

Committee(s)	Dated:
Epping Forest and Commons	14 01 2019
Subject: Proposed Construction of a Flood Alleviation Scheme at Hillyfields Loughton (SEF 4/19)	Public
Report of: Colin Buttery, Director of Open Spaces	For Decision
Report author: Tristan Vetta – Senior Forest Keeper, Epping Forest	

Summary

This report is necessary to update your Committee on the findings of a Surface Water Management Plan (SWMP) commissioned by Essex County and Epping Forest District Councils in 2016, to address potential 1:50 flood risks to properties in the Loughton area. The SWMP has identified Epping Forest Land held in trust by the City Corporation, together with adjacent Public Open Space, held by Loughton Town Council, at Hillyfields as a Critical Drainage Area (CDA), where 70 adjacent residential properties are at risk of flooding from surface water flooding.

Essex County Council has proposed a Flood Alleviation Scheme (FAS) which will require the construction of an earth bund to create a Flood Storage Area (FSA) on City Corporation and Town Council Land. While the character of the land will be changed by an earth bund proposed in this scheme, as well as reducing the flood risk to 70 neighbouring residential properties, there are opportunities to make habitat improvements and to increase the security of the site from illegal occupation, therefore this scheme is recommended for adoption.

Recommendation(s)

Members are asked to:

- i. Approve the use of Forest Land at Hillyfields/Pyrles Lane, Loughton as a Flood Alleviation Scheme as part of Essex County Council's Surface Water Management Plan.
- ii. Enter into a formal agreement with Essex County Council for the ongoing management of the Flood Alleviation Scheme with all costs to be borne by the County Council
- iii. Instruct the Comptroller & City Solicitor to undertake any necessary documentation to conclude the agreement.

Main Report

Background

1. The 1882 Epping Forest Arbitration Award ceded a series of interconnected roadside verges running between Baldwins Hill and Theydon Green to Epping Forest. One section of this Forest Land is located on the junction of Rectory Lane and Pyrles Lane, Loughton. The piece of land is approximately 4,047m² (1 acre) which is depicted in Appendix 1. There are no City of London Corporation facilities on this 'satellite' site and it is not visually obvious that the land forms part of Epping Forest.
2. This small area of Forest Land sits on the southern edge of a larger piece of public open space, formed as part of the post-War Debden Estate, and is known as Hillyfields or Millennium Common, which is under the ownership of Loughton Town Council. To maintain a uniform approach to the management of the site, the Forest Land is under a care and maintenance agreement with Loughton Town Council (LTC). The grass cutting on the site is currently conducted by Loughton Town Council with the City Corporation being responsible for all other aspects of management.
3. Epping Forest hosts two Flood Alleviation Schemes (FAS) on Forest Land – The Thornwood FAS at Lower Forest and the Loughton FAS at Staples Road Pond, Loughton. A further major FAS scheme is located on Buffer Land at Cobbins Brook which protects 314 properties at Waltham Abbey from a 1:50 flood event.

Current Position

4. Capita Consultants, working on behalf of Essex County Council and Epping Forest District Council, completed a Surface Water Management Plan (SWMP) for Loughton, Buckhurst Hill and Theydon Bois in 2016. SWMPs outline the predicted risk and preferred surface water management strategies for discrete areas. Computer modelling has identified areas at a significant risk of flooding which are characterised within the SWMP as Critical Drainage Areas (CDA).
5. Forest Land on the junction of Rectory Lane and Pyrles Lane, Loughton has been identified as a CDA. Each CDA has site-specific measures designed to address the CDA risks. At Rectory/Pyrles Lane, the main aim of the CDA scheme is to reduce flood risk to 70 properties in the immediate area.
6. Essex County Council has sought the support of the City Corporation and Loughton Town Council to help manage flood risk at the Hillyfields site. Previously, the City Corporation has worked in partnership with neighbouring land-owners, local authorities and the Environment Agency with flood alleviation scheme (FAS) projects to ensure reduced flood risk to our neighbours and to maintain the City Corporation's reputation as a collaborative authority and responsible land-owner. Examples of significant FAS projects on Forest Land include Loughton Brook-Staples Road Pond and Thornwood Common, Lower Forest. In addition, the importance of the Forest's Buffer Lands for flood

protection was demonstrated when a significant portion of Warlies Park was incorporated into a very large FAS project by the EA itself in 2008 in order to protect Waltham Abbey from flooding. The proposal also reflects the 'ecosystem services' approach, pioneered in the Epping Forest Quality of Life Capital Study (2003) commissioned by the Conservators and other local authority partners in the Epping Forest Liaison Group which seeks to use Forest Land for wider environmental and social benefit.

7. As well as the flood risk, Forest Land at Rectory/Pyrles Lane and Public Open Space at Hillyfields has also seen three traveller incursions over the last two years. The construction of this FAS would substantially reduce the available space for traveller vehicles to occupy the site.

Options

8. **Option 1: Approve the construction of a FAS under a Memorandum of Understanding** - This option would see construction and future management agreed on the basis of a Memorandum of Understanding (MoU) with Essex County Council as proposed by the Local Authority. The MoU is not felt to provide sufficient protection for the City Corporation in terms of long-term liability for maintenance and repair. **This option is not recommended.**
9. **Option 2: Approve the construction of a FAS under Licence** - Under this option construction and management would require the drafting of a Licence agreement with Essex County Council and Loughton Town Council with greater clarity regarding 'Long-Term Maintenance'.> This would allow the City Corporation to ensure that Essex County Council remains responsible for the future management of the scheme. **This option is recommended.**
10. **Option 3: Decline the installation of the scheme upon City Corporation Forest Land** . Given that the scheme has been identified as a CDA the City Corporation should be seeking to act as a responsible neighbour to support flood reduction schemes. **This option is not recommended.**

Proposals

11. The scheme will be constructed on Forest Land on land under the ownership and management of Loughton Town Council. The FAS will consist of a new flow path interception landscaped earth bund is to be constructed in Hillyfields Open Space with an associated raised kerb line on the cycle track to the south. This will reduce flood risk to downstream properties.
12. The FAS storage area will comprise of a landscaped earth bund along the southern corner of the Hillyfields Open Space boundary, with an approximate length of 60m, maximum height of 1.2m and maximum width of 8.1m. Water will discharge from the attenuation (the storage and controlled release of surface water run-off) at a controlled rate via a new connection into the existing Thames Water surface water system. The material used to construct the bund is to be

cohesive clay, and it is proposed to source this from the on-site material. The bund and open excavation once constructed is topped with a minimum of 100mm topsoil.

Corporate & Strategic Implications

City of London Corporate Plan 2018-2023

13. People are safe and feel safe: a) Prepare our response to natural and man-made threats & c) Protect consumers and users of buildings, streets and public spaces.

Open Spaces Department Business Plan 2016-19

14. **Our spaces are secure, resilient and well-maintained:** b) Build resilience to natural and man-made threats by strengthening, protecting and adapting our infrastructure, directly and by influencing others.
15. **Open spaces and historic sites are thriving and accessible:** 2) London has clean air and mitigates flood risk and climate change.

Implications

16. **Legal** – The Epping Forest Act 1878 provides Trustees with powers under *Section 33(1.)(ii.) ‘To dig and remove gravel, sand, clay, loam and turf and drain, level and improve the soil and subsoil, as far as in their judgment (sic) may be necessary or desirable for the purposes of management’.* *Section (1.)(v.) provides for further power ‘To make ponds, and enlarge or clean out and maintain or fill up ponds, streams, watercourses and springs;’*
17. Your Committee has previously supported the amalgamation of Forest Land with the new Public Open Space created through the construction of post-War Debden Estate. It was acknowledged at this time that some of the natural aspect character of the site would be subsumed by its proximity to a large open space managed primarily for public recreation.
18. **Financial** - There will be no financial implications for the City of London if the entirety of the scheme’s construction and on-going maintenance and inspections is completely assigned to the responsibility of Essex County Council. The approval of the scheme will alter the visual look of this part of the Forest and the wider landscape. However, the entire construction will be as sensitive as possible to the surrounding land. Close supervision by Officers has achieved beneficial improvements at previous FAS projects.
19. There is potential that a small oak tree may need to be removed to accommodate the scheme. Officers from both the City Corporation and Loughton Town Council will seek to mitigate the construction by seeking to secure landscape improvements around tree planting and potentially the introduction of marginal water plants with the FSA.
20. **Health** - Flood risk, the scheme is intended to reduce flood risk to 70 nearby properties, where there are evident health risks if flooding was to occur. Flood

risk is expected to increase as human driven climate change is expected to increase the likelihood of severe weather episodes.

21. **Structural**, the earth bund construction does not pose any major health risks and its relatively small size will reduce the risk of slumping or collapse as can occur on higher earth structures.

Conclusion

22. Given the location of this outlier of Forest Land at Rectory/Pyrles Lanes amidst the Debden Estate the character of the site already reflects the largely functional and utilitarian Public Open Space style of the larger neighbouring Hillyfields site rather than the 'natural aspect' more commonly experienced in the main body of the Forest. Consequently, the current nature of this site will not be greatly altered by the FAS installation and will not have implications for the 'natural aspect' of the site.
23. As with previous FAS schemes hosted within the Forest and Buffer Land, Trustees will need to consider the wider public role of supporting a CDA scheme designed to protect 70 residential properties from flooding, enhanced site security regarding illegal occupation and the provision of opportunities for habitat enhancement.

Appendices

- Appendix 1 – Map of City of London Land holding at Pyrles Lane/Hilly Fields.
- Appendix 2 - Photograph of site
- Appendix 3- Hillyfields Open Space Flood Alleviation Scheme, Loughton: Memorandum of Understanding Between Essex County Council and The City of London Corporation
- Appendix 4 – Technical Drawings (B3553M05-JAC-EPP2-NW-DR-C-001,002&003)
- Appendix 5 – Letter to Loughton Residents, highlighting the need and rational of the scheme.

Background papers

Report to Epping Forest & City Commons Committee ' Proposed Cobbins Brook FAS'

Report to Epping Forest & City Commons Committee ' Proposed Loughton FAS'

Report to Epping Forest & City Commons Committee ' Proposed Thornwood FAS'

Tristan Vetta

Senior Forest Keeper, Epping Forest

T: 0208 532 1010 or 07734855051

E: tristan.vetta@cityoflondon.gov.uk