

<b>Job Title</b>	<b>Newport Transporter Bridge</b>		
<b>Job Number:</b>	<b>2376</b>		
<b>Subject:</b>	<b>Otter Fencing</b>		
<b>Prepared by:</b>	<b>SS</b>	<b>Approved by:</b>	<b>PMcC</b>
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Introduction

TACP were commissioned by Newport Norse to provide advice in relation to otter fencing requirements during the construction of the new Newport Transporter Bridge visitor centre on the western embankment of the River Usk and associated refurbishment works on the eastern embankment.

This document summarises the available background information, the proposed compound fencing, and the recommendations to reduce the risk of otter access into the working areas on both embankments.

Background

An ecological impact assessment (EclA) was produced by Ecological Services Ltd in February 2020 following a preliminary ecological appraisal (PEA) in August 2019. These reports confirmed the presence of otters utilising the River Usk in this area for moving up and down river, with the presence of holt and/or resting up sites deemed unlikely. Based on this evidence and the lack of works on the riverbanks themselves, several potential impacts were identified, including the risk of otters accessing the working areas and becoming trapped.

Along with several other mitigation measures, the EclA identified the need to fence the site compounds and to ensure that *'fencing will be designed and used to prevent otter gaining access into the machinery or stored materials.'*

This requirement was included as a condition of the Appropriate Assessment produced in relation to the project as otters are a designatory feature of the River Usk Special Area of Conservation (SAC). This was further emphasised by the NCC planner.

Western Embankment

The site compound and works area on the western embankment covers the existing visitor centre, car park area, and informal amenity area. The site compound and work area will be fenced to the non-river sides using a non-dig 'hoard-it' solution, as shown below:



<https://hoard-it.co.uk/our-products/hoarding/>

This fencing provides a solid barrier that is 2.0m tall with panels secured between full length uprights supported by concrete blocks. The panels are designed to sit at ground level with no gap beneath.

This fencing is taller than standard otter resistant fencing, which is 1.5m tall, with a 0.3 cranked section, and therefore is considered sufficient to reduce the likelihood of otters attempting to climb over the fence. The solid nature of this fencing further reduces this as there would be no visual encouragement for them to do so.

The western embankment site is uneven in places and some small gaps may occur with the hoard-it option. To ensure that there is minimal risk of otters attempting to access the site through these, sand and/or gravel bags can be pushed into and against these gaps from inside the compound area. These would block the gaps without being easily moved by otters and can be monitored and repaired easily during the construction period. Where there are larger gaps, plyboard panels can be pinned between the hoarding and the sand/gravel bags as an additional measure.

It is noted that there is no below ground element to this fencing, which is part of standard otter resistant fencing in the form of a 500mm below ground section with a 300mm underground return. However, this standard fencing specification is designed for permanent use and where otter passage is being prevented, neither of which apply in this instance. The measures detailed above to ensure that there are no gaps beneath the hoard-it fencing are considered sufficient to minimise the likelihood of otters attempting to access the site beneath the fencing.

The river side of the western embankment area is to be fenced with the Heras HSG 151 System, as shown below:



<https://www.heras-mobile.co.uk/fencing/151-system>

This fencing is more open than the hoard-it approach but is more flexible and therefore allows fencing to be adjusted to permit drainage outfall and retaining wall works.

This fencing provides a fencing height and small mesh size comparable to standard otter resistant fencing, with the gaps between panels also small enough to limit otter egress. Where gaps are over 200mm wide, 25mm galvanised wire netting will be attached to the outside of the fencing and tie wired into place for the full length of the panel.

The gaps at the base of the fencing will be addressed by adding 25mm galvanised wire netting to the bottom of each panel, on the outside of the fencing, using tie wires or similar to fix these in position. This netting will overlap at the edges of each panel and be tie wired in place, as well as extending over the ground at the base of each panel by a minimum of 500mm creating an above ground 'return'. This overlap will be either battened or pinned down depending on the ground surface. Sand and/or gravel bags, or similar weighted items will be used where netting does not sit flush with the ground. This overlap will also be attached to access gates and weighted down appropriately at the end of each working day. This netting will act in a similar way to the below ground section and return of standard otter resistant fencing, preventing otters from digging beneath the fence to access the site.

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### Eastern Embankment

The site compound and works area on the eastern embankment consists of a tarmacked road and small grass verge areas and will be fenced using standard heras fencing (3.45m width x 2m height). As on the western embankment this provides a fencing height and small mesh size comparable to standard otter resistant fencing, with the gaps between panels also small enough or appropriately covered with 25mm galvanised wire netting to limit otter egress.

The gaps at the base of this fencing will also be addressed through the use of 25mm galvanised wire netting as detailed above.

### Fence Checks and Maintenance

A suitably experienced ecologist will attend site towards the end of fence installation to review the fencing, recommend any adjustments and to sign off the final fence layout. A record of fence condition will be produced, including photos, against which the fence condition can be checked during the construction period to ensure continued effectiveness.

Fence checks should be undertaken during the construction period, on both sides of the fence, and any signs of attempted digging should be highlighted and discussed with a suitably qualified ecologist. Should signs of attempted digging access be identified then 25mm galvanised wire netting will be attached/incorporated into the fence layout and turn out across the ground to minimum of 500mm to discourage further digging.

### Fence Removal

Upon completion of works a suitably qualified ecologist will attend site towards the end of fence removal to provide a record of ground conditions and assess the potential for any permanent impact. A record of post works ground condition along the fence line, including photos, will be produced to support this.

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