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National Infrastructure Directorate  
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**Our ref:** WA/2015/120640/07-L01

**Int. Party ID:** 10031668

**Your ref:** TR010019

**Date:** 25 November 2015

Dear Examining Authority,

**Deadline 4 (26 November 2015) – Written summaries of oral submissions presented at issue specific hearings on 17, 18 and 19 November 2015.**

### **Development Consent Order Application M4 - Junctions 3-12 (Smart Motorway)**

As requested we wish to summarise our contributions at the issue specific hearings on the environment (17 and 18 November 2015) and the draft development consent order (19 November 2015). Our comments are set out under the following headings:

- 1.0 Overview
- 2.0 Update on Statement of Common Ground
- 3.0 Flood risk
- 4.0 Biodiversity and Water Quality
- 5.0 Other Consents and Issues Raised
- 6.0 Draft Development Consent Order

#### **1.0 Overview**

- 1.1 In principle, the Environment Agency supports proposals to improve national infrastructure. Currently, we do have concerns about some potential environmental impacts from this scheme. We do not believe that the proposed flood risk mitigation measures are satisfactory and consequently the proposed development is likely to increase flood risk. We are concerned this will impact both people and the environment and that any increase in flood risk would be contrary to paragraph 5.99 of the National Policy Statement for National Networks (NPSNN).
- 1.2 We were also concerned that the scheme would adversely impact water quality and biodiversity interests. However, we are pleased to inform the Examining Authority (ExA) that following Highway's England submission of further evidence and clarification, including information provided as part of the Deadline 3 submissions (5 November) we believe that our biodiversity and water quality interests are capable of being protected through suitable requirements in the Development Consent Order (DCO). We are currently reviewing the details of



requirement 24 (biodiversity management strategy) which is a new addition in the latest draft DCO submitted at deadline 3 and will continue to liaise with Highways England on this matter. We will keep the ExA informed of any progress with regards to this topic.

- 1.3 With regards to the draft DCO, we have raised some concerns relating to particular requirements. These are summarised in section 6.0 below. Additionally, until further details have been submitted by Highways England regarding the potential mechanism for the discharge of requirements by the Secretary of State as part of deadline 4 (26 November 2015) we wish to reserve our position on this feature until we have undertaken a more detailed review.

## **2.0 Update on Statement of Common Ground**

- 2.1 We apologise to the ExA that we have been unable to submit a Statement of Common Ground (SoCG) between ourselves and Highways England by the 13 November as previously hoped. This has been as a result of new and revised information seeking to address our concerns being submitted and these potentially changing our position. This has included the reviewing of several iterations of the Flood Risk Assessment with the most recent version prior to the hearings being received on the afternoon of Thursday 12 November, 2015. Consequently this impacted the potential wording of the draft SoCG. As previously indicated exchanges of the draft wording was provided to Highways England by the Environment Agency on 2<sup>nd</sup> and 8<sup>th</sup> October and Highways England provided a further draft for review on 3 November.
- 2.2 Following the hearings last week it was agreed that a SoCG would be submitted as part of the deadline 4 submission. We are hopeful that a signed SoCG between the parties will be submitted shortly.
- 2.3 At submission of this letter (25 November) we are awaiting for comments from Highways England on the recent draft that we provided to Highways England on 24 November 2015. It will be indicated within the SoCG that we agree on several points however, there are still some outstanding matters not agreed. These primarily relate to flood risk and the associated mitigation and compensation measures. We will continue to liaise with Highways England on these issues and will inform the ExA of any further progress.

## **3.0 Flood Risk**

- 3.1 We do have concerns about some potential environmental impacts from this scheme. We do not believe that the proposed flood risk mitigation measures are satisfactory and consequently the proposed development is likely to increase flood risk. We are concerned this will impact both people and the environment and that any increase in flood risk would be contrary to paragraph 5.99 of the National Policy Statement for National Networks (NPSNN).
- 3.2 From the outset, we wish to note that the 'Table of Mitigation Measures' (Appendix A of Highways England response to First Written Questions submitted for deadline 2, 8 October 2015) only refers to floodplain compensation measures being provided at four overbridge sites – Ascot Road, Monkey Island Lane, Wood Lane and Riding Court Road (page 23). Highways England have assessed that

there are at least 10 sites that require floodplain compensation. Furthermore, the table notes the impact to result from construction in the floodplain. If any loss of floodplain is not appropriately compensated there is a risk that the proposed development will increase floodrisk during the construction phase and/or post-construction.

- 3.3 Furthermore, we wish to clarify that the term flood zone 3 does not include an allowance for climate change. Flood zone 3 is the 1% Annual Exceedence Probability (AEP) without an allowance for climate change.
- 3.4 Although the current flood risk assessment (FRA) refers solely to development within flood zone 3, we wish to emphasise that all development within the 1% AEP plus a 20% allowance for climate change (also known as the 1 in 100 year plus 20% allowance for climate change flood extent) requires satisfactory floodplain compensation to ensure that flood risk is not increased.
- 3.5 Even though the FRA refers only to flood zone 3 we welcome that the applicant has based their recent floodplain compensation calculations on the design flood event (1% AEP plus 20% allowance for climate change) as required by national policy.
- 3.6 Within the current FRA Highways England state that a neutral outcome or 'negligible change' is a variation of 10mm (increase or decrease) in flood levels based on their Design Manual for Roads and Bridges (DRMB). We do not agree with this position. Paragraph 5.99 of the NPSNN states that there should be no increase in flood risk. We support the policy in the NPSNN. Any increase in flood risk could place people and the environment at risk.
- 3.7 At the environment hearings on 18 November 2015, Highways England verbally confirmed that the flood compensation scheme will be designed so there will be no increase in flood levels up to and including the 1% AEP plus a 20% allowance for climate change flood event. Their initial floodplain compensation calculations appear to support this however, the FRA has not been updated to reflect this position. We understand that a revised FRA will be submitted as part of the Deadline 4 (26 November 2015) submissions and we look forward to reviewing this document in due course.
- 3.8 With regards to floodplain compensation, for the majority of sites, Highways England has now quantified the volume of flood compensatory storage required. This is indicated within documents provided to the Environment Agency on 12 November 2015 including Appendix I (flood plain compensation calculations summary and summary details); updated Appendix G maps; cross section for Area R18 (WB), (Junction 7-6 (CH 26500-27100)) AND Area R19 (EB), Junction 7-6 (CH 26550-27070). We understand that these documents will be submitted to the ExA as part of the deadline 4 submissions. Following a meeting between Highways England and the Environment Agency on Monday 23 November 2015, Highways England agreed to confirm if flood compensation was required for any of the work compound areas (particularly work compound 5) and to confirm the precise number of locations where floodplain compensation was required. Once received, we will review this information.
- 3.9 In addition to identifying suitable floodplain compensation areas it has been shown that there is additional volume within the proposed compensatory storage areas that are located within the order limits that could be utilised if required at

the detailed design stage. This is important because the majority of the calculations for floodplain compensation have been based on LiDAR height data and not on the more accurate detailed site specific topographical surveys. We have sought reassurance from Highways England that the compensation calculations will be re-run using site specific topographical data at detailed design to ensure no loss of flood plain storage. We await for this to be confirmed and secured in writing as part of the DCO application.

- 3.10 However, we have concerns in relation to the connectivity of the proposed compensation areas. There is limited detail in relation to hydraulic connectivity. We require further information on the arrangement of the ditches and culverts connecting the floodplain. This should include invert levels, lengths, whether they are existing or proposed structures, if existing structures what is their current role/use, etc...? Where an existing drainage ditch is proposed for hydraulic connectivity, it should be demonstrated that it will not compromise the working of existing surface water drainage systems. The hydraulic linking of compensation areas to the flood plain should be designed to ensure that the connectivity is available and volumes along the hydraulic link are safeguarded. If the ditch is currently used to attenuate surface water, volumes used for surface water management should not be calculated for the compensation scheme. At detailed design if existing ditches cannot be used alternative hydraulic connectivity should be sought.
- 3.11 The proposed floodplain compensation areas must be hydraulically linked to the existing floodplain to ensure that the flood water can move freely between the plots. If they are not suitable hydraulically linked, the proposal as submitted may increase flood risk offsite (outside of the order limits) to nearby roads and properties.
- 3.12 The following comments relate to particular sites/areas where floodplain compensation is proposed.
- 3.13 **Area R18** (WB), Junction 7-6 (CH 26500-27100) and **Area R19** (EB), Junction 7-6 (CH 26550-27070), drawing 514451-MUH-00-ZZ-DR-DR-400157.

A cross section for this area has been submitted, which supports the written summary of compensation calculations as shown in Table 1. The invert level of the culvert is shown to be flat. Due to the length of the connectivity, we have concern about whether flood water would be able to recede back to the flood plain. There is limited information about the culvert link across the motorway is shown on the plan and how this will be used.

- 3.14 **Area R16** (EB), Junction 6-5 (CH 17445 -17600), drawing number 514451-MUH-00-ZZ-DR-DR-400158 and **Area R 17** (WB), Junction 6- 5 (CH 25260 -25830), drawing number **514451-MUH-00-ZZ-DR-DR-400158** and **Area R06** (WB), Junction 5-4b (CH 17445 -17600), drawing number 514451-MUH-00-ZZ-DR-DR-400134.

Highways England has explained they will be using an open channel to hydraulically link to the flood plain where a nearby ditch is available at a lower level. There is limited detail in relation to the ditch and how the hydraulic link will provide connectivity and ensure that flood water will be able to recede back to the flood plain.

- 3.15 **Area E9-A1** (WB), Junction 12-11 (CH 56180 -56280), drawing number 514451-MUH-00-ZZ-DR-DR-400133. The applicant has explained that there will be an open channel that will hydraulically link at CH56100 to 56110 (WB) at 38.4mAOD. This is a slightly lower level than the compensation area. Limited detail has been submitted to explain how flood water will be contained in the compensation area and how flood water will be able to recede back to the flood plain.
- 3.16 **Wood Lane Road** (Junction 7- 6), drawing number 514451-MUH-SR-ZZ-DR-DR-301325. Hydraulic connectivity is proposed via a pipe from a level 20.98mAOD to 20.5mAOD at its outlet at the natural ditch on the eastern side of the road. Limited detail has been submitted to explain how flood water will be contained in the compensation area and how flood water will be able to recede back to the flood plain.
- 3.17 **Ascot Road**, (Junction 8/9 – 7), drawing number 514451-MUH-SR-ZZ-DR-DR-301319. Hydraulic pipe connectivity is proposed at ref CH 400 (local) to the nearest flood plain within Order Limits as shown on the drawing. No detail submitted to demonstrate how this will work.
- 3.18 **Riding Court Road** (Junction 6-5), drawing number 514451-MUH-SR-ZZ-DR-DR-301324. Hydraulic pipe connectivity is proposed from the compensation area reference CHS120 to the opposite side of the road as shown. Only one culvert has been proposed to hydraulically link the flood plain and it has not been demonstrated that this adequately provides connectivity for the flood plain north of the proposed connection. Any proposed connectivity via culverts under roads should remain open for the lifetime of the development and there should be consideration of future maintenance requirements, which has not been discussed.

#### **4.0 Biodiversity and Water Quality**

- 4.1 Following further clarification and submission of information including that provided by Highways for deadline 3, we are content that the proposed development as currently submitted will not adversely impact our biodiversity or water quality issues. This is subject to appropriately worded requirements being included within the DCO and other associated documentation including the Construction Environmental Management Plan (CEMP) relating to the issues of groundwater quality, biodiversity surveys, mitigation, compensation and enhancement measures as promoted by paragraph 3.3 of the NPSNN.
- 4.2 We are pleased to note that the correct Chalvey Ditch waterbody (GB106039023550) has now been assessed and included within Appendix B – ‘Comparison of water bodies’ of Highways England response to written representations as submitted for deadline 3 (5 November 2015) and that this data does not alter the overall conclusions of the Water Framework Directive Compliance Assessment (WFSCA).
- 4.3 Within the latest submissions and during the hearings it has been confirmed by Highways England that Frog’s Ditch will not be culverted or diverted. We welcome this confirmation.

- 4.4 We believe that the proposed scheme will not significantly impact the implementation of the proposed Water Framework Directive (WFD) measures as recommended within the Thames River Basin Management Plan (RBMP).
- 4.5 We do not believe that the lengthening of the two culverts will result in a neutral ecological outcome as concluded by Highways England within the Environmental Statement. This is because the lengthening of the culverts will result in the loss of river bed and banks. These areas provide habitats for various flora and fauna. However, we are satisfied that we will be able to secure appropriate compensation through the proposed DCO requirements (wording yet to be agreed) and within separate consenting regimes under various legislations including the Water Resources Act 1991 (as amended), the Thames Water Authority Land Drainage Byelaws 1981 (as amended) and the Thames Conservancy Act 1932 (as amended). However, as our position relates to our remit this should not imply that other parties are fully satisfied on this issue.
- 4.6 At the time of writing, we are currently reviewing the details of requirement 24 (biodiversity management strategy) with regards to our remit. Requirement 24 is a new addition in the latest draft DCO submitted at deadline 3. We will continue to liaise with Highways England on this matter. We will keep the ExA informed of any progress with regards to this topic.

## **5.0 Other Consents and Issues Raised**

### **5.1 Other Consents**

- 5.1.1 We are pleased that Highways England has confirmed during the November hearings that they are not seeking to dis-apply the consents, licences and notifications required under the Water Resources Act 1991 (as amended), the Thames Water Authority Land Drainage Byelaws 1981 (as amended) and the Thames Conservancy Act 1932 (as amended). However, we seek that this be specifically stated within the requirements to clarify this matter with all parties. Please refer to section 6.0 for further information.

### **5.2 Maintenance of proposed flood compensation areas**

- 5.2.1 During the November hearings, several issues were raised by the ExA and interested parties relating to the maintenance of different features. We wish to raise concern that the submitted documents and DCO requirements do not appear to provide sufficient details on who will be responsible and how Highways England propose to maintain the various ditches, culverts, pipes, sustainable drainage systems (SuDS) and land associated with the floodplain compensation scheme.
- 5.2.2 It is essential that appropriate measures and plans are implemented to ensure that these features will work as designed both during the construction phase and post-construction for the lifetime of the development. Without this reassurance, the floodplain compensation scheme may not function correctly and this could lead to an increase in floodrisk. This may place people and the environment at risk and would be contrary to paragraph 5.99 of the NPSNN.

### 5.3 Maintenance by the Environment Agency

- 5.3.1 A question relating to the maintenance of main rivers by the Environment Agency was raised from the gallery by a member of the public. We wish to summarise our response at the hearing and provide a brief overview of the Environment Agency's role.
- 5.3.2 Those who own land adjoining, above or with a watercourse running through it, have certain rights and responsibilities. In legal terms they are a 'riparian owner'. In this instance, Highways England are the riparian owner and as such must fulfil their responsibilities accordingly. Further information relating to riparian ownership can be found at <https://www.gov.uk/government/publications/riverside-ownership-rights-and-responsibilities>
- 5.3.3 The Environment Agency is one of the risk management authorities as defined by the Flood and Water Management Act 2010. Protecting the river environment and managing flood risk is part of our job. This means that some of its duties and powers affect riparian owners.
- 5.3.4 The Environment Agency has powers to work on main rivers and the sea to manage flood risk. These powers allow us to do work. However, we do not have to maintain or construct new works on main rivers or the sea. We are unlikely to maintain a watercourse to improve the amenity of the river or to stop erosion that does not increase flood risk. We can also do work to prevent environmental damage to watercourses, or to restore conditions where damage has already been done.
- 5.3.5 The Environment Agency undertakes maintenance work to main rivers on a regular basis. Our river and costal maintenance programmes are published online at <https://www.gov.uk/government/publications/river-and-coastal-maintenance-programme>
- 5.3.6 Further information on the different roles and responsibilities of each stakeholder can be found at <https://www.gov.uk/guidance/river-maintenance-and-drainage-charges-farmers-and-landowners>
- 5.3.7 Although the gentleman's question should not be dismissed, we wish to note that the proposed scheme must meet the requirements of paragraph 5.99 of the NPSNN. This policy states that the proposed development should not increase flood risk and that when required appropriate mitigation and compensation measures are fully implemented. Therefore, the proposed works should not change the current floodrisk parameters.

### **5.4 Construction Environmental Management Plan (CEMP)**

- 5.4.1 We are content with the overarching framework of the Construction Environmental Management Plan (CEMP) (Appendix 4.2A to the ES) (Application Document Reference 6.3). However, we will be seeking some wording changes prior to the submission of the next revision of the document. These primarily relate to flood risk. We understand from the hearing sessions that the next CEMP will be submitted for deadline 5 (8 January 2015).

5.4.2 Furthermore, as a contractor has now been appointed, where possible further detail would be appreciated to enable a more comprehensive review. The CEMP approval and implementation process is yet to be agreed although we expected that this can be appropriately addressed through a suitable DCO requirement.

## **6.0 Draft Development Consent Order**

6.1 The following remarks summarise our comments on the draft DCO made at the relevant hearing on Thursday 19 November 2015.

6.2 We are pleased that Highways England has agreed to certain notice provisions requested by the Environment Agency. These primarily relate to access to main rivers and interference with apparatus and a written notice period of 8 weeks is being proposed. Although wording is yet to be agreed both parties seem content with this position.

6.3 As discussed on 19 November, we would seek that article 16 is qualified so that it expressly states that it does not remove the need for flood defence consent to be obtained under s.109 of the Water Resources Act 1991 and relevant byelaws. We agreed with Highways England that the current wording does not serve to dis-apply these provisions, but explained that we would like the wording to be added in order to clarify this.

6.4 The process for discharging requirements was discussed, in particular the consultation process associated within this. We ask that the wording in Part 2 of Schedule 2 and Schedule 12 to be clarified so that it is clear which provisions relate to the discharge of requirements. We express concern that there is insufficient time for the Environment Agency to respond to any consultation, particularly as the Environment Agency will be the expert on some issues and will be advising the Secretary of State who will ultimately be discharging the requirement. For now, until further detail on this potential discharge mechanism is provided by Highways England as part of the deadline 4 we wish to reserve our position regarding this matter. Upon receipt of further details and clarification we will review the information and provide our opinion to the ExA.

6.5 We wish to highlight that requirement 8 (CEMP) does not currently require the mitigation measures from the Environmental Statement that are contained in the outline CEMP to be in the final CEMP. We acknowledged that requirement 8 provides that the CEMP must be approved by the Secretary of State in consultation with the Environment Agency and that it must be 'substantially in accordance' with the outline CEMP, but stated that, although unlikely, the approved CEMP could nevertheless still fail to contain all of the mitigation measures that it would be expect to. Highways England explained the difficulty of securing ES mitigation measures in the DCO as they are secured by different means. We explained that we understood this, but that we still required the mitigation measures that are meant to be contained in the CEMP to be secured. We suggested listing the mitigation measures that are meant to be contained in the CEMP in requirement 8 in order to ensure that they are included in the final CEMP.

6.6 We do not agree with the current wording of requirement 23 relating to the Flood Risk Assessment. We have provided Highways England with alternative wording on 17 November 2015 and are in discussions with them on this matter. We are



hopeful that we will agree alternative wording in the near future. The requirement is expected to contain the need for a compensation scheme to be approved, which must be as set out in the Flood Risk Assessment unless an alternative scheme is provided that does not result in the flood levels in the Flood Risk Assessment being exceeded. This is provided that the updated Flood Risk Assessment provides suitable compensation measures and that provision is made for maintenance of any culverts and ditches needed as part of the compensation scheme. We also noted to the ExA that we did not think maintenance was appropriately addressed within the application or DCO.

- 6.7 At the time of writing, we are currently reviewing the details of requirement 24 (biodiversity management strategy) with regards to our remit. Requirement 24 is a new addition in the latest draft DCO submitted at deadline 3. We will continue to liaise with Highways England on this matter. We will keep the ExA informed of any progress with regards to this topic.

If you have any queries please feel free to contact me.

Yours faithfully

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