

River Thames
Scheme



Supplementary Consultation
3 September to 7 October 2024

Ferris Meadow Lake Options Appraisal Report

Appendix G - Planning Policy and Legislative Appraisal

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1. Introduction

1.1 Purpose of this report

This appendix provides a high-level appraisal of the options for Ferris Meadow Lake in terms of their compliance with relevant national planning policy and local development plan policies. It also identifies where there is likely to be a major conflict with applicable environmental legislation.

1.2 Background to the proposals

The River Thames Scheme (the Scheme) will provide flood risk and environmental benefits between Egham Hythe and Teddington. The Scheme consists of a flood relief channel, in two sections, additional works to increase the downstream capacity of the River Thames, new green open spaces and areas of habitat creation.

The alignment of the Scheme's channel sections has been designed to maximise the use of existing lakes to minimise construction impacts. Therefore, the alignment of the Spelthorne Channel adopted from the Lower Thames Strategy (September 2009) included the use of Ferris Meadow Lake (previously referred to as Ferry Lane Lake) as part of the Scheme before flows discharge to the Thames. However, during the course of Scheme development the lake has become used for open water swimming. In light of this, and feedback from stakeholders and statutory consultation, alternative options for the routing and design of the Scheme at this location are being considered.

The following design options have been appraised in this planning policy appraisal (refer to Section 2 of the Ferris Meadow Lake Options Appraisal and Appendix A for option drawings). A brief description of options is provided below:

- Option 1 – Spelthorne channel passes through Ferris Meadow Lake (current proposed alignment).
- Option 2 – Direct the flood channel north of Ferris Meadow Lake into the River Thames via the Chap (locally known as the Creek).
- Option 3 – Direct the flood channel to the west side of Ferris Meadow Lake into the River Thames along a newly constructed route.
- Option 4 – Divide the Spelthorne channel into two sections with half diverted to the north via the Chap and half down the west side of Ferris Meadow Lake along a newly constructed route.
- Option 5 - A tunnel under Ferris Meadow Lake for flood flows with augmented flow diverted into the Chap.
- Option 6 - Retain the flood relief channel alignment through Ferris Meadow Lake but with the augmented flow diverted into the Chap, with sub-options to consider both with (6b) and without (6a) a new flow control structure.

- Option 7 – Separate Ferris Meadow Lake into two. This creates an area for swimming in the north east area of lake and space for the Scheme to pass through to the south. Augmented and flood flow follow the same route.
- Option 8 – Ferris Meadow Lake use would be changed from ‘swimming’ to future potential to create a ‘marina’. A level retention weir would be required in the field, to the west of Ferry Lane with an open connection created to the River Thames at the southern edge of the lake.

1.3 Approach

Planning policy documents against which each of the options have been assessed comprise the following¹:

- National Policy Statement for Water Resources Infrastructure (NPSWRI)
- National Planning Policy Framework (NPPF)
- Spelthorne Borough Local Plan 2001 Saved Policies and Proposals (2009)
- Spelthorne Core Strategy and Policies Development Plan Document (Adopted 2009)
- Elmbridge Local Plan: Core Strategy (2011)
- Elmbridge Local Plan: Development Management Plan (2015)
- Pre-submission Spelthorne Local Plan 2022-2037
- Surrey Minerals Plan Core Strategy Development Plan Document (2011)
- Surrey Waste Local Plan 2019-2033 (2020)

The following policy themes have been considered in this appraisal:

- Landscape
- Cultural Heritage
- Biodiversity
- Flood Risk
- Climate Change
- Green and Blue Infrastructure
- Socio-economics (including recreation)
- Minerals and Waste

¹ Ferris Meadow Lake is within the boundary of Spelthorne Borough Council and in close proximity to Elmbridge Borough Council. The boundary between the two authorities runs down the middle of the River Thames to the east of the Lake.

The policy appraisal does not specifically address compliance of the Scheme options with traffic and transport, noise or air quality policies. The design options do not raise any compliance risks against these policy objectives and as such are not a factor that will differentiate between the options in policy terms. While it is recognised that there are likely to be different transport, noise and air quality impacts between the options during the construction phase, these are all considered to be capable of mitigation through measures which will be set out within an Outline Construction Environmental Management Plan (CEMP), Outline Construction Traffic Management and Logistics Plan, and proposed management plans for noise and air quality.

An appraisal against Green Belt policy is also not included in this report. Planning policy related to the Green Belt is set at a national level in the NPPF. This sets out what is and what is not allowed within the Green Belt and under what circumstances exceptions can be made. The NPPF is then transposed into local policy which reflects all of its principles, but in a local context.

All of the Ferris Meadow Lake options are located in the Green Belt and it is not possible to design the options to avoid this constraint, given the wide expanse of Green Belt in this location. The Scheme would generally be considered engineering operations and, as such, appropriate development in the Green Belt. Some elements of the options could be deemed inappropriate development in the Green Belt in terms of structures proposed. However, Ferris Meadow Lake cannot be looked at in isolation in terms of impact on the Green Belt. The Scheme needs to be assessed as a whole in terms of harm to the Green Belt and very special circumstances justified accordingly where the Scheme involves inappropriate development. For this reason, the policy appraisal of Ferris Meadow Lake options excludes Green Belt policy, which will be assessed holistically in the Planning Statement that accompanies the DCO application.

The following section presents a high-level overview of policy compliance for each option.

2. Planning Policy Appraisal

2.1 Policy objectives for which there is limited difference in compliance between options

There are a range of planning policy objectives for which there is only minor differences between the options in terms of their ability to comply. These are set out below.

2.1.1 Landscape

All options considered would require the removal of trees that are the subject of a Tree Preservation Order (TPO) and which Local Plan policies seek to protect. In accordance with planning policy, high quality replacement planting would need to be undertaken in all cases as part of a detailed landscape design strategy. However the scale of removal of protected trees would differ. Options 3 and 4 would require a significantly larger scale removal of a group protected trees than the other options to enable the construction of a channel to the west of the lake, directly conflicting with applicable planning policies. Although Option 2 is likely to require removal of a relatively low number of individual trees (including in private gardens), these will be very difficult to mitigate. In contrast the potential impact on protected trees associated with Options 1, 6a and 6b for example, are likely to be capable of mitigation through the sensitive routing of the proposed access track.

2.1.2 Cultural Heritage

For all options potential impacts on the setting of Listed Buildings and any archaeology is likely to be mitigated through screening and an archaeological written scheme of investigation (WSI), and as such in compliance with national and local planning policy. For Option 5, while an archaeological WSI can address effects on paleoenvironmental remains, these may be extensive and so at this stage is unknown whether impacts could be fully mitigated and therefore policy compliant. For all options it is considered that the benefits of the Scheme would outweigh the harm, which would not be substantial.

2.1.3 Flood Risk

All options have been designed to have equal benefits in terms of flood risk reduction. A full sequential test for the Scheme will be included in the DCO application.

2.1.4 Climate resilience and adaption

Climate resilience and adaptation is a national and local planning policy objective and one of the main goals of the Scheme. Sustainable construction practices will be employed across the Scheme as a whole, although this is unlikely to include the use of recycled construction materials for this element of the Scheme. The main difference between the options is the amount of embedded carbon in the materials used to construct the design, specifically concrete, sheet piles and rip rap (stones, rock or other material used to protect the channel structures against scour).

2.1.5 Green Infrastructure connectivity

All options will retain and enhance the connectivity of the green infrastructure network with the introduction of a new Active Travel Route.

2.1.6 Waste hierarchy

Opportunities for re-use and recycling of materials, in accordance with national and local planning policy are being addressed at a project wide level. However, for the purposes of this appraisal the amount of waste materials required to be excavated for each option have been considered to assess performance against the planning policy objective to minimise waste.

2.2 Appraisal of individual options against policy objectives for which there are differences in compliance

The following text summarises the compliance of each option with planning policy objectives against which their performance differs.

2.2.1 Option 1

Potential adverse landscape and visual effects arising from the construction and operation of Option 1 will be capable of mitigation, including through planting and detailed design, including consideration of material used, and therefore in accordance with relevant national and local planning policies.

It is not anticipated there will be any substantial harm to heritage assets, although effective mitigation measures, will need to be considered in more detail through the EIA. In relation to planning policy the public benefits of the Scheme are considered to outweigh the less than substantial harm on heritage assets.

Option 1 will not comply with the NPPF policy that development should, wherever possible, help to improve local environmental conditions such as water quality.

This option (alongside 6a, 7 and 8) is most likely to lead to negative effects on water quality in Ferris Meadow Lake as a result of lake water mixing with river water. The predicted reduction in water quality is likely to adversely impact fish and eels and marginal habitats and the loss of Sites of Nature Conservation Interest (SNCI) habitat which is contrary to adopted and emerging Local Plan policy.

Local planning policy seeks to protect recreational use of the River Thames, including visitor facilities. Although Ferris Meadow Lake is not part of the River Thames, under Option 1 the Lake would become connected to the river. Bathing water quality could potentially be reduced from Excellent to Good. In this scenario there may be a risk to the attractiveness of Shepperton Open Water Swim facility if users perceive a risk to their health associated with the anticipated reduction in bathing water quality.

Option 1 (and Option 7) requires the least volume of excavation (including waste which would amount to approximately 50% of the total volume) of all the options appraised and as such performs well against relevant policy tests in the Surrey Waste Local Plan. Option 1 also has the least amount of embodied carbon in the construction materials used, and therefore performs best in terms of sustainable construction policy objectives.

2.2.2 Option 2

Any impact on the setting of Listed Buildings and any archaeology is likely to be mitigated through screening and archaeological WSI and so would be in compliance with relevant national and local planning policy.

There would be minor impacts on water quality in the Chap, Ferris Meadow Lake, Ferry Lane Lake 1 and 2. Loss of SNCI habitats and effects on the Chap as a result of augmented flow, including spread of invasive species and pathogens and loss of backwater habitats, would not be compliant with national or local planning policy.

This option should not have any operational (long term) impact on the attractiveness of the open water swimming facility to its users. However, there will be short term impacts on recreational activity due the need to relocate the sailing clubhouse to enable construction, but this is capable of mitigation to avoid conflict with Local Plan policies which seek to safeguard facilities which support recreational use of the River Thames.

Option 2 requires the excavation of a significantly higher quantum of material (including waste) than four of the other options (1, 6a, 6b and 7) appraised as it will prove more difficult to demonstrate it uses the minimum quantity of material necessary.

2.2.3 Option 3

Potential harm to the landscape and visual amenity to property on Ferry Lane would be capable of mitigation through appropriate design, material finish and riparian planting to assist in screening of project elements over time. As such this option should not conflict with policy objectives to avoid or minimise harm.

Any impact on setting of Listed Buildings and any archaeology is likely to be mitigated through screening and archaeological WSI and so would be in compliance with relevant national and local planning policy.

This option would have only short term construction related impacts on water quality in Ferris Meadow Lake, but would have the greatest loss of SNCI habitat, including grassland and woodland with engineering work presenting risk to protected species and as such would not be compliant with applicable national or local planning policy.

This option should not have any operational (long term) impact on the attractiveness of the swimming facility to its users, and so should not conflict with socio-economic policy objectives, including Local Plan policies supporting recreational use of the Thames. However, disruption during construction will need to be carefully managed to reduce short-medium term impacts on the open water swimming facility.

Option 3 requires the excavation of approximately two and a half times the total volume (including twice as much waste) as Option 2 and so does not perform as well in terms of demonstrating it uses the minimum quantity of material necessary.

2.2.4 Option 4

Potential harm to the landscape and visual amenity to property on Ferry Lane would be capable of mitigation through appropriate design, material finish and riparian planting to assist in screening of project elements over time. As such this option should not conflict with policy objectives to avoid or minimise harm.

Any impact on setting of Listed Buildings and any archaeology is likely to be mitigated through screening and an archaeological WSI and so would be in compliance with relevant national and local planning policy.

This option would cause loss of habitats on Ferris Meadows SNCI and at the Chap, with minor impacts on water quality in the Chap, Ferris Meadow Lake, Ferry Lane Lake 1 and 2 which would not be policy compliant.

This option does not conflict with national or Local Plan policy to safeguard recreational facilities on the River Thames as it does not have any direct short or long term impacts on the open water swimming or sailing club.

In relation to waste and materials excavation during construction, this Option requires more than double the total quantum for Option 2, including a higher absolute and proportionate volume of waste material.

2.2.5 Option 5

This option is unlikely to meet planning policy requirements in relation to landscape harm without further mitigation (which may need to include relocation of Scheme elements) as the tunnel entrance shaft and raised access track on Desborough Island are likely to cause significant change to key landscape characteristics.

Option 5 has no impact on Ferris Meadows SNCI habitat and avoids effects on water quality in Ferris Meadow Lake but is likely to have minor impacts to Ferry Lane Lakes 1 and 2. Whether this option complies with Local Plan policy will depend on the likely effects of the limited loss of Desborough Island SNCI habitat.

This option does not conflict with Local Plan policy to safeguard recreational facilities on the River Thames as it does not have any direct short or long term impacts on the open water swimming or sailing club.

This option requires the excavation of the largest volume of excavated material (and waste material) and as such performs least well against Surrey Waste Local Plan objectives to generate the minimum amount of waste necessary during construction and excavation. Option 5 also has the largest embodied carbon in the construction materials used, and therefore performs least well in terms of sustainable construction policy objectives.

2.2.6 Option 6a

Compliance of this option with planning policy requirements in relation to landscape harm will require further mitigation. Harmful landscape impacts associated with raised access track and outlet structure would be capable of mitigation through riparian planting and detailed design consideration including materials finish. The loss of some preserved trees could be avoided through realignment of the proposed access track.

Due to the anticipated adverse effects on water quality in Ferris Meadow Lake and the Chap as a result of more frequent and formalised flood flows into the Lake, and augmented flow into the Chap, this option is not likely to meet the policy test in the NPPF and the Local Plan which require proposals to demonstrate how they will maintain and enhance water quality. The reduction in water quality may have adverse impacts on aquatic species and habitats within Ferris Meadow Lake and through a reduction in fish spawning and refuge in the Chap. Water quality is also expected to be adversely affected in Ferry Lane Lakes 1, 2 and 3. Combined with

the loss of SNCI habitats, this will make it very difficult for this option, on its own, to comply with national or local biodiversity policies.

This option should not be in conflict with local planning policies to safeguard recreational facilities on the Thames, as it will have no direct effect on the open water swim facility or the sailing club, although bathing water quality is likely to reduce which may deter some swimmers from using the Lake.

This option requires as similar volume of excavation as Option 1 and minimises additional excavation through and recovery of landfill material, thereby performing well against Surrey Waste Local Plan policy objectives for waste management in new development.

2.2.7 Option 6b

Compliance of this option with planning policy requirements in relation to landscape harm will require further mitigation. Harmful landscape impacts associated with the flow control structure and associated operational compounds and access track would be capable of mitigation through planting and detailed design consideration including materials finish. The loss of some preserved trees could be avoided through realignment of the proposed access track.

Due to the anticipated adverse effects on water quality in Ferris Meadow Lake and the Chap as a result of more frequent and formalised flood flows into the Lake, and augmented flow into the Chap, this option is not likely to meet the policy test in the NPPF and the Local Plan which require proposals to demonstrate how they will maintain and enhance water quality. The reduction in water quality may have adverse impacts on aquatic species and habitats within Ferris Meadow Lake and through a reduction in fish spawning and refuge in the Chap. Water quality is also expected to be adversely affected in Ferry Lane Lakes 1, 2 and 3. Combined with the loss of SNCI habitats, this will make it very difficult for this option, on its own, to comply with national or local biodiversity policies.

Under this option bathing water quality is not expected to deteriorate and so would have no direct effect on the open water swim facility or the sailing club and should therefore be in compliance with Local Plan policies which seek to promote and protect recreational use of the Thames.

This option requires as similar volume of excavation as Option 1 and minimises additional excavation through and recovery of landfill material, thereby performing well against Surrey Waste Local Plan policy objectives for waste management in new development.

2.2.8 Option 7

The harmful impacts on character associated with this option should be capable of being in accordance with landscape policies as potential impacts are capable of mitigation, including through consideration of the detailed design of the bund, its form and the materials used, as well as detailed design, materials and planting to reduce the visual impact of the proposed channel outlet structure at the south of Ferris Meadow Lake.

Option 7 (alongside options 1, 6a and 8) is most likely to lead to the negative effects on water quality in Ferris Meadow Lake as a result of lake water mixing with river water. This is likely to adversely impact on fish and eels and marginal habitats and the loss of SNCI habitat.

This risk to biodiversity resulting from splitting the lake into two is likely to reduce its functioning as a supporting water body to the South West London Waterbodies Special Protection Area (SPA) and Ramsar site, potentially adversely affecting the integrity of the SPA. Given this, and that the Scheme has considered alternative solutions at this location that could be brought forward (which is one of the tests to be considered if adverse effects on integrity to a European Site are identified), this option risks Scheme non-compliance with the Conservation of Habitat and Species Regulations (2017) as well as national and local planning policy.

The separation of the open water swimming area from the flood channel under Option 7 should mean there is no long term impact on the use of that recreational facility, and therefore no conflict with policies seeking to protect recreational use.

This option performs well against Surrey Waste Local Plan objectives for waste management in new development as it requires the least volume of waste proposed to be excavated from historical landfill along with Option 1.

2.2.9 Option 8

This option is considered to be capable of being in accordance with national and local landscape policies as potentially harmful impacts on landscape characteristics and views are capable of mitigation. However, this would be subject to the identification of appropriate measures including planting and detailed design as well as consideration of the relocation of the outlet structure to mitigate harmful impacts on landscape character.

Option 8 (alongside options 1, 6a and 7) is most likely to lead to negative effects on water quality in Ferris Meadow Lake as a result of lake water mixing with river water.

This option is likely to result in operational disturbance to the interest features of South West London Waterbodies SPA and Ramsar Site due to the new access being created and more craft entering the lake. Given this, and as the Scheme has

considered alternative solutions at this location that could be brought forward (which is one of the tests to be considered if adverse effects on integrity to a European Site are identified), this option risks Scheme non-compliance with the Conservation of Habitat and Species Regulations (2017) as well as national and local planning policy.

The permanent change in water quality, (bathing water quality would be reduced from Excellent to Poor), resulting from this option and the heightened risk to health, is likely to discourage some swimmers from using the Lake. This outcome may conflict with socio-economic policy objectives, including Local Plan policies supporting recreational use of the Thames (which the Lake will become part of if this option forms part of the Scheme design).

This option would generate a similar level of excavated material to Option 2 and will therefore prove difficult to demonstrate that it uses the minimum quantity of material necessary.



Contact

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