

# Lower Thames Crossing

## 6.3 Environmental Statement Appendices

### Appendix 14.1 – Assessment Criteria Tables

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications:  
Prescribed Forms and Procedure)  
Regulations 2009

Volume 6

**DATE: October 2022**

Planning Inspectorate Scheme Ref: TR010032  
Application Document Ref: TR010032/APP/6.3

**VERSION: 1.0**

# Lower Thames Crossing

## Appendix 14.1 – Assessment Criteria Tables

### List of contents

	Page number
<b>1 Assessment Criteria Tables .....</b>	<b>1</b>

## List of tables

	<b>Page number</b>
Table 1.1 Estimating the importance of water environment attributes .....	1
Table 1.2 Estimating the magnitude of an impact on an attribute .....	3

# 1 Assessment Criteria Tables

**Table 1.1 Estimating the importance of water environment attributes**

Importance/ sensitivity of resource or receptor	Criteria	Typical examples	
Very high	Nationally significant attribute of high importance	Surface water	<ul style="list-style-type: none"> <li>• Site protected/designated under European Commission (EC) or UK legislation (Special Area of Conservation, Special Protection Area, Site of Special Scientific Interest, Ramsar site, salmonid water)</li> <li>• Watercourse having a Water Framework Directive (WFD) classification shown in a River Basin Management Plan (RBMP) and a Q95<sup>1</sup> ≥1.0m<sup>3</sup>/s</li> <li>• Watercourse in natural equilibrium exhibiting a range of morphological features (e.g. pools, riffles) that is free from any modification or human influence</li> </ul>
		Flood risk	Essential infrastructure or highly vulnerable development
		Groundwater	<ul style="list-style-type: none"> <li>• Principal aquifer providing a regionally important resource and/or supporting a site protected under EC and UK legislation</li> <li>• Groundwater locally supports a Groundwater Dependent Terrestrial Ecosystem (GWDTE)</li> <li>• Source protection zone (SPZ) 1</li> </ul>
High	Locally significant attribute of high importance	Surface water	<ul style="list-style-type: none"> <li>• Watercourse having a WFD classification shown in an RBMP and a Q95 &lt;1.0m<sup>3</sup>/s</li> <li>• Very limited signs of modification or other human influences on morphology</li> </ul>
		Flood risk	More vulnerable development
		Groundwater	<ul style="list-style-type: none"> <li>• Principal aquifer providing locally important resource or supporting a river ecosystem</li> <li>• Groundwater supports a GWDTE</li> <li>• SPZ 2</li> </ul>
Medium	Of moderate quality and rarity	Surface water	<ul style="list-style-type: none"> <li>• Watercourses not having a WFD classification shown in an RBMP and Q95 &gt;0.001m<sup>3</sup>/s</li> <li>• Watercourse showing signs of modifications and having a limited range of morphological features</li> </ul>
		Flood risk	Less vulnerable development

<sup>1</sup> Q95 = The flow equalled or exceeded in a watercourse 95% of the time.

Importance/ sensitivity of resource or receptor	Criteria	Typical examples	
		Groundwater	<ul style="list-style-type: none"> <li>• Aquifer providing water for agricultural or industrial use with limited connection to surface water</li> <li>• SPZ 3</li> </ul>
Low	Lower quality	Surface water	<ul style="list-style-type: none"> <li>• Watercourses not having a WFD classification shown in an RBMP and <math>Q95 \leq 0.001\text{m}^3/\text{s}</math></li> <li>• A highly modified watercourse changed by channel modification or other human pressures. No morphological diversity</li> </ul>
		Flood risk	Water compatible development
		Groundwater	Unproductive strata

**Table 1.2 Estimating the magnitude of an impact on an attribute**

Magnitude of impact	Criteria	Typical example	
Major adverse	Results in loss of attribute and/or quality and integrity of the attribute	Surface water	<ul style="list-style-type: none"> <li>• Loss or extensive change to a fishery</li> <li>• Loss or extensive change to a designated nature conservation site</li> <li>• Reduction in water body WFD classification</li> <li>• Failure of both acute-soluble and chronic sediment-related pollutants in Highways England Water Risk Assessment Tool (HEWRAT; National Highways was formerly known as Highways England) and Environmental Quality Standard (EQS) compliance failure. Calculated spillage risk of <math>\geq 2\%</math> annually</li> <li>• Extensive change to channel planform, replacement of large extent of natural bed/banks with artificial material</li> </ul>
		Flood risk	Increase in peak flood level (1% Annual Exceedance Probability (AEP)) >100mm
		Groundwater	<ul style="list-style-type: none"> <li>• Loss of, or extensive change to, an aquifer</li> <li>• Loss of a regionally important water supply</li> <li>• Potential high risk of pollution to groundwater from routine runoff – risk score &gt;250.</li> <li>• Calculated risk of pollution from spillages <math>\geq 2\%</math> annually</li> <li>• Loss of, or extensive change to, a GWDTE or baseflow contribution to protected surface water bodies</li> <li>• Reduction in water body WFD classification</li> <li>• Loss or significant damage to major structures due to subsidence or similar effects</li> </ul>

Magnitude of impact	Criteria	Typical example	
Moderate adverse	Results in effect on integrity of attribute, or loss of part of attribute	Surface water	<ul style="list-style-type: none"> <li>• Partial loss in productivity of a fishery</li> <li>• Pollution of a non-potable source of abstraction</li> <li>• Degradation of regionally important public water supply or loss of major commercial/ industrial/agricultural supply</li> <li>• Contribution to reduction in water body WFD classification</li> <li>• Failure of both acute-soluble and chronic sediment-related pollutants in HEWRAT but compliance with EQS values. Calculated risk of pollution from spillages <math>\geq 1\%</math> annually and <math>&lt; 2\%</math> annually</li> <li>• Replacement of natural bed or banks with artificial material over more than 3% of the water body's total length</li> </ul>
		Flood risk	Increase in peak flood level (1% AEP) $> 50\text{mm}$
		Groundwater	<ul style="list-style-type: none"> <li>• Partial loss or change to an aquifer</li> <li>• Degradation of regionally important public water supply or loss of significant commercial/industrial/agricultural supplies</li> <li>• Potential medium risk of pollution to groundwater from routine runoff – risk score 150–250.</li> <li>• Calculated risk of pollution from spillages <math>\geq 1\%</math> annually and <math>&lt; 2\%</math> annually</li> <li>• Partial loss of the integrity of a GWDTE</li> <li>• Contribution to reduction in water body WFD classification</li> <li>• Damage to major structures through subsidence or similar effects or loss of minor structures</li> </ul>
Minor adverse	Results in some measurable change in attribute quality or vulnerability	Surface water	<ul style="list-style-type: none"> <li>• Failure of either acute soluble or chronic sediment-related pollutants in HEWRAT</li> <li>• Calculated risk of pollution from spillages <math>\geq 0.5\%</math> annually and <math>&lt; 1\%</math> annually</li> <li>• Minor effects on water supplies</li> <li>• Slight change from baseline conditions of channel bed/banks</li> </ul>
		Flood risk	Increase in peak flood level ( $> 10\text{mm}$ )

Magnitude of impact	Criteria	Typical example	
		Groundwater	<ul style="list-style-type: none"> <li>• Potential low risk of pollution to groundwater from routine runoff – risk score &lt;150</li> <li>• Calculated risk of pollution from spillages ≥0.5% annually and &lt;1% annually</li> <li>• Minor effects on an aquifer, GWDTEs, abstractions and structures</li> </ul>
Negligible	Results in effect on attribute, but of insufficient magnitude to affect the use or integrity	The proposed project is unlikely to affect the integrity of the water environment.	
		Surface water	<ul style="list-style-type: none"> <li>• No risk from routine runoff is identified by HEWRAT. Risk of pollution from spillages is &lt;0.5%.</li> </ul>
		Flood risk	<ul style="list-style-type: none"> <li>• Negligible change in peak flood level (≤ +/- 10mm).</li> </ul>
		Groundwater	<ul style="list-style-type: none"> <li>• No measurable impact upon an aquifer and/or groundwater receptors, and risk of pollution from spillages is &lt;0.5%.</li> </ul>
Minor beneficial	Results in some beneficial effect on attribute or a reduced risk of negative effect occurring	Surface water	<ul style="list-style-type: none"> <li>• HEWRAT assessment of either acute soluble or chronic sediment-related pollutants becomes a pass from an existing site where the baseline was a fail condition</li> <li>• Calculated reduction in existing spillage risk by 50% or more (when existing spillage risk is &lt;1% annually)</li> </ul>
		Flood risk	Creation of flood storage and reduction in peak flood level (1% AEP) >10mm
		Groundwater	<ul style="list-style-type: none"> <li>• Calculated reduction in existing spillage risk by 50% or more to an aquifer (when existing spillage risk &lt;1% annually)</li> <li>• Reduction of groundwater hazards to existing structures</li> <li>• Reductions in waterlogging and groundwater flooding</li> </ul>
Moderate beneficial	Results in moderate improvement of attribute quality	Surface water	<ul style="list-style-type: none"> <li>• HEWRAT assessment of both acute-soluble and chronic sediment-related pollutants becomes a pass from an existing site where the baseline was a fail condition</li> <li>• Calculated reduction in existing spillage by 50% or more (when existing spillage risk &gt;1% annually)</li> <li>• Contribution to improvement in water body WFD classification</li> </ul>
		Flood risk	Creation of flood storage and reduction in peak flood level (1% AEP) >50mm



Magnitude of impact	Criteria	Typical example	
		Groundwater	<ul style="list-style-type: none"> <li>• Calculated reduction in existing spillage risk by 50% or more (when existing spillage risk is &gt;1% annually)</li> <li>• Contribution to improvement in water body WFD classification</li> <li>• Improvement in water body Catchment Abstraction Management Strategy (or equivalent) classification</li> <li>• Support to significant improvements in a damaged GWDTE</li> </ul>
Major beneficial	Results in major improvement of attribute quality	Surface water	<ul style="list-style-type: none"> <li>• Removal of existing polluting discharge or removing the likelihood of polluting discharges occurring to a watercourse.</li> <li>• Improvement in water body WFD classification</li> </ul>
		Flood risk	Creation of flood storage and reduction in peak flood level (1% AEP) >100mm
		Groundwater	<ul style="list-style-type: none"> <li>• Removal of existing polluting discharge to an aquifer or removing the likelihood of polluting discharges occurring</li> <li>• Recharge of an aquifer</li> <li>• Improvement in water body WFD classification</li> </ul>
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.		

If you need help accessing this or any other National Highways information, please call **0300 123 5000** and we will help you.

© Crown copyright 2022.

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit [www.nationalarchives.gov.uk/doc/open-government-licence/](http://www.nationalarchives.gov.uk/doc/open-government-licence/)

write to the **Information Policy Team, The National Archives, Kew, London TW9 4DU**, or email [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk).

Mapping (where present): © Crown copyright and database rights 2022 OS 100030649. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

If you have any enquiries about this publication email [info@nationalhighways.co.uk](mailto:info@nationalhighways.co.uk) or call **0300 123 5000\***.

\*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.

These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

Printed on paper from well-managed forests and other controlled sources when issued directly by National Highways.

Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ

National Highways Company Limited registered in England and Wales number 09346363