EU Exit Readiness: Category Insight

City of London

London, 4 February 2019



Table of Contents

Overview	3
Methodology	4 - 5
Categories	6 - 17
Construction	6
Facilities Management	7
Highways	8
Food Services	9
Waste & Street Cleansing	10
IT Services and Consumables	11
IT Networks & Telecommunications	12
Adult & Social Care	13
MRO	14
Energy	15
Aggregates	16
Granite	17



This EU Exit Readiness report provides City of London Corporation with insight into possible impacts of EU exit on its core categories of spend

Overview

Situation summary

- The City of London Corporation (City of London)
 wishes to understand the possible impacts of Brexit on
 the key markets from which it buys goods and
 services
- As far as possible, City of London wishes to make use of existing research and insight
- The requirement is for category/market level insight not a detailed impact assessment on City of London contracts or projects
- The cost of the work should be kept to a minimum
- The key categories identified by the City of London most at risk due to Brexit are: Construction, Highways maintenance, Facilities services Hard and Soft (cleaning, security, catering), IT, Commodities – Fuel, Energy (gas/electric), IT consumables, MRO, Food, granite, Adult and Social care, Waste collection and street cleansing
- Efficio is well-placed to meet the needs of the City of London. We have deep expertise in the key categories of spend and have completed EU exit readiness assessments for relevant clients in the public and private sectors



Approach

- We have produced 1 page summaries of the impacts on each category, leveraging past work & category knowledge – supplemented with new research to fill gaps
- Each 1 page summary covers, in digestible format:
 - Sector overview exposure to EU exit risk
 - Possible Brexit impacts (forex, tariffs, freedom of movement restrictions, barriers to trade)
 - Likely risks to an organisation such as the City of London – tailored impact assessment
 - Actions to consider typical mitigation actions that organisations such as City of London should consider



We have assessed the high level impact of a 'No-Deal' Brexit to understand risk to cost and supply

Methodology for EU Exit Assessment



Key categories are discussed and aligned with City of London Corporation



Assumptions are refined to understand worst-case scenario (see below)





Interviews are conducted with SMEs on various categories. Research is done using intelligence reports & online resources



Overview of the category is addressed. Impact on movement of people and goods, & changes due to Forex is evaluated.

Assumptions:



- Since a no-deal Brexit may have biggest impact and changes to the industries, this scenario was considered while evaluating impact of each category
- In labour composition, unless specified, "Others" refers to non-EU workers who can be from the UK or other countries
- Supply Risk: Red Significant risk to service continuity, Amber Medium risk to service continuity, Green Low risk to service continuity
- Cost Risk: Red Major cost change potential, Amber Minor cost change potential, Green no change expected

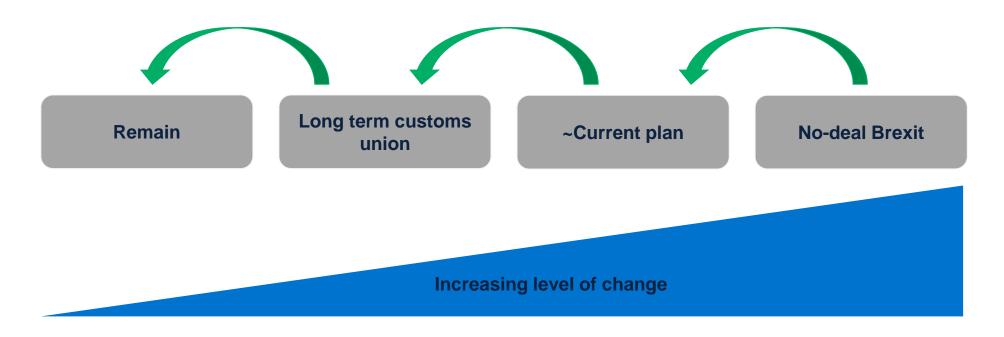
Each category addresses these elements:

- Category and Contract Overview: Outline of key features of the industry and typical contract types
- City of London Context: Specific CoL considerations for the category
- Brexit Risks: Movement of People, Movement of Goods, Tariffs and Forex



There is a wide range of Brexit scenarios; this analysis has been simplified to focus on 'no-deal Brexit'; from which every other scenario can be seen as a 'step back'

Simplifying the possible scenarios



Each scenario can be understood as a series of 'steps back' from a hard exit scenario

By basing our analysis on a 'no-deal exit' scenario we can understand key risks to supply and cost

Construction is a labour intensive industry and laws regarding freedom of movement will have the biggest impact on this category

Risk RAG
Supply
Cost



Category Overview

- Labour and Materials are the biggest cost drivers in this category, both of which stand to be impacted by Brexit.
 Cost Breakdown: Labour (30%), Material (70%)²
- Up to 7% of the UK construction workforce³ and 60% of materials are from the EU¹
- The workforce in London consists of up to 28% workers from the EU³. There are also expected to be a significant portion of workers from non-EU countries working in this industry.
- Construction is a highly time-sensitive industry any disruption or delays to the supply of labour or materials has a significant impact on costs and revenues
- As of late 2018, a number of major UK construction companies are currently operating in stressed conditions (following the failure of Carilion in early 2018) and Brexit may further add to general industry problems and increase the risk of further failures.



- Construction contracts are a mix of lump-sum and cost plus contracts¹. In instances where companies undertake
 construction for a customer they may also have a mix of contract types which may not be "back-to-back" with
 supplier contracts. This may create cost pressure at both ends.
- Even in existing agreements where suppliers are contractually bound to a fixed price, CoL may face price pressure from suppliers as they seek to find other ways to increase contract values.



- CoL tendering activity and proposed Major Projects indicate significant investments in construction projects over the next few years (FY18/19 ~£250m; FY19/20 ~£350m; FY20/21 ~£400m)
- There may be potential for suppliers to try to push through cost increases to CoL by Brexit as a context. A review of contracts with suppliers should be conducted to understand how changes in labour movement and tariffs which may impact costs.
- Given the challenges faced by the construction industry at present, CoL may be able to leverage it's strong cash
 position to secure supply continuity as a result of Brexit (e.g. through early payment)



Brexit Risks

Movement of PeoplePotential shortage

Potential shortage of labour as 7% of the construction workers in the UK and 28% in London are from the EU³. Loss of freedom of movement, and any changes to the way workers are paid and taxed, presents risk of delay in projects and increasing costs. For example, if there are changes to EU workers' ability to reclaim tax, it may make UK less attractive to EU workers unless wages increase such that workers have the same net position. If wages don't increase to this level, scarcity of labour will drive a labour cost increase regardless.

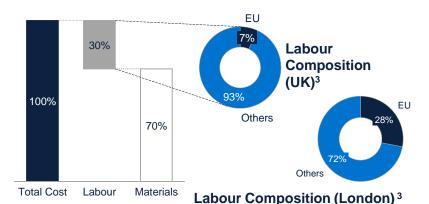
Movement of Goods

- UK imports 60% of total construction materials from the EU¹
- Potential delays at ports if clearance required leading to additional costs and longer lead times. This will have a
 knock-on effect on construction timelines, further increasing costs and lost revenues
- Material supplies will be interrupted if suppliers stop serving UK markets altogether
- Some companies have started building safety stock to minimize any price spikes and supply issues¹

Tariffs & Forex

- Material prices may increase due to increase in import/export duties and clearance work.
- · Volatility in currency may have an impact on cost
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Industry Cost Breakdown²



- Engage major suppliers to identify how CoL can secure supply (e.g. reducing payment terms)
- Engage suppliers to evaluate workforce to identify breakdown of workforce and highlight any critical knowledge or skills held by non-UK employees and related risk of losing these.
- Map what % of employees are not directly employed and without notice periods or obligations
- Discuss with suppliers if they are building safety stock for materials that may be impacted by Brexit



Facilities Management services may see a major impact because of dependence on lower-skilled EU workers **Industry Cost Breakdown²**

Risk Supply Cost



- FM consists of Hard and Soft Services which have varying dependency on labour and materials. While hard services would be more affected by changes related to materials, soft services would be impacted by loss of free movement of labour.
- The sector employs up to 10% of the country's workforce¹ and up to 24% of them are from EU⁴.
- Cleaning is a part of Facilities Management, and according to statistics, the workforce involved in the general cleaning of buildings in London consists of 32% EU nationals⁵. There are also expected to be a significant portion of workers from non-EU countries
- The UK market was regarded as the 'most mature and competitive in Europe' but it faces a skills shortage due to the UK's demographic changes and a lack of skilled applicants.
- Workers in the industry are often paid minimum wage or close to those levels, and many are likely to be on short notice periods.
- Cost breakdown: Labour (55%), Material (30%), Overhead (15%)²



- There is a mix of cost-plus and fixed price supplier contracts in the FM industry. CoL's own customer contracts may also be a mix and may not be "back-to-back" with supplier contracts. This may create cost pressure at both ends for CoL.
- Average contract period in the industry is 3 years². There may be uncertainty over future contract type and length until impact of Brexit in known.



- CoL has a diverse portfolio of properties ranging from schools to bridges to commercial offices all requiring a different set of FM services.
- Certain soft FM services like security could have a greater operational risk than others if they were to fail (e.g. not being able to cover security positions vs struggling to get cleaning services).
- If CoL needs security clearance for FM workers, it may increase complexity and timelines to hire new staff which should discussed with suppliers
- CoL requires its suppliers to pay the London living wage which is approx. 35% higher than the minimum wage³ and may protect them from shortage of labour to some extent as workers have incentive to work with CoL



Wage

Brexit Risks

Movement of People

- Potential shortage of labour as up to 24% of the FM workforce is from the EU⁴
- Upward pressure on wages and costs due to the potential scarcity of labour
- FM industry would be hit directly because of its reliance on lower-skilled migrant workers. As above, CoL London Living Wage policy may limit the impact and ensure CoL has continuity of labour, however suppliers' other contracts may be affected and there may be a knock-on effect

Movement of Goods

- Availability of critical parts may be interrupted due to delays at customs impacting particular areas of hard FM services (e.g. elevators and lifts): for some products, there will not be any international substation opportunities
- Potential increased supplier costs at any suppliers who rely on EU materials may face upward pressure

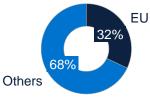
Tariffs & Forex

- Material prices may increase due to increase in import/export duties and clearance work
- Volatility in currency may have impact an on cost
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Labour 55% Composition (UK)4 Others 30%

Labour Material Overhead Total Cost

> General Cleaning of buildings - Labour Composition (London)⁵



- Review contracts with customers and suppliers to understand relationship and contract types in place and where contracts types are not aligned
- Engage major suppliers & gain commitment to service levels and continuity
- Engage suppliers to evaluate workforce to identify breakdown of EU nationals and highlight any critical knowledge or skills held by individual employees and related risk of losing these
- Ensure Service plans and requirements are up to date in case of a need to rapidly transition suppliers or retender



Highways Maintenance is principally dependent on labour with some minor critical equipment requirements - both of which will be affected by EU exit

Risk	RAG
Supply	
Cost	



Category Overview

Highways maintenance is highly dependent on the utilisation of high-skilled labour (design engineers), low-skilled labour (general operatives), and construction equipment, all of which stand to be impacted by Brexit.

Part of highways spend is street furniture some of which have high technical specifications (e.g. street lights) and others which are low specification (e.g. road signs, rubbish bins).

- Street furniture can be categorised into illuminated (installed & maintained by the highways maintenance supplier) and non-illuminated (installed & defects rectified by the highways maintenance supplier, cleaned by the waste collection and street cleansing supplier).
- Highway workers are included in the overall construction workforce by the Office of National statistics. It states 7% of UK construction workers and 28% in London are EU nationals. There are also expected to be a significant portion of workers from non-EU countries working in this industry.
- According to a report by Highways UK, the industry is concerned about future labour shortages due to an ageing workforce, and more people retiring than joining4
- Typically highways maintenance includes 2 kinds of projects: routine (where there is continuity) & section work (ad-hoc project work)



City of London Context

- Approximately 50% of UK authorities, CoL included, are estimated to use term maintenance contracts2 (the contract creates a mechanism for the client to instruct services at different locations without needing to procure a new contract every time)
- Contracts for routine works are typically long, ranging between 5-10 years in length²
- CoL manages 5 key bridges and resurfaces about 15-20³ roads each year.
- CoL roads are heavily utilised by business, leisure and emergency services traffic. It is essential highways maintenance works are able to continue efficiently to avoid major congestion and delays that may significantly impact other sectors of the economy (e.g. tourism, transport, emergency services).

Movement of People

- Potential shortage of labour as 7% of construction workers in the UK and 28% in London are from the EU1
- Loss of freedom of movement, and changes to the way workers are paid and taxed, presents risk of delay to projects and increasing costs. For example, changes to EU worker's ability to reclaim tax may make UK less attractive to EU workers unless wages increase such that workers have same net position. If wages don't increase to this level, scarcity of labour will drive a wage increases regardless.



Brexit Risks

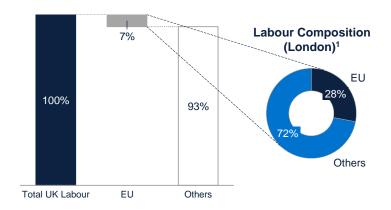
Movement of Goods

- Suppliers of higher specification street furniture such as lighting may be local UK companies or large global companies such as Siemens. Either way, finished products or component parts (particularly non-illuminated) are highly likely to be imported from the EU and elsewhere. There is a potential risk to critical part availability if suppliers have their supply chain in the EU.
- Potential delays at ports if clearance required leading to additional costs and longer lead times. This will have a knockon effect on maintenance timelines.
- Low specification items (e.g. bins) are low impact and low risk due to relative ease of supplier substitution in the event these are manufactured and imported from the EU.

Tariffs & Forex

- Material prices may increase due to increase in import/export duties and clearance work.
 - Volatility in currency may have an impact on cost
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Labour Composition (UK)¹



- Review services to identify critical services (e.g. street lighting) and associated supplier contracts
- Engage with suppliers, prioritised according to the above review. to ensure they have appropriate labour and safety stock of critical spare parts located in the UK and are taking action to manage inventories in the event of customs delays
- Engage suppliers to evaluate workforce to identify breakdown of EU nationals and highlight any critical knowledge or skills held by individual employees and related risk of losing these.
- Map what % of employees are not directly employed and without notice periods or obligations



Food Services & Banqueting are dependent on labour and materials, with Brexit risks associated with shortage of contract labour and availability of food produce





- UK is a mature market for catering services. The market consists of specialized catering providers & large FM companies who provide catering services as a bundled service offering
- Cost breakdown: Labour (38%), Material (45%), Overheads (17%)2
- Wages in the food services industry are typically at or close to minimum wage (LLW for CoL)
- Suppliers have a high proportion of contractors/temporary staff to permanent staff²
- 30% of the food consumed in the UK was imported from the EU1 in 2017

Origins of food consumed in the UK1

Others



- Catering services contracts are typically 2-3 years in length²
 - Alongside cost plus & fixed price contracts, the other contract types used in the category are2:
 - concession model (suppliers use the clients' premises and pay a fixed rent/% of revenue) and
 - nil subsidy model (supplier's costs are covered by income generated through services. The clients do not pay the supplier for their services)



- As part of CoL, catering services are provided to schools, corporate estate and business events
- CoL also hosts "banqueting" events which focus on premium produce from the EU
- Both staff and materials are needed to deliver catering services successfully. Brexit may have an impact on the movement and prices of both of these as 30% of the food in UK is imported from the EU1
- CoL requires its suppliers to pay the London Living Wage which is approx. 35% higher than the minimum wage and may protect them from shortage of labour to some extent as workers have incentive to work with



Wage Living Wage

Movement of People

- Potential shortage of labour as up to 29% of the labour is from the EU⁴
- If there was loss of freedom of movement, more than 80% of the EU workers working in catering services would not meet UK's
- Highly likely to see upward pressure on wages and costs due to the potential scarcity of labour in the event of Brexit. In addition, increased staff turnover will likely impact efficiency and service quality in the short term. CoL London Living Wage policy may limit the impact for CoL and ensure CoL has continuity of labour, however suppliers' other contracts may be affected and there may be a knockon effect.

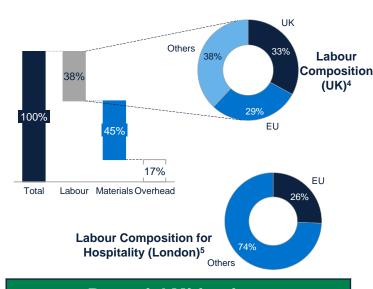


Movement of Goods

- UK imports 30% of food from the EU1
- Potential delays at ports if clearance is required leading to additional costs and longer lead times
- Increased time at custom checkpoints may impact availability of certain foods (e.g. perishable items) coming from EU, driving higher prices and/or requiring in product substitution
- Food supplies will be interrupted if suppliers stop serving UK markets altogether
- Longer term, changes to policies on farming and food production may structurally alter UK food production and prices/availability
- Ports may be overburdened if checks need to be done for food imported from EU, leading to delays in perishable items. For example, Terry Jones, Director General of the NFU has said: "Currently, the only ports set up to do veterinary checks on meat are London Gateway, Tilbury, Felixstowe, Southampton and Liverpool.6"

- Food prices may increase if being imported from the EU due to increase in import/export duties and clearance work making catering services more expensive
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Industry Cost Breakdown²



- Engage with suppliers to understand their supply chain for food imports & understand what mitigations are being taken to ensure supply continuity (e.g. menu changes)
- Review contracts with suppliers and build contingency by agreeing on flexible catering menus to avoid disruption until further clarity on Brexit
- Engage suppliers to evaluate workforce to identify breakdown of EU nationals and highlight any risks to service and understand their mitigation plans (e.g. training and apprenticeships to maintain staff levels and ensure workers are capable of providing quality service)



Waste Collection and Street Cleansing are heavily reliant on labour, comprising 40% of total cost

Risk Supply Cost



Category Overview

- Collection and disposal are the two most costly elements of waste management. This review focuses on the waste collection and street cleansing elements, not disposal.
- Cost breakdown: Labour (40%), Transportation (10%), Overheads (5%), Disposal (30%), Others (15%) 1
- Typically workers in the industry are paid minimum wage or close to those levels, and many are likely to be on short notice periods.
- General cleaning of buildings has been used to represent the EU workforce breakdown in this category.



- Waste contracts are typically volume based or fixed price.
- Globally, about 60%1 of Total Waste management contracts are volume-based so the suppliers work to increase profits by reducing their costs. Normally under this sort of contract, a customer would expect that the supplier would absorb any increases in cost during the contract term.



City of London Context

- Labour accounts for approx. 60% of the cost for CoL as it uses a system which involves intensive manual sweeping which has a low level of mechanisation. Streets are swept by hand up to four times daily depending on demand.
- The majority of waste produced in the City originates from businesses and construction companies that operate in the Square Mile. Construction waste is however managed by construction contractors, so won't directly affect these services
- CoL has a very small residential base in comparison to the number of people that work in the
- By 2021, commercial/business waste is estimated to make up over 90% of total waste².
- Being an area that is heavily utilised by tourists and businesses, it is essential waste collection and street cleansing services continue without disruption to avoid loss of reputation.
- CoL requires its suppliers to pay the London Living Wage which is approx. 35% higher than the minimum wage and may protect them from shortage of labour to some extent as workers have incentive to work with CoL3



Movement of People

- Typically, waste collection and street cleansing services employ workers from the EU, many of who may be affected by loss of freedom of movement1
- Upward pressure on wages and costs due to the potential scarcity of labour
- CoL London Living Wage policy may limit the impact for CoL and ensure CoL has continuity of labour, however suppliers' other contracts may be affected and there may be a knock-on effect.

Brexit Risks

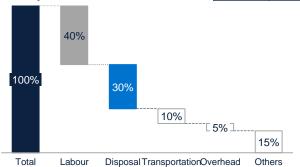
Movement of Goods

Waste collection and street cleansing are highly unlikely to affected by any changes to movement of goods however disposal and treatment of waste may be impacted due to UK exporting waste to the EU and non-EU countries

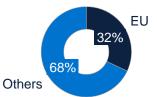
Tariffs & Forex

Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Industry Cost Breakdown¹



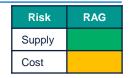
General Cleaning of buildings - Labour Composition (London)4



- Engage suppliers to evaluate workforce to identify breakdown of EU nationals.
- Map what % of employees are not directly employed and without notice periods or obligations
- Engage with suppliers to understand impact of Brexit on CoL's contracts (depending on if they are volume-based or fixed price)
- Evaluate workforce to identify breakdown of EU nationals and highlight any critical risks of potential breakdown in service.



IT categories face the main challenges of labour shortages and how and where data is stored and processed post Brexit



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Category Overview

- In this category, IT services, data centres and hardware will be reviewed.
- Though this category is fragmented, the top ten vendors command a larger share of the market¹ with most leading vendors having a global presence (across multiple locations).
- Data centres are situated both in the UK and globally. Power and space rental costs constitute nearly 65%1 of the total costs for data centres
- In order to act on collection, usage, storage and transmission of data within data centres, data sovereignty is an important aspect for enterprises as standards may be different across countries.
- Although hardware companies may be located in the UK, they may be having distribution centres and warehouses in the EU
- 11% of the London IT workforce is from the EU and 20% from non-EU countries²



- Contracts
- IT service and data centre contracts may need to be revisited to understand if there is any data storage and regulatory impact due to changing regulations post Brexit
- For hardware, the average contract duration is 3-4 years with a refresh of hardware every 18-24 months1



City of London Context

- CoL follows guidelines set by the HMRC regarding data usage and storage. Assuming the data is stored in the UK and continues to be so, there should be minimal impact. City's main outsourced ICT contract includes UK provision for data storage rather than EU. Expect market costs may increase for UK provision when City tender contracts
- Suppliers providing hardware for the police force may have supply chains extending to the EU which may be disrupted
- Licensing is another area CoL should review with suppliers to understand impact due to any changes in legislation

Movement of People

- 6% of the workforce in the IT industry is made up of EU nationals, but over 30% of the workers in London are not UK nationals
- The UK, London in particular, may experience an IT skill shortage, as non UK workers make a big portion of the workforce
- Labour costs, and visa and immigration costs may increase for suppliers with centres in the UK. This may lead to moving of delivery centres to Europe and other non-EU countries



Brexit Risks

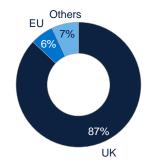
Movement of Goods

- Risk of technology firms moving distribution centres to the EU putting an upward pressure on price.
- May affect supply chain for products and spare parts, especially if they are stocked outside UK. This may lead to longer lead times and waiting time for consumers

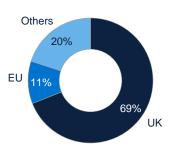
Tariffs & Forex

- Volatility in currency may have an impact on cost
- Decline in GBP value may reduce the attractiveness of working in the UK for skilled workers from both EU and non-EU national

IT Workforce Composition (UK)



IT Workforce Composition (London)



- Confirm with Suppliers future intentions for service locations, safety stock and impact on data storage and processing
- Review if the suppliers are paid in a currency other than Pound Sterling that may be affected by Brexit
- Evaluate workforce to identify breakdown of EU nationals and highlight any critical risks of potential breakdown in service
- Extensively review supplier's supply chain and remind supplier of responsibility for service continuation and proactive planning around spare parts and staffing
- Refresh training package and ensure readiness in case new staff need to be hired and trained



Networks and Telecommunications are unlikely to be majorly impacted although have some risks surrounding labour and equipment availability





Category Overview

The network and telecommunications industry consist of both mobile and telecommunications infrastructure (e.g. cables)

- The telecoms industry is highly regulated which restricts a company's ability to operate in or provide services in certain areas/markets. UK regulation requires companies to maintain licenses for their operations¹. Telecoms markets are governed, in the majority, at a national, not EU, level
- The industry is characterised by rapid technological change, requiring high capital expenditure costs to set up infrastructure and implement new technologies.
- Major cost components include labour and equipment (e.g. fibre-optic cables)
- There are high-skilled workers in the industry as well as semi-skilled workers, involved in infrastructure construction.



- For mobile, companies tend to adopt a pooling fee structure where a fixed fee is charged, and voice minutes and data is priced for the entire group, irrespective of how the volume is distributed across users1
- Contracts may need to be revisited to understand if there is any data storage and regulatory impact due to changing regulations post Brexit



City of London will have contracts with likely one telecommunications supplier providing employee mobile services and potentially a number of suppliers providing network connectivity across London.



Brexit Risks

Movement of People

- Loss of freedom of movement, and changes to the way workers are paid and taxed, presents risk of project delays and increasing labour costs
- Labour costs, and visa and immigration costs may increase for suppliers with centres in the UK. This may lead to moving of delivery centres to Europe and other non-EU countries

Movement of Goods

- Risk of technology firms moving distribution centres to the EU putting an upward pressure on price.
- May affect supply chain for products and spare parts (e.g. fibre-optic cables), especially if they are stocked outside UK. This may lead to longer lead times and waiting time for consumers

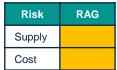
Tariffs & Forex

- Risk of increase in costs with companies charging extra for voice and data usage in the EU
- Volatility in currency may have impact an on cost
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

- Confirm with Suppliers future intentions for service locations, and impact on data storage and processing
- Review if the suppliers are paid in a currency other than Pound Sterling that may be affected by Brexit
- Evaluate workforce to identify breakdown of EU nationals and highlight any critical risks of potential breakdown in service
- Extensively review supplier's supply chain and remind supplier of responsibility for service continuation and proactive planning around spare parts and staffing
- Refresh training package and ensure readiness in case new staff need to be hired and trained



Adult and Social Care services need skilled labour to deliver services effectively which may be impacted by loss of freedom of movement





Category Overview

- Social care services are provided by Local Authorities, Charities and Independents.
- Social Care Workers in London are predominantly British (61%), with over a guarter non-EU nationals (26%) and the remainder being EU nationals (13%)1
- On average, care workers (who make up over half of the Social Care workforce) are paid marginally (5-10%) above the minimum wage. Almost a guarter of UK care workers are on zero-hour contracts.
- Approximately half of care workers have relevant qualifications of some level.
- Health and social care service failures are "high profile" and therefore there will be a reputational risk in the event CoL is unable to provide adequate services to its community.



Social care services may be delivered (i) direct with employment agencies or carers, with CoL directly managing the activities of the carers; and/or (ii) via outsourced care providers co-ordinating and providing services on behalf of City of London.



City of London Context

- CoL has responsibility for all the people, housing, education, social care and community services of the approximately 8,760-strong residential community in the Square Mile².
- Assuming the wider London social care workforce is representative of the CoL workforce, the main Brexit risks relate to the 13% of workers who are EU nationals.
- There may be need for increased spending on training to develop additional workforce capable of providing adult and social care services in London
- CoL requires its suppliers to pay the London living wage which is approx. 35%3 higher than the minimum wage and may protect them from shortage of labour to some extent as workers have incentive to work with CoL.



Brexit Risks

Movement of People

- Labour shortages may lead to a upward wage pressure in the industry. As above, CoL London Living Wage policy may limit the impact and ensure CoL has continuity of labour, however suppliers' other contracts may be affected and there may be a knock-on effect
- In the short term, a shortage of labour due to loss of freedom of movement may result in people may not get required help in time, with potentially high profile negative press coverage

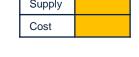
Movement of Goods

The supply of occupational therapy aids and home conversion appliances manufactured inside the EU could be interrupted (specialist toilets, handrails, mobility aids)

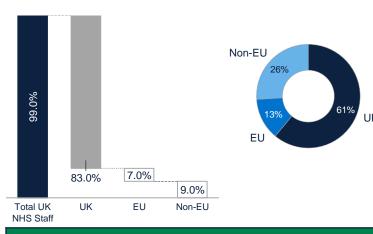
Tariffs & Forex

Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals

Workforce Composition (UK)¹



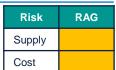
Workforce Composition (London)1



- Evaluate workforce to identify EU nationals and highlight any critical knowledge or skills held by individual employees and related risk of losing it
- Review and develop contingency plans to prioritise services in case there is restricted workforce at supplier
- Refresh training packages and funding to ensure readiness if new staff need to be hired and trained



MRO may see disruption in everyday activities mainly due to disruption in the supply chain of equipment needed for MRO activities





MRO is the general categorisation for maintenance, repair and overhaul of plant, machinery and equipment and it's scope varies greatly by industry. For this overview we have focused on CoL critical systems for Water, Power, HVAC, Fire and Security Systems, and Lifts

- Machinery and equipment in these focus areas is often likely to have been originally manufactured in EU, requiring specialist parts and, in some cases, specialist labour for installation and services
- The typical MRO category cost breakdown is: Labour (15%), Material (65%), Logistics (8%), Admin/Overheads (12%)1
- Many suppliers keep labour costs low by employing contractors rather than permanent staff¹
- Materials and Labour may be severely impacted due to Brexit and disrupt timelines in this category
- Government statistics include repair & installation of machinery and equipment under the manufacturing industry, and statistics show about 16% of workers in the industry in London are from the EU⁴. There are also expected to be a significant portion of workers from non-EU countries working in this industry.



- There is a mix of cost plus, fixed price and management fee (all costs incurred + fixed management fee) contracts in the industry
- Cost plus and Fixed price models are more widely adopted than the Management fee model¹



- City of London will have a large number of critical systems for Water, HVAC and Lifts which, should they cease to operate properly, will impact ongoing use of premises/locations. This failure risk is managed by CoL through its MRO supplier contracts, who rely on availability of parts and labour to meet the required response/resolution times for the different repair categories.
- CoL has 4 different levels of repair categories depending on the associated risk and hazard: Emergency, Urgent, Priority and Non-Urgent repairs². CoL may have customer contracts with significant liabilities in the event that locations/premises are unusable.

Brexit Risks

Movement of People

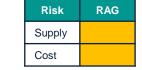
- Potential shortage of labour if the industry is reliant on labour from EU countries. For example: GKN's (automotive and aerospace components company) workforce consists of 10% EU nationals3
- Upward pressure on wages and costs due to the potential scarcity of labour. Loss of freedom of movement, and changes to the way workers are paid and taxed, presents risk of delay in projects and increasing costs. For example, changes to EU worker's ability to reclaim tax may make UK less attractive to EU workers unless wages increase such that workers have same net position. If wages don't increase to this level, scarcity of labour will drive a labour cost increase regardless.

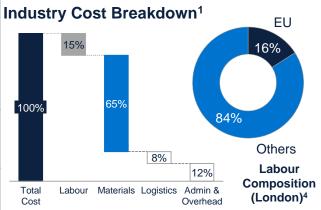
Movement of Goods

- In some cases MRO parts physically located in the UK will be limited, with suppliers restocking from European warehouses when UK inventories reach a certain level. Lean stock management in these cases will have been enabled by efficient customs clearing.
- Potential delays at ports due to Brexit will result in longer lead times from Europe, requiring UK suppliers to increase local inventories to mitigate
- Failure to have the appropriate stock on hand for CoL may seriously impact its use of premises, in particular in relation to emergency and urgent repairs.

Tariffs & Forex

- Material prices may increase due to increase in import/export duties and clearance work.
- Volatility in currency may have an impact on cost
- Decline in the value of GBP may result in a reduction in the attractiveness of working in the UK for both EU and non-EU nationals





- Review CoL operations and customer contracts to understand critical assets/services and the critical MRO requirements associated with these.
- Engage with suppliers, prioritised according to the above review, to ensure they have appropriate safety stock of critical spare parts located in the UK and are taking action to manage inventories in the event of customs delays
- Ensure MRO requirements are up to date in case of a need to rapidly transition suppliers or retender



Commodities (Fuels) may see a price increase but supply is not expected to be interrupted





Category Overview

In 2017 the UK had a net import energy dependency of 35.8% 1

- Top countries where fuel is imported from 1:
 - Crude Oil: Norway (57%), OPEC (24%), USA (8%) 2
 - Gas: Norway (75%), Qatar (12.6%), Belgium (5.6%) 2
 - Electricity: France and Netherlands 2
 - Coal: Russia (35%), USA (26%), Colombia (7.4%) 2
 - Petroleum products: Netherlands is the largest supplier of transport fuels but the US is the largest supplier of diesel
- 80% of the UK's 25M homes are powered by gas and around 25% of the country's electricity is
- In 2017 39.7% of electricity was generated from gas, 29.4% from renewables, 20.9% from nuclear, 6.7% from coal. 1 At the same time, two thirds of domestic energy demand was met by gas 3
- generated by gas-fired power stations³
- Labour working in this industry is typically highly-skilled



Contracts will continue being dictated by the market, with fuel and gas being sold and bought according to market



The same applies to CoL as the wider market in regards to energy prices and how they may change. The market would continue selling at global price levels. CoL has a 100% renewable Electricity Policy. The solution to this is a renewable energy PPA, which brings price certainty by hedging the market.



Movement of People

- Since the labour in this industry is highly-skilled, there should be minimal impact due to loss of freedom of movement.
- If workers do need a visa post Brexit, they would be eligible for applying for these since they are highly skilled

(1)

Brexit

Risks

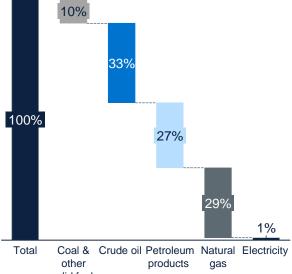
Movement of Goods

- 44% of UK's gas comes through pipelines from Europe and 9% from LNG tankers³
- Short term: potential for higher costs and longer lead times if port clearance is needed.
- Long term: Gas is expected to be increasingly sourced through supplies of LNG from other non-EU countries, such as the USA2

Tariffs & Forex "10-15% drop in currency" (Mitie: CoL energy broker)

- Crude Oil and Gas price may increase if being imported from the EU due to increase in import/export duties and clearance work.
- Volatility in currency may have an impact on cost since oil and gas prices are tied to currency
- Decline in GBP value may reduce the attractiveness of working in the UK for skilled workers from both EU and non-**EU** nationals

Energy imported into the UK by energy type, 20154



solid fuel



Value in Trade £m

Four key aggregates - Sand, Lime, Cement and Bituminous mixtures - and

their value in trade is reviewed below

Supply Cost



Category Overview

- Aggregates like sand, lime, tar & bituminous mixtures, and cement are some of the key materials used in construction of street pavements, buildings, bridges, monuments and in building interiors.
- The UK spends varying amounts in the export and import of these aggregates which can be seen in the graphs on the right - with the UK being net importers of Sand and Cement (note: this is at an aggregate level and does not account for the different material grades)
- Amongst these aggregates, over £100m is spent on import of Portland Cement (which is the most common type of cement used globally as a basic ingredient of concrete amongst other products) 1



Not Applicable



- CoL resurfaces about 15-20² roads each year and has committed significant amounts to construction over the coming years.
- While building construction spend is approx. £300m, highways spend is approx. £10m per annum
- Being an area that is heavily utilised by tourists and businesses, it is important for CoL to maintain the quality of its pavements and other installations to avoid loss of reputation.
- It is important supply of aggregates according to specifications is maintained to ensure no disruption or delays in any projects

Movement of Goods

- The supply risks appear to be sand and cement where the UK is a net importer.
- It is important to understand where imported aggregates are entering the UK from as there can be potential delays at ports if clearance is required - leading to additional costs and longer lead times. This may have a knock-on effect on construction timelines, further increasing costs and potentially lost revenues

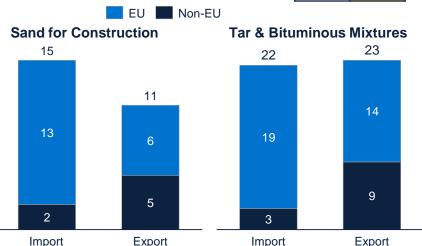


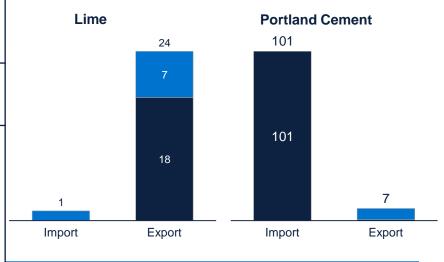
Brexit Risks

Tariffs & Forex

- Aggregate prices may increase due to increase in import/export duties and clearance work from European and global imports.
- Volatility in currency may have an impact on prices of all aggregates, regardless of origin

- Review with suppliers where aggregates are being imported from to understand if there is potential for prices to increase
- Review lead-times and ask suppliers about safety stock as uncertainty exists regarding duties and
- Provide forecasted plans and requirements, where possible, to suppliers to allow them to secure supply at agreed prices ahead of Brexit
- Ensure material specifications and forecasts are up to date in case of a need to rapidly transition suppliers if they stop supplying to the UK







The majority of granite imports to the UK are Asia (70%) with 21% from Norway and 8% from other European countries

Risk Supply Cost



Category Overview

- Granite is used in construction of street pavements, buildings, bridges, monuments, and in building interiors. Granite is available in a range of specifications.
- The granite market is growing rapidly by the "surging construction and renovation activities in developed countries, rapid industrialization and urbanization in developing countries, changing consumer preference for natural looking home décor, and the growing commercial value of granite products in the global market1".
- The majority of granite imports to the UK come from India (60%). 29% of granite coming into the UK is from Europe (21% Norway, 8% other European countries), and 10% from other Asian countries²



Not applicable



London Context

- CoL resurfaces about 15-203 roads each year along with other construction projects. Many of the City's public realm and roadworks make use of granite sets, along with other materials such as mastic asphalt and York stone
- Being an area that is heavily utilised by tourists and businesses, it is important for CoL to maintain the quality of its pavements and other installations to avoid loss of reputation.
- It is important supply of granite sets according to specifications is maintained to ensure no disruption. or delays in any projects

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Movement of Goods

Movement of People Not applicable

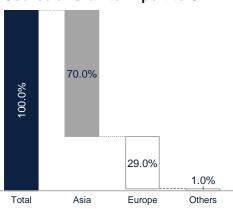
Brexit Risks

- It is important to understand where granite is entering the UK from as there can be potential delays at ports if clearance is required - leading to additional costs and longer lead times. This may have a knock-on effect on construction timelines, further increasing costs and potentially lost revenues
- Material supplies will be interrupted if suppliers stop serving UK markets altogether

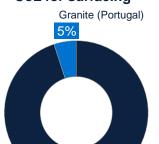
Tariffs & Forex

- Granite prices may increase due to increase in import/export duties and clearance work for European imports.
- Volatility in currency may have an impact on prices

Source of Granite import to UK²



Non-Asphalt hard surfaces used by CoL for surfacing



Yorkstone (UK sourced)

- Review with suppliers where Granite is being imported from to understand if there is potential for prices to increase
- Review lead-times and ask suppliers about safety stock as uncertainty exists regarding duties and port clearance
- Provide forecasted plans and requirements, where possible, to suppliers to allow them to secure supply at agreed prices ahead of Brexit
- Ensure material specifications and forecasts are up to date in case of a need to rapidly transition suppliers if they stop supplying to the UK