

Environment Agency

Planning Statement

Mereway Weir Replacement and Fish
Pass: Planning permission application
reference: PP-07906577

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1. Introduction

1.1 Purpose of the statement

This Planning Statement has been prepared by the Environment Agency to support an application for full planning permission for the development of a fish pass channel between the Duke of Northumberland (DNR) and the River Crane (please refer to figure 2).

The application for full planning permission is submitted to Richmond Borough Council, as Local Planning Authority (LPA), under regulations 3 and 4 of the Town and Country Planning General Regulations 1992 (si 1492) (as amended).

1.2 Structure / Purpose of this statement

This planning statement supports the application made to Richmond Borough Council in August 2019. The purpose of this planning statement is to provide a clear understanding of the proposed scheme in line with relevant policy and other material considerations. The statement provides the existing conditions at the site, the nature of the proposed scheme and assesses it within the context of national and local planning policy.

The Planning Statement is structured as follows:

- Section 2 describes the application site;
- Section 3 provides background to the proposed scheme;
- Section 4 describes the proposed scheme and its key benefits;
- Section 5 sets out the conclusions of this planning statement.

2. The Application Site

2.1 Site Description

The proposal is for a fish pass to be developed to complement the permitted development of a weir replacement on the River Crane at grid reference TQ 14969 73292. A Lawful Development Licence has been submitted for the permitted development works. (Reference PP-08024093v1). Mereway Weir is located on the River Crane in Twickenham, approximately 1km south of Twickenham Rugby Stadium and 2.5km east of Hounslow Heath as shown in Figure 1. The River Crane is a tributary of the River Thames and is approximately 13.5km long. It flows from Hayes southeast past Heathrow and Hounslow Heath then east through Twickenham before joining the Thames at Isleworth.

The Fish Pass is planned to sit within the Mereway Nature Reserve between the river Duke of Northumberland and the River Crane. Please see an overview of the project area and map showing site use (in figure 1 and 2 below).

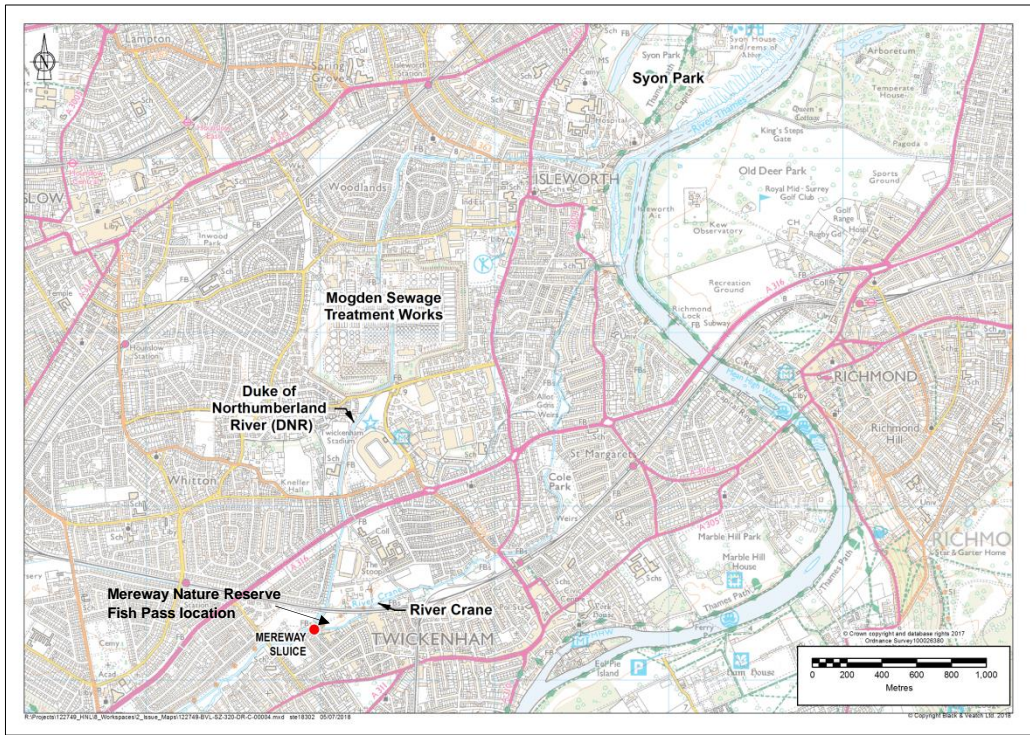


Figure 1: Location Map of project area



Figure 2: Map of Mereway Project detailing areas of site interest

2.2 Site Context

The application site is situated upon a nature reserve (Mereway), and is planned for the far west of the site. The nature reserve sits between two main rivers, to the north, the Duke of Northumberland and the south, the River Crane.

The landscape is characterised by relatively flat ground to the north and with some steeper slopes to the south towards the River Crane. The area is vegetated by bramble brush and trees and includes a small road through the middle. It also has pathways regularly used by residents, commuters and as recreation. Mereway Nature reserve is designated as

Metropolitan Open Land acting as multi-functional green infrastructure which is open to the public.

3. The Background to the Proposed Scheme

3.1 The purpose of the proposed scheme

The Environment Agency is currently progressing plans to replace an automated tilting weir located on the River Crane at grid reference TQ 14969 73292.

These weir replacement works are permitted development under Water Resources Act 1991 (section 165 and 172). These works have been submitted via a lawful development licence reference PP-08024093v1.

The Environment Agency are required to make sure fish have safe passage with any new or updated flood defence asset, so as part of the weir replacement plans fish pass installation options were considered.

A fish pass was required as the current design of the weir does not allow fish passage through its structure. Alternative weir design (completely remove, fixed weir with crest etc) were considered but all variants showed an increase in flood risk either downstream in the Duke of Northumberland, the River Crane or both.

3.2 The need for the proposed scheme

The weir replacement is required as it is nearing its end of life for the structure and its mechanisms which is given an estimate of 30 years for the materials used. The weir was previously updated between 1993 and 1995, and the structure and mechanisms are showing the wear and tear associated with its late stage.

The weir is 15 metres downstream of the divergence of the River Crane and the eastern section of the Duke of Northumberland River (DNR) as shown in Figure 2. This weir controls the flow split between the two watercourses. This is to maintain statutory flow requirements in the DNR to meet the abstraction needs of Thames Water's Mogden Sewage Treatment Works (STW) and a supply of water to lakes at Syon Park.

Failure of the weir could result in an increased flood risk to hundreds of properties, the A316, the railway and businesses and the area around Twickenham Rugby Ground. There is also a risk to the operation of the Mogden STW and supply of water to Syon Park. As flows would naturally go down the Lower Crane rather than the DNR. The proposed refurbishment works are to prevent this situation arising.

Under the Flood Defence Grant in Aid (FDGiA) funding (money allocated by the government for reducing flood risk) a project was proposed to replace this structure, but as passage for fish need to be included, a fish pass had to be designed to complement the weir replacement.

The Water Framework Directive (WFD) requires all waterbodies to achieve a 'good' ecological status by 2027. The River Crane has been classed as having 'poor' ecological and 'good' chemical status and this project should aim to bring improvement to this status where possible. The 'fish' quality element is currently classified as 'moderate' and is not currently achieving 'good' due to the presence of flood protection structures and barriers to movement causing ecological discontinuity. This project plans to incorporate a fish pass to allow fish pass and eel passage and move fish quality element from moderate to good.

3.3 Planning History

There have been no direct planning applications impacting the area where the fish pass is to be installed. As the area is designated Metropolitan Open Land (as referenced in section 2.2), development may not have been given planning permission for this area.

3.4 Alternative options considered

Alternative options considered for the fish pass were a fully technical concrete fish pass on the north bank of the River Crane where the weir is located. Please see Figure 3 below which depicts this.

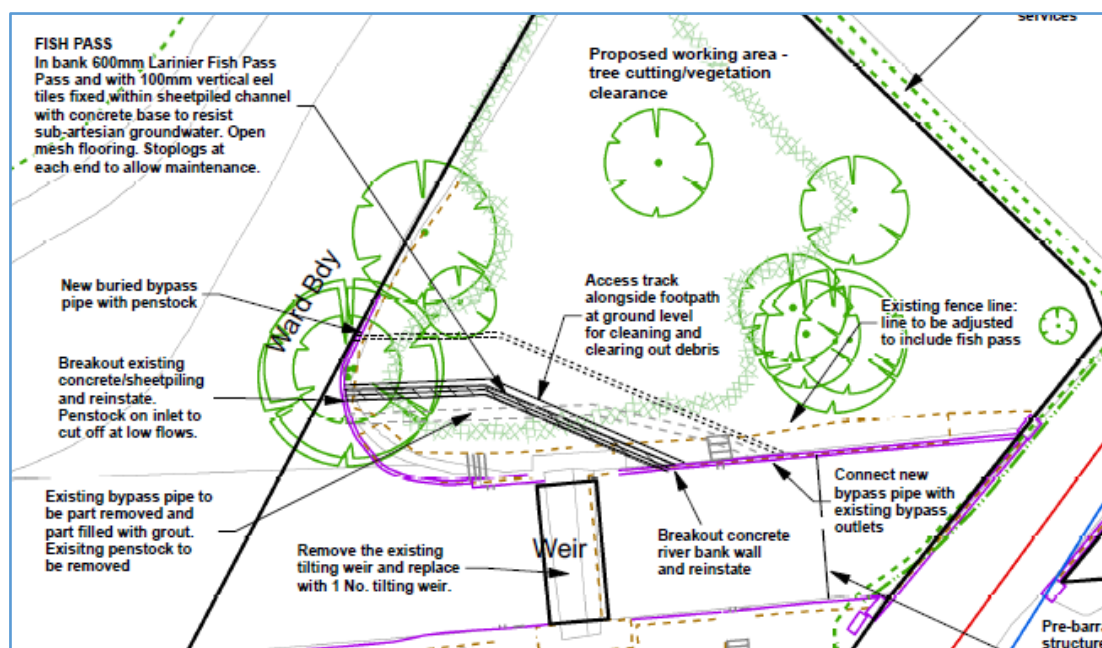


Figure 3: Previous option for the fish pass

This option was before any engagement with the surrounding community groups and would not have adhered to the metropolitan open land aims.

Other options were considered post engagement with external stakeholders; Friends of the River Crane, Richmond Borough Council, Crane Valley Partnership, Friends of Kneller Gardens and the wider group for the project Lower River Crane restoration project. These consisted of making the fish pass channel as natural looking as possible and utilising Mereway Nature Reserve for this.

A number of options were explored across the nature reserve between the Duke of Northumberland and the River Crane, one (option 3) fully natural diagonally across the nature reserve, (2) another channel slightly smaller with a small brush pass on at the end into the River Crane. The first (1) was a smaller natural channel with a larinier (technical) fish pass on the end into the River Crane. Please see figure 4 depicting these.

Unfortunately option 1 had to be discounted due to high sub artesian ground water pressure affecting the fish pass location. The amount of work required to offset this during construction would have raised the project totals, causing the benefit cost ratio to decrease and making the whole project (Weir replacement and fish pass) unviable, as per the project requirements for FDGiA funding. Please see figure 5.

A decision was made to amalgamate option 1 and 2 (please refer to attachment 'Mereway Site Visit Minutes 11.03.19' in original planning permission ref: PP-07906577). The

consultants contracted by the Environment Agency started working on the plan to design the fish pass to be as natural looking as possible for 75% of its length and include a brush technical design for the steeper area of bank down into the River Crane to the south of Mereway Nature reserve. It was decided by this group to keep the length of the fish pass as close to the west side of the nature reserve as possible.

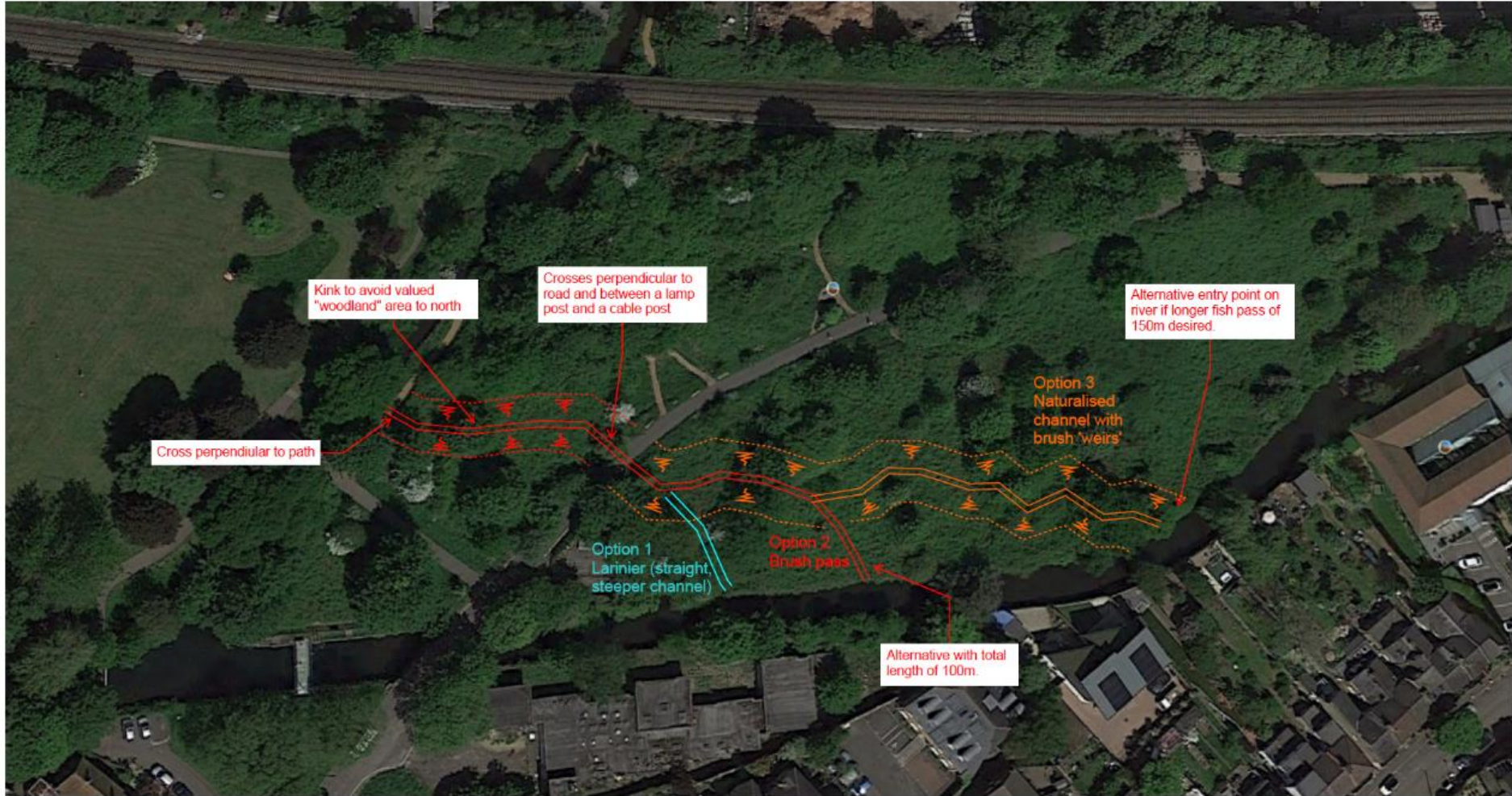
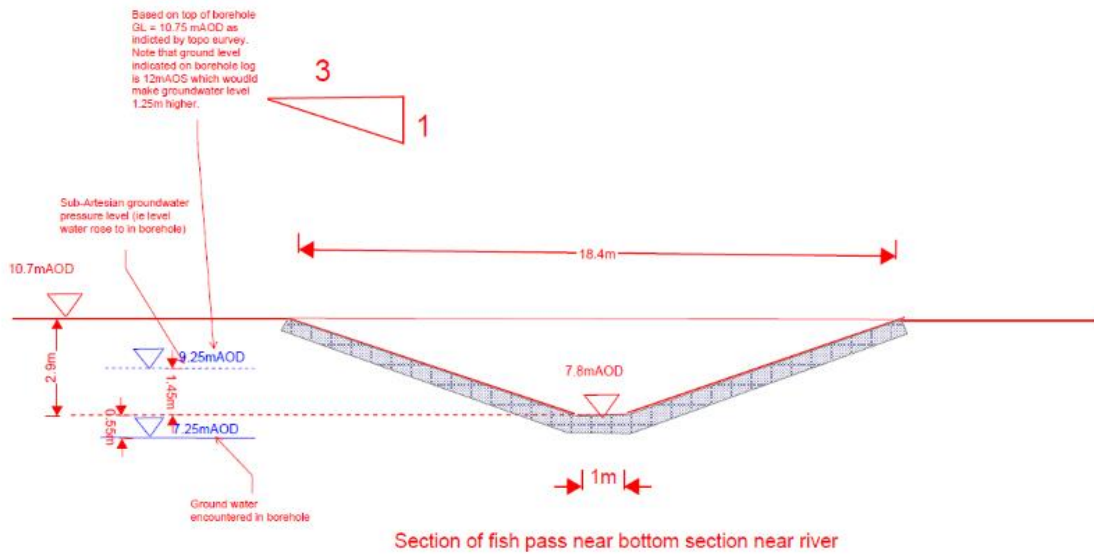


Figure 4: Potential Fish Pass considerations



Sub Artesian Groundwater pressure

Figure 5: Sub Artesian Groundwater affecting Fish Pass option 1

3.5 Preferred Fish pass option

The preferred fish pass option as described in 3.4 was decided as being located to the far west of Mereway Nature Reserve with as much of the length being as natural looking as possible until gradient of land and River Crane bank required a more technical design. Please see an earlier design for this fish pass below in figure 6.

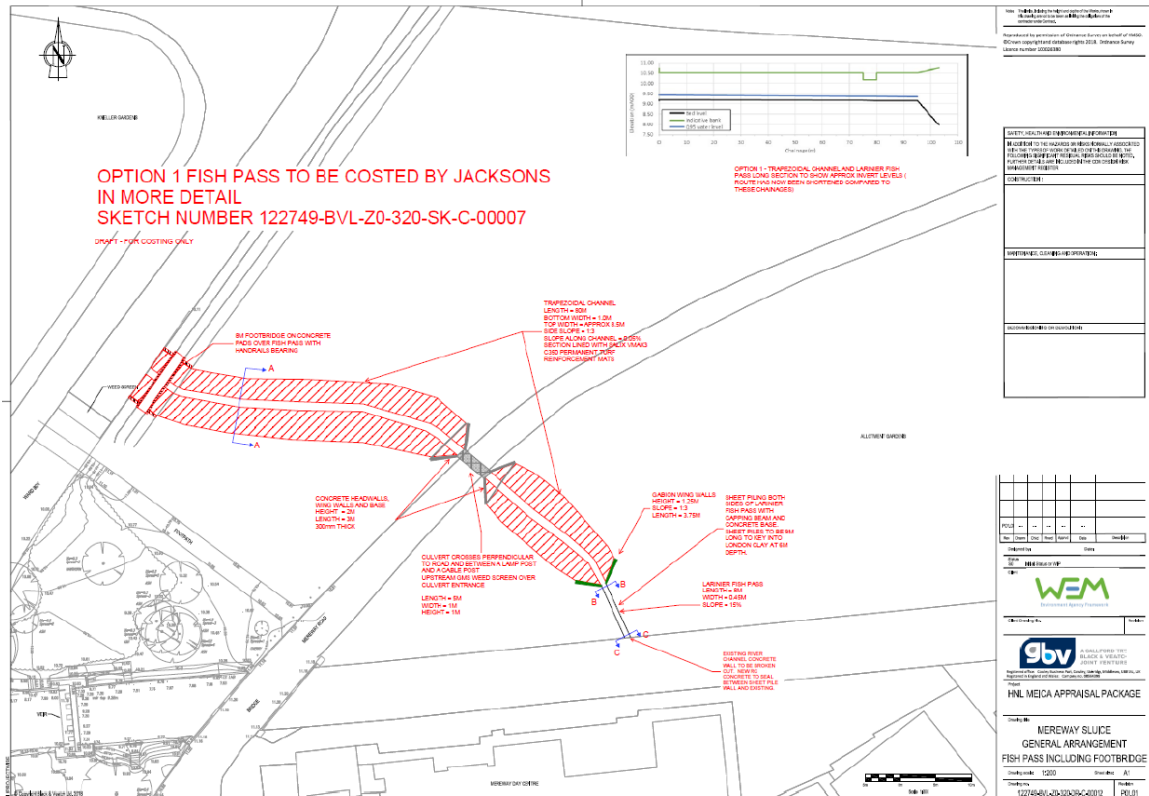


Figure 6: Preferred Fish Pass option initial design

3.6 Preferred Fish Pass development

The development to the fish pass option required more substantial ground investigations to go ahead to determine what sort of construction methodology was required. The ground showed that the ground water levels were suitable for the initial assessment made for construction. Please refer to attachment ‘Mereway Fish Pass Preliminary Summary from Ground Investigations’ in original planning permission ref: PP-07906577).

The trees included in the fish pass footprint also needed further evaluation so another survey was conducted, this highlighted the potential trees that may have to be removed. Please refer to attachments ‘Tree survey map – Mereway Weir Replacement and Fish Pass’ and ‘Tree Survey schedule - Mereway Weir and Fish Pass’ in original planning permission ref: PP-07906577).

Further clarification was also discussed with the external stakeholder group in a group meeting on the 13th August 2019. The minutes will be attached with this Planning Statement in the submission email and will be referenced ‘Mereway Fish Pass Meeting Minutes 13.08.19’

During this meeting further discussion around the trees in the fish pass footprint was also held between the consultant and the Richmond Borough Council Trees Officer Craig Ruddick. It was agreed that the line of the fish pass be adjusted to allow an Oak tree to remain. This has now changed the design slightly to incorporate this. This is detailed in Section 4.

4. The Preferred Fish Pass

The current design of the preferred fish pass is below in Figure 7 and will be attached to Planning Statement submission reference as 'Mereway Fish Pass Colour Design CURRENT Aug2019'



Figure 7: Current design of the Fish Pass in colour

A more detailed design is being completed to complement the more complex construction requirements. These will be submitted as they are finalised.

4.1 Outline and Benefits

The fish pass start from the Duke of Northumberland will be located at grid reference TQ 14978 73338 and end into the River Crane at grid reference TQ 15029 73303. From the current design (figure 7) it will be focussed within the first 25m of the nature reserve from the footpath entering into Kneller Gardens. Of the 16000sqm area of the nature reserve only between 1500sqm and 2000sqm will be required to incorporate the fish pass.

The fish pass will be open and accessible as much as possible to the public, taking into account health and safety as well as ideas from our external stakeholder group to incorporate recreation opportunities they have identified through the local residents and users of the reserve. As is referenced in the design, public space for picnic areas etc have been identified on the outer banks of the fish pass. The channel is designed that a shallow amount of water will be flowing and could be accessible to the public.

This will also support passage for fish as well as eels and would support water vole movement as well, expanding the biodiversity in the area. This advances the opportunity for education of local groups/schools who use the reserve as well.

All footpaths and road access will be maintained as much as possible during the construction and will be kept the same post installation (with any thoughts for improvements taken into account).

This supports the aims of Metropolitan Open Land (MOL) which encourage outdoor open space uses and improvements to human health, biodiversity and quality of life. The fish pass (open channel through Mereway Nature reserve) will be an addition to the MOL of the reserve and increase and enhance what is already available to the general public. The planned placement of the fish pass this will also keep the current environment of the nature reserve (bramble habitat and linked flora and fauna) as well.

4.2 Access

As mentioned in 4.1 all footpaths will be kept open as much as possible during construction with signposting and diversion in place if not. This will just be minor diversions through other areas in the Nature Reserve.

Austin road in the centre of the Nature Reserve will be kept open as well throughout construction. There may be potential to close this for a couple of hours at a time, with use of the recycling centre as alternative use by Mereway Cottages for access at the end of the road, though only if needed.

Mereway road via Andover road will be used for the main access for contractors, please refer to attachment 'J-S4007 Mereway project Traffic Management Plan' in original planning permission ref: PP-07906577).

The contractors will be liaising with Richmond Borough Council Highways to determine when potential parking restrictions can be put in place to support some of the larger vehicles that will be travelling don these roads.

4.3 Flood Risk

Flood risk has been assessed for the weir replacement works (please refer to attachments 'Mereway Project weir replacement FRAP risk assessment' and Mereway Weir replacement Flood Protocol' in original planning permission ref: PP-07906577).

Flood risk has also been assessed for the works required for the fish pass construction (please refer to attachments 'Mereway Project Flood Zone 2 and 3' in original planning permission ref: PP-07906577).

Flood risk activity permits have been submitted to the Environment Agency for the weir replacement works and for the fish pass.

Please note the contractors for the works are preparing the documents for the fish pass construction which will include reference to flood protocol and avoiding increase in flood risk during the works. This will be submitted when they are available.

4.4 Construction, maintenance management and materials

Construction information around the weir replacement is detailed in attachments 'Mereway Project weir replacement Outline Methodology' in original planning permission ref: PP-07906577) as well in the Lawful development statement reference: PP-08024093v1.

More detail around the fish pass construction is still to be submitted, with the construction programme to be finalised in advance of the works.

The sequence of construction activities will follow the general timeline below:

- Advance/preparatory works likely to be undertaken prior to construction
- Site establishment and preliminary works
- Main construction; excavation of fish pass area, installation of headwall, installation of culvert for Austin road, and technical fish pass.
- Final Finishes (landscaping, recovery)

The timeline of construction hopes to be completed at the same time as the weir replacement works go ahead, as it will be the same contractor carrying out the works.

Maintenance of the fish pass is being discussed with Richmond Borough Council, as the fish pass channel will be through land owned by the local authority. It has been discussed that maintenance may be better placed with their parks operations team. Initial discussions have gone ahead, with certain preliminary costings attached to the potential maintenance actions. This is still to be determined with official heads of terms to be signed.

4.5 Public Engagement and Consultation

Initial letters were posted to Mereway Road residents in July 2019 with information about the upcoming works and communication links to a webpage (<https://consult.environment-agency.gov.uk/hnl/mereway-weir-replacement/>) and email address to contact with any questions. Please refer to attachments referenced 'MerewayProject-LettertoResidents July 2019' in original planning permission ref: PP-07906577.

Ground Investigations were also publicised within the letter and via posters around Mereway Nature Reserve in advance of the smaller clearance and boreholes that went ahead so people were advised before this went ahead.

Our external stakeholders also provided communications and dissemination via their social media links and newsletters.

A drop-in event went ahead for the public on 3rd September 2019 on Kneller Gardens. This was advertised via the council newsletter, leaflets through doors and partner social media. This attracted a lot of interest and many people were made aware of the event and visited on the day. There were no concerns about the changes to Mereway Nature Reserve, there was interest around the fish that would be able to utilise the new water channel though.

Future communications will continue through letter updates around works dates and timings as well as webpage updates and individual email updates for those that opted in.

We welcome any public consultation attached to this application if required and would be happy to engage with any internal consultation/committees as well.

5. Conclusion

The Fish Pass being established is a positive addition to the environment of Mereway Nature Reserve and only increases its MOL characteristics and public recreation.

With the works hoping to be completed during the winter months alongside the weir replacement, this should alleviate the visual impact it would have if during the summer when the nature reserve is in full bloom, and it will give enough recovery time for the flora for the coming spring and summer months.

Further documents are being prepared to support this application and will be submitted as addendums when they are available.