

The approach – minimising demolition, celebrating the historic, and enhancing daylight, air, and green connections – will reconnect people with nature in urban environments.

We believe that this major infrastructure project should not only serve transport needs but also nurture biodiversity and a sense of place.

This project represents a vision where cultural heritage and ecological regeneration meet. By connecting a historic gateway to the capital with living systems that support wildlife and human connection, we can help set a precedent for rail hubs as vibrant, nature-connected civic spaces. Eden looks forward to contributing to this transformative and inspiring venture.

Dan James, Development Director, Eden Project



Eden Project, Cornwall

# Developing a unified proposal – Designing low carbon office buildings

The McAslan proposal has the potential to be an exemplary low-carbon office building, and a pointer to the future for the City of London. The arched tension structure is highly efficient in terms of material use and is also in the spirit of Victorian innovation. The past informing the future!

## 1. Key Point:

Each of these Stages (or Modules) can be examined independently but to get the lowest carbon outcome and to optimise resource efficiency it is best practice to consider how each design decision performs across all Modules A, B and C. Module D is not included in calculations as it is largely guesswork driven by optimism!

## 2. Construction:

The Construction process can be the single biggest carbon cost in the life cycle of a building.

- Material Sourcing: Reduce through low carbon eg natural materials, or

use of recycled or even better, reused content. This is by far the largest part of the ‘construction’ carbon cost.

- Transport: Local Sourcing can help, although a diesel container lorry can be much higher CO2e than say ship and train. Generally minimal impact.
- Fabrication/Site Works: can be significant with difficult structural conditions.

## 3. In Use:

- Maintenance and Replacement: There is often a trade off between the life expectancy of materials and the carbon cost of construction. Nirvana is achieved when you get low carbon in construction and long life, low maintenance thereafter. Services are problematic as they invariably have short equipment life spans.
- Energy Use: Clearly to minimise this the performance of the envelope is

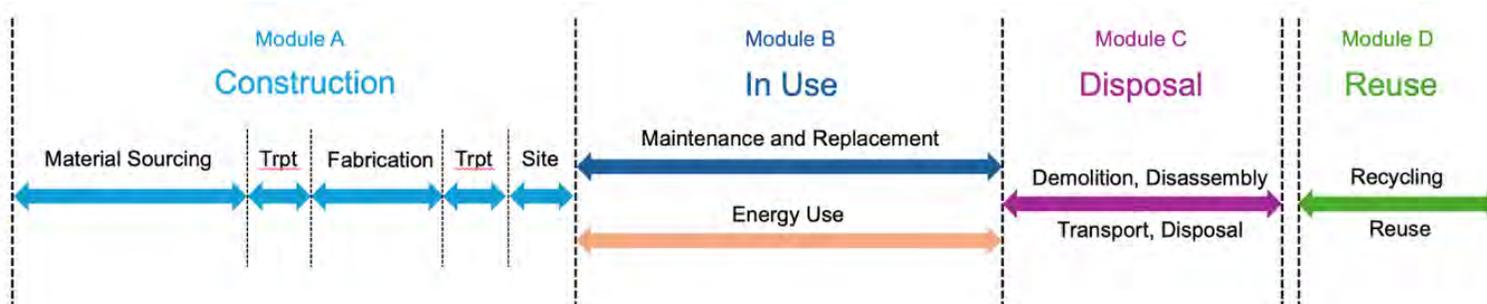


Fig. 1 above shows a simplified version of the assessment structure for carbon accounting (for full version see end of this document).

crucial, however heat retention in the structure can contribute to overall efficiency.

#### 4. Disposal:

Traditionally we haven't worried about what happens to our buildings post PC let alone post use. However clearly the ability to disassemble a building into useful components is far more carbon/resource efficient than 'recycling'. Many Planning Submissions will claim 95% or 99% of material will be 'recycled'. This is a nonsense as this can mean anything. eg bricks that end up under roads because cement mortar was used will claim to be 'recycled', whereas you really want the recycled brick to be reused as a brick.

#### LIVERPOOL STREET SCHEME:

##### 5. Structure:

- **Foundations:** Minimise the use of cement wherever possible. Can stone be used? It lasts forever and doesn't mind getting wet.
- **Primary Structure:** Steel in tension is probably the best solution by far (fire casing?). CLT as structural slabs would be ideal as it is comparatively light and sequesters carbon (effectively a credit). Safety/Fire/Insurance speak to: Alexia Laird, Sustainability Director at Landsec

alexia.laird@landsec.com Their Timber Sq project was steel frame with CLT slabs; Andrew Waugh at Waugh Thistleton andrew@waughthistleton.com , they have done a lot of structural timber buildings. Also Try Sam Liptrott of OFR Consultants sam.liptrott@ofrconsultants.com I arranged for him to give evidence to parliament on fire/insurance.

##### 6. Cladding:

The difficulty with facade design is reconciling:

- Low carbon construction
- Good thermal performance
- Long life
- Good recyclability.
- It may be that a divide and rule approach is best, ie the majority of the facade is opaque, good on thermal performance and very long life (say more than 50-60 years), and as low carbon as possible. External glazing is treated separately and is capable of easy replacement (timber framing, why not?!)

##### 7. Services:

The key point here is to minimise services by ensuring the design of the building is fabric first and therefore reduces the need for heating/cooling. (Easier said than done!).

This diagram below is from the RICS Whole life carbon assessment for the built environment – 2023, and is a more comprehensive version of the diagram at the beginning.

Simon Sturgis, Targeting Zero

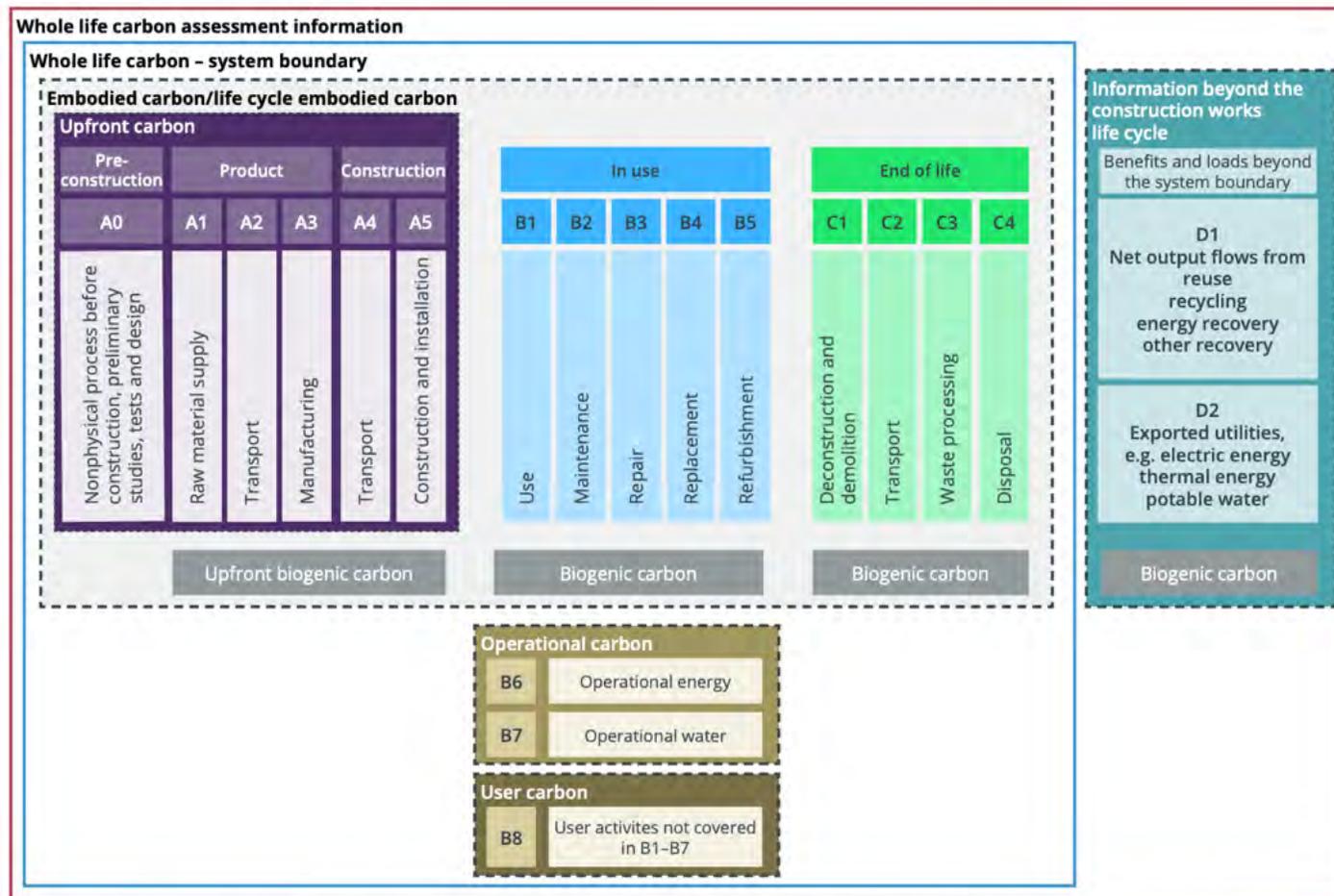
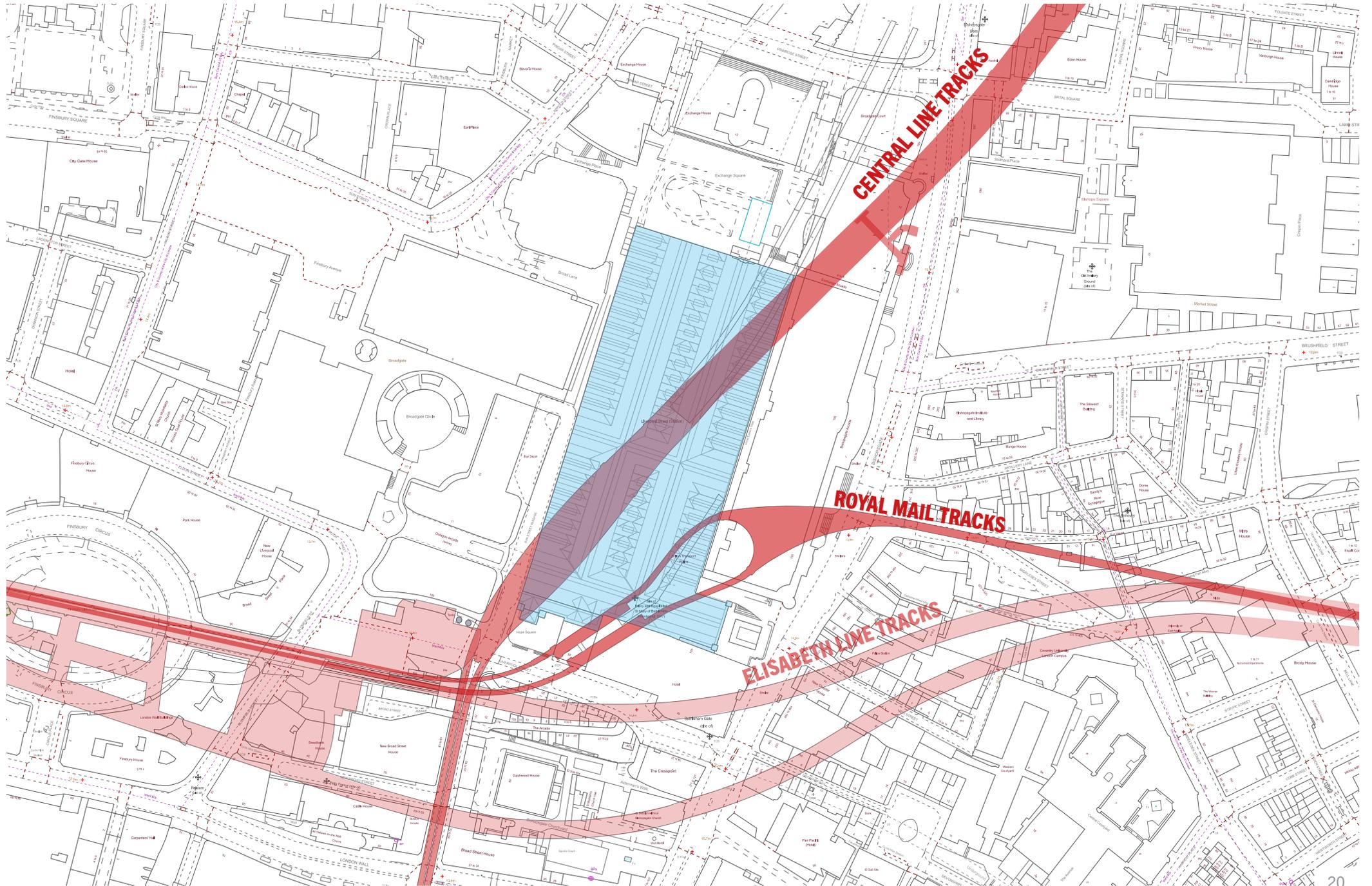
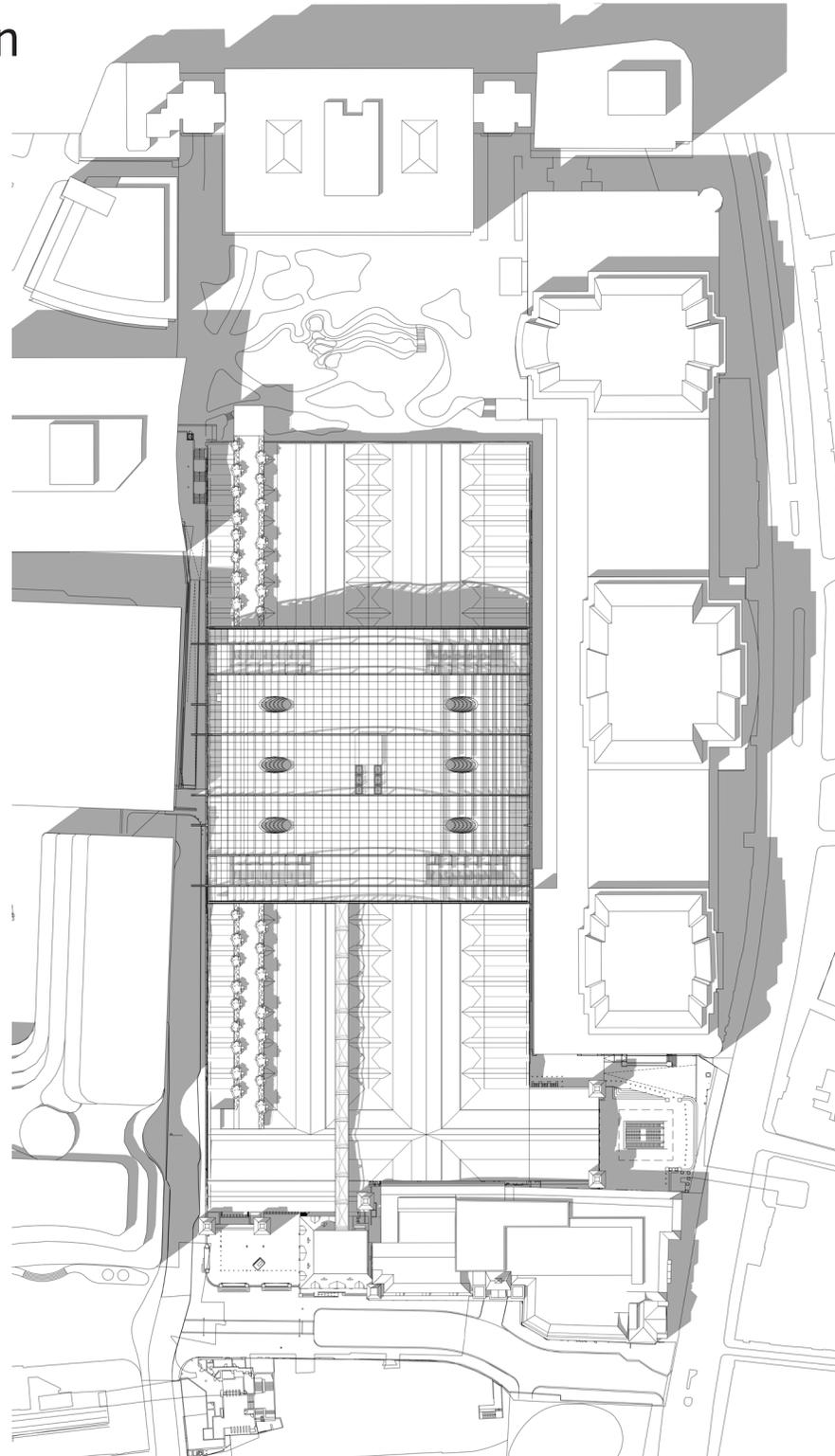


Figure 2: Building and infrastructure life cycle stages and information modules (adapted from EN 15978, EN 17472 and EN 15643, with additions to illustrate biogenic carbon)

# Proposal – Underground tracks overlay



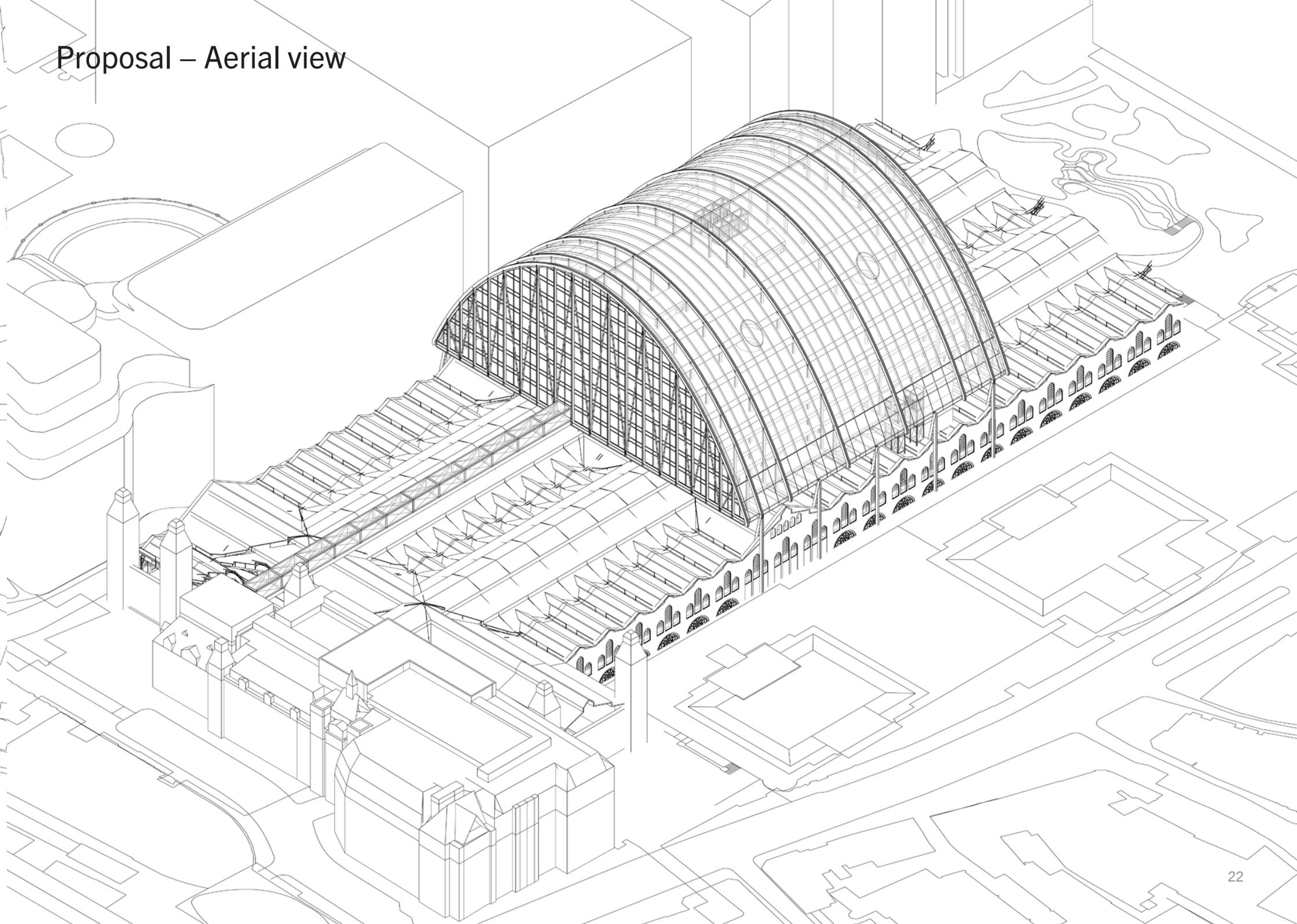
# Proposal – Roof plan



GIA 560,000 ft2  
(incl. 4.5m cantilevers)  
(97m x 81m)

- + 36,000 ft2 GIA 50 Liverpool Street
- + 75,000 ft2 GIA Retail by Platform 10

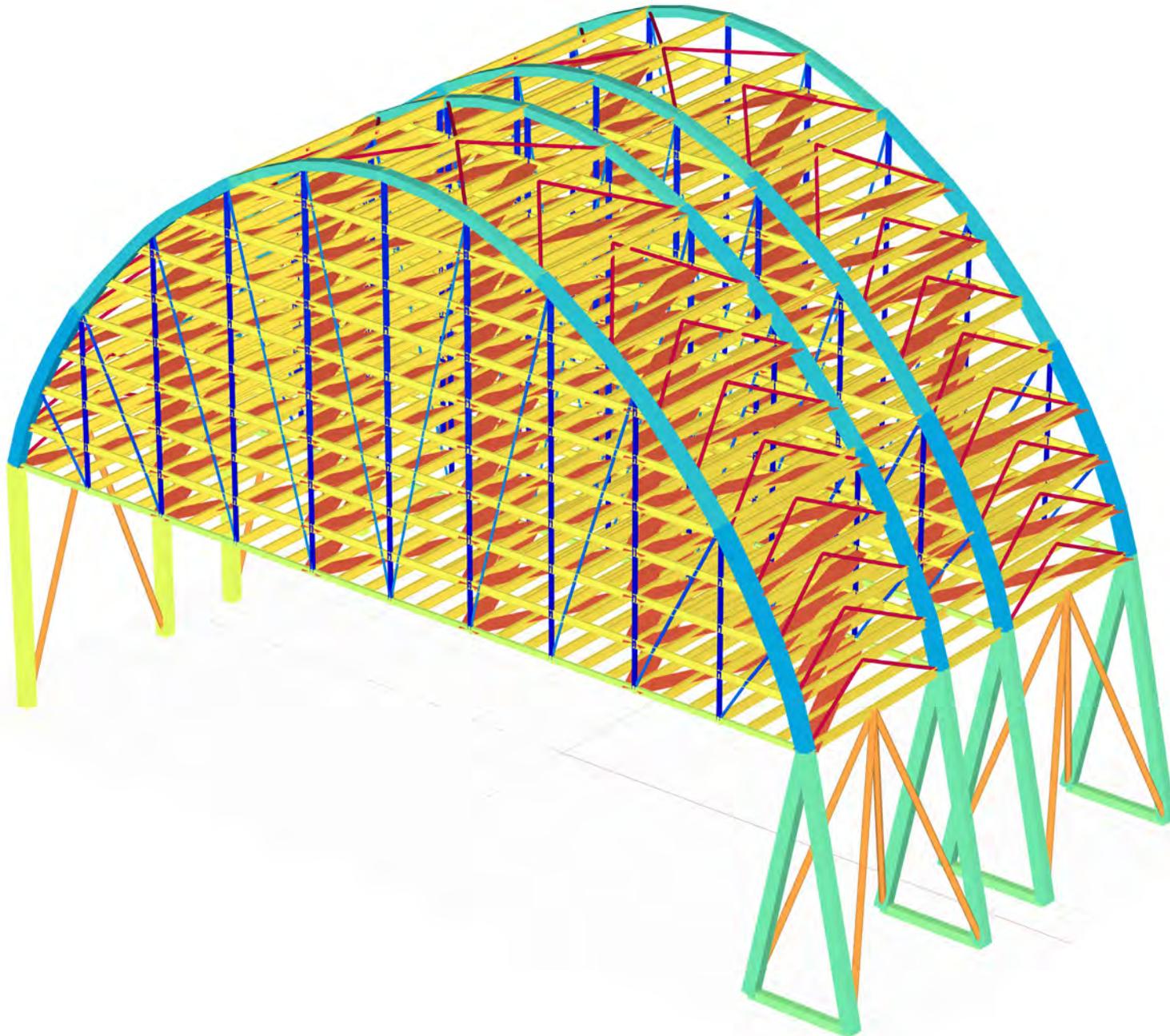
# Proposal – Aerial view



# Proposal – Over-Station development cutaway diagram



# Proposal – Over-Station development engineering diagram



# Proposal – Liverpool Street entrance



# Proposal – Trainshed interior



# Proposal – Station concourse



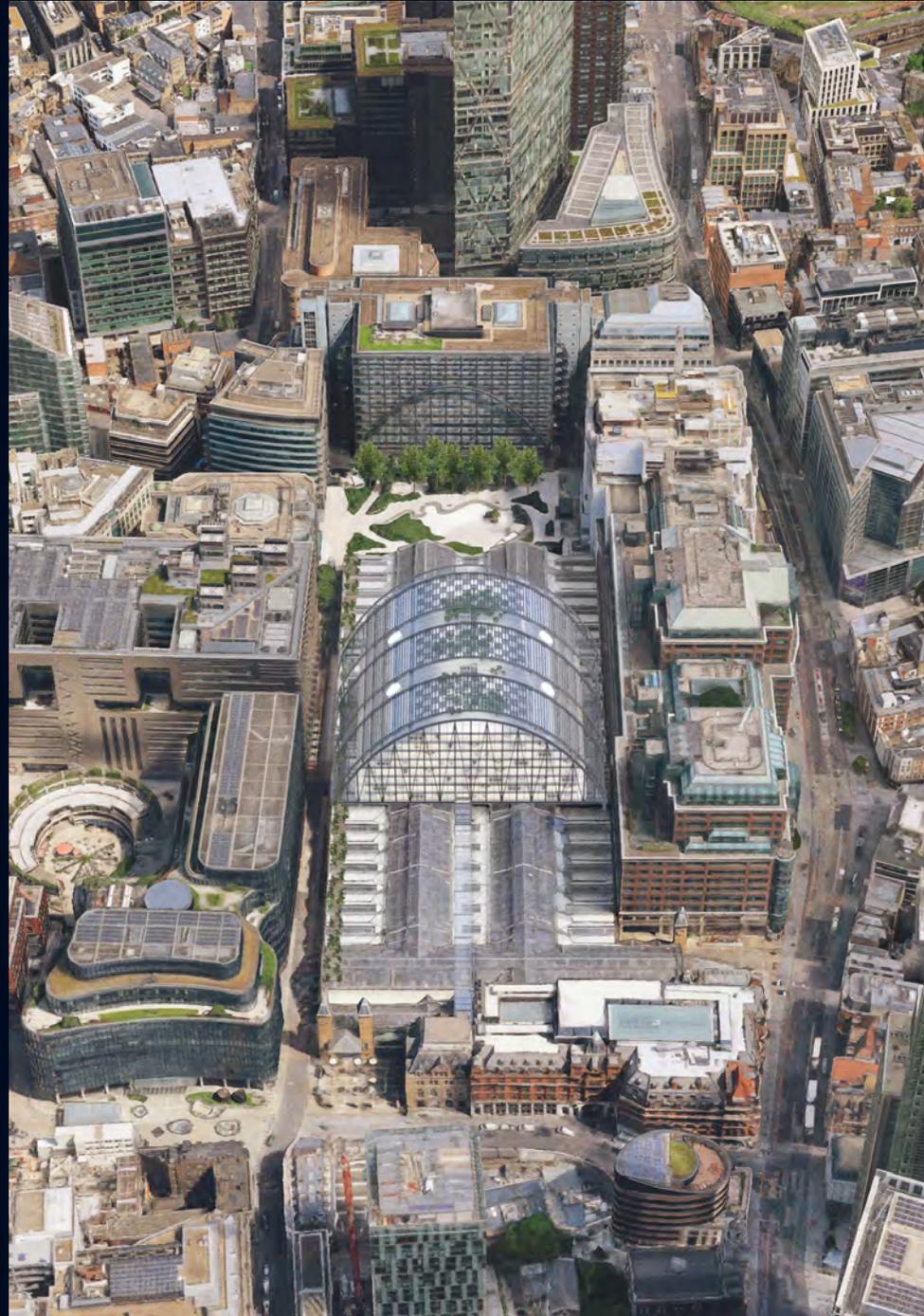
# Proposal – Sky Lobby looking south



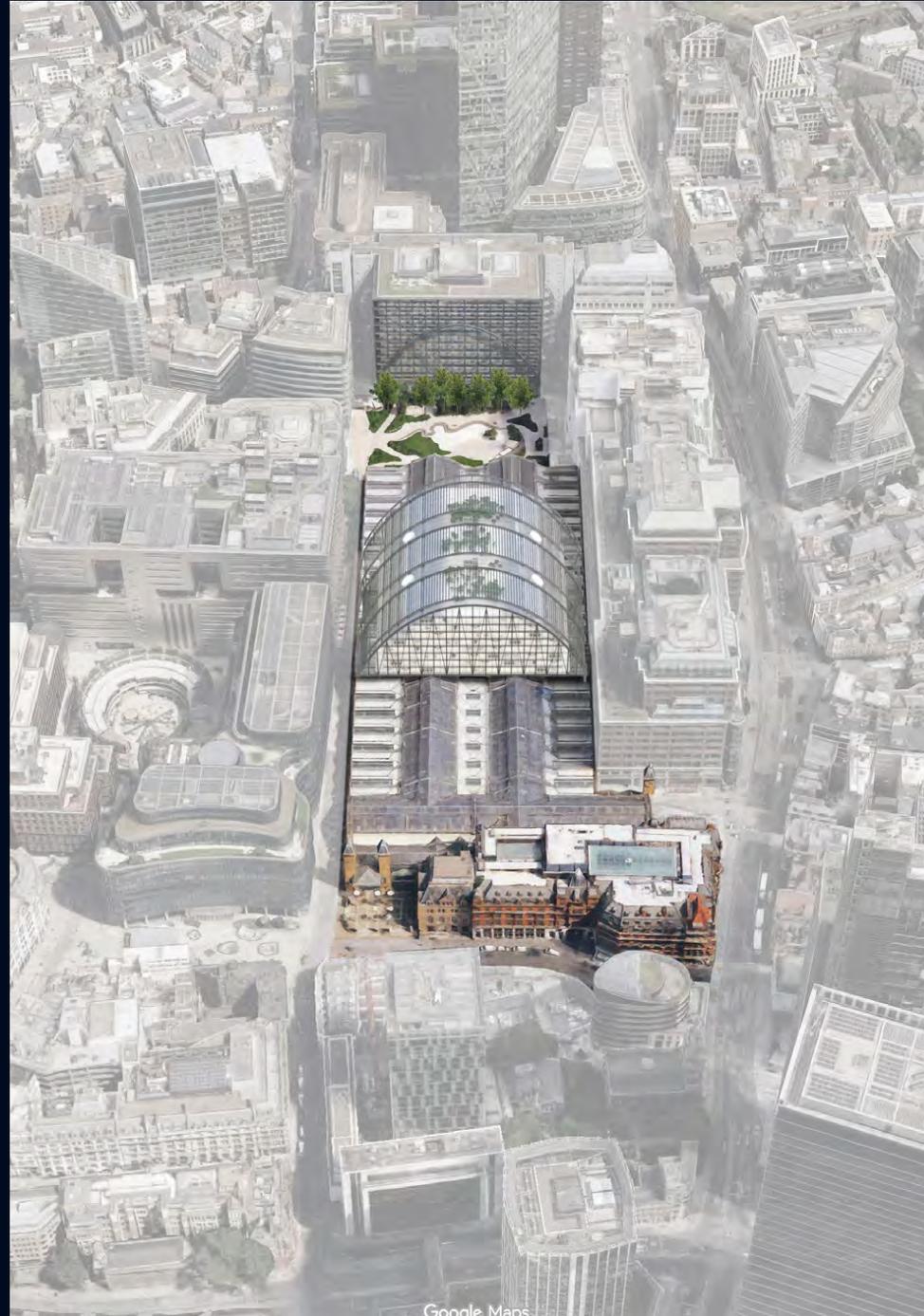
# Proposal – Over-Station development top floor



# Proposal – Aerial view looking north



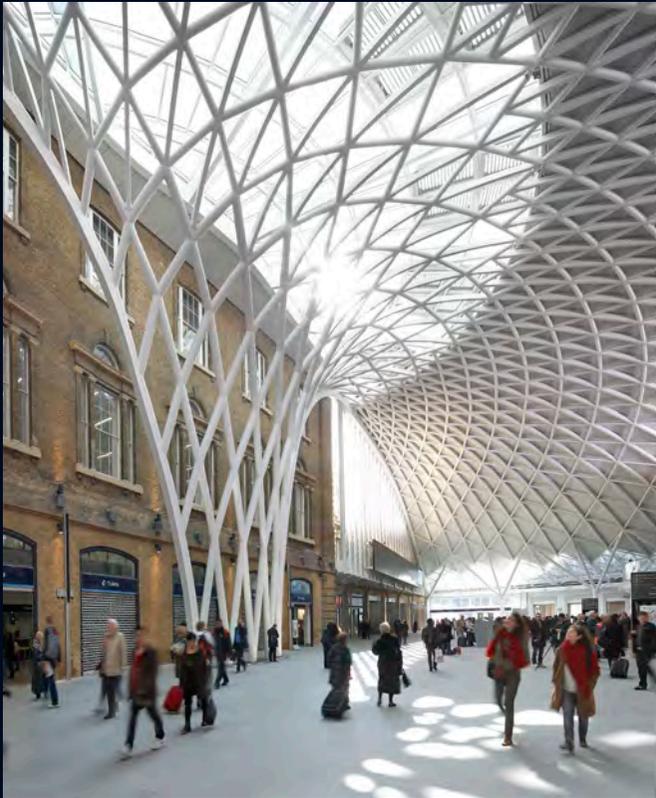
# Proposal – Aerial view looking north



# Proposal – King’s Cross Station / Liverpool Street Station – Old into New



# JMP precedents – Old into New – Transport



King's Cross Station, London



Sydney Central Station



Kensington High Street Station, London

# JMP precedents – Old into New – Culture and Education



The Burrell Collection, Glasgow



Roundhouse, London



SAÏD Business School, Global Leadership Centre,  
University of Oxford

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875 Washington Street  
New York City, NY 10014  
United States  
T: +1 332 867 1735  
newyork@mcaslan.co.uk

**JOHN MCASLAN + PARTNERS**

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Re: Objection to Liverpool Street proposed redevelopment plans  
**Date:** 27 January 2026 09:48:44  
**Attachments:** [image001.png](#)

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You don't often get email from [REDACTED]

**CAUTION:**This email is from outside the Corporation. Do not open attachments, click on links or scan QR codes in this email unless you recognise the sender's e-mail address and know the content is safe.

Just to add my Grandmother was born in 1890 at the Whitechapel Hospital living in Brick Lane, E1, as was my father in 1928, living in Buxton Street, E1 off Brick Lane.

Sent from [Outlook for Android](#)

---

**From:** Hannah Brack <[REDACTED]>  
**Sent:** Tuesday, January 27, 2026 9:44:13 AM  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Subject:** Re: Objection to Liverpool Street proposed redevelopment plans

Yes, sure, my name is Hannah Brack of 21a Barnsbury Street, Islington, London, N1 1PW

Many thanks.

Hannah

Sent from [Outlook for Android](#)

---

**From:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Sent:** Tuesday, January 27, 2026 9:38:17 AM  
**To:** Hannah Brack <[REDACTED]>  
**Subject:** RE: Objection to Liverpool Street proposed redevelopment plans

Dear Sir or Madam,

Thank you for your email. I can confirm receipt of your comment.

However, I cannot take into account comments that do not include a name and address, nor can the comments be reported. For the purposes of data protection, we do not reveal the email address, telephone number or signature of private individuals. You can ask for your name and address to be removed from the planning report to the Planning Applications Sub-Committee, but your comments will be anonymous and that may affect the weight the Members give them.

In light of the above, please can you provide a full address?

Kind regards,

**Davis Watson**

Planning Administrator



Environment Department  
City of London Corporation

City of London Corporation| PO Box  
270|London EC2P 2EJ|  
[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)

---

**From:** Hannah Brack <[REDACTED]>  
**Sent:** 26 January 2026 21:53  
**To:** PLN - Comments <PLNComments@cityoflondon.gov.uk>  
**Subject:** Objection to Liverpool Street proposed redevelopment plans

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**CAUTION:**This email is from outside the Corporation. Do not open attachments, click on links or scan QR codes in this email unless you recognise the sender's e-mail address and know the content is safe.

Dear Network Rail/Planning Committee,

Please register my absolute objection to the latest plans for the proposed redevelopment of Liverpool Street Station.

It is abhorant to me as a 3rd generation Londoner of the area and is the most unpopular scheme when you talk to people on yhe ground. I dismiss your claims and reject your ideas and believe your only consideration are the developers and not the end users.

Enough of this now. Please come up with a suitable alternative and please consider installing benches between the alcoves on yhe platforms where available. I have a disability which means I cannot stand for periods like waiting for a train.

I object.

Please confirm receipt of this objection.

Many thanks,

Hannah Brack

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Application Ref: 25/00494/FULEIA - Liverpool Street Station: Phased development/partial demolition

**We object strongly to this planning application.**

The London and Middlesex Archaeological Society (LAMAS) promotes London's archaeology, local history, and historic buildings. The LAMAS Historic Buildings and Conservation Committee reviews planning applications relating to important historic buildings and seeks to ensure a sustainable future for vital aspects of London's built heritage.

LAMAS is a member of the Liverpool Street Station Campaign (LISSCA) and we object to this planning application primarily on the following grounds:

- The substantial harm that would be caused to (a) the setting of the Grade II\* listed former Great Eastern Hotel and Liverpool Street Station by the new 97m, twenty storey building being erected over the station, and to (b) the setting of the Bishopsgate Conservation Area as a whole, which is generally an area of low-rise buildings.
- The destruction of the Grade II listed roof of the concourse. Its destruction is reported as necessary as it would be unable to bear the weight of the new tower above it. We remain unconvinced that such a large building is required to fund the necessary upgrades to Liverpool Street station.
- The extension of the high-level walkways along the east and west sides of the trainshed to house a large number of additional retail units, which will have a harmful impact on the special interest and significance of the Grade II listed trainshed.

The [Bishopsgate Conservation Area SPD 2014](#) states (p22) that '*The [Liverpool Street] station, its 1990s additions, its Gothic style office wing on Liverpool Street and the former Great Eastern Hotel (1880-84) collectively form a notable Victorian townscape group*'. The setting of this 'grouping' would be materially damaged by the proposed new building. The importance of this 'group value' is highlighted also in Historic England's Listing Particulars for Liverpool Street Station.

The harm to the settings caused by the new tower would be contrary to the relevant planning guidelines in (a) the NPPF, (b) the London Plan, (c) the 2015 City of London Local Plan, and (d) the City Plan 2040, currently being consulted on:

**1) NPPF (December 2024 version): Paragraphs 212-214.** We do not believe that any 'substantial public benefits' have been demonstrated which would outweigh the substantial harm that would be caused to the settings.

**2) London Plan: Policy D9 (Tall Buildings),** particularly (C)(1)(d). We do not believe that 'clear and convincing justification' of the harm to heritage assets and their settings has been demonstrated, or that the proposed new buildings 'positively contribute to the character of the area' (the Bishopsgate Conservation Area). Also, **Policy HC1 Heritage conservation and growth** is relevant.

**3) City of London Local Plan 2015:** We consider that the proposed development most certainly 'detracts from' the settings of the heritage assets, and would contravene (a) **Core Strategic Policy CS12;** (b) **Policy DM 12.1;** and (c) **Policy DM 12.2.**

**4) City Plan 2040:** This proposed new Local Plan constitutes a material consideration in planning terms. **Policy HE1: Managing Change to Heritage Assets** sets out three sets of criteria that development proposals should meet in relation to heritage assets. None of these criteria have been met by the proposed development. Also, **Strategic Policy S12: Tall Buildings** is relevant, as is **Strategic Policy S21: City Cluster:** there is no 'contribution to' or 'preservation of' heritage assets and their settings in the proposed scheme.

The Heritage Statement prepared by Donald Insall Associates concludes (p9) that '*In summary, the proposals **comply in part with the development plan comprised of the heritage policies in the City of London Local Plan, the draft City of London Plan, and the London Plan, although some harm will be caused to heritage assets which prevents full compliance with certain policies***'. We believe strongly that the harm caused will be material, and that the proposals represent an unacceptable contravention of these planning policies.

We therefore strongly recommend that this planning application be refused.

  
Vanessa Harding  
President  
London and Middlesex Archaeological Society

  
John Ricketts  
Chair  
LAMAS Historic Buildings and Conservation Committee



**Application Ref: 25/00494/FULEIA - Liverpool Street Station: Re-consultation on the phased development/partial demolition**

The proposed amendments behind this re-consultation fail to address the concerns we raised in our objection letter dated 30 June 2025, in particular the totally inappropriate height and massing of the scheme and the negative impact on the surrounding heritage assets.

We therefore continue to recommend that this planning application be refused.



Vanessa Harding  
President  
London and Middlesex Archaeological Society



John Ricketts  
Chair  
LAMAS Historic Buildings and Conservation Committee

22 December 2025