

# M5 Junction 10 Improvements Scheme

## Change Application 2

### Summary of Changes to Register of Environmental Actions and Commitments

TR010063 – APP 10.26

Nationally Significant Infrastructure Projects: Changes to an application after it has been accepted  
for examination

Planning Act 2008

Volume 10  
October 2024

# Infrastructure Planning Planning Act 2008

## Nationally Significant Infrastructure Projects: Changes to an application after it has been accepted for examination

### M5 Junction 10 Improvements Scheme

Development Consent Order 202[x]

---

#### Change Application 2 – Summary of Changes to Register of Environmental Actions and Commitments

---

<b>Regulation Number:</b>	N/A
<b>Planning Inspectorate Scheme Reference</b>	TR010063
<b>Application Document Reference</b>	TR010063/APP/10.26
<b>Author:</b>	M5 Junction 10 Improvements Scheme Project Team

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	October 2024	Change Application 2

REF.	Objective of the commitment	Description of the mitigation measure or commitment	Source of the mitigation measure ES Reference (Relevant section within the ES where this mitigation is identified)	How the mitigation measure/commitment is to be implemented, and monitoring requirements (if applicable).	Achievement and reporting criteria (if applicable)	Responsible person(s): PC Design team GCC National Highways	When: P= pre-commencement of construction C= construction O= post-construction / operation
B23	To minimise disturbance to migratory fish within the River Chelt	<ul style="list-style-type: none"> <li>The following measures will be put in place and overseen by a suitably qualified and experienced ECoW: <ul style="list-style-type: none"> <li>All haul roads, lay down areas and compounds will be located at least 10 m from watercourses, except where access is required to specific locations for works to bridges/culverts for example. Site tracking routes will be arranged to avoid watercourse margins.</li> <li>Rotary drilling rather than percussive piling will be used during the construction of the Link Road bridge.</li> </ul> </li> <li>Soft start up methods will be employed on plant being used for any in-channel works and works within 20 m of the River Chelt, including piling, at the start of each working</li> </ul>	Chapter 7 of the ES.	<ul style="list-style-type: none"> <li>The implementation and monitoring of these measures will be the responsibility of the Contractor and their ECoW. Table 2-2 of the EMP (1<sup>st</sup> iteration) outlines the roles and responsibilities of the ECoW.</li> <li>This will be implemented by the preparation and approval of the 2<sup>nd</sup> and 3<sup>rd</sup> iteration EMP. The EMP (2<sup>nd</sup> iteration) will be in accordance with the EMP (1<sup>st</sup> iteration), as secured by DCO Schedule 2, Requirement 3(2)(a). Completion, approval and implementation of the 2<sup>nd</sup> iteration EMP, is secured by DCO Schedule 2, Requirement 3(1) and 3(3). Completion, approval, and</li> </ul>	<ul style="list-style-type: none"> <li>As detailed in the fish rescue plan (to be developed and instigated in consultation with the Environment Agency and Natural England).</li> </ul>	PC GCC	C

		<p>day. The soft-start duration should be a period of not less than 20 minutes and should piling cease for a period greater than 20 minutes, the soft start procedure must be repeated.</p> <ul style="list-style-type: none"> <li>• <del>Prior to any in-channel works or de-watering, measures shall be implemented that act to temporarily displace fish from the working area. Measures may include the removal of channel features from the working area that provide cover such as large wood to reduce the overall attractiveness of the working area for fish species. This is particularly relevant to benthic species such as European eel that frequently occupy voids between larger substrates. Such in-channel features that provide cover will be replaced after the construction works.</del></li> <li>• <del>In the event that dewatering is required during the installation of bank protection, only part of the width of the channel will be dewatered. Therefore, continuity of flow and fish passage would be maintained at all</del></li> </ul>		<p>implementation of the 3<sup>rd</sup> iteration EMP, post construction is secured by DCO Schedule 2, Requirement 3(4) and 3(5).</p>			
--	--	--	--	---	--	--	--

		<p>times during construction. A fish rescue plan will be developed in consultation with the Environment Agency and Natural England, which may include the need to relocate lamprey ammocoetes prior to dewatering in order to reduce the potential for injury/mortality. The fish rescue plan will also include a requirement for an ecological watching brief.</p> <ul style="list-style-type: none"> <li>• Appropriate screening of any pumping equipment during dewatering activities will be implemented (2 mm screens) to avoid any potential entrainment/mortality of fish during the works. Consider the use of temporary stop nets across the channel upstream of the works to prevent fish from becoming entrained in the working area. Works most likely to cause disturbance to migratory species in the River Chelt (i.e., the construction of the new bridge crossing and installation of bank protection associated with the crossing) will be timed to occur outside of the key</li> </ul>					
--	--	---	--	--	--	--	--

		<p>ecologically sensitive periods for migratory species. February to July and October to November will be avoided as they are the key migratory periods for European eel (this also avoids the spawning period for lamprey (March to April), trout (peaks in October to November) and salmon should they be present). These periods will be confirmed through ongoing consultation with Natural England and the Environment Agency. - Where works during migratory periods is unavoidable, no night-time (taken to be between 30 minutes prior to sunset until 30 minutes following sunrise) vibration work will be undertaken. If night working is essential, minimal and directional lighting will be used.</p> <p><u>In-channel works within the River Chelt and other disturbing works in the vicinity of the River Chelt associated with construction of the new bridge crossing will avoid ecologically sensitive periods for migratory fish species. February to July and October to November will be avoided as they are key migratory periods for European eel (this also avoids the spawning period for lamprey (March to April)).</u></p>					
--	--	--	--	--	--	--	--

		<p><u>trout (peaks in October to November) and salmon should they be present). These periods will be confirmed through ongoing consultation with Natural England and the Environment Agency. Where works during migratory periods is unavoidable, no night time (taken to be 30 minutes prior to sunset until 30 minutes following sunrise) vibration work will be undertaken. If night working is essential, minimal and directional lighting will be used.</u></p> <p><u>A River Realignment and Channel Diversion Phasing Plan will be required to consider the timing of activities and the work processes which are required to mitigate impacts to aquatic species and sediment loads. As a minimum, this plan will consider:</u></p> <ul style="list-style-type: none"> <li><u>• Construction and design (including depth, velocities and sediment composition) of the temporary diversion to ensure hydrological and ecological continuity throughout the construction of the river realignment and Link Road River Chelt Bridge.</u></li> <li><u>• Dewatering of the River Chelt associated with the diversion and appropriate mitigation to manage impacts as a result of dewatering.</u></li> </ul>					
--	--	--	--	--	--	--	--

		<ul style="list-style-type: none"> <li>• <u>Mitigation measures to manage silt when the temporary diversion is connected to the main channel and when the new realigned channel is reconnected as the primary flow pathway.</u></li> </ul> <p><u>A fish rescue plan, required in the event that species are found in the river Chelt, which will be developed in consultation with the Environment Agency and Natural England for in channel works associated with the existing river Chelt and the temporary diversion on completion of the realignment. The fish rescue plan will include a requirement for an ecological watching brief and will detail the measures to be put in place to ensure protection of all fish species during in-channel works.</u></p> <p><u>The fish rescue plan shall include details of any licence requirements to permit fish rescues (e.g., FR2: Application for authorisation to use fishing instruments other than rod and line in England), as well as the requirement for appropriate screening of any pumping equipment (typically 2 mm screens) to avoid potential entrainment/mortality of fish during the works.</u></p> <p><u>The fish rescue plan will consider the use of temporary stop nets across the channel upstream of the works to prevent fish from becoming entrained in the working area.</u></p>					
--	--	--	--	--	--	--	--



		<p>The fish rescue plan will consider measures to displace fish from the working area prior to construction works, such as removal of channel features from the working area that provide cover such as large wood to reduce the overall attractiveness of the working area for fish species. This is particularly relevant to benthic species such as European eel that frequently occupy voids between larger substrates. Such in channel features that provide cover will be replaced after the works. The fish rescue plan will also cover the need to relocate lamprey ammocoetes prior to dewatering in order to reduce the potential for injury/mortality.</p>					
WE1	Minimising deterioration in surface water quality resulting from construction activities	<p>The management plans to be developed as part of the EMP will address good site practice and the preparation of robust method statements (e.g., Guidance for Pollution Prevention (GPP)). An assessment of impacts from pollution during construction should align with CIRIA C648 which outlines potential impacts and mitigation measures. Measures will include:</p> <ul style="list-style-type: none"> <li>- Temporary works sites, haul roads and other associated works should be designed and maintained to minimise impact.</li> <li>- Where temporary watercourse diversions are required or in-channel working, specific mitigation strategies will be</li> </ul>	Chapter 8 of the ES	<p>Complete a EMP (2<sup>nd</sup> iteration) which outlines:</p> <ul style="list-style-type: none"> <li>- Methods for reducing the risk of pollution to surface and groundwater which should follow best practice guidance (i.e., guidance on pollution prevention) in particular, GPP1, GPP5 and GPP21.</li> <li>- Methods for undertaking works along watercourses to ensure limited impacts to hydromorphology. This includes the</li> </ul>	Approval of the EMP (2 <sup>nd</sup> iteration)	PC	P

		<p>needed to ensure the temporary design is in line with the WFD and that temporary impacts are minimised. <u>On the River Chelt, A River Realignment and Channel Diversion Phasing Plan will include any mitigation required to manage sediment concentrations and pollutants within the watercourse during construction.</u> Areas which may generate contaminated water, such as oil storage areas, will need to be bunded and have water discharged to self-contained units with treatment facilities. There would be no discharge to groundwater.</p> <ul style="list-style-type: none"> <li>- Tests will be undertaken to ensure contaminated material is identified, isolated and reworked or removed to special landfill to avoid any leachate problems.</li> </ul> <p>Temporary land-take required for construction will include adequate areas of land set aside for robust control measures, for example sustainable drainage control.</p>		<p>bank reprofiling and bridge construction.</p> <ul style="list-style-type: none"> <li>- Construction compounds and works areas to be outside of the functional floodplain.</li> <li>- Requirements for the flood storage and compensation areas to be constructed prior to the loss of the floodplain.</li> </ul> <p>Over-pumping requirements (e.g., on the Leigh Brook and Drain 22) to reduce impacts on hydromorphological regime during construction.</p> <p>This will be implemented by the preparation and approval of the 2<sup>nd</sup> iteration EMP. The Environment Agency to be included as a consultee for this EMP.</p> <p>Completion, approval, implementation of the 2<sup>nd</sup> iteration EMP, is secured by DCO Schedule 2, Requirement 3(1) and 3(3).</p>			
WE2	Minimising deterioration in surface water quality resulting from the operation	The design of the highway drainage system for the Scheme will comply with all current standards and sustainable drainage system (SuDS) best practice techniques to	Chapter 8 of the ES	Implemented as part of the detailed design of the Drainage Strategy (copy provided as Application document TR010063/APP/6.15).	N/A	Design team GCC NH	P, O

	of the Scheme	<p>ensure that sustainability is a key drainage design criterion.</p> <p>Six highway drainage catchments utilise attenuation basins to mitigate the impacts on water quality. One highway drainage catchment utilises a wetland to mitigate impacts on water quality. <del>Swales and</del> <del>Vegetated</del> ditches are also implemented to reduce any impact to Negligible.</p>		<p>The implementation of measures to mitigate deterioration of surface water quality as a result of the operation of the Scheme, will be reviewed as part of the development of preliminary design, at the detailed design stage. Developments to the design are secured by DCO Schedule 2 Requirement 11(1). Requirements for future maintenance will be included in the 3rd iteration EMP, which is secured by DCO Schedule 2, Requirement 3(4) and 3(5).</p>			
WE3	Minimising deterioration in surface water hydromorphology resulting from construction of the Scheme	<p>To minimise the impact of the Scheme components on hydromorphological elements, the following guidance has also been adopted:</p> <ul style="list-style-type: none"> <li>Bank reprofiling and near channel works will be carried out in an environmentally sensitive manner to reduce temporary impacts.</li> <li>Where over-pumping is required, e.g., on the Leigh Brook and Drain 22, the pumping extent and duration will be minimised to reduce impacts on hydromorphological regime.</li> </ul>	Chapter 8 of the ES	<p>Section 8.7 of Chapter 8 of the ES outlines the mitigation measures to be included in an EMP (2nd iteration), secured by DCO Schedule 2, Requirement 3(2)(c).</p> <p>This will be implemented by the preparation and approval of the 2<sup>nd</sup> iteration EMP. The Environment Agency to be included as a consultee for this EMP.</p> <p>Completion, approval and implementation of the 2<sup>nd</sup> iteration EMP, is secured by DCO Schedule 2, Requirement 3(1) and 3(3).</p>	Approval of the EMP (2nd iteration)	PC	P

		<ul style="list-style-type: none"> <li>Where construction works are taking place, care will be taken to minimise impact on riparian vegetation to reduce the impacts from surface runoff and sediment entrainment.</li> </ul> <p>Sediment management measures will be implemented where there is potential for surface water runoff to carry sediments from work areas to watercourses.</p> <p><u>A River Realignment and Channel Diversion Phasing Plan will be required to consider the timing of activities and the work processes which are required to mitigate impacts to and sediment loads as a result of the realignment of the River Chelt. Construction and design (including depth, velocities and sediment composition) of the temporary diversion to ensure hydrological continuity and stability throughout the construction of the river realignment and Link Road River Chelt Bridge.</u></p>					
WE12	Minimising deterioration in groundwater quality and quantity as a result of construction of the Scheme	West Cheltenham Link Road River Chelt Bridge (Work No.5 (d)), <u>West Cheltenham Link Road Flood Alleviation Bridges (Work No. 5 (l) and (m)</u> , and Piffs Elm interchange bridges (Work No. 2(a)): Where piling is required a piling risk assessment will be carried out to ensure the selected piling methods would not introduce contamination pathways into the aquifer. Deep foundations extending beneath the groundwater table will be designed	Chapter 8 of the ES	Section 8.7 of Chapter 8 of the ES outlines the mitigation measures to be included in an EMP (2nd iteration), secured by DCO Schedule 2, Requirement 3(2)(c). A piling risk assessment is required to ensure the piling method is appropriate for the geology and groundwater parameters. This will be	N/A	PC	P, C

		in accordance with industry standards best practice, such as the groundwater protection technical guidance which should take into account the site-specific water level monitoring data obtained from intrusive ground investigation for the Scheme. Areas which may generate contaminated water, such as oil storage areas, would need to be bunded and have water discharged to self-contained units with treatment facilities.		implemented by the preparation and approval of the 2nd iteration EMP. Annex C of the EMP (1st iteration) outlines the method statements and risk assessments that are required to be produced as part of the EMP (2nd iteration) which includes a Piling Risk Assessment. Completion, approval and implementation of the 2nd iteration EMP, is secured by DCO Schedule 2, Requirement 3(1) and 3(3). Environment Agency to be included as a consultee for this EMP and the piling risk assessment.			
WE19	Minimising impacts on flood risk as a result of the operation of the Scheme	Floodplain conveyance structures will be placed through the West Cheltenham Link Road. In the <del>DF3</del> Scheme design, <u>two bridges are provided with piled foundations</u> <del>the Scheme Structures includes 37 box culvert openings, 36 no being 3 m wide and 1 m tall with an enlarged 6 m wide culvert accommodating an existing field drain</del> (Work No. 5 (i), (l) and (m)).	Chapter 8 of the ES	The mitigation measures (namely the sizing, number and location of the floodplain conveyance structures) are described in Chapter 8 of the ES (Application document TR010063/APP/6.6). The locations of the flood conveyance structures are shown in the General Arrangement Plans (Application document TR010063/APP/2.9). The General Arrangement Plans are secured by DCO Schedule 2 Requirement 11(1) which requires the detailed design to be compatible	N/A	Design Team	P

				with inter alia the General Arrangement Plans.			
--	--	--	--	--	--	--	--

5th Floor, Block 5  
Shire Hall  
Bearland  
Gloucester  
GL1 2TH