

The Planning Inspectorate
National Infrastructure Directorate
Crown Building Cathays Park
Cardiff
South Glamorgan
CF10 3NQ

Our ref: WA/2015/120640/03-L01
Int. Party ID: 10031668
Your ref: TR010019
Date: 07 October 2015

Dear Sir/Madam

**Response to the Examining Authority's (ExA) 1st written questions (PD-005)
Development Consent Order Application M4 - Junctions 3-12 (Smart Motorway)**

The following table identifies questions from the ExA's first written questions (PD-005). Where appropriate we have provided a response to each of the relevant question. If you have any queries or would like further information on any of our responses below please feel free to contact us.

Yours faithfully

**Mr Jonathan Fleming
Sustainable Places | Planning Specialist**

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Question Ref	Environment Agency Response
4.1.1	<p><i>Chapter 5 Section 5.5 APP-145 sets out the methodology for establishing the baseline for the Environmental Impact Assessment (EIA). Are consultees and interested parties satisfied with the approach as adopted?</i></p> <p>We are content with the methodology for establishing the EIA baseline as set out within section 5.5 of chapter 5. Although desktop studies form an important part of data collection for the baseline, up-to-date surveys also play a key role in ensuring that the baseline is reflective of the current situation.</p>



4.1.3	<p>Can the applicant please provide a table which sets out the mitigation measures which are identified as required in each technical chapter of the ES, and provide a cross reference to that part of the draft DCO through which the mitigation measure would be delivered. In particular the table should clarify which mitigation measures identified as necessary in the ES should be secured through the CEMP.</p>
	<p>We welcome the ExA's request for this information as we have concerns how some of the required mitigation measures will be secured and implemented through the DOC, CEMP and/or other associated documents.</p>
4.1.4	<p>Do any interested parties have any comments on the sufficiency of the outline CEMP for securing mitigation? The ExA would be interested in particular in comments from NE, the EA and the LPAs who would be responsible for approving the CEMP under requirement 8 of the DCO.</p> <p>We are continuing to review the outline CEMP and if relevant we will seek to provide additional comments to the ExA regarding it on or before 26 October 2015.</p> <p>From our reviews to date we have concerns how the CEMP will be successfully used to secure mitigation measures. Section 1.6 of the CEMP states that amongst other items, it will include 'all committed mitigation measures as set out in the Environmental Statement, environmental best practice measures and any further mitigation measures as agreed post publication or developed following the completion of ecological surveys prior to the works commencing.'</p> <p>Furthermore, paragraph 1.7.1 states that 'liaison will be required with the relevant local planning authorities along the Scheme and relevant statutory bodies to ensure that the scheme proposed and recommended mitigation measures are acceptable to the authorities and such statutory bodies.'</p> <p>However, vital elements of mitigation such as floodplain compensation (FpC) have not been incorporated within the outline CEMP. Although the type and degree of FpC to be provided has yet to be determined and agreed we would expect the outline CEMP to at least include a brief reference to this, with additional detail to follow at a later stage.</p> <p>Additionally, there are no provisions requiring the mitigation measures to be included within the final version of the CEMP.</p> <p>We do not believe this to be acceptable wording and will seek through further discussions with the ExA and HE to have an approval process incorporated for any revisions of the CEMP. If the CEMP is to be used for securing and implementing various mitigation</p>

	<p>measures, it must be transparent and include a chain of ‘checks and balances’ to ensure that people and the environment are protected both during the construction phase and throughout the lifetime of the development.</p> <p>In addition to concerns about the CEMP, we also have concerns in relation to the EMP and HEMP. In particular, it is not clear how the EMP, CEMP and HEMP will all interact and how the HEMP will be agreed.</p>
4.2.6	<p><i>Para 8.2.11 APP-148 states that no further assessment work (since a survey in November 2014) has been carried out in relation to impacts on the night time landscape from lighting, as the replacement lighting will be retained at its current locations. However, it is uncertain whether the lighting columns will be replaced and if so their design; para 4.2.4 of Chapter 4 APP-144 states “lighting columns will be mounted on top of the new concrete barrier”. Details are not provided regarding the existing and proposed light spill. Can the applicant confirm the design of the new lighting and how it compares with the existing lighting and provide details of the how the proposed light spill compares with the existing?</i></p> <p>We are interested in the comparisons between the existing and the proposed light spill. Any increase in light spill from existing levels has the potential to adversely affect river wildlife corridors, the natural habitats for flora and fauna located in these areas and the potential movement of species along these green and blue infrastructure corridors. We look forward to reviewing the application’s response to this question.</p>
4.3.1	<p><i>Is the EA satisfied with the adequacy of the applicant’s Flood Risk Assessment (FRA) APP-077 and with its conclusions?</i></p> <p>For a more detailed response we would refer the ExA to chapters 1.0 to 1.10 of our Written Representations (WR). The Environment Agency has made formal comments regarding flood risk in response to all formal consultations. After reviewing the Environmental Statement and accompanying FRA we continue to have a number of issues.</p> <p>As noted within our Relevant Representations (RR) the submitted information within the flood risk assessment (FRA) is inadequate. It does not fully assess the impacts of the scheme with regards to flood risk. Specifically, the applicant has not satisfactorily assessed the impacts of the proposed works in relation to upstream and downstream flood risk. Furthermore, they have not properly quantified the loss of floodplain storage and the associated compensation that may be required as a mitigation measure.</p> <p>The applicant is proposing works within the floodplain without</p>

demonstrating that 'level for level' compensation is achievable. Therefore the applicant has failed to demonstrate that there would not be an increase in flood risk elsewhere as a result of the proposed works as required by paragraph 5.99 of the NPS for National Networks (NPSNN).

Flood storage compensation is required to mitigate for loss of storage for all flood events up to and including the 1% annual exceedance probability (AEP) (1 in 100 year) with an allowance for climate change flood event.

The FRA explains that compensation will be provided for and assessed at the detailed design stage. The applicant has suggested that there is the required compensatory storage volume for the proposed earth embankment works but have only supplied volumes. We do not know whether this will be on a level for level basis or volumetric compensation. It could even be provided on a mixture of the two but this is not confirmed. If volumetric compensation is the only option for providing mitigation there could be an increase in flood risk in the higher order events.

The earth embankment work totals 6300m². It appears that HE are also proposing some small sections of land raising for the Emergency Refuge Areas (ERAs) which is 400m² per Junction. Without further details about these from the outset, it is unclear if the applicant will be able to satisfactorily provide the required floodplain compensation or how they propose to implement/secure them.

Paragraph 5.96 of the NPS states that If the Environment Agency has concerns about the proposal on flood risk grounds, *'the applicant is encouraged to discuss these concerns with the Environment Agency and look to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns'*.

In summary we require:

- A revised FRA and associated drawings, which include all the evidence requested within the issues detailed below. This will allow us to fully assess the flood risk issues relating to the scheme. These issues mainly relate to floodplain concerns and flood compensation areas;
- Written confirmation that HE will not be seeking to disapply our flood defence consenting regime as set out under the Water Resources Act 1991 and land drainage byelaws. If HE seek to disapply this consenting regime additional protective provisions within the DCO will be sought as it is important for us to retain our ability to approve any works affecting main rivers in order to ensure that there will be no increase in flood risk elsewhere and no adverse impact on the status of the relevant Water Framework Directive (WFD) waterbodies.

So long as the additional information required evidences that sufficient floodplain compensation areas are available and indicates what form of compensation will be provided ('level for level',

	<p>‘volumetric’, etc...) we anticipate that we will be able to agree a mechanism to secure the implementation and completion of the required flood water storage within the appropriate phasing timetables during the course of the examination. We will jointly provide a copy of these to the ExA once finalised.</p> <p>At the time of writing we are waiting for further flood risk information and evidence to be provided by the applicant for consideration and review. Upon receipt of this information we will notify the ExA if our position has changed and/or appropriate mitigation measures have been agreed.</p>
4.5.1	<p><i>Chapter 10 APP-150 identifies no significant residual impact from the project on groundwater resources during either construction or operation. Are the conclusions agreed with statutory consultees?</i></p> <p>With regards to our remit, providing appropriate mitigation measures are implemented and continuing monitoring and survey works are agreed and undertaken we believe the majority of our concerns have been assessed. The Environmental Statement appears to have addressed most of the issues with respect to protecting aquifers and source protection zones within Chapter 15. It also covers potential sources of contamination (e.g. landfills) in chapter 10.</p> <p>In Chapter 10, within the list of receptors in many of the tables it has "Persons abstracting water without a licence". Under "locations" it puts "Unknown theoretical only". However, we are aware of a number of domestic and private abstractions below 20m³/day (these would not require a licence) within the zone of investigation along the motorway. We are not responsible for keeping a record of these abstractors but the Local Authority will have records of potable abstractions. We strongly recommend that HE obtain a record of these from the relevant Local Authorities.</p> <p>With regards to water resources dewatering of excavations has the potential to damage the receiving watercourses. This has could have slight adverse to moderate adverse impact. Therefore, we strongly recommend that HE implement suitable pollution prevention controls where dewatering activities occur, for example, settlement ponds, sediment traps and visual checks. We acknowledge that some of these measures are noted within the outline CEMP however, the mechanism for securing/implementing this document is not clear within the draft DCO.</p> <p>Dewatering activities are required to comply with the Environment Agency’s Regulatory Position Statement (RPS): Temporary water discharges from excavations https://www.gov.uk/government/publications/temporary-water-discharges-from-excavations</p> <p>Where dewatering activities do not fall within the criteria of the RPS</p>

	<p>then the discharge will require an environmental permit for a bespoke water discharge activity. Dewatering activity is currently exempt from regulatory requirements. This may not be the case in the future.</p> <p>ES Sub-section 15.4.46 highlights actions which will be undertaken if there is any requirement to dewater the groundwater. The potential concern for dewatering relates to the abstraction of any contaminated/polluted water. These poor quality waters (where identified) may be due to more than just a heavy silt content. This needs to be carefully monitored and assessed as the discharge of such water into controlled water could result in a pollution incident. Information from any water quality sample, and land survey data needs to be assessed to flag potential issues, and adequate measures incorporated into the method statement for this activity.</p> <p>We would request that proposed areas for dewatering be discussed through the detailed design phase.</p> <p>ES Sub-section 15.4.42 notes the need for an abstraction licence, if water abstraction is required, has been recognised. The applicant must be aware that any abstraction licence granted will be done so in such a way so as to avoid derogation of existing abstractors. Any licence granted may be subject to constraints limiting/preventing abstraction under low-flow conditions. It is important that they contact the Environment Agency at an early stage due to the regulatory procedures that might apply (time constraint imposed by these procedures) where a licensing situation arises.</p> <p>The scheme, primarily in the design/construction stage, may impact upon water abstraction operations and infrastructure relating to public water supply. The applicant must determine what, if any, abstractions the scheme will conflict with, and liaise with the custodians of said abstractions to establish how to best mitigate against any negative impacts. Of particular concern are the abstractions at Beenham's Heath and Bray, which sit within 100m of the centreline of the scheme. The public water supply abstractions deemed to be at risk, the precise impacts and the mitigation measures must be assessed, agreed with the abstractor(s) and documented.</p>
5.8	<p><i>Has the drainage strategy for the project been agreed with the EA?</i></p> <p>This question is best addressed by the relevant Lead Local Flood Authorities (LLFAs). Although the Environment Agency has a overview of surface water flooding, under the Flood and Water Management Act 2010 surface water drainage and associated approvals are the responsibility of the LLFAs from April 2015. We have advised the applicant of this on several occasions, most recently at a meeting on 25 September 2015 and believe that they are liaising with the relevant authorities.</p> <p>We did previously provide general surface water advice to the applicant as part of our statutory pre-application Planning Act 2008,</p>

	<p>section 42 response on 18 December 2014. At this time surface water drainage was within the remit of the Environment Agency.</p>
<p>5.9</p>	<p>Is the EA satisfied that adequate compensation for any loss of floodplain can be provided?</p> <p>For a more detailed response we would refer the ExA to chapters 1.0 to 1.10 of our Written Representations (WR). These deal with our outstanding concerns on the adequacy of the applicant's flood risk assessment (FRA).</p> <p>In summary, as noted within our Relevant Representations (RR) and WR the submitted information within the flood risk assessment (FRA) is inadequate. We have made formal comments regarding flood risk in response to all formal consultations.</p> <p>The submitted FRA does not fully assess the impacts of the scheme with regards to flood risk. Specifically, the applicant has not satisfactorily assessed the impacts of the proposed works in relation to upstream and downstream flood risk. Furthermore, they have not properly quantified the loss of floodplain storage and the associated compensation that may be required as a mitigation measure.</p> <p>The applicant is proposing works within the floodplain without demonstrating that 'level for level' compensation is achievable. Therefore the applicant has failed to demonstrate that there would not be an increase in flood risk elsewhere as a result of the proposed works as required by paragraph 5.99 of the NPS for National Networks (NPSNN).</p> <p>Flood storage compensation is required to mitigate for loss of storage for all flood events up to and including the 1% annual exceedance probability (AEP) (1 in 100 year) with an allowance for climate change flood event.</p> <p>The FRA explains that compensation will be provided for and assessed at the detailed design. The Applicant has suggested that there is the required compensatory storage volume for the proposed earth embankment works but have only supplied volumes. We do not know whether this will be on a level for level basis or volumetric compensation. It could even be provided on a mixture of the two but this is not confirmed. If only volumetric compensation is used to mitigate there could be an increase in flood risk in the higher order events.</p> <p>The earth embankment work totals 6300m². It appears that HE are also proposing some small sections of land raising for the Emergency Refuge Areas (ERAs) which is 400m² per Junction.</p> <p>Without further details from the outset, it is unclear if the applicant will be able to satisfactorily provide the required measures or how they propose to implement/secure them through the DCO, phasing schemes and other associated documents.</p>

	<p>At the time of writing we are waiting for further flood risk information and evidence to be provided by the applicant for consideration and review. Upon receipt of this information we will notify the ExA if our position has changed and/or appropriate mitigation measures have been agreed.</p>
8.10	<p>Draft DCO Article 6 - This wording is not present in the equivalent article included in the A556 (Knutsford to Bowden Improvement) DCO, referred to in the Explanatory Memorandum (EM) APP-027.</p> <p>This would seem to provide little clarity as to the extent of the development. If it is anticipated that the Order limits (together with the deviation limits in this article) will be the maximum extent, why is this wording required? Alternatively, should the order limits be amended to reflect the proposed limits?</p>
	<p>We are currently considering the DCO provisions relating to limits of deviation and will inform the ExA as soon as possible if we seek any amendments to the current wording.</p>
8.12	<p>Draft DCO Article 15 - Would this provision grant adequate protection for adverse impacts as a result of the formation of a means of access? Would there be circumstances where the prior approval of the local planning authority should be sought?</p>
	<p>We are currently considering whether there is any land that we would not wish a new access to be formed over and will inform the ExA as soon as possible if we seek any amendments to the current wording.</p>
8.13	<p><i>Draft DCO Article 16 - The powers provided by this article could have significant impacts on the navigation or watercourse and on its users. With that in mind, can each of the powers be justified? Have the Environment Agency or any other relevant bodies commented on this approach?</i></p>
	<p>We have advised the applicant that the wording in Article 16 of the DCO is acceptable to us so long as it includes a paragraph confirming that it does not supersede the requirement to obtain Water Resources Act or Byelaw consent i.e. Flood Defence Consents.</p> <p>From a navigational perspective for the purposes of powers in relation to relevant watercourses, our focus will be the River Thames as the other rivers listed are either non navigable or navigations that are managed by the Canal and Rivers Trust.</p>

From the proposed plans it seems the primary impact on navigation would be during works involving the M4 bridge crossing the River Thames between junctions 7 and 8/9. As the navigation authority on the River Thames it is our responsibility to maintain the public right of navigation and make sure any proposed works have minimal impact on our river users. In order to achieve this we are likely to request or seeks safeguards to include:

- a) A minimum of 10 weeks notice given on any planned river restrictions / closures for more than four consecutive hours;
- b) An indication of timescale of any proposed works that will require a river closure / restriction;
- c) That works be scheduled out of the main boating season i.e. April to September inclusive;
- d) A single point of contact is established between contractors and our Waterways team and that full detailed method statements for any proposed works are provided to us and that they will be in accordance with our Navigation Conditions for Bridge Works.