

River Thames
Scheme



Integrated Scheme Description

About the scheme

The River Thames Scheme (RTS) will reduce the risk of flooding to thousands of homes, businesses and vital infrastructure while unlocking the economic, health and environmental benefits of the river between Egham and Teddington and responding to the challenges of climate change and nature recovery.

The scheme represents a new landscape-based approach to creating healthier, more resilient, and more sustainable communities.

The scheme will create new areas of green and blue open space with recreational facilities and connections to wildlife and provide sustainable travel connections to link communities together.

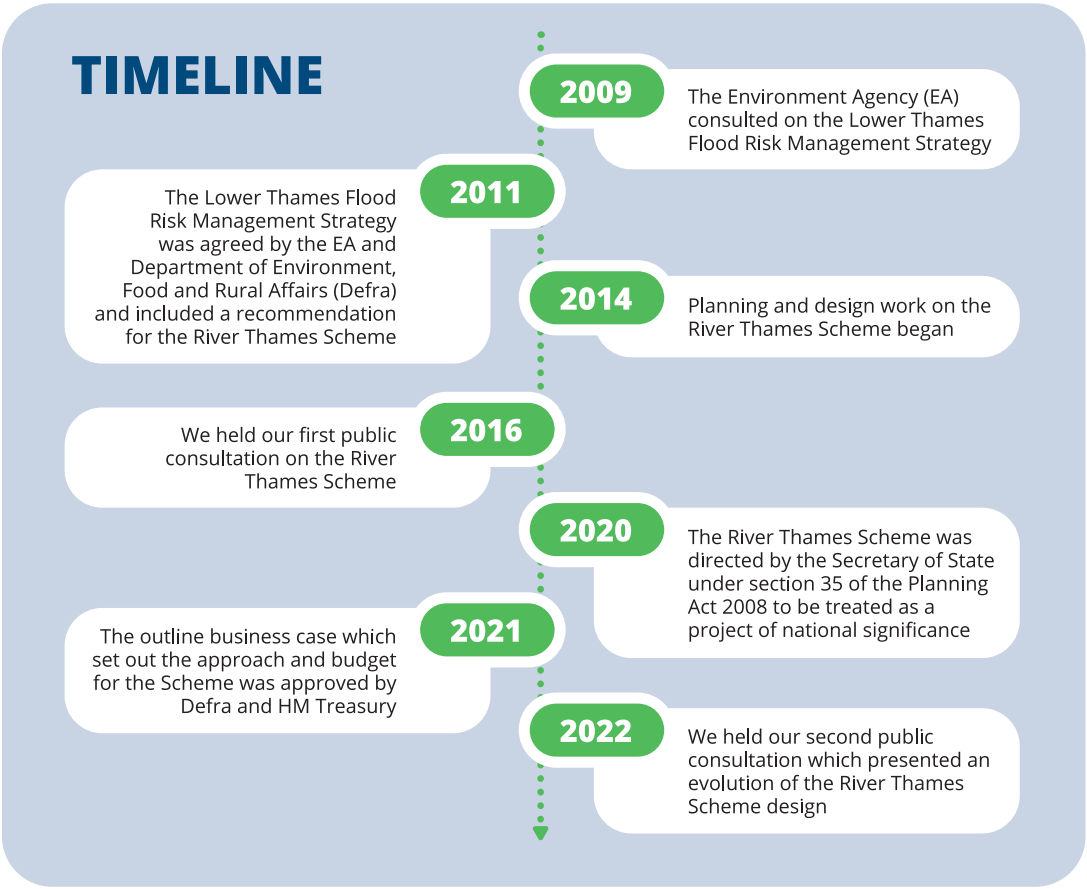
The RTS is the first flood and climate mitigation project to be described as nationally significant, reflecting its scope and ambition.

The Environment Agency and Surrey County Council are working together to deliver the River Thames Scheme in partnership with other local authorities – Runnymede Borough Council, Spelthorne Borough Council, and Elmbridge Borough Council – and other interested organisations: The Royal Borough of Kingston Upon Thames, The Royal Borough of Windsor and Maidenhead, London Borough of Richmond Upon Thames, Thames Regional Flood and Coastal Committee and Thames Water.

Every component of the scheme is a significant addition to existing blue and green infrastructure, working in tandem to provide communal benefits.

Developing the scheme

The figure below provides an at a glance timeline for the scheme's development. If you would like to read more about this please view our Consultation Brochure.



Purpose of this document

As part of this statutory consultation, we have provided several detailed technical documents such as the Maps for Statutory Consultation and Preliminary Environmental Information Report. We have also provided a Consultation Brochure to give an overview of the proposals, why we are proposing measures outlined in this document, as well as how to provide your views on them.

This document will provide you with an overview of the proposed design of the whole scheme. It will show the engineered flood alleviation measures alongside the proposed improvements to active travel and recreational facilities, as well as the ecological enhancements we are proposing. The purpose of this consultation is to hear your views on our proposals. More information on how to respond to the consultation can be found in our Consultation Brochure, as well as on page 52 of this document.

A guide to the document is below.

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To help you understand the scheme

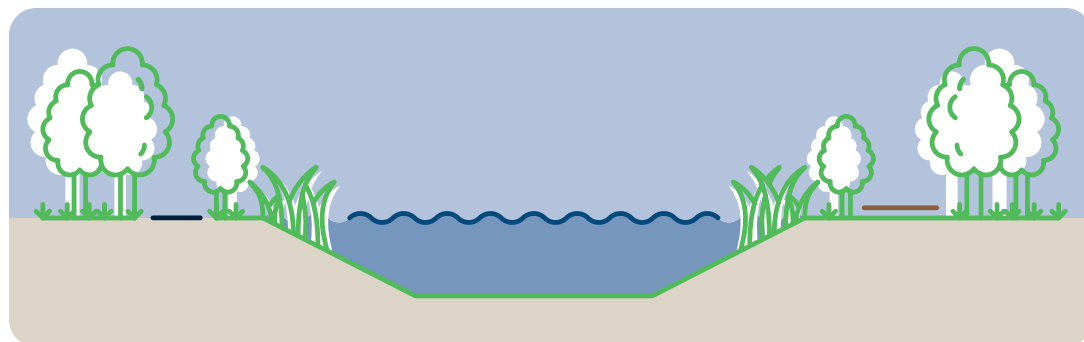
We use many different methods to alleviate flooding but what these methods are is often not well known by the public. This section provides an overview of the common methods that will be used by the scheme.

Channels

We will use a flood relief channel to take excess water away from the River Thames. The flood channel will vary in shape depending on the ground conditions or lake that it passes through. Where it is possible, the width of the channel will be minimised to reduce the amount of excavation and processing of materials required.

Channels through natural and made ground

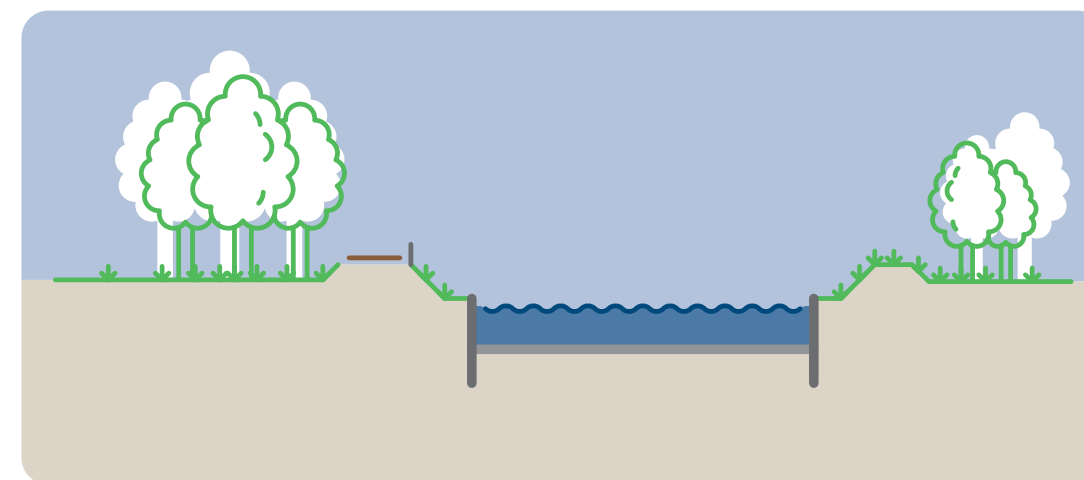
Where the channels will pass through natural and made ground (other than waste), they will be designed to achieve a “natural” appearance, with softer edges as shown in the image (below). These sections of the channels will have an approximate width of 45 metres, a depth between 3 to 4 metres and will maintain an average water depth of 2 to 3 metres. These sections of channel design will be possible along 0.3 miles (0.5 km) of the Runnymede Channel and along 0.1 miles (0.2 km) of the Spelthorne Channel in areas where there is the potential to include in-channel and riparian habitats and/or softer landscaping of the flood channel.



An indicative cross section of channel

Channels through landfill sites

We use these types of channels through existing and historical landfill sites, as well as when space may be limited. They will be constructed using vertical sheet piled walls driven into the ground from the existing ground level. A water-resistant layer will be installed on the channel bed to isolate the channel from the surrounding landfill. These channel sections will have a width of approximately 20 metres, a depth of approximately 4 metres, and a water depth ranging from 2 to 3 metres in normal non-flood conditions.



An indicative cross section of channel

The sections of the channels through landfill sites will be expected along approximately 0.5 miles (0.9 km) of the Runnymede Channel and approximately 0.7 miles (1.2 km) of the Spelthorne Channel. We are considering whether it will be possible to create planted edges along the length of these sections of the channel to create a more natural appearance.

Channels through lakes

In addition to the channels described above, the scheme will run through several lakes. By integrating these existing lakes into the channel design, the need for heavy engineering is minimised. The flood channels do not aim to deepen the bed of any of the lakes. However, some of the smaller lakes, like the one south of Green Lane, might require reshaping to facilitate the smooth and efficient flow of water.

Flow control structures

Several types of flow control structures are proposed for the scheme. When the flood channels are in operation, the flow control structures will help control the water flowing into the channels. A description of some of the main types of structures the scheme will use is given below. Further types of structures are found in the scheme description sections throughout the document.

Gated Control Structure

Gated control structures are used to control the operation of the channel, by controlling flow and water levels. Gated control structures will be located at the intake for each channel and at the outlet of the Thorpe Park Lakes in the Runnymede Channel. They are concrete structures forming a series of channels (sluiceways). A steel radial gate is mounted in each channel on pivots and rotated vertically by an overhead hoist to allow water to flow under the gate. During flood events the gates will be opened and closed as required to regulate the conveyance of flood water along the channels. There are gated control structures adjacent to all the non-tidal locks on the River Thames.



Example of a gated control structure

Fixed level control structure

A fixed level control structure is a fixed concrete weir over which water flows. We are proposing three of these structures on the scheme and they range between 75 metres and 94 metres in length.



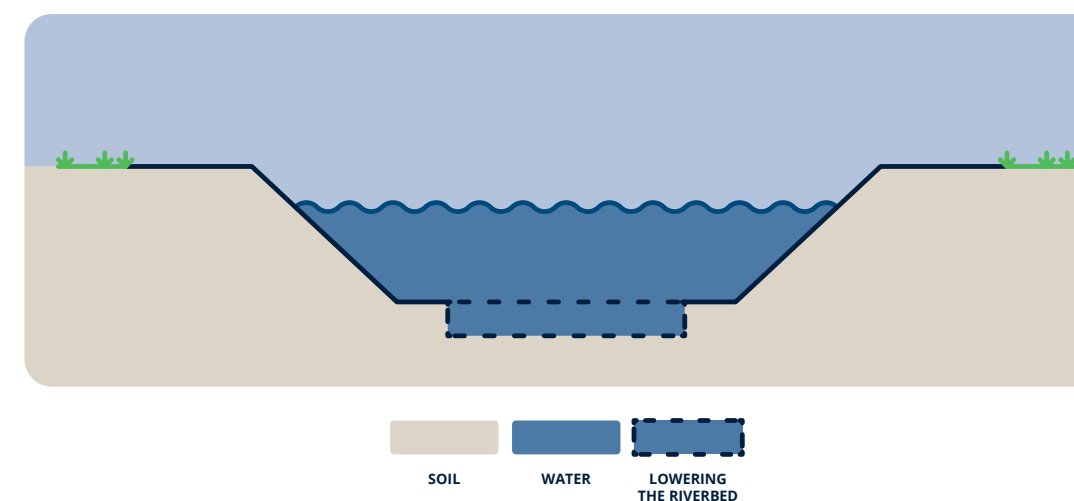
Example of a fixed level control structure

Fish pass

A fish pass allows fish to move over, through or around any weir or other river obstruction in either an upstream or a downstream direction. It can take the form of a conduit, channel, lift, other device or structure. Several channel type fish passes are proposed as part of the scheme to ensure the safe migration of fish.

Riverbed lowering

Riverbed lowering is the process of creating additional depth to a river at targeted locations. In specific situations, this helps with capacity. On the scheme approximately 1 km of riverbed lowering will take place just downstream of the Desborough Cut.



An indicative cross section of riverbed lowering, this image is not to scale

Landscape & habitat

Alongside the channel and flow control structures, the proposed scheme will create new areas of open space, as well as create and improve habitat areas.

Open space

The scheme will see the development of two new green (land-based) open spaces at Royal Hythe, west of the A320 and south of Egham Hythe, and Sheepwalk which would span Chertsey Road to the west of Old Shepperton (and thus encompasses the previously separate site of Land South of Chertsey Road (B375)). As described in more detail in this document, the new green open spaces will adopt a soft, natural landscape design, comprised of various mixes of meadows, grasslands and woodlands. This will provide the setting for new recreational spaces, together with the flood channel and other water habitat features. As part of the final landscape design, we will consider the comments received at this consultation as well as previous engagement.

A blue (water-based) open space at Abbey 1 Lake, to be known as Penton Park, is also being considered as well as a further significant new wetland at Desborough Island. These spaces will form an integral part of the scheme, working alongside the implementation of the active travel route to create a distinctive and scenic landscape throughout the scheme.

Habitat creation/improvements.

New and enhanced wildlife habitats and areas for nature recovery will be established as part of the scheme, connecting with existing nature sites and wildlife corridors to create a connected ecological corridor. The scheme aims to create an extensive nature recovery network spanning the length of the channel and beyond, supporting diverse habitats and biodiversity and to support health and wellbeing benefits by improving access to nature.

As described in more detail in this document, locations for these improvements are being proposed both adjacent to the channel and in appropriate locations in the locality. The designs being developed include planting along sections of the flood channel, tree planting and enhancing the environment for wildlife such as hedgerows and other existing habitats.

Active travel

To ensure both residents and visitors can fully enjoy the advantages of the scheme, a central route for active travel of around 5 and a half miles (8.8km) is proposed, stretching the length of the scheme. The route will be fully segregated between cyclist and pedestrian users. As described in more detail in this document, it will run as a continuous route connecting the two primary new green open spaces at Royal Hythe and Sheepwalk (Land South of Chertsey Road) and the new potential 'blue' open space at Abbey 1 Lake.

The active travel route will also comprise of multiple links to connect local communities such as Staines, Egham Hythe, Thorpe, Laleham, Chertsey, Shepperton Green, Old Shepperton, Weybridge and Walton. The route includes the building of two new bridge crossings for non-motorised use over the River Thames, connecting Chertsey to Laleham to the north of the existing M3 river crossing, and at Desborough Island to Ferris Meadow Lake. This route is described in more detail in this document.

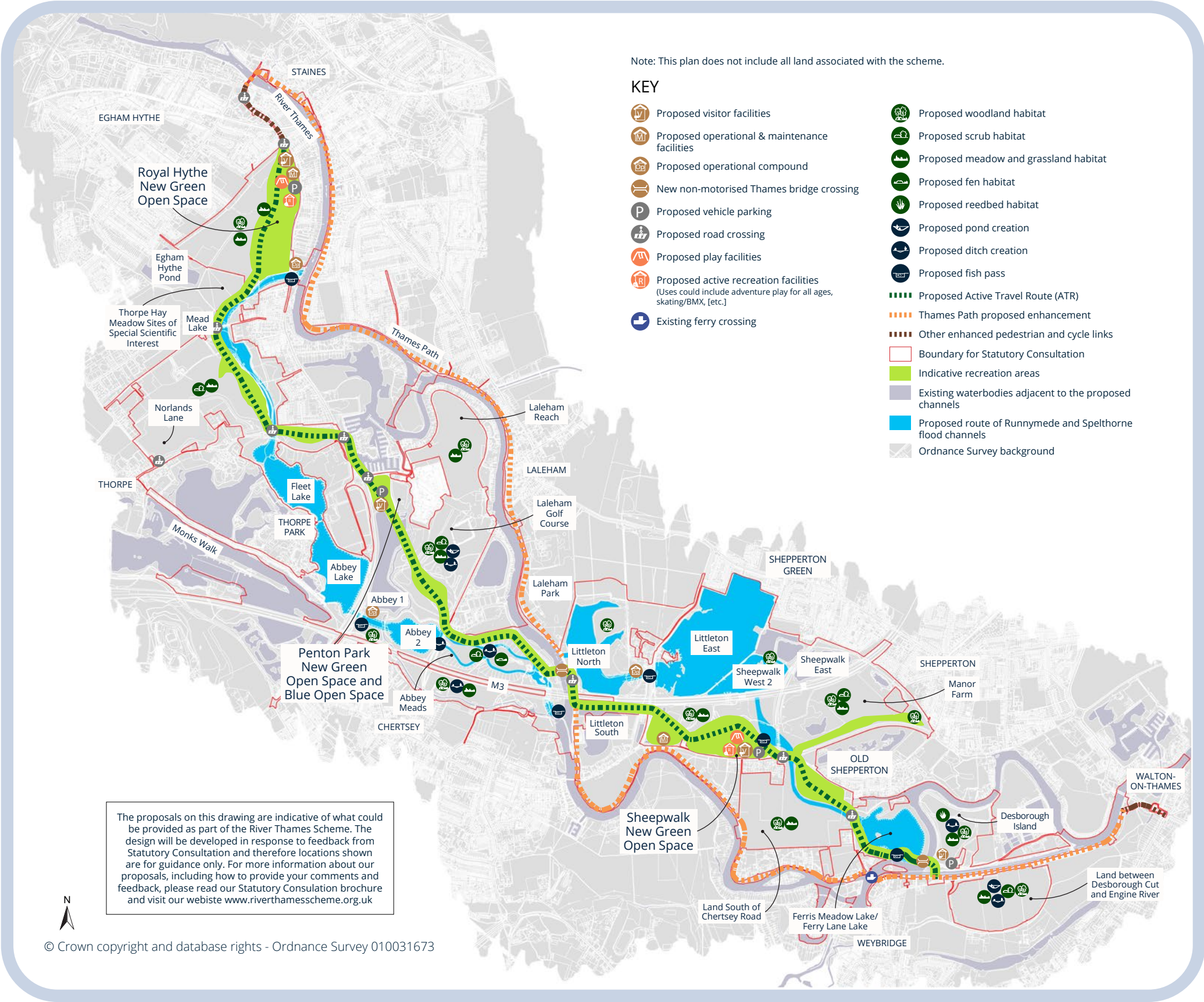
In addition to the Active Travel Route, we are proposing Thames Path enhancements which runs along the River Thames from Staines to Walton-on-Thames.

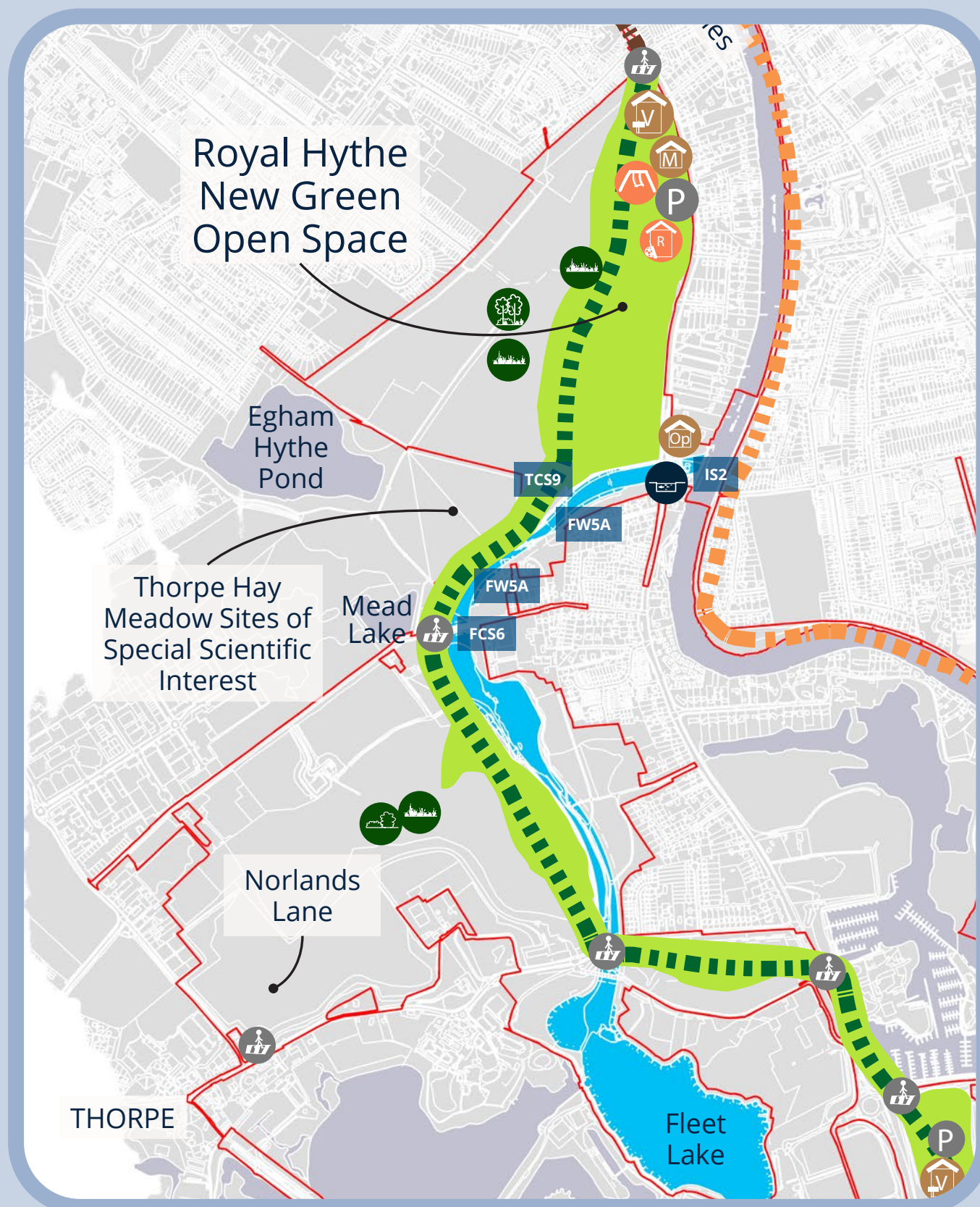
Overview of the scheme

The scheme will include a new flood channel in two sections, passing through the boroughs of Runnymede and Spelthorne in Surrey, as well as the bed lowering of the River Thames downstream of the Desborough Cut. Additionally, there will be increases in capacity at the Sunbury, Molesey and Teddington weirs. Complementing this, the channel will be bordered by new expanses of public green open space, creating opportunities for recreation and engagement with nature.

New routes for pedestrians and cyclists will run along the channel and through the new public spaces, linking different elements of the scheme with communities and providing better connections within and across the area.

Areas of new and improved habitat for wildlife and nature recovery will connect with existing nature sites and wildlife corridors to provide a new nature recovery network along the length of the channel that supports even more biodiversity.





Flood channel and flow control structures - Runnymede Channel section

Runnymede Channel section

River Thames to Fleet Lake

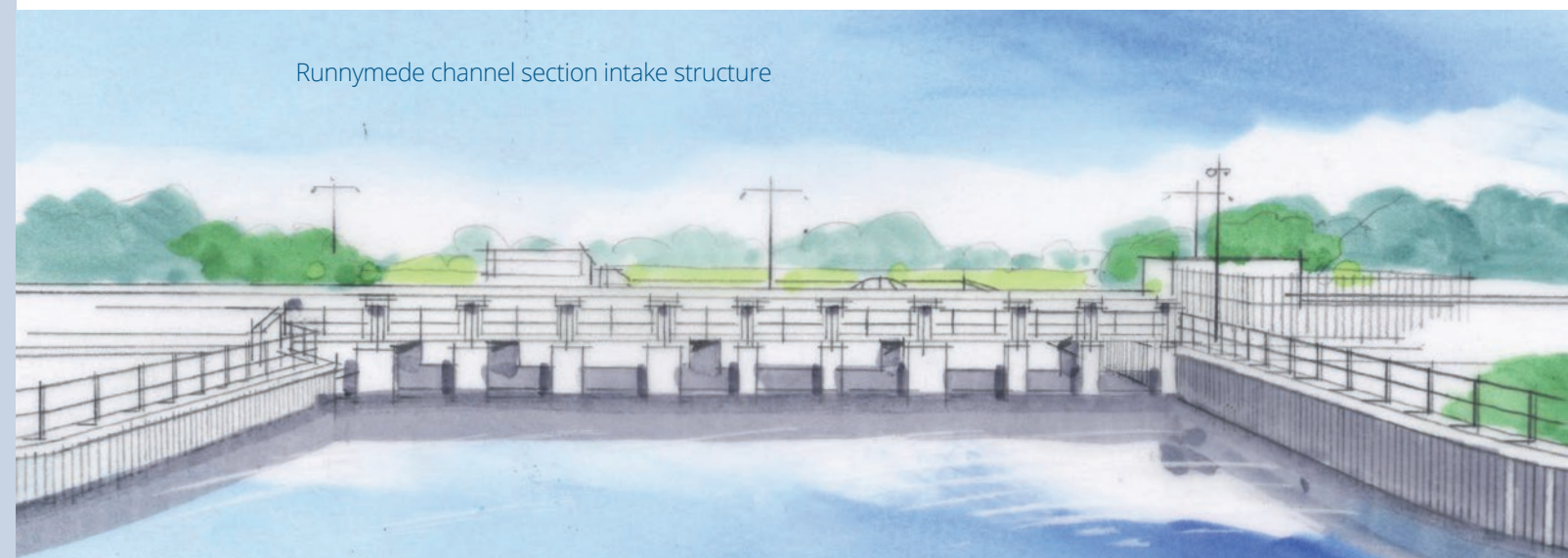
The nearly 3 mile (4.8 km) Runnymede Channel section of the scheme is proposed to begin to the north of Ferry Avenue and Truss's Island with an inlet Flow Control Structure on the west side of the River Thames. The inlet structure will include nine radial gates which will control the amount of water entering the Runnymede Channel and include a fish pass to allow fish to safely pass up and down the new channel.

As shown in the map to the left, the channel will then run through a mixture of vertical sided (channels through landfill sites) and natural 'looking' channels before joining the existing Mead Lake Ditch. It will then continue in a vertical sided channel before entering the lake south of Green Lane. The channel will continue in a vertical sided channel for approximately 0.4 miles (0.7km) until it reaches Fleet Lake. By running the channel through existing lakes, such as Fleet Lake, we can minimise the amount of heavy engineering works required.

For this section of the scheme, we are proposing Flow Control Structures, some of which are described on pages 8 and 9, and embankments which provide additional protection to properties. The approximate location of these structures is shown on the map provided with for example "IS2" as a reference.

- An inlet structure which will include nine radial gates and a fish passage (IS2)
- Two embankments that will together be approximately 280m in length (FW5A)

Runnymede channel section intake structure



- A piped inlet at the Drain (TCS9)
- An inlet with flap valve at Mead Lake Ditch. A flap valve is designed to ensure that water can flow out of the inlet but not flow back into it if water levels in the RTS rise (FCS6).

Open space and priority areas for habitat creation and enhancement

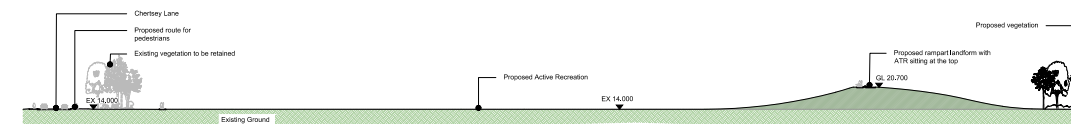
Royal Hythe

The proposed Royal Hythe new green and open space area will cover around 45 hectares of land. The new green and open space could be used for various recreational activities such as fitness trails, play spaces or a BMX or skate park. It could also include visitor facilities and parking. To help create this new green open space and incorporate it within the active travel route described, we intend to reprofile areas of land within the new open space area. We are also proposing several new pedestrian and cycling routes within the area of open space connecting communities to the active travel route.



Royal Hythe

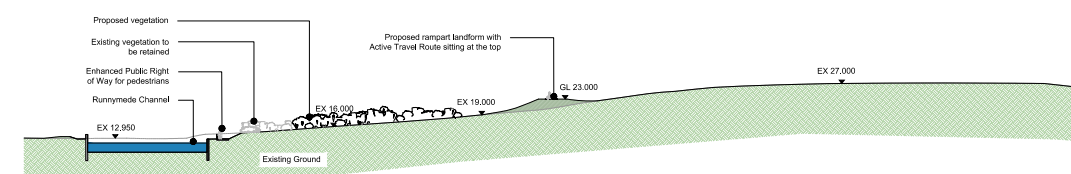
The space is proposed to benefit from improvements to the existing grassland and woodland habitat, providing for a range of plant and animal species. We are also considering providing a small area of wetland habitat at the south of the new area of open space.



An example cross section of the area of open space

Norlands Lane

The proposed Norlands Lane areas of enhanced public connection and priority area for habitat will cover around 42 hectares and will include woodland, grassland and scrub habitat which will provide homes for a range of plant and animal species. To allow for the proposed active travel route within this area, we will reprofile the east side of the existing raised land. The area will also include a proposed cycle and pedestrian route connecting communities of Thorpe to the active travel route.



An example cross section of the area of Norlands Lane

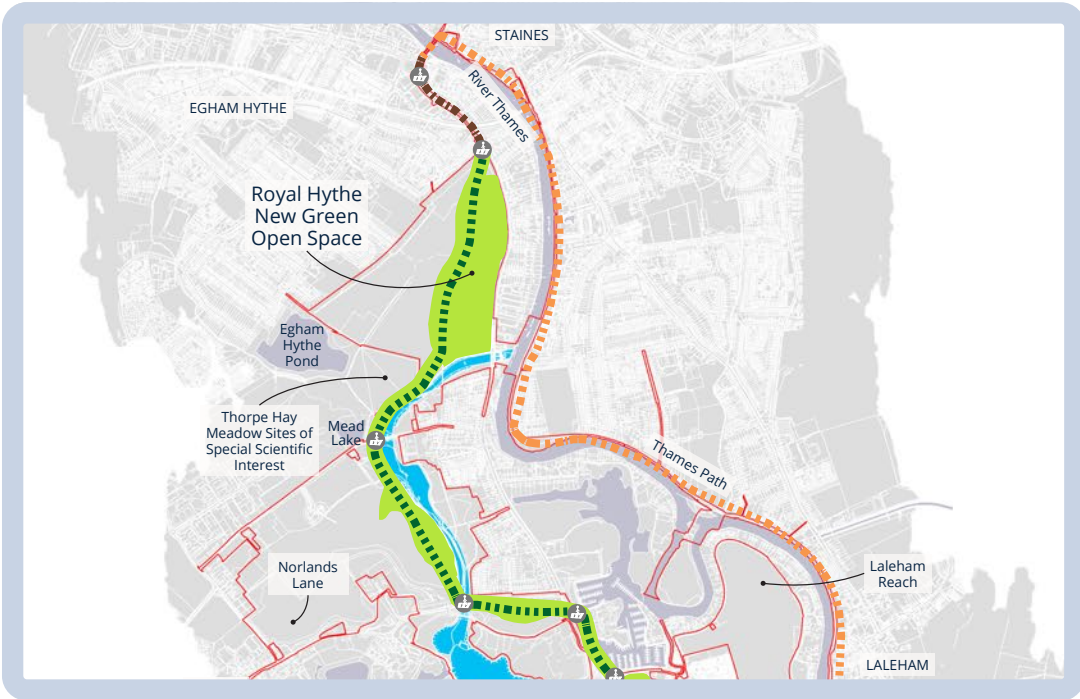
Active travel route

The fully segregated active travel route (ATR) is marked in a green dashed line on the map. The route will head south from Staines town centre across Staines bridge before heading east along Chertsey Road where it will reach the north of Royal Hythe open space. The route will run through the large Royal Hythe open space and then bear westward before crossing Green Lane via a new crossing.

After crossing Green Lane the ATR will head south following the route of the flood channel to Norlands Lane. The ATR will cross Norlands Lane before heading eastwards off road, parallel with Norlands Lane to its junction with Chertsey Lane.

The ATR will then cross Chertsey Lane by a controlled crossing linking into the existing cycleway. It then heads south along Chertsey Lane before entering the new Penton Park open space area.

The Thames Path enhancement will also run throughout this section of the scheme as shown in orange and there will also be various other connections to the active travel route.



- Proposed road crossing
- Proposed Active Travel Route (ATR)
- Thames Path proposed enhancement
- Other enhanced pedestrian and cycle links
- Boundary for Statutory Consultation
- Indicative recreation areas
- Existing waterbodies adjacent to the proposed channels
- Proposed route of Runnymede and Spelthorne flood channels
- Ordnance Survey background





Flood channel and flow control structures - Fleet Lake to Abbey Meads

Fleet Lake to Abbey Meads

As shown in the previous section, the channel is proposed to utilise Fleet Lake. The channel will then enter Abbey Lake. For both Fleet Lake and Abbey Lake, we are considering work to naturalise the edges of the lakes which would help to stimulate vegetation growth and in turn provide improved habitats. Abbey Lake will also include a flow control structure beneath Monks Walk to control the flow of water to and from St Ann's Lake.

From Abbey Lake, we are proposing a vertical sided channel (channel through landfill sites) which will run under Staines Road before becoming a natural 'looking' channel. The channel will include a gated flow control structure of nine radial gates, similar to the structure at the inlet to the channel. At the eastern end of the channel, inlet and outlet structures are proposed which will ensure that in normal conditions water will be directed into Abbey River and on into the River Thames.

In flood conditions, the inlet and outlet structures will allow water to continue into Abbey Lake 2 until it reaches such a level that it overflows into the proposed Abbey Meads. The overflow will be facilitated by the creation of a wide 90 metre weir which will allow water to overflow from Abbey Lake 2 into the proposed Abbey Meads. From Abbey Meads the Runnymede channel will connect to the River Thames by passing under the M3 via the Burway Ditch existing flood culverts.

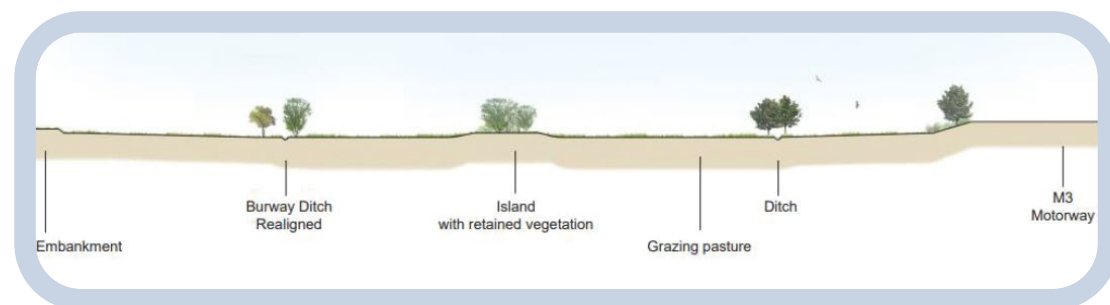
For this section of the scheme, we are proposing several Flow Control Structures some of which are described in pages 8 and 9, which will allow the flow of water to be controlled, and embankments which provide additional protection to properties. The approximate location of these structures is shown on the map provided with for example "FCS7" as a reference.

- An adjustable weir gate at Abbey Lake outlet to St Ann's Lake (structure reference FCS7)
- Lowering of 20 metres of river bank on the Chertsey Bourne at St Ann's Lake inlet (structure reference FCS8)

- A small structure on the outlet from St Ann's lake into the Twynersh Lakes will be rebuilt to adjust water levels in St Ann's lake whilst also limiting outflows into the Chertsey Bourne River (FCS9).
- A gated control structure (nine gates) at the Thorpe Park Lakes outlet (structure reference FCS10). This structure will include a fish pass.
- An inlet with scour protection to prevent erosion on the Abbey River (structure reference TCS10).
- A stop logged channel outlet structure on the Abbey River (structure reference TCS11). Stoplogs are removable barriers (normally timber or metal planks) used to control water flow in a channel or as flood defences.
- A fixed level control structure (concrete, 82 metres long) at Ferry Lane (structure reference FCS12)
- An embankment approximately 500m in length to the north of Abbey Meads Floodway (structure reference FW6)

Abbey Meads

Abbey Meads will range in width from approximately 140 metres to 300 metres and be used in flood conditions where overspill from Abbey Lake 2 can enter the floodway. To create the floodway, the area will undergo shallow excavation. The existing ground levels will be lowered by approximately 1 metre and shaped to create a damp to wet summer grazing zone.



A cross section of Abbey Meads

Unlike the channels where water levels will be kept at a constant 2 to 3 metres in non-flood conditions, Abbey Meads will predominantly be dry with rough grazing pasture due to the flow control structures at the east of Abbey Lake 2 directing water to Abbey River. In the wetter winter months during normal conditions, it may be partially flooded.

Abbey Meads is also proposed to be an area of enhanced public connection and priority area of habitat. Including fen and scrub habitat, as well as the creation of ditches, the area could provide a home for several plant and animal species.

Open space and priority areas for habitat creation and enhancement

Penton Park

North of Abbey Lake 1, the proposed Penton Park will be an area of blue open space covering nearly 9 hectares. It is also proposed to be a priority area for habitat creation, enhancement and mitigation and include woodland and grassland and may include parking facilities and a visitor centre. As with the other areas of open space, to allow for the proposed active travel route we will reprofile the land.

Laleham Reach

In land between Penton Hook Marina and the River Thames, Laleham Reach is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The area could include grassland and woodland, as well as a pond.

Laleham Golf Course

At the former golf course site, in land to the east of Abbey 1 Lake, we are proposing to create an area of enhanced public connection and priority area for habitat. The area could include several new ditches, a new pond and woodland and grassland, creating home for animal and plant species.



Laleham Golf Course

As with the other areas of open space, to allow for the proposed active travel route we will reprofile the land.

South of M3 and north of Abbey River

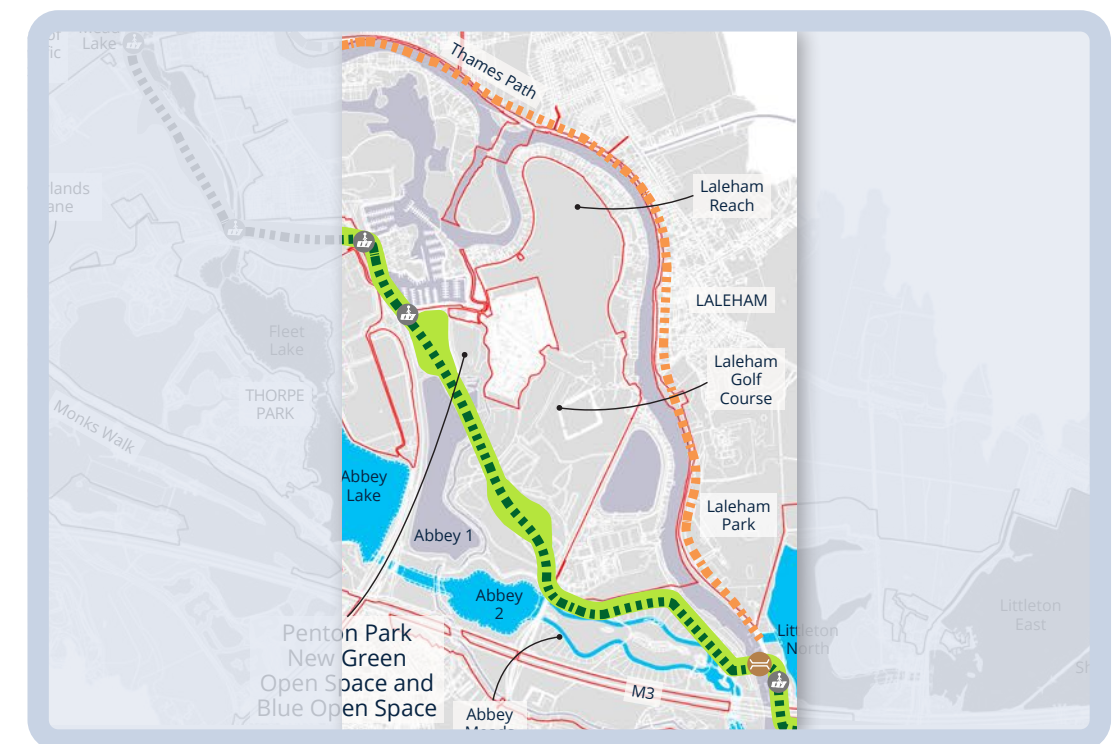
In land south of the M3 and north of Abbey River, an area is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The area could include grassland and woodland.

Active travel route

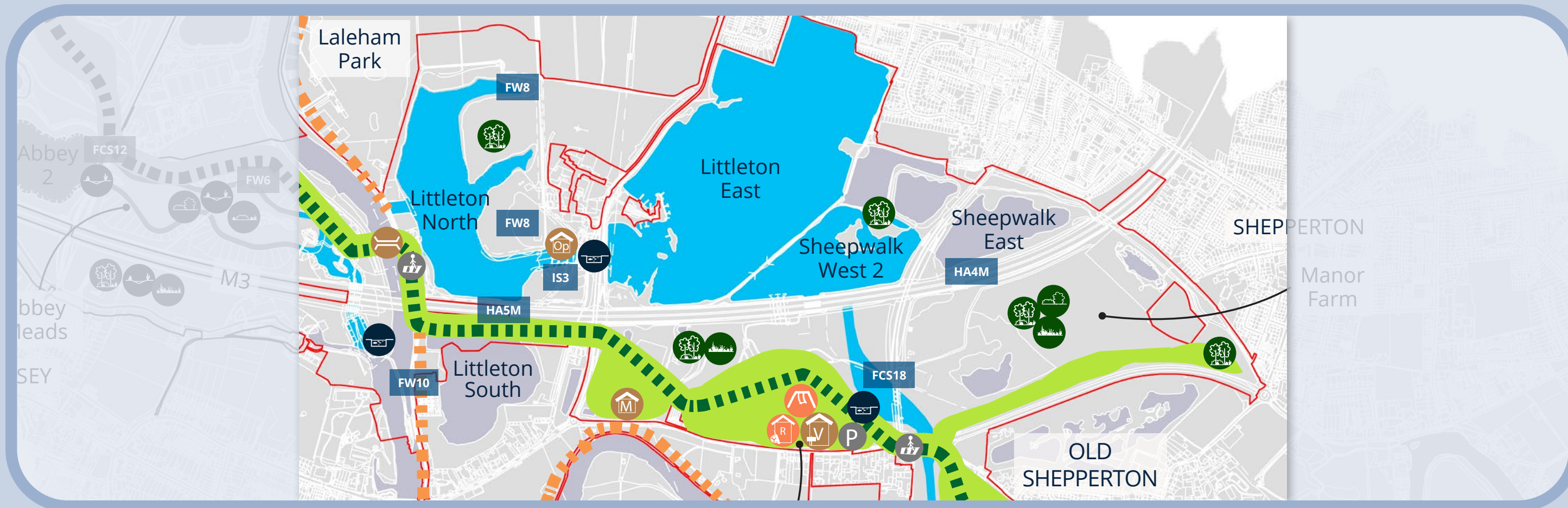
After heading south along Chertsey Lane the active travel route will enter Penton Park before continuing through the Laleham Golf Course area of enhanced public connection and priority area for habitat.

The route will then continue to the north of Abbey Meads Floodway before crossing the River Thames on a new bridge which is proposed as part of the scheme.

The Thames Path enhancement will also run throughout this section of the scheme as shown in orange and there will also be various other connections to the active travel route.



- | | |
|---|---|
| Proposed road crossing | Indicative recreation areas |
| Proposed Active Travel Route (ATR) | Existing waterbodies adjacent to the proposed channels |
| Thames Path proposed enhancement | Proposed route of Runnymede and Spelthorne flood channels |
| Other enhanced pedestrian and cycle links | Ordnance Survey background |
| Boundary for Statutory Consultation | |



Flood channel and flow control structures - River Thames to Chertsey Road

River Thames to Chertsey Road

The proposed Spelthorne Channel section of the scheme is 3.2 km long and begins with an open channel from the River Thames to the west of Littleton North Lake. The vertical sided channel will pass under Thames Side Road and connect to Littleton North Lake.

It will then run through Littleton North Lake until it reaches the proposed inlet Flow Control Structure and vertical edged channel (channel through landfill sites) connecting it to Littleton East Lake. The proposed Flow Control Structure at this location will include nine radial gates and a fish pass, and will allow the flow of water to be controlled between the lakes,

similar to the structure at the inlet of the Runnymede channel (see page 15). As with the Runnymede channel section of the scheme, by using the existing lakes where we can it allows us to minimise the need for hard engineering and also reduce the amount of excavation required.

Passing under Littleton Lane the channel will continue through Littleton East Lake and into Sheepwalk West Lake 2, passing under the existing public right of way (PRoW). The existing embankment on which the PRoW currently runs, will be partially removed and replaced with a bridge. From there, a new bridge will be provided under the M3 to allow the new channel to pass south into the proposed Sheepwalk new green open space.

The channel will then continue in a vertical sided channel (channel through landfill sites) through the eastern side of the proposed Sheepwalk new green open space until it passes under Chertsey Road. To accommodate this section of the channel and green open space we are proposing to realign Sheep Walk.

For this section of the scheme, we are proposing several Flow Control Structures, some of which are described on pages 8 and 9, which will allow us to control the water flow, and embankments which provide additional protection to properties. The approximate location of these structures is shown on the map provided with for example “FW8” as a reference.

- Two embankments running to the east of Littleton North Lake with a combined length of approximately 900m (FW8)
- A 285m long section of flood wall which is proposed to be up to 0.6m in height on the east side of Littleton South Lake (FW10)
- A gated control structure (nine gates) on the Spelthorne Channel between Littleton North Lake and Littleton East Lake (structure reference IS3). This structure will include a fish pass.
- Flows will be restricted through existing culverts beneath the M3 at two locations by constructing low walls (structure references HA4M and HA5M)
- A fixed level control structure (concrete, 94 metres long) at Manor Farm (structure reference FCS18). This structure will include a fish pass.

Open space and priority areas for habitat creation and enhancement

Sheepwalk Lakes

Sheepwalk lakes provide a potential further opportunity as an area focused on habitat creation, enhancement or mitigation and is therefore being explored accordingly.

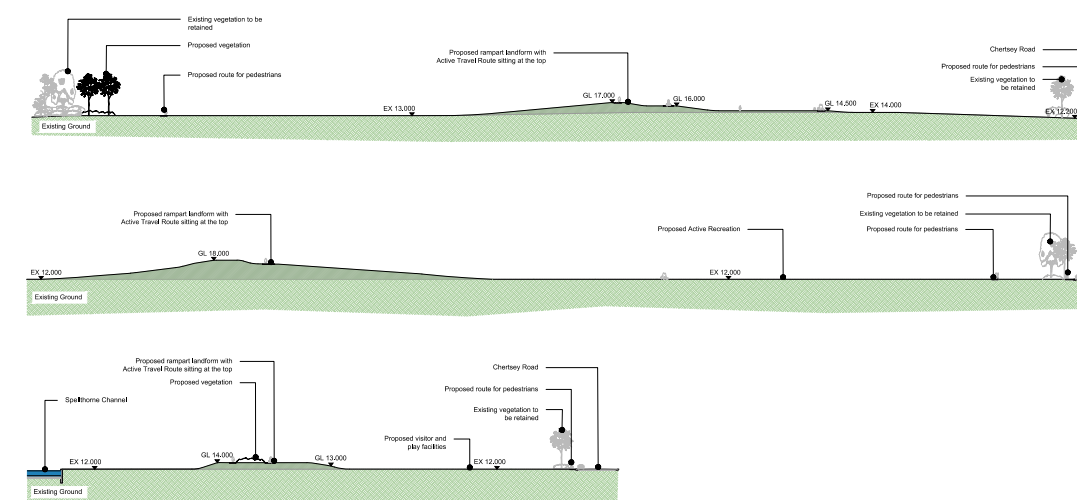
Sheepwalk

Spanning from Chertsey Road to the west of Old Shepperton, this area of new green open space will cover around 34 hectares. The new green and open space could be used for various recreational activities such as fitness trails, play spaces or a BMX or skate park. It could also include visitor facilities and parking. To help create the active travel route described in the active travel route section below, we intend to reprofile areas of land and also create several pedestrian routes within the open space to connect to local networks.



Sheepwalk

The space is proposed to benefit from improvements to the existing grassland and woodland habitat, providing for a range of plant and animal species.



Cross sections of Sheepwalk

Manor Farm

Located south of the M3 between Sheep Walk and the community of Shepperton, Manor Farm is proposed to be an area of enhanced public connection, and a priority area for habitat. The area will encompass but retain the Funky Footprint nature reserve and include improved woodland and grassland habitat providing homes for animal and plant species. Along its southern edge we are also proposing a new route for cyclists and pedestrians to connect to the active travel route.

Active travel route

Having crossed over the River Thames to the west of Littleton North Lake, the route will run parallel with Thames Side and pass under the M3 bridge. The route then heads eastwards and will run to the north of the Littleton South Lake.

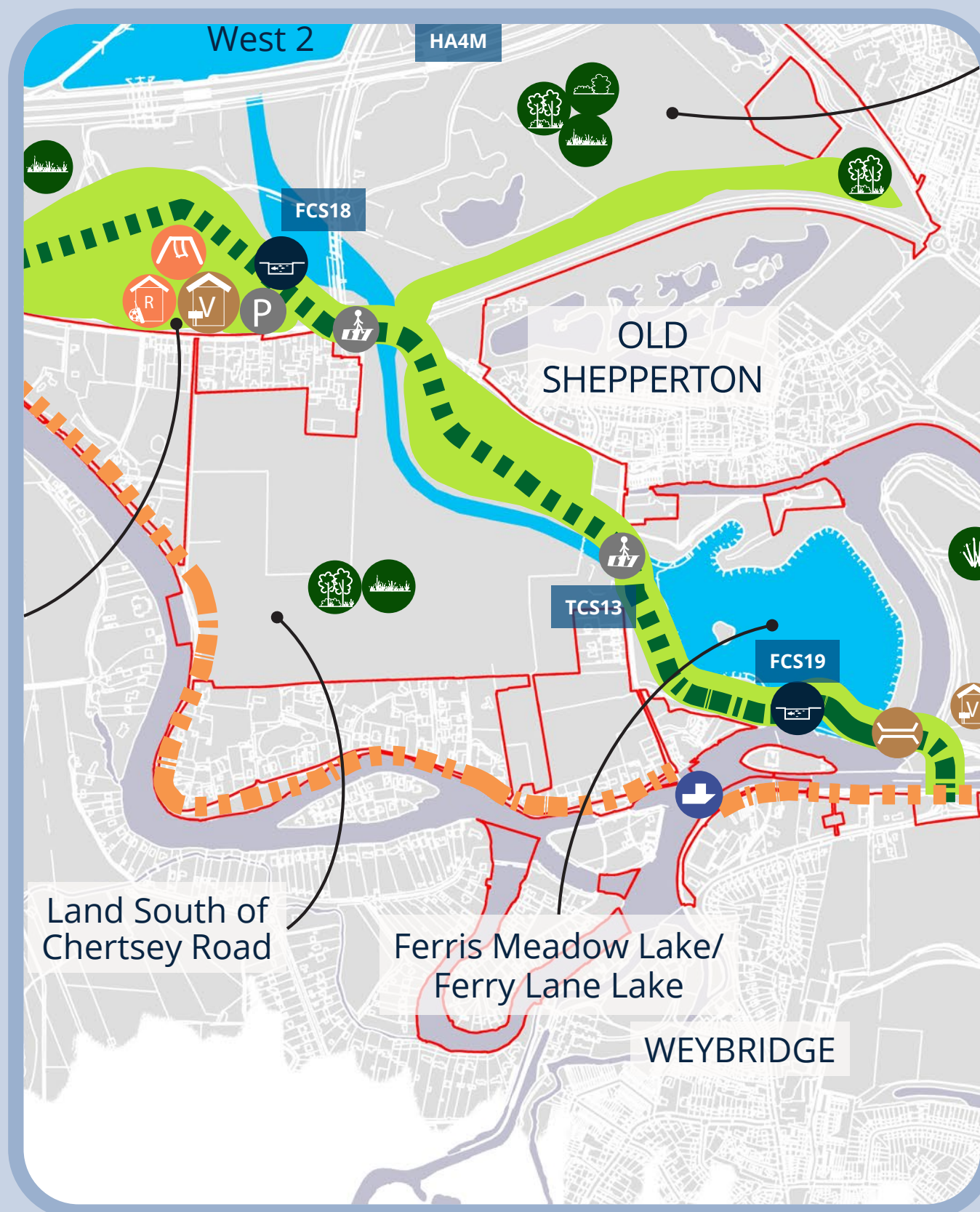
Passing under Littleton Lane in a proposed tunnel, the route will continue east through the proposed Sheepwalk new green open space and habitat creation area to the south of the M3.

The Thames Path enhancement will also run throughout this section of the scheme as shown in orange and there will also be various other connections to the active travel route.



- Proposed road crossing
- Proposed Active Travel Route (ATR)
- Thames Path proposed enhancement
- Other enhanced pedestrian and cycle links
- Boundary for Statutory Consultation
- Indicative recreation areas
- Existing waterbodies adjacent to the proposed channels
- Proposed route of Runnymede and Spelthorne flood channels
- Ordnance Survey background





Flood channel and flow control structures - Chertsey Road to River Thames

Chertsey Road to River Thames

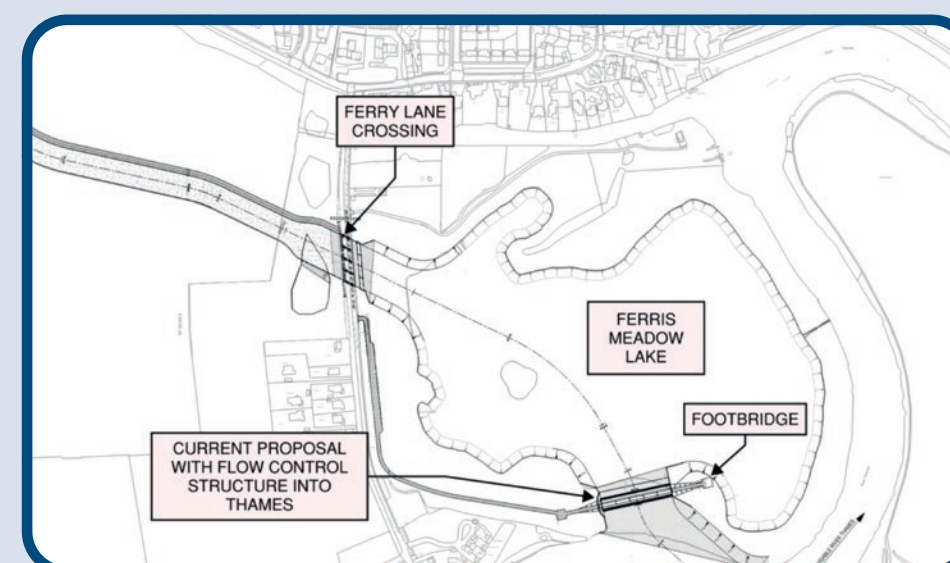
After passing under Chertsey Road, the vertical sided channel will continue south until bearing east to run through land south of Chertsey Road before passing underneath Ferry Lane where we would build an overflow Drain from Ferry Lane (marked in the map as TCS13). The channel is then proposed to enter Ferris Meadow Lake.

In our current proposals shown in the map, the channel would continue through Ferris Meadow Lake and then re-join the River Thames via a 75 metre long fixed level control (structure reference FCS19) which would include a fish pass. However, during the course of scheme development, the lake has become used for open water swimming. In light of this and associated feedback from stakeholders, we are currently undertaking a water quality assessment of the impacts of our current alignment on Ferris Meadow Lake and an options study to understand the feasibility of alternative alignment options for the Spelthorne Channel at this location.

A detailed overview of the study and options can be found in the consultation brochure. As an overview there are six options being considered:

OPTION 1

Spelthorne channel passes through Ferris Meadow Lake.

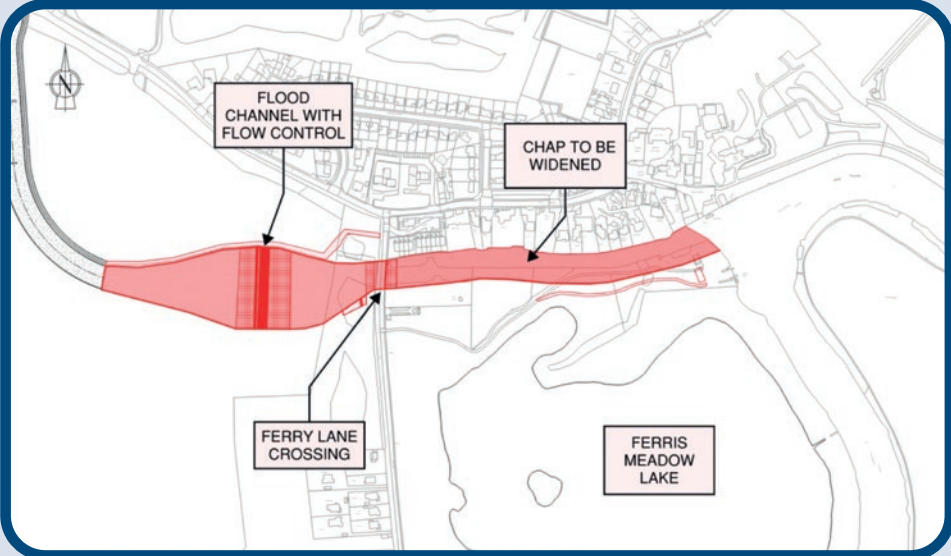


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OPTION 2

Direct the flood channel north of Ferris Meadow Lake into the River Thames via the Chap along a newly constructed route.

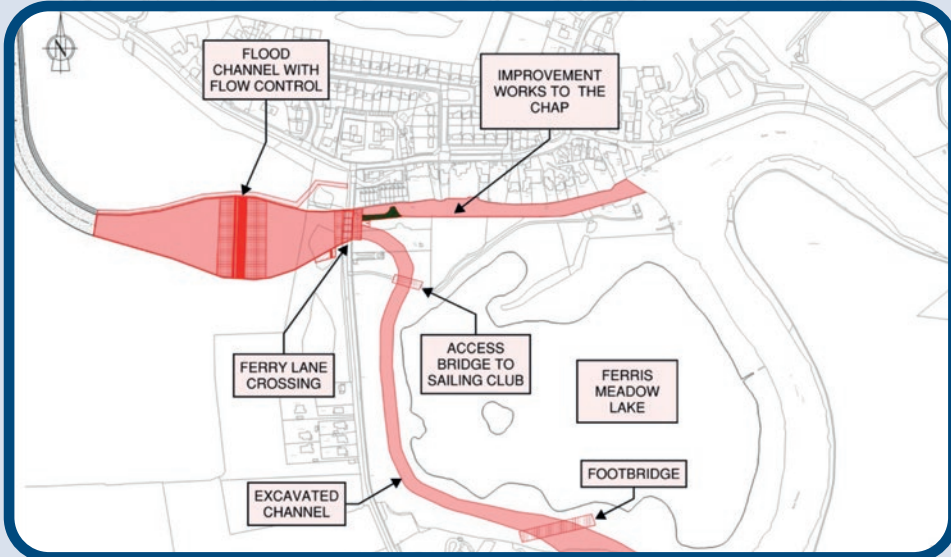


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OPTION 4

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.

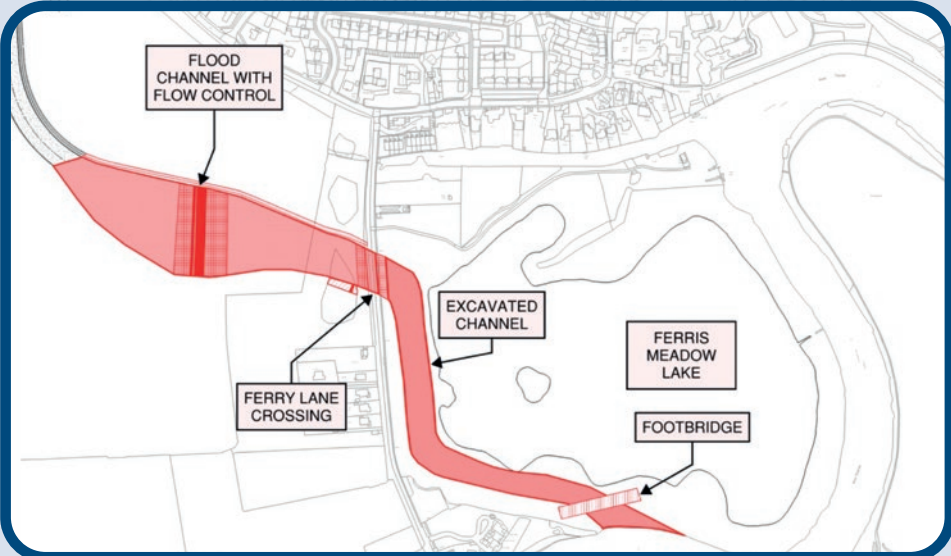


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OPTION 3

Divert the Spelthorne channel down the west side of Ferris Meadow Lake into the River Thames along a newly constructed route.

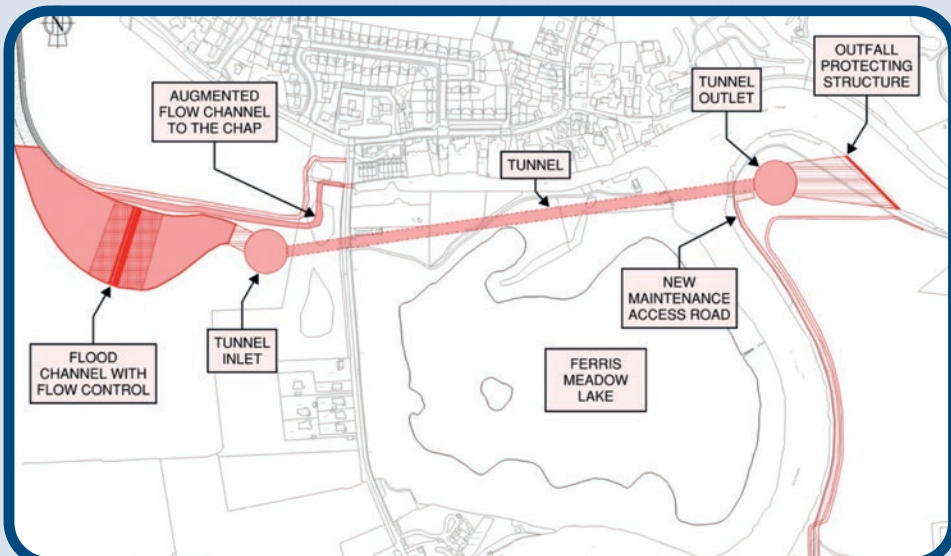


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OPTION 5

A tunnel under Ferris Meadow Lake for flood flows with augmented flow diverted into the Chap via a newly constructed route.

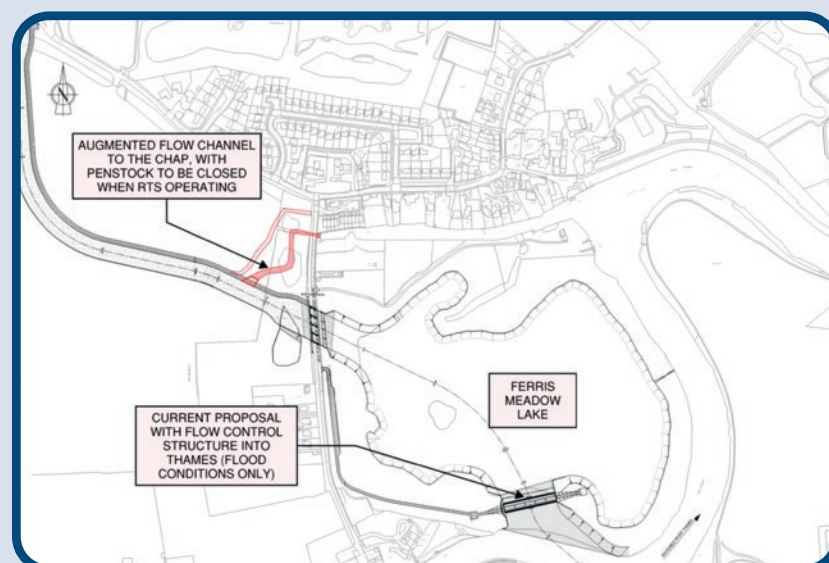


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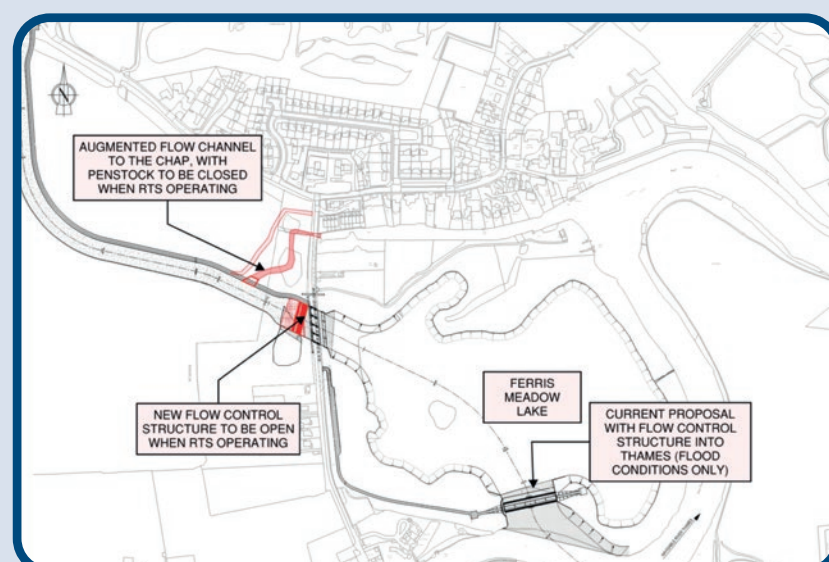
OPTION 6

Retain the flood relief channel alignment through Ferris Meadow Lake but with the augmented flow diverted into the Chap via a newly constructed route, with sub-options to consider both with (6b) and without (6a) a new flow control structure.

OPTION 6A

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OPTION 6B

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As noted, further information on the options for Ferris Meadow Lake can be found in the Consultation Brochure.

Open space and priority areas for habitat creation and enhancement

Land south of Chertsey Road

The land south of Chertsey Road is proposed to cover around 28.5 hectares and include a new green area of open space with associated areas of enhanced public connection. The area will also be a priority area for habitat and include grassland and woodland providing homes for animal and plant species.



Shepperton area

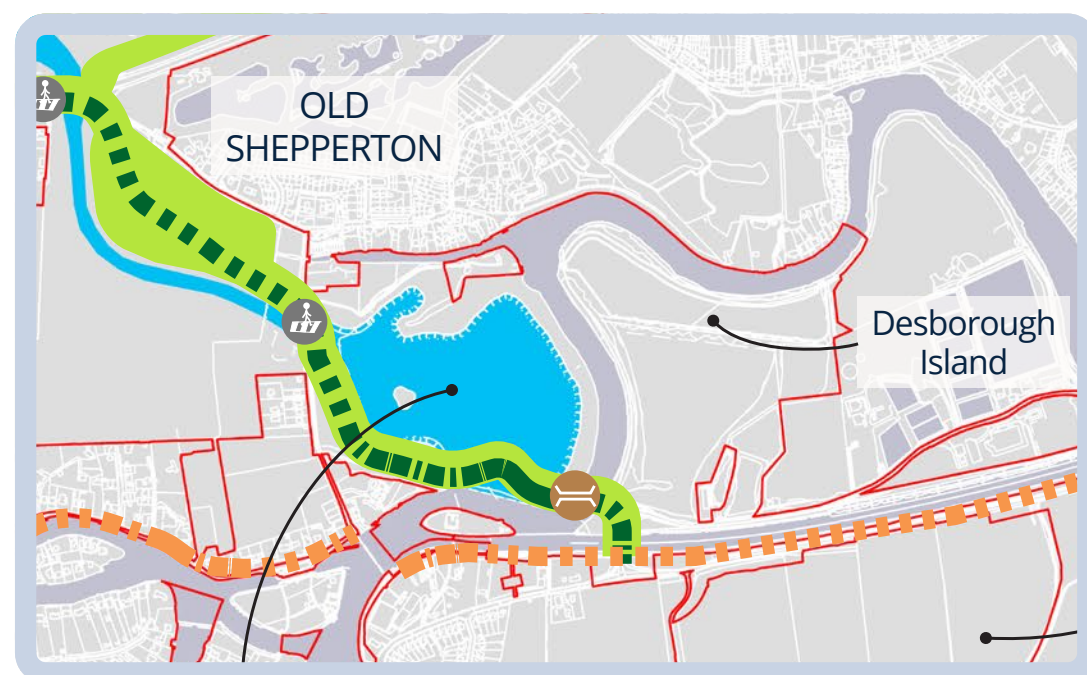
To accommodate the active travel route we will reprofile land on the east side of the area of proposed open space.

Active travel route

After passing through Sheepwalk area of new green open space, the route will cross Chertsey Road via a new crossing. It will then cross the new channel and continue south through the land south of Chertsey Road area of open space.

Crossing the channel again at the east of Ferris Meadow Lake the route will continue to the south of the lake before passing over the weir. It will then cross the River Thames on a new bridge on to Desborough Island

The Thames Path enhancement will also run throughout this section of the scheme as shown in orange and there will also be various other connections to the active travel route.

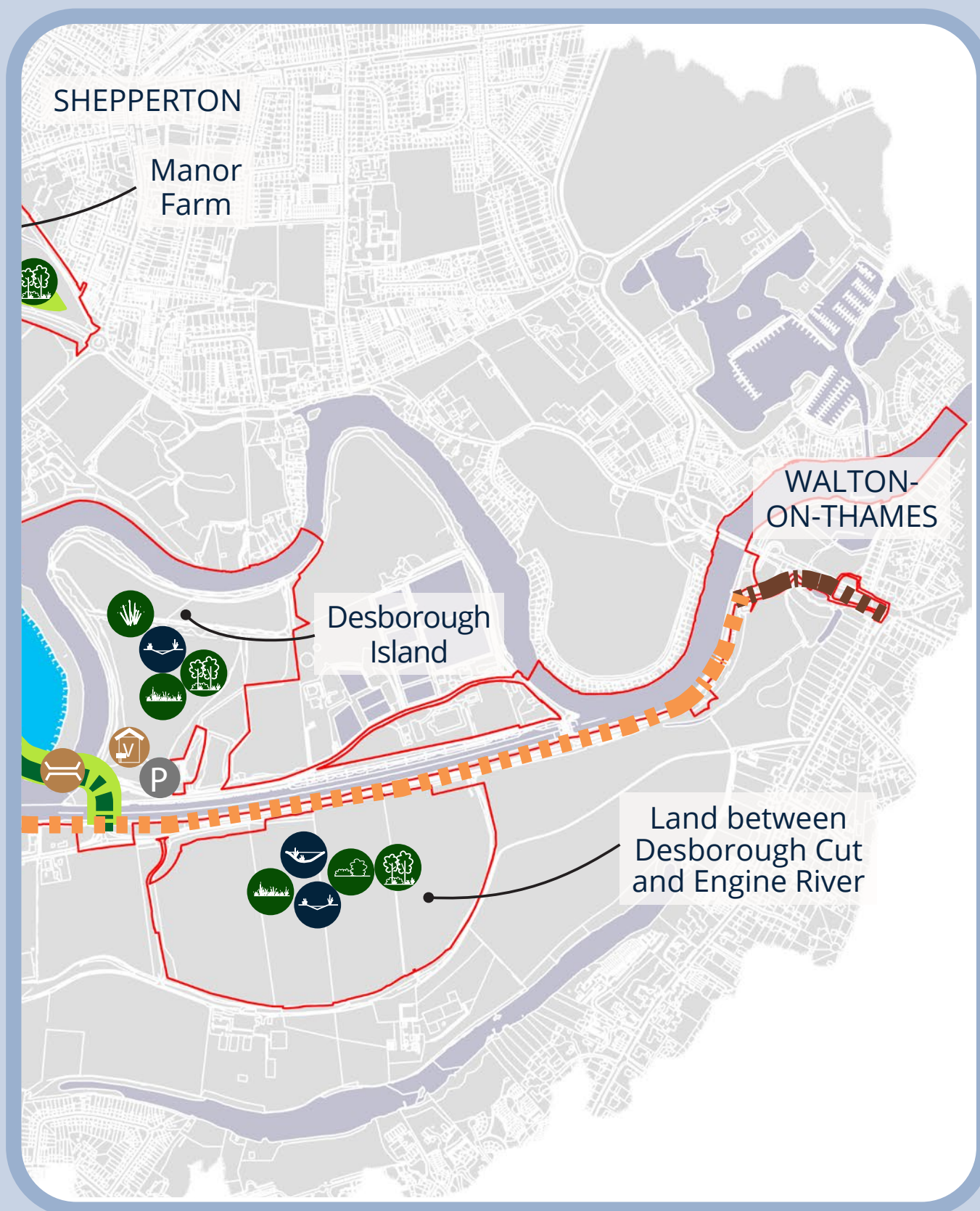


- Proposed road crossing
- Proposed Active Travel Route (ATR)
- Thames Path proposed enhancement
- Other enhanced pedestrian and cycle links
- Boundary for Statutory Consultation
- Indicative recreation areas
- Existing waterbodies adjacent to the proposed channels
- Proposed route of Runnymede and Spelthorne flood channels
- Ordnance Survey background



Crossing of the weir and the River Thames



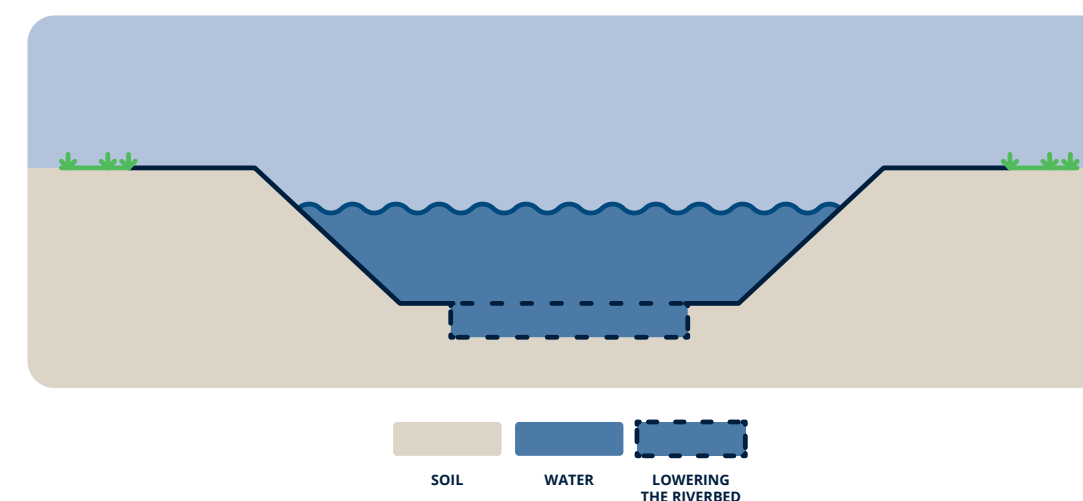


Flood channel and flow control structures - Bed lowering downstream of Desborough Cut

Bed lowering downstream of Desborough Cut

To improve channel capacity, we are proposing to lower the riverbed within a stretch of the River Thames, around 0.6 miles (1 km) in length, from the downstream end of Desborough Cut to just downstream of Walton Marina. This work has been designed to optimise the capacity improvements at the weir gates.

We anticipate that only the central third of the River Thames channel (approximately 20 metres width) will be excavated. No impact to the banks of the River Thames is therefore anticipated as a result of this work. The average total depth of bed lowering will be 0.7 metres, including built-in resilience against siltation.



An indicative cross section of riverbed lowering, this image is not to scale

Open space and priority areas for habitat creation and enhancement

Desborough Island

To the north of the Desborough Cut, on Desborough Island we are proposing a priority area for habitat creation and enhancement with associated areas of enhanced public connection. This area could include low-key visitor facilities and car park improvements, as well as grassland, wetland and woodland providing homes for a range of plant and animal species. The area may also include new pedestrian routes, as well as an enhanced public right of way connection to the active travel route at its south west corner.



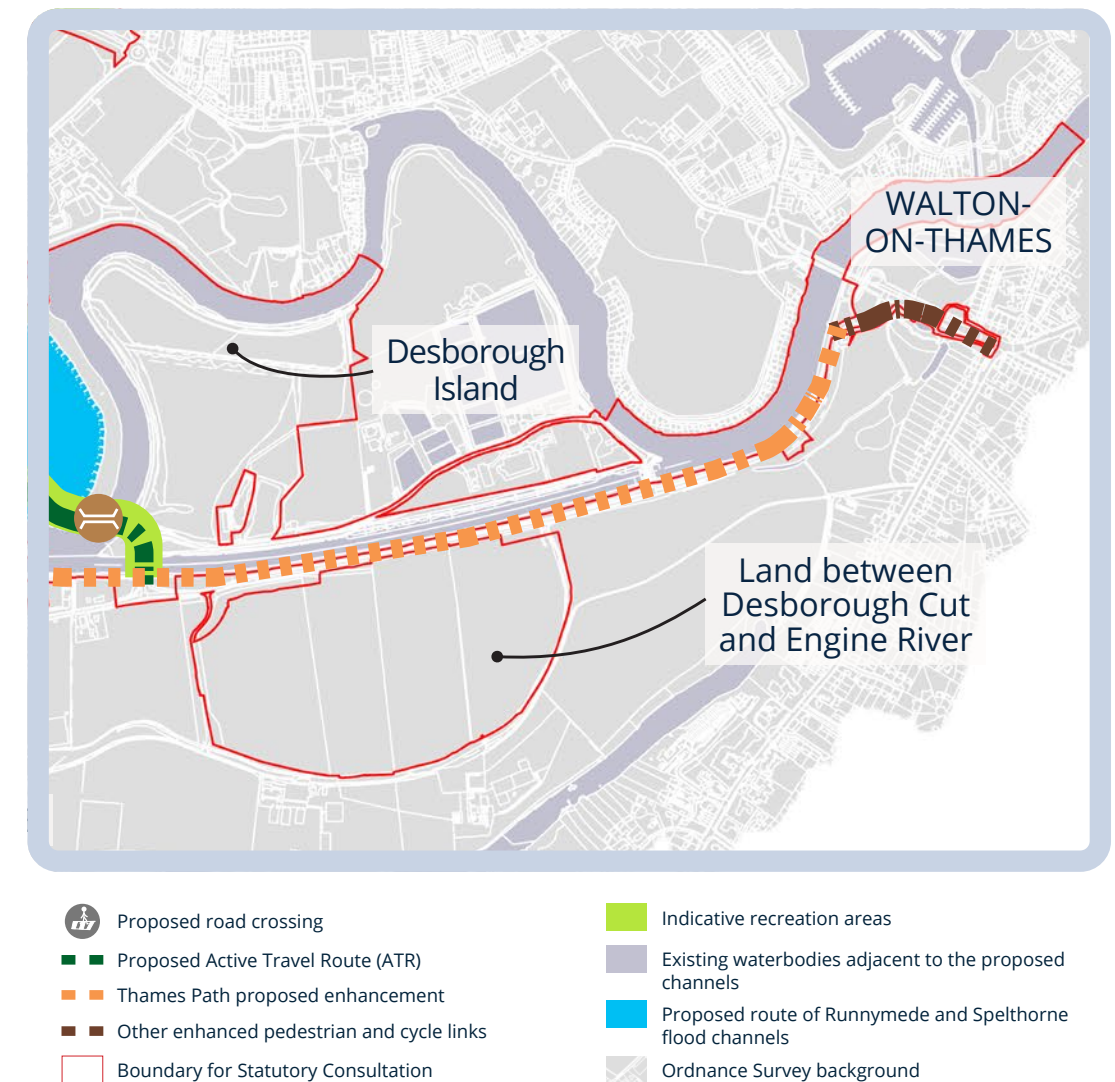
Desborough Island

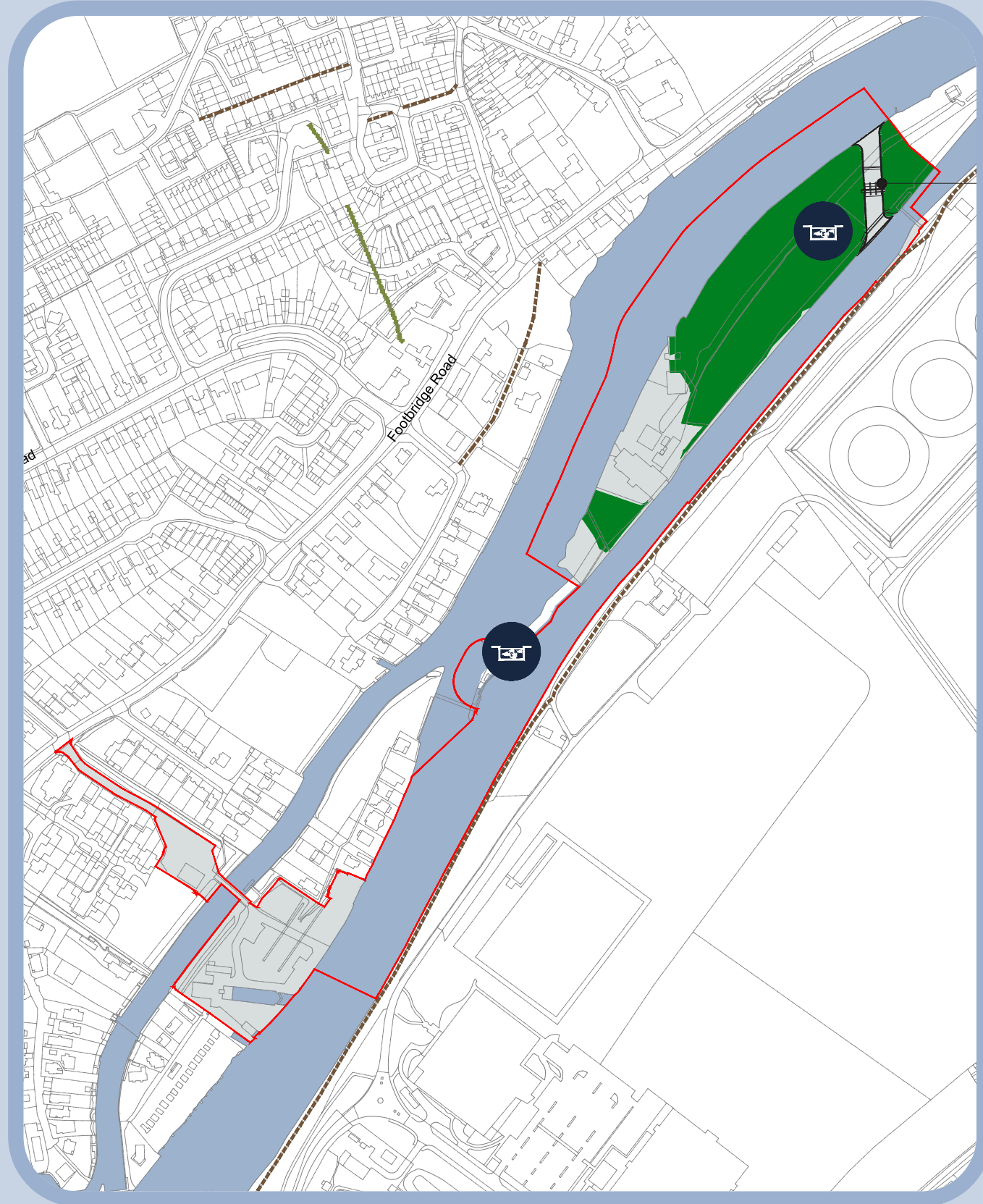
Land between Desborough Cut and Engine River

In land to the south of the River Thames, land between Desborough Cut and Engine River is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The area could include grassland, woodland and scrubland, as well as a pond.

Active travel route

From Desborough Island, the route will cross the western of the two Desborough Island bridges to the Thames Path before heading under the bridge and going west along the Thames Path. It will continue onwards from the River Thames to the Walton Bridge where it will pass under and join the existing route along Walton Bridge Road and provide access to Walton town centre.





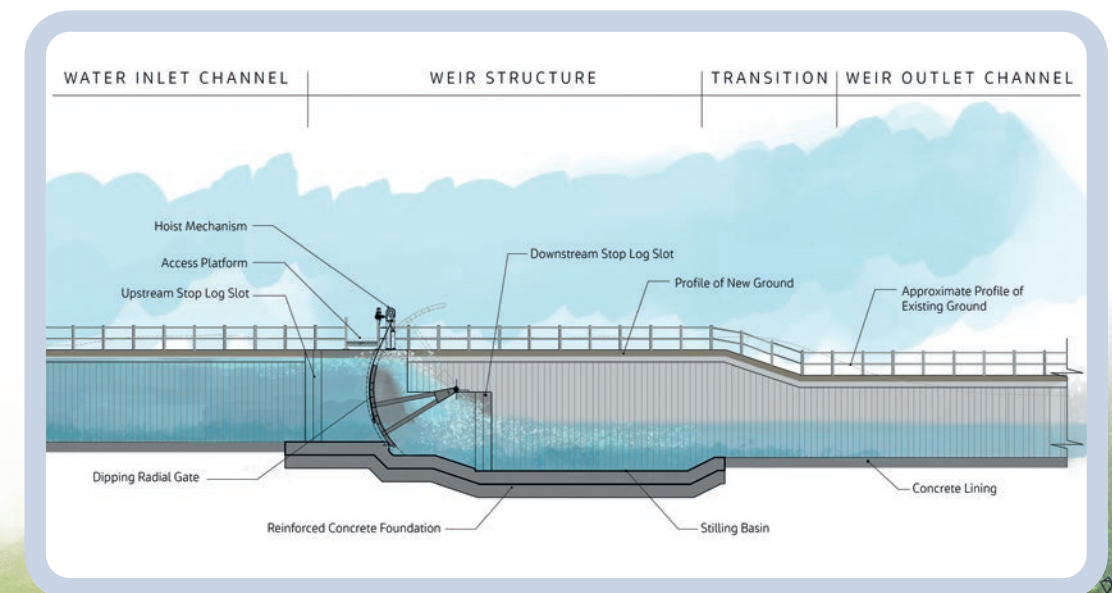
Flood channel and flow control structures - Sunbury, Molesey & Teddington Weirs

Sunbury, Molesey & Teddington Weirs

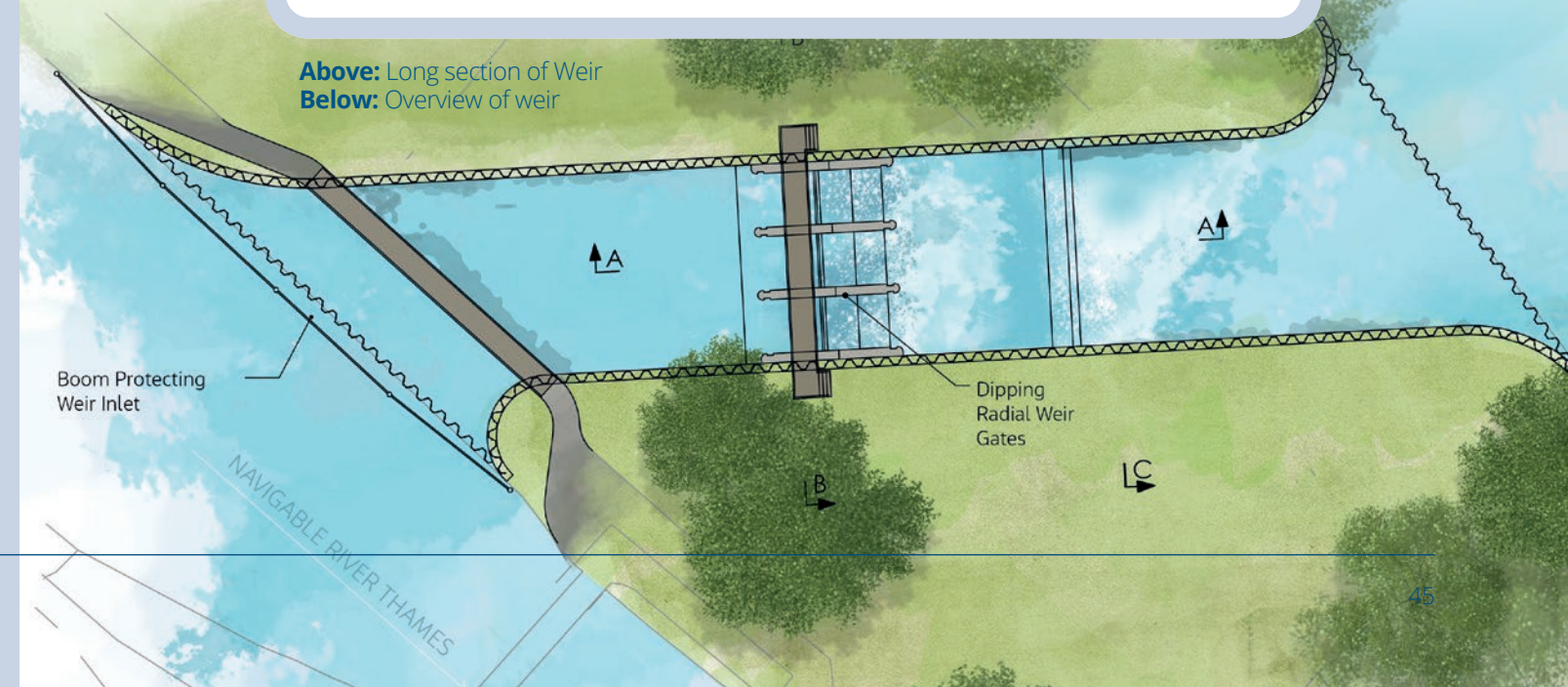
Sunbury Weir

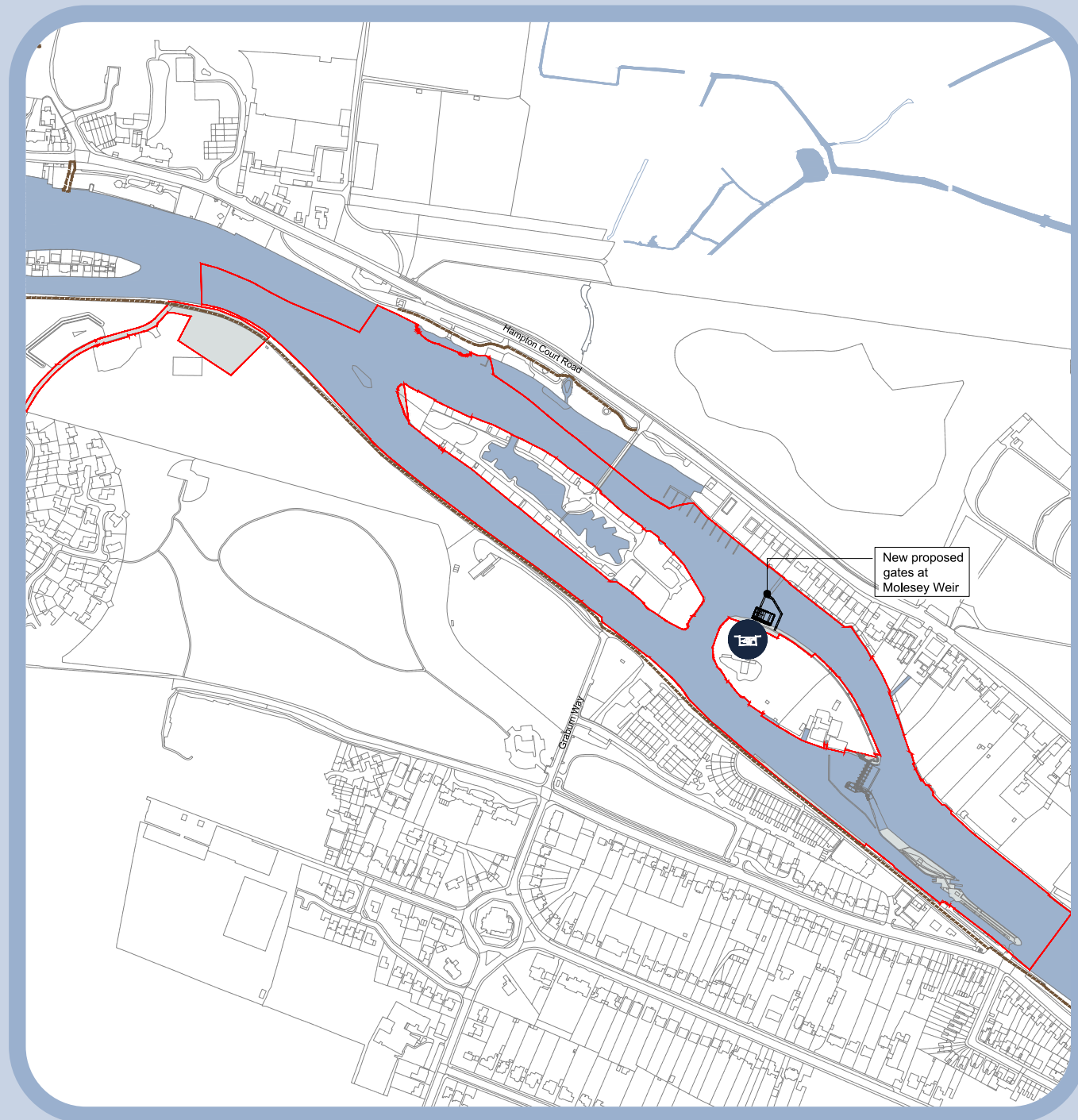
We propose to construct a new weir structure including two to three radial weir gates to provide additional flood conveyance through Sunbury Lock Ait and the installation of two multiple species fish passes. A new channel will be cut through the island at a diagonal angle and will be approximately 12 metres wide, 75 metres long and 5 metres deep. It will also include an elevated walkway with railings either side (for operational use only).

In addition, at Beasley's Ait we propose to provide a further multiple species fish pass.



Above: Long section of Weir
Below: Overview of weir



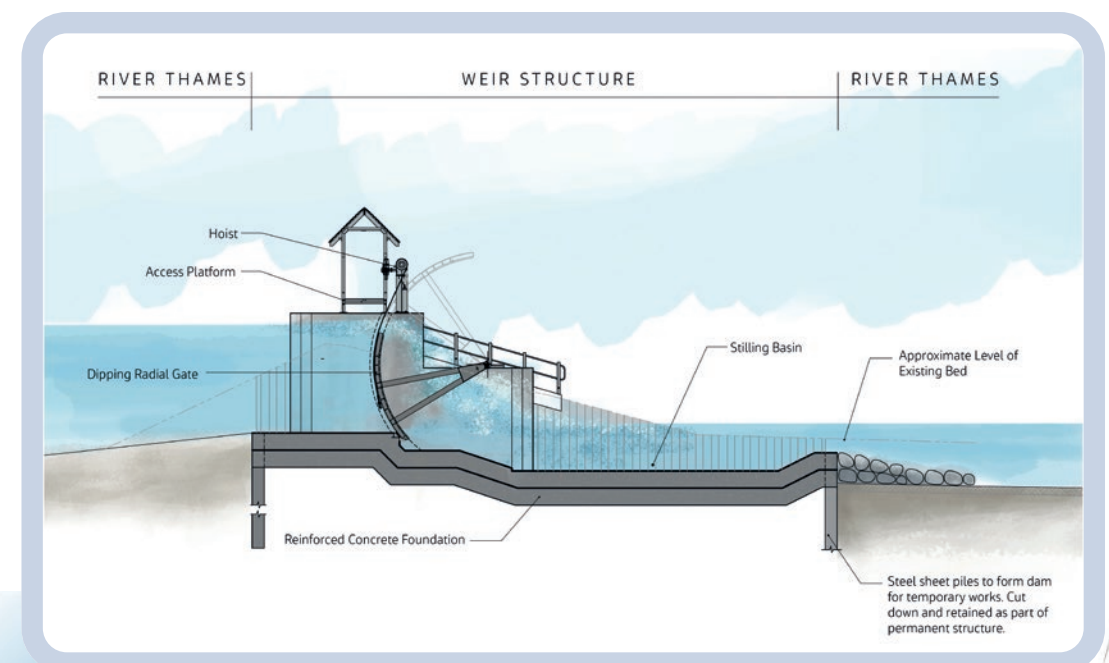


Flood channel and flow control structures - Molesey Weir

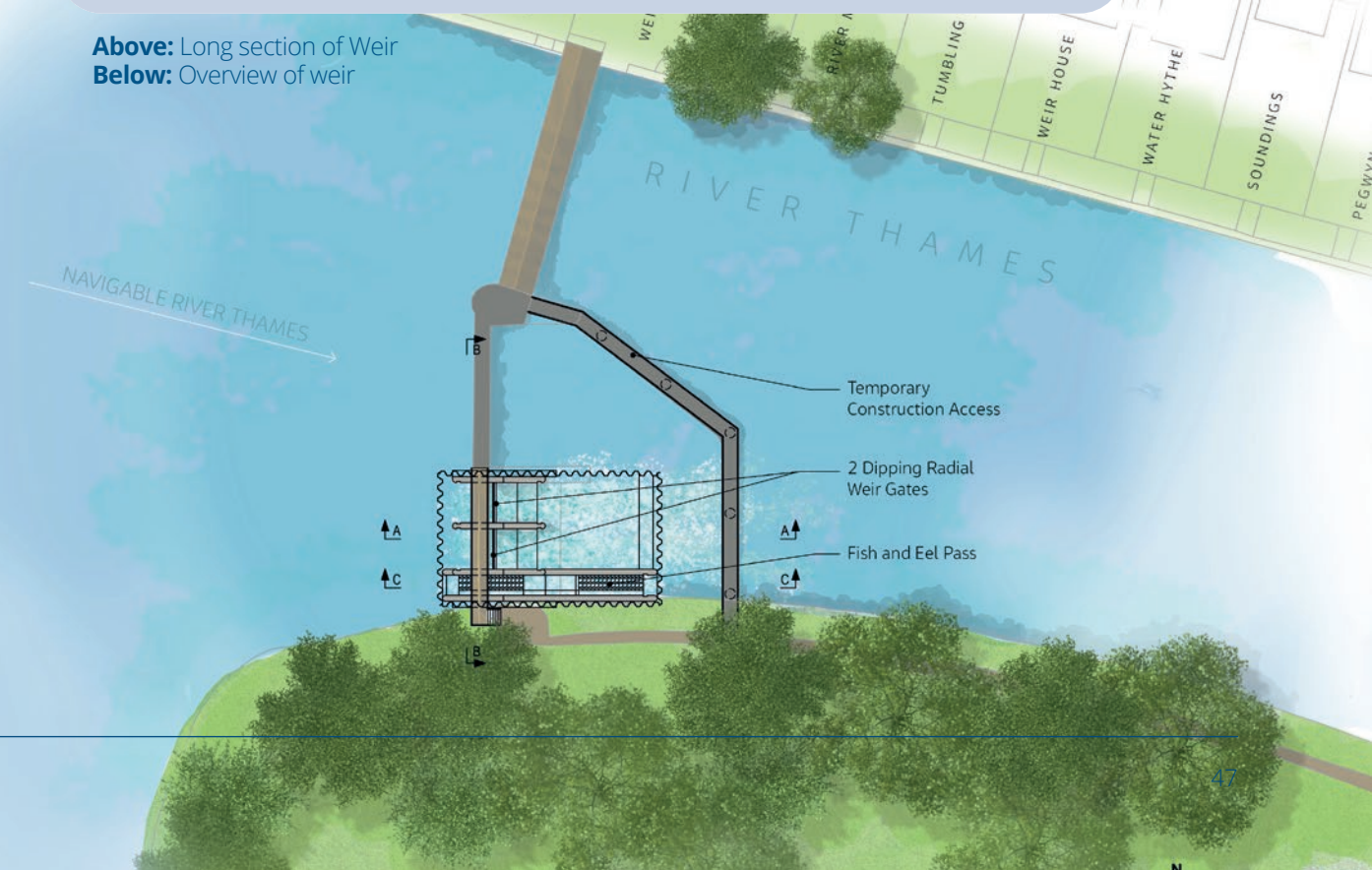
Molesey Weir

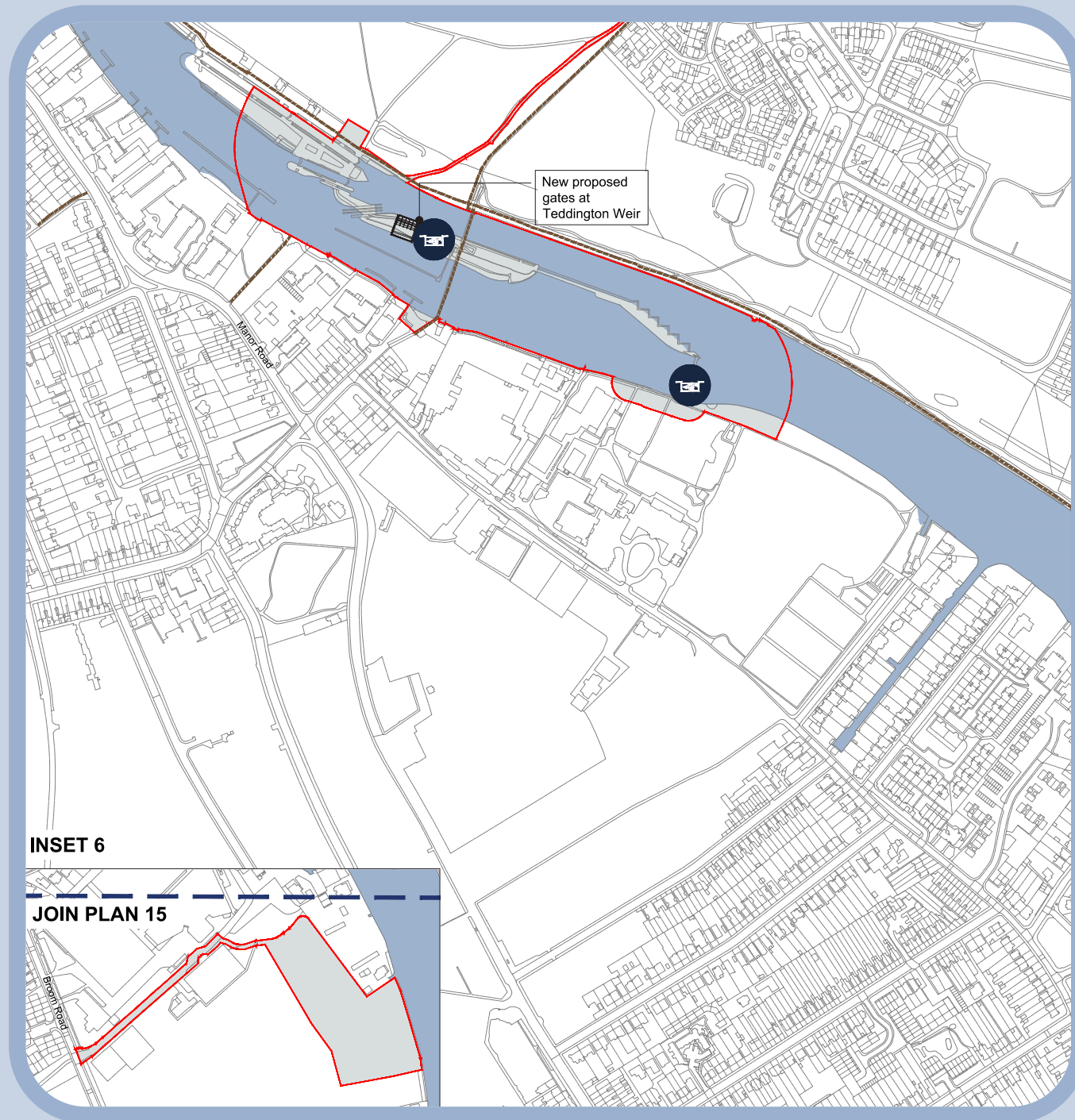
The improvements at this weir will be focused on replacing the existing overfall weir and fish pass on weir C, which is located on the Hampton Court side of the River Thames.

The weir is proposed to have two radial weir gates and a multi species fish pass. The gates will have a combined width of approximately 13 metres. The addition of these gates will reduce flood levels back up to Sunbury weir.



Above: Long section of Weir
Below: Overview of weir



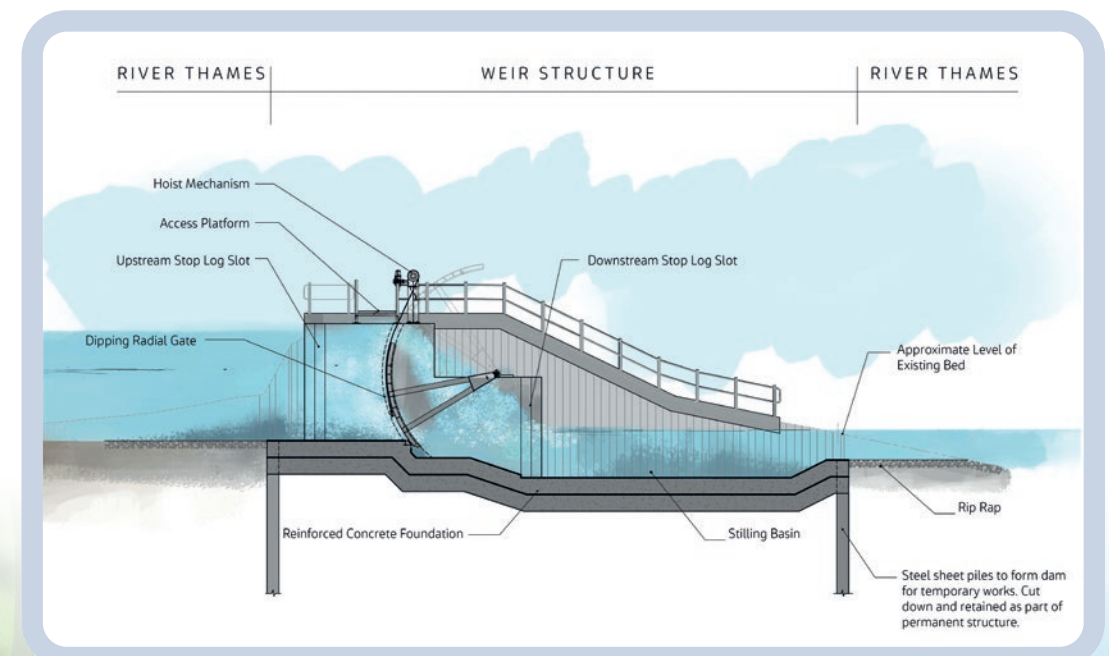


Flood channel and flow control structures - Teddington Weir

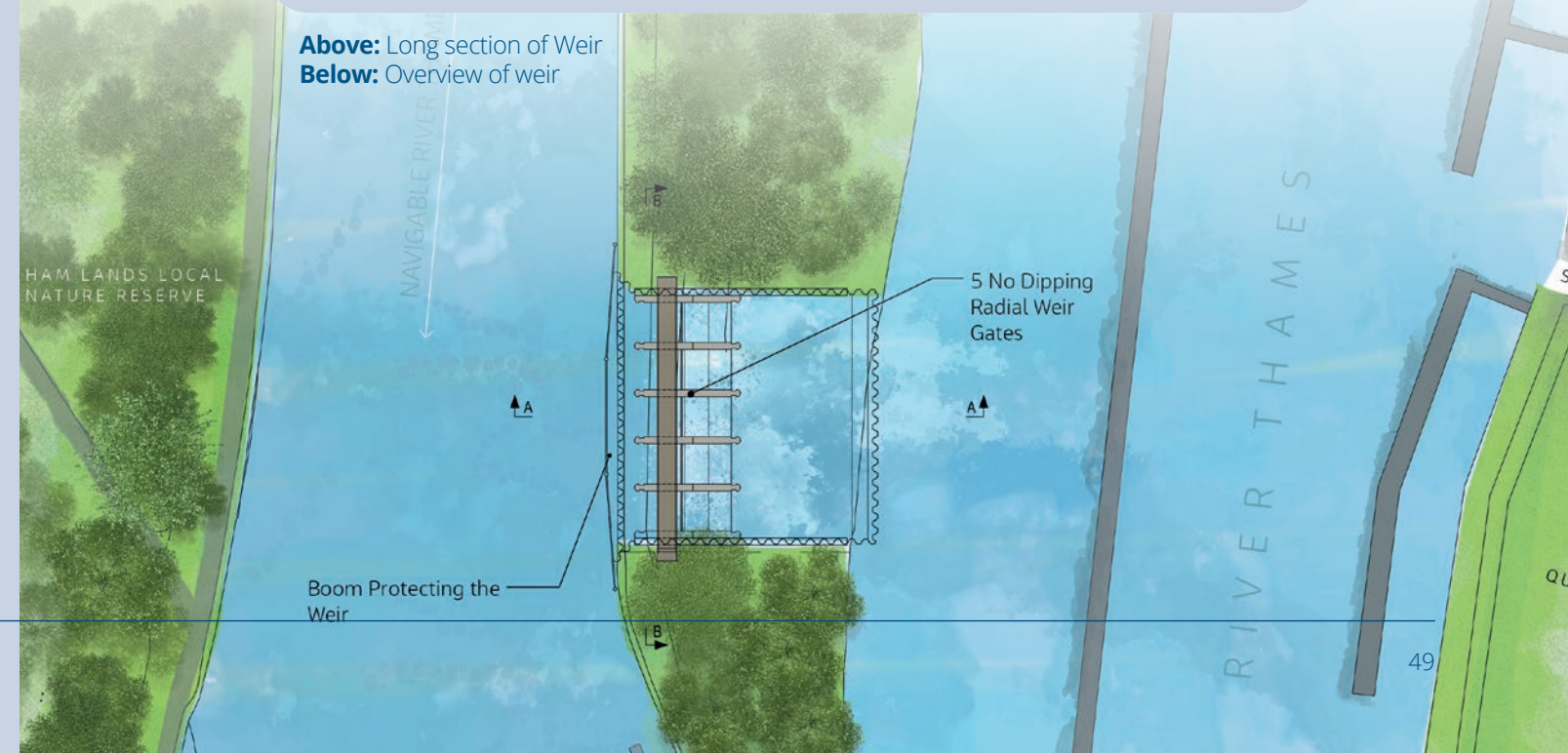
Teddington Weir

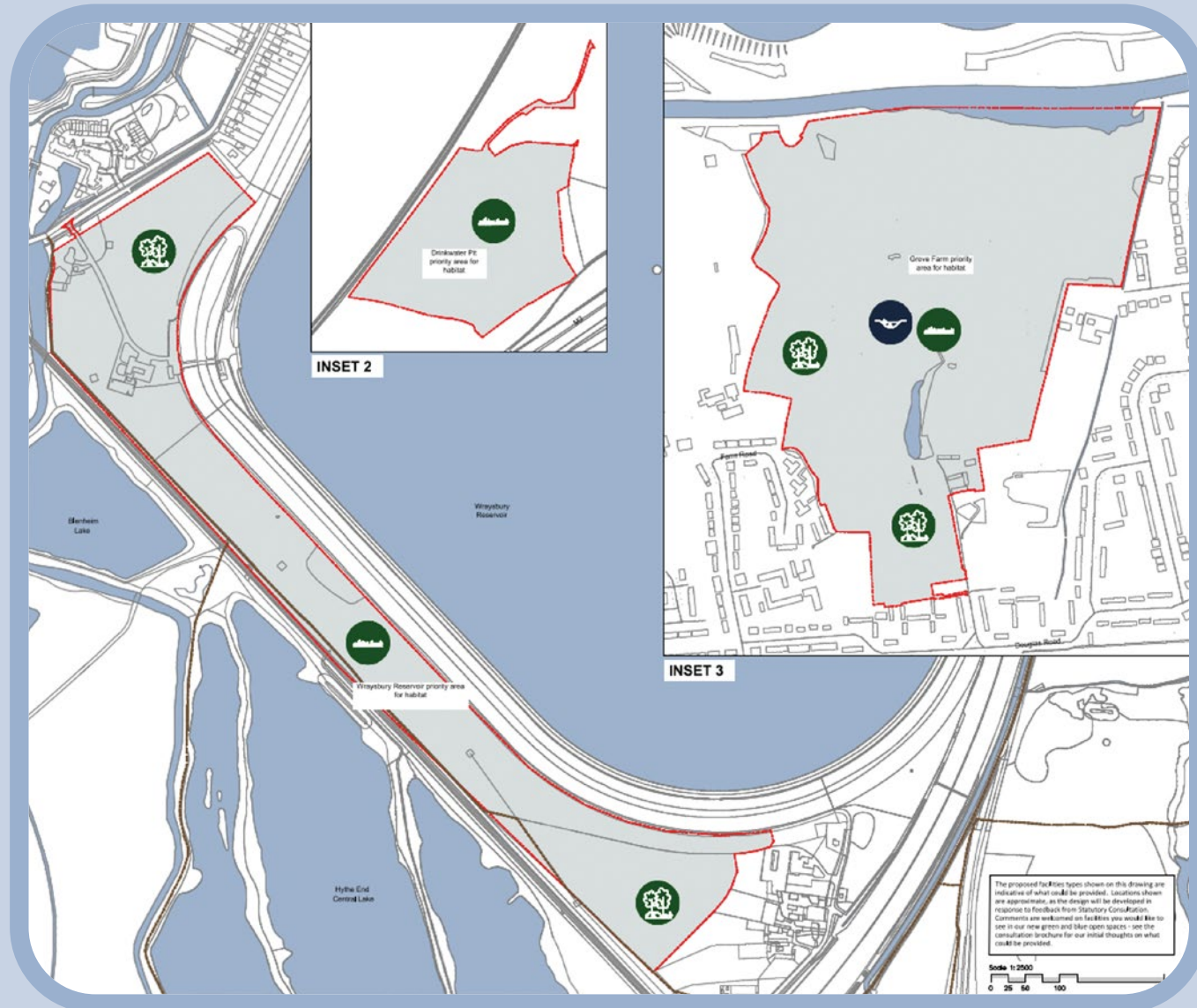
The capacity improvements at this weir will be achieved by constructing a new weir structure with three to five radial gates through Teddington Lock Island. A fish pass is being considered at the weir, as well as modifications to part of the Boat Rollers to improve fish passage.

A channel, approximately 20 metres wide, 20 metres long and 5 metres deep, will be cut through the island, approximately 10 metres upstream of the existing boat rollers and 70 metres downstream of the footbridge. If the final design provides three gates the channel is anticipated to be cut diagonally, if the final design provides five gates the channel is anticipated to be cut horizontally as shown in the image below.



Above: Long section of Weir
Below: Overview of weir





Flood channel and flow control structures - Other areas of priority

Other areas of priority

Areas for habitat creation, enhancement and mitigation under consideration

Wraybury Reservoir

On the southeast side of the reservoir, this area of land is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The area could include both woodland and grass habitat providing a home for several plant and animal species.

Drinkwater Pit

In land to the south of Chertsey Water Works, next to the M3, this area of land is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The area could include grass habitat providing a home for several plant and animal species.

Grove Farm

To the south of the Island Barn Reservoir and the River Ember, this area is being explored as an opportunity to provide habitat creation, enhancement or mitigation. The proposed area could include woodland and grass habitat, as well as a pond providing a home for several plant and animal species.

For more information

More information on the proposed scheme can be found in:

- Consultation Brochure
- Preliminary Environmental Information Report
- Maps for Statutory Consultation
- Environmental Effects of the RTS: Next Steps

How to respond

This statutory consultation is a critical step in the River Thames Scheme. All of your consultation feedback is important to us and will help to shape and refine our proposals going forward. You can share your thoughts through the following channels:

Online

The easiest way to do this is to complete it online: www.riverthamesscheme.org.uk. You can save your response whilst you are completing it and return at your convenience.

By post

You can complete a paper copy of the feedback form and send it back to us using our Freepost address – all you need is an envelope. You can pick up a paper copy of the feedback form at our events or by contacting us to request a copy by post or email.

You can also send us a letter by post with your comments.

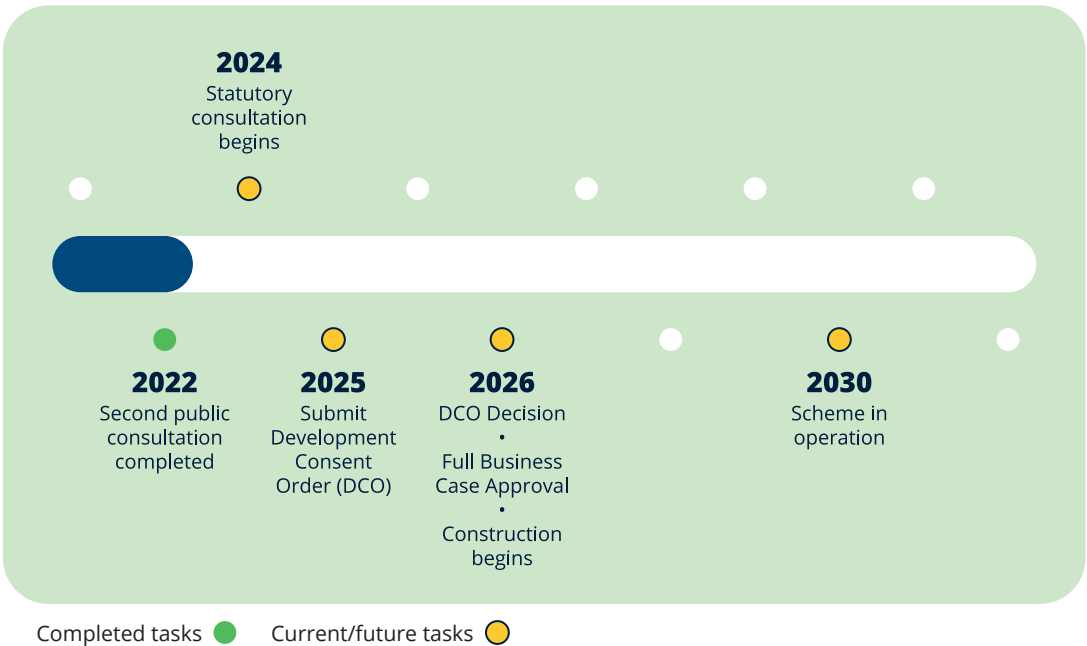
FREEPOST RTUK – RBL Y – XU BT, RIVER THAMES SCHEME, 5 First Street, Manchester, M15 4GU

By email

If you cannot complete the feedback form, you can email us to receive the digital feedback form at: enquiries@riverthamesscheme.org.uk. If you are sending your feedback in an email, please state clearly that your email is your River Thames Scheme consultation feedback to ensure that it is able to be taken into account.

Next steps

The timeline below provides a high-level overview of the next steps for the scheme. For more information, please view our consultation brochure.





Contact

There are lots of ways you can contact us or find out more about the scheme:

Telephone: **03456 009 009**

Email: **enquiries@riverthamesscheme.org.uk**

Web: **www.riverthamesscheme.org.uk**

Accessibility

If you would prefer this brochure in large text, a different format or language please contact using the details below and we will do our best to help.

Text (SMS): **07860 053 465**

(for the deaf or hard of hearing community)

Textphone (via Relay UK): **18001 03456 009 009**

British Sign Language: **www.surreycc.gov.uk/bsl**

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