



The Planning Inspectorate

Application by Highways England

M4 Junctions 3 to 12 Smart Motorway

The Examining Authority's second written questions and requests for information

Issued on 11 December 2015

The following document comprises the Examining Authority's (ExA) second written questions and requests for information.

Each question has a **unique reference number** which combines a section number and a question number. **When you are answering a question, please start your answer by quoting the unique reference number.**

The majority of the questions are directed to the applicant. **Where questions are directed to other parties, those parties are identified in bold within the relevant question.** The ExA would be grateful if all parties named could answer all questions directed at them, providing either a substantive response, or indicating that the question is not relevant to them for a reason. **It is expected that answers will be given by each party unless an agreed position on relevant matters is to be included in a Statement of Common Ground, or for local authorities the matter is covered in the Local Impact Report.** The direction of questions in this way does not prevent an answer being provided to a question by a person to whom it is not directed, should the question be relevant to their interests.

Questions concerning the draft Development Consent Order and those dealing with the proposed compulsory acquisition/temporary possession of land and rights are provided in table form.

Unless otherwise stated, the applicant and other interested parties should provide any new or amended documentation prepared in support of the answers to these questions for submission to **Deadline V on 8 January 2016** in the examination timetable. All document references (provided in subscript) have been attributed by the Planning Inspectorate and are taken from the live Examination Library which is available on our website, here:

<http://infrastructure.planninginspectorate.gov.uk/document/3566825>

If you are answering a limited number of questions, responses in a letter format will suffice. If you are answering several questions, it will assist the ExA if you use a table which incorporates the referencing conventions used in the questions.

1. National Policy Statement for National Networks

No further questions at this stage.

2. Local Development Plans

No further questions at this stage.

3. Green Belt

No further questions at this stage.

4. Environment

4.1 Environmental Statement

No further questions at this stage.

4.2 Landscape and visual effects

- 4.2.1 From our visit to Cranford Park and its listed buildings ^{EV-006}, it was clear that the M4 currently has a significantly harmful effect on the amenities of the Park both in terms of noise and visual amenity. The listed buildings are on the 'at risk register' and the local community are working to conserve the buildings and to find new uses for them. The Park provides a valuable open space amenity in an otherwise urban area. The proposal to bring traffic closer to the Park and the listed buildings through all lane running (ALR), together with the positioning of new gantries would be likely to increase visual impact. Furthermore, whether or not ambient noise levels were reduced, the source of the noise would become more evident.

What provisions can be made for enhancements to the visual and aural environment of the Park in terms of boundary treatment to the M4 such as higher fencing to provide visual and acoustic mitigation, and increased planting?

4.2.2 Having regard to the positioning of new gantries and the emergency refuge areas (ERA) in proximity to Harlington Village Conservation Area and the Church of St Peter and St Paul, what additional shrub and tree planting can be provided to mitigate the introduction of the gantries and the impact of bringing traffic closer to the heritage assets?

4.2.3 The potential for off-site planting to replace planting lost as a result of the scheme and to provide enhanced environmental mitigation was discussed at the issue specific hearing dealing with matters relating to the environment, and London Borough of Hillingdon (LBHill) has identified locations with the potential for off-site planting to provide improvements to visual amenities ^{EV-015 & EV-021}. Highways England (HE) indicated that this could be dealt with by means of s253 agreements with land owners. However, there is no means by which such agreements could be secured through the draft Development Consent Order (dDCO), and therefore the Secretary of State (SoS) could not be satisfied that any off-site planting would be achieved.

Could a requirement be added to the dDCO for a scheme of off-site planting to be agreed with the relevant local planning authorities before the M4 Smart Motorway (M4SM) is brought into operation, with an appropriate implementation clause included, or is this a matter which could be secured through a Development Consent Obligation?

4.2.4 What mitigation measures can be put in place for properties in Keats Way where vegetation would be lost to rear gardens? Can acoustic barriers be replaced with a type which would support plants, with transparent upper panels?

4.2.5 Can taller acoustic panels be provided where vehicles using the current hard shoulder might have a view into the upper windows of adjoining properties (for example Holyport Road, Maidenhead)?

4.2.6 Fencing opposite to Savoy and Cleave Avenues and Cranford Drive allows for views directly onto the M4. LBHill request higher fences with off-site planting, or alternatively a type of fence which would support planting, with transparent upper panels ^{REP4-038}.

Is there any reason why such provision could not be made?

4.2.7 What enhancements could be provided to mitigate the visual impacts on the Amerden Caravan Park ^{EV-025} both during the construction phase and once the M4SM is in operation?

4.2.8 The allotments at The Myrke are a well-used community asset and the introduction of ALR would bring traffic closer to those working on the allotments. Furthermore existing vegetation on the motorway side of the boundary would be lost to the scheme which includes an emergency refuge area and new gantry in this location.

What improvements could be made to the treatment of the boundary between the M4SM and the allotments at The Myrke in order to provide a visual and aural screen for allotment users?

4.3 Flooding

4.3.1 **Can the applicant confirm that the following documents will be submitted at Deadline V without fail, or sooner if possible? These documents should be discussed and agreed with the relevant statutory authorities.**

i. Updated Flood Risk Assessment

ii. Updated Drainage Strategy Report

4.3.2 HE stated that a Hydrological Risk Assessment is underway and will be submitted together with a Statement of Common Ground (SoCG) with South East Water by Deadline V ^{REP4-001}. However later HE states in paragraph 6.4 of the same document that this assessment is to '*commence and will be completed by the end of the Examination.*'

Can the applicant give an update on both documents and submit these by Deadline V?

4.3.3 A SoCG has still not been agreed between the applicant and the **Environment Agency** (EA). The Examining Authority (ExA) expects that this will be submitted at Deadline V, detailing matters agreed and matters not agreed. Where matters are not agreed an update on the discussions should be provided giving specific actions being taken and a date when the matters will be resolved.

It is noted from the EA submission that matters are still not agreed ^{REP4-028}. These include the following:

- i. The EA does not believe that the proposed flood risk mitigation proposals are satisfactory and do not comply with para 5.99 of the National Networks National Policy Statement (NN NPS).
- ii. The applicant has identified four overbridge sites that require floodplain compensation; the EA have assessed that at least 10 sites require compensation.
- iii. In the current Flood Risk Assessment (FRA), the applicant states that a neutral outcome or negligible change is a variation of 10mm increase or decrease; the EA does not agree with this position stating that paragraph 5.99 of the NN NPS states that there should be no increase in flood risk.
- iv. The EA has requested confirmation if flood compensation is required for any of the work compound areas (particularly work Compound 5) and to confirm the precise number of locations where flood compensation is required.
- v. The EA requires further information on the connectivity of the floodplain compensation sites as if they are not properly hydraulically connected there may be a risk of flooding offsite to nearby roads and properties.
- vi. The EA has requested further information on the following areas where floodplain compensation is proposed; Area R18, Area R16, Area E9-A1, Wood Lane Road, Ascott Road and Riding Court Road.

The ExA expects that all these issues and any other matters which have been identified are resolved in the FRA and the SoCG to be submitted at Deadline V.

4.3.4 *Use of Sustainable Drainage Systems (SuDs)*. We note the applicant's submissions that there is insufficient space within the boundaries of the application to introduce the use of SuDs. However, Buckinghamshire County Council (BCC) ^{REP4-032} and LBHill ^{REP4-033} identify land outside the confines of the site which could be used to introduce SuDs in to the scheme. The NN NPS paragraph 5.230 states that the project should adhere to any national standards for sustainable drainage systems. Whilst it is recognised in the NN NPS that it may not be feasible to adopt the most

sustainable approach, the land identified by the local authorities represents opportunities to upgrade the approach which has currently been adopted.

Can the applicant provide an assessment of the feasibility of using the land identified by BCC and LBHill in order to incorporate the use of SuDs into the M4SM drainage scheme?

4.4 Ecology and nature conservation

4.4.1 *Biodiversity and water quality*. It is noted that matters are still not agreed with the **EA** REP4-028. These include the following:

- i. The EA states that it is content that the proposed development will not adversely impact their biodiversity or water quality issues subject to appropriate requirements and other wording in other documents such as the Construction Environmental Management Plan (CEMP). Can the EA identify where such changes are required and suggest appropriate wording?
- ii. The EA does not believe that the lengthening of the two culverts will result in a neutral ecological outcome as concluded by HE, but does believe that wording in the dDCO could resolve this issue. The EA should give suggested wording for an appropriate requirement.
- iii. The EA is reviewing the wording of R24. Suggested wording should be submitted.

The ExA expects that all these issues and any other matters which have been identified are resolved and submitted at Deadline V.

4.4.2 In light of the response by **Natural England** (NE) to the Rule 17 request REP3-024 confirming that NE agrees with the applicant that there were no likely significant effects from the project on any of the five European designated sites identified in the Environmental Statement, **could NE clarify the reason why they agree to no likely significant effects on the Thursley, Ash, Pirbright and Chobham Special Area of Conservation?**

4.5 Geology and soils

No further questions at this stage.

4.6 Air quality

4.6.1 *Definition of significance.* LBHill submit that Professor Laxen on the Council's behalf REP4-038, p28 stated at the hearings that the guidance on describing significance of impacts had been updated in the recent Environmental Protection UK/Institute of Air Quality Management (EPUK/IAQM) guidance. This effectively halved the criterion used to describe impacts as negligible from the previous $0.4 \mu\text{g}/\text{m}^3$ to $0.2 \mu\text{g}/\text{m}^3$. It was recognised that the guidance is not intended to replace the more formal guidance of HE in its advice notes, however, the new guidance represents the views of the organisation (IAQM) that represents air quality professionals. LBHill stated that it should also be noted that the views of the IAQM informed the HE guidance in IAN 174/13 on page 15 under the heading Imperceptible. The IAN 174/13 is therefore not up-to-date and does not reflect current IAQM guidance.

Is IAN 174/13 being updated in the light of the IAQM guidance? What weight should be given to the IAQM guidance? Does the revised level of significance in the IAQM provide an indication that an exceedance of $0.4 \mu\text{g}/\text{m}^3$ APP-146, Table 6.3 should no longer be considered to be negligible? If so, what level should be considered to be negligible?

4.6.2 *Reliability of the HE assessment.*

Can the applicant explain the relationship between the forecasts of traffic flows on the M4SM and the assessment of air quality impacts? Can the applicant also provide the following information:

- i. Does the air quality assessment use the same base year for traffic data as the traffic forecasts?**
- ii. Is the base year traffic flow in each forecast based on real life surveys? If not, what is it based on?**
- iii. Are the traffic levels from the traffic forecasts for do minimum and do something at the opening year (2022) those used in the air quality assessments?**

- iv. Does the air quality assessment use the same vehicle fleet composition as in the traffic forecasts? What is the vehicle fleet composition for the base year, and the do minimum and do something 2022 scenarios?**
- v. Can the applicant explain any additional or amended assumptions from those used in the traffic forecasting (such as the rate of fuel consumption) which are used for the air quality forecast, or any change in the data sets used in the air quality forecasts such as for the composition of the vehicle fleet?**

4.6.3 *Reliability of the HE assessment.* The ExA notes HE's view that the methodology used in the applicant's air quality assessment is more conservative than would be achieved by applying a 50% uplift to Euro 6/VI emissions alone. Ricardo Energy and Environment (Ricardo) on behalf of Slough BC REP4-034, Section 4 sets out the findings of the International Council on Clean Transportation. In a real world test of Euro 6 diesel cars, NO_x emissions were found to be 7 times higher than the Euro 6 standard, with an on road level of 560 mg/km of NO_x compared to the regulatory limit of 80 mg/km. Furthermore, although diesel vehicles are forecast to make up 50% of the fleet in 2022, for motorways the expected split between petrol and diesel in the road fleet at 2022 is 33% and 67% respectively.

Can the applicant provide the following assumptions used in the air quality assessment?

- i. The rate at which Euro 6/VI vehicles are introduced into the fleet over the period of the projections.**
- ii. The level of emissions assumed for Euro 6/VI vehicles, having regard to the test standard of 80 mg/km which is not expected to be achieved.**
- iii. The breakdown of the fleet in terms of the percentage which are diesel.**
- iv. The level/rate of dispersion which is assumed in the modelling.**

4.6.4 *Level of uncertainty.* The assessment of air quality relies on a forecast of traffic levels and a set of assumptions which include those listed in questions 4.6.1-4.6.3 above. Ricardo on behalf of Slough Borough Council (BC) requests that a level of uncertainty of 10% should be accepted in regard to the air quality forecasts. Uncertainties in the modelling chain are set out by Ricardo under para 2.1 numbers 1-11 of REP4-034.

The applicant is requested to address each of these comments. What is the level of uncertainty which HE considers should be applied to the forecasts, and on what basis is that level considered to be appropriate?

4.6.5 *Implications for future AQMAs.* Evidence is submitted by LBHill_{REP2-060} and Slough BC_{REP2-047} of receptors which are forecast to experience levels of NO₂ very close to or above the annual mean UK air quality objective (the EU limit of 40 µg/m³). No forecast can be assumed to be entirely secure, and with the current doubt as to the reliability of Euro 6/VI vehicles, the ExA is concerned that the future pollution climate along the M4, which passes through existing AQMAs, is uncertain. An uncertainty of 10%, as suggested by Ricardo_{REP4-034}, could for example lead to increase of 4 µg/m³ of NO₂ in locations which are at the EU limit. This increase could result from either an underestimate of traffic levels or the level of emissions, but for those receptors in areas already just below or just above the EU limit, there would be a harmful level of exposure to NO₂.

What assurance can HE provide that harmful increases in emission levels will not occur?

4.6.6 *LBHill AURN¹ data.*

i. Can the applicant give an update on the discussions with Defra concerning the AURN monitoring site in LBHill (REP4-033)?

LBHill has provided further information concerning the AURN and the extent to which emissions may be the result of the school based traffic on Sipson Road_{REP4-033}. This indicates that the results from the AURN are unlikely to be heavily influenced by school related traffic, but are likely to be the result of the current operation of the M4. We note the applicant's submission that a change in the modelling to include the data from the AURN monitor is too small to result in a significant difference in predicted concentrations_{REP4-001}. However, if the data from the AURN is correct, it indicates

¹ Automatic Urban and Rural Network

that local residents and the staff and children attending the school are already experiencing levels of NO₂ in excess of the European Union (EU) limit.

- ii. **The applicant is requested to provide its opinion on the LBHill submissions and consider to what extent the emissions measured at this monitor are a result of the current operation of the motorway.**
- iii. **In the event that the AURN is representative of the level of NO₂ experienced by receptors in this area, how would the operation of the M4SM add to the concentrations for local residents and the school? Would it delay the ability of the location to achieve compliance with the EU target for NO₂ of no more than 40 µg/m³?**

4.6.7 *Scheme design.* **In the event that EU air quality limits are exceeded beyond the levels forecast by the applicant in the Air Quality assessment for the AQMAs, would the current design of the project allow for changes to be made in the management of the M4SM through for example, lowering speed limits in the off-peak as well as the peak hours of use (as in the A556 Knutsford to Bowdon Improvement scheme DCO); restricting traffic flow from feeder junctions; restricting access to the route for specific classes of vehicle? Can the applicant explain how any changes in management would be achieved?**

4.6.8 *Future proofing the M4SM.* The applicant's position is that there is no need for air quality mitigation measures, and in any event that there is little evidence of effective mitigation measures. However, Ricardo ^{REP4-034} provides evidence of barriers which have been tested and used for air quality mitigation. We note the argument that an increase in the height of barriers would cause visual amenity impacts, but there are examples of transparent barriers and the use of planting which would reduce such impacts. In any event, we consider that local authorities, on behalf of their local communities, should be given the opportunity to choose between air quality or visual impacts.

HE in its Delivery Plan 2015-2020 ^{REP4-005} commits 'to invest in a range of projects to reduce pollution and ensure the air around the network is clean and healthy for our customers and neighbours.' This also states that it will 'develop an air quality action plan setting out our activities for the next five years.' Furthermore the NN NPS states at paragraph 5.12 that the SoS must give air quality considerations substantial weight where a project would lead to deterioration in air quality in a zone/agglomeration- the NN NPS does not qualify that deterioration. In paragraphs 5.14 and 5.15 it

goes on to state that the SoS should consider whether mitigation measures put forward by the applicant are acceptable and gives examples of mitigation measures including '*physical means including barriers to trap or better disperse emissions and speed control*'

Having regard to submissions on behalf of Slough BC and other IPs concerning the uncertainty of the modelled levels of air pollution from the scheme, we consider that provision should be made for the monitoring of air quality by HE along the route of the M4SM during the periods of pre-construction, construction and operation of the scheme. In the event that monitoring data indicates that the scheme is causing increases to levels of NO₂, then an Air Quality Action Plan should be produced for implementation until such time as air quality levels are improved.

We therefore invite the applicant to prepare, **in consultation with the relevant local planning authorities**, a requirement to be included within the dDCO which provides for the following:

- i. A monitoring strategy for NO₂ detailing monitoring points, methods of measurement and levels of concentration which would trigger action, to be approved by the SoS² and implemented at least 6 months prior to the commencement of development.**
- ii. In the event that the trigger levels are exceeded, a scheme for the management of the M4SM which could include restriction of traffic speeds, restricting traffic flow from feeder junctions, restricting access to the route for specific classes of vehicle, or other measures to be submitted to the SoS for approval and implemented within 3 months of such approval.**
- iii. In the event that the management measures are not sufficient to reduce the air quality levels below the trigger value, a scheme for retrofitting physical measures such as air quality barriers should be submitted to the SoS for approval and implemented within 6 months of approval. The measures to be included in this scheme should be in accordance with Best Practicable Environmental Options (BPEO) to ensure future proofing of the scheme.**

² Reference is made to the SoS as discharging body. In the event that another discharging body is identified for the dDCO requirements, that body should be identified in the requirement. If the SoS is the discharging body rather than relevant local authorities, full consultation with the local authorities must be provided for.

The requirement should provide for the applicant to prepare each scheme or plan set out above in consultation with the relevant local planning authorities and other appropriate interested parties.

4.7 Noise and vibration

4.7.1 *Hours of Working and Construction Activity.* Re question 4 in the noise and vibration hearing (EV-008), which asked if the local authorities were satisfied with the mechanism proposed by the applicant to control hours of working and construction activities, LBHill^{REP4-033/038} raised a number of points, including the mechanism for ensuring adequate consultation with local authorities on the CEMP prior to the applicant's proposed approval by the SoS, the need to ensure that the final CEMP is in place before work commences on site, and the need for clarification on working hours at weekends.

With the SoS as the approval authority proposed by the applicant for the dDCO requirement on the CEMP (and other requirements), how will the applicant secure an appropriate level of consultation with the local authorities in the dDCO?

To what extent does the applicant accept LBHill's proposals with regard to working hours at weekends, and how will these proposals be secured in the dDCO by means of the CEMP?

4.7.2 *Noise Limits During Construction.* Re question 5 in the noise and vibration hearing^{EV-008}, which asked local authorities whether they were satisfied that adequate protection would be afforded to sensitive receptors by the approach proposed by the applicant of using the noise limits adopted for the M3 J2 to 4a scheme, the applicant^{REP4-001} noted that Slough BC, South Bucks District Council (SBDC) and LBHill had reservations regarding night-time working and the restriction of certain activities and would be entering into dialogue with the applicant. LBHill^{REP4-033/038} stated that: *'There are concerns with regard to the suggested approach on noise limits',* in that *'the proposed noise limits stated ... differ from the methodology proposed in table 12.1 of the ES'.* LBHill details its concerns and states that *'HE and its contractor should identify through measurements and predictions at least 6 months before work commences those properties that are likely to qualify for noise insulation and or temporary rehousing'.* LBHill also states that the form of respite for exceeded vibration levels is not given and should form part of a revised CEMP. With regard to the CEMP procedure for managing noise and vibration, the council states that it would only be satisfied with the suggested approach if its comments were addressed and an appropriate mechanism was developed for adequate consultation with local authorities with regard to discharge of obligations (see question 4.7.1 above with regard to consultation on the CEMP).

What is the applicant's response to LBHill's concerns on the applicant's proposals for construction noise limits and the Council's proposals with regard to noise mitigation measures?

4.7.3 *Enhanced Noise Mitigation Strategy*. Re question 6 in the noise and vibration hearing EV-008, which asked the extent to which the enhanced noise mitigation strategy would affect the noise environment of sensitive receptors, the applicant stated REP4-001 that work was ongoing to provide a quantitative assessment of the enhanced mitigation strategy outlined in Appendix 12.5 of the Environmental Statement APP-351, and consequently, it was *'not possible to be definitive on the number of beneficiaries and the estimated noise decreases at this stage'*.

Re question 9 in the hearing, which asked the local authorities and interested parties if they were satisfied with the applicant's amended schedule of noise barriers, submissions expressing issues were received from LBHill REP4-033/038 and Hayes Community Development Forum REP4-030.

What is the applicant's response to the specific issues raised by the following affected and interested parties:

- i. **LBHill** REP4-033/038, which called for clarification and tightening of the wording of Requirement 22 (Acoustic Barriers – addressed in the dDCO section of questions). The Council also requested that the height of the barriers should be increased along the northern boundary of the M4 where the Scheme abuts a substantial number of residential properties³, and questioned whether the heights of the fencing along the Cranford Park boundary (south of the M4) were accurate and wished to see enhanced mitigation implemented in this location. Having regard to the location of listed buildings which are on the 'at risk' register in Cranford Park, what measures could be put in place to improve the noise environment of these buildings⁴? Can the applicant confirm that, where enhanced noise mitigation measures have been applied elsewhere (e.g. M1, M6, M25), at least these levels of noise mitigation will be applied to the M4 at all comparable locations?
- ii. **Beverley Hunt (The Myrke resident)** REP4-011, who called for an extension to the proposed noise barrier in the vicinity of the Myrke properties;

³ See also questions on visual impact.

⁴ As above.

- iii. **Wokingham Liberal Democrats (Clive Jones)** ^{REP4-025}, who commented on current proposals for noise mitigation measures between junctions 10 and 11, and made proposals for enhanced noise mitigation measures;
- iv. **Wokingham Borough Council** ^{REP4-025}, which tabled a noise measurement map for the Lower Earley vicinity;
- v. **Dr Cocks (resident of Lower Earley)** ^{REP4-022}, who referenced noise map recommendations from Defra and the World Health Organisation with their implications for health, and requested '*any possible method to mitigate the noise problem*';
- vi. **Dr Jorgensen and Mr Holton (residents of Earley)** ^{REP4-014/015/016} who submitted collated lists of properties particularly affected by noise. For stretches along the north side of the M4 where the houses are at a higher level than the Motorway, for example Lower Earley and Savoy and Cleave Avenues, can higher acoustic fencing be included in the scheme to provide improvements to mitigation?
- vii. **Mr Green (resident)** ^{REP4-009}, who made observations on the current noise strategy, and proposed engineering the scheme to mitigate extensive traffic noise;
- viii. **Hayes Community Development Forum (Robin Brown)** ^{REP4-030}, who made reference to the NN NPS to consider opportunities '*to deliver environmental benefits*' and enhance the motorway '*to a standard equivalent to a contemporary motorway*', and also called for the rectification of the extent and nature of noise barriers in its locality;
- ix. **Reading Friends of the Earth (John Booth)** ^{REP4-018}, who raised concerns about acceptable noise levels for public health and the possibility of speed limits as a mitigation measure;
- x. **SBDC (Peter Beckford)** ^{REP4-021}, who raised concerns over the noise impact on a number of locations and properties (identified by SBDC) around the scheme?

4.7.4 *Single-sided Noise Barriers*. Re question 7 in the noise and vibration hearing ^{EV-008}, which asked whether any validation surveys had been undertaken in areas of single-sided noise barriers, the applicant stated that no such validation had taken place.

- i. **What is the applicant's response to LBHill's ^{REP4-017/033} requests for validation data to support assumptions with regard to single-sided barriers, and lining the side of the barrier facing the traffic with absorption materials?**
- ii. **What is the applicant's response to the Mid and West Berkshire Local Access Forum's ^{REP4-020} issues and requests with regard to noise and public rights of way, extra safety barriers, and the cattle creep crossing?**
- iii. **Re the Arborfield and Newland Parish Council's ^{AS-027} issues concerning reflected noise from barriers on the opposite side of the M4, can the Parish Council please identify precisely the locations with which they are concerned? The use of a map would assist.**

4.7.5 *Low Noise Surfacing*. Re question 8 in the noise and vibration hearing ^{EV-008}, which considered low noise surfacing, the applicant stated ^{REP4-001} that: '*The initial benefit of the Scheme of between 4 and 6 dB falls to between 1 and 3 dB after 10 years ... The -3.5 dB correction for a low noise surface, as prescribed in Design Manual for Roads and Bridges (DMRB), is a reasonable average over the life of the surface for calculation and assessment purposes*'. LBHill commented: '*At the hearing the ExA panel suggested amendments to the Draft DCO requirement to review the need for adequate maintenance and replacement of the low noise surfacing; this is supported by the council.*'

Would the applicant please state how the benefits of using low noise surfacing will be secured over the lifetime of the scheme when those benefits are lost as the surface ages?

4.8 Cultural assets

No further questions at this stage.

4.9 Effects on travellers (including Traffic Forecasting)

4.9.1 *Cumulative Impact*. The ExA notes HE's submissions ^{REP4-001} concerning the need to adopt a baseline date for the assessment of cumulative impacts. However ExA considers that a cumulative impact assessment should remain open to review over the period in which an application is proceeding through the consenting process. In this case, High Speed 2 (HS2) and the relocation of the Heathrow Express depot (HEX) are projects which are within the final stages

of the Hybrid Bill process. HS2 has cross-party support, and HEX is necessary for HS2 to proceed. Royal Assent may well be gained in time for the start of construction in 2017-18.

Furthermore, the ES was prepared and available for consultation in 2013 – 2014. Even at HE's baseline date of February 2014, there was information available to HE for the project to be taken into account.

In the applicant's submissions at Deadline IV ^{REP4-001 and Appendix A,} the applicant states: *'In line with the TAG guidance, all developments considered to be 'near certain' or 'more than likely' were taken forward for inclusion in the core scenario of the traffic model. Those developments considered to be 'reasonably foreseeable' or 'hypothetical' were excluded from the core scenario'.* The ExA believes that HS2 and HEX are 'more than likely' and should therefore be taken into account.

The construction period for HS2 would be from 2017 – 2025, and HEX would require relocation at an early stage in the construction timetable. BCC ^{REP4-032} identified at the hearing the potential for construction overlaps in 2020. In particular, issues were raised concerning impacts on the A412, the A4007 and the M25.

Since the primary potential for cumulative impact lies within the construction phase of the projects, the ExA considers that provision is required through the CEMP for any cumulative construction impacts that would arise as a result of works on HS2 and HEX during the same period as works on the M4 scheme.

Can the applicant include, in the outline CEMP, provision for the mitigation of cumulative impacts in the event that there is geographical and timescale overlap between the construction of HS2 and HEX with the M4 scheme? An amendment to R8 in the dDCO is put forward in the list of questions on the dDCO. To what extent would these changes meet the concerns of the local authorities?

- 4.9.2 *Consistency of Modelling.* Re question 3 in the hearing on traffic forecasting ^{EV-008,} as to whether the methodologies were developed by the same contractors or at least in a consistent manner, the applicant responded ^{REP4-001} that *'The National Transport Model and National Trip End Model were developed by consultants WSP, working on behalf of the Department for Transport. The M4 Smart Motorway model has been developed by two consultants. AECOM developed the variable demand element and Mouchel Consulting has developed the highway assignment model. Consistency has been achieved through the use of the DfT's Transport Analysis Guidance (TAG). The M4 Smart Motorway model has been developed in compliance with the guidance set down in TAG'.*

Since the DfT's Transport Analysis Guidance is only guidance, how does it guarantee consistency between different modellers?

4.9.3 *DfT Concerns and Future-proofing.* Re question 5 in the traffic forecasting hearing ^{EV-008}, as to whether the concerns in relation to the DfT Road Traffic Forecasts 2013, cited in the 2015 version (DfT website), had been taken into account in the HE M4 Smart Motorway Traffic Forecasting methodology, the applicant stated ^{REP4-001} that '*The general concern over the apparent conflict between the DfT forecasts of significant growth and a largely flat trend over the last decade has been addressed within the 2015 forecasts through the introduction of additional forecast scenarios in which the underlying assumptions that have historically underpinned earlier sets of forecasts are replaced with other potential explanatory variables. However, as the 2015 forecasts were published after completion of the M4 Smart Motorway model, these additional forecasts have not been taken into account ... As stated in paragraph 2.29 of Road Traffic Forecasts 2015, 'A full update of NTEM is underway and is scheduled to complete early in 2016. In the meantime, the DfT has stated that scheme promoters should continue to use the current (version 6.2) of NTEM until the update is ready for use ... Highways England confirmed that, in order to carry out the analysis in the same way, it would not be able to update its model until the more recent NTEM was provided. Highways England could, however, look at the implications of an alternative growth scenario by means of a sensitivity test.'*

Given 'DfT's forecasts of significant growth' in traffic volumes, ExA needs to be assured that there is sufficient flexibility in the design of the M4 Smart Motorway for future-proofing – e.g. speed limits, traffic volume control, traffic type control, and gantry spacing for control – and how this flexibility will be secured in the dDCO. We have tabled questions on future proofing in the air quality section.

Given the applicant's offer to look at the implications of an alternative growth scenario by means of a sensitivity test, would the applicant please do this for the worst case scenarios that might reasonably be inferred from DfT's forecasts (by Deadline V)?

4.9.4 *Independent Assessment and Verification.* Re question 8 in the traffic forecasting hearing ^{EV-008}, as to whether the HE M4 Smart Motorway Traffic Forecast had been independently assessed and verified, the applicant stated that: '*the model validation and subsequent forecasts for the M4 Smart Motorway model have been assessed and signed off by Highways England's Traffic Appraisal, Modelling and Economics (TAME) Appraisal Certifying Officer. In addition following completion of the appraisal an independent assessment is carried out of the traffic forecasting outputs by the DfT transport appraisal and strategic modelling team'*.

Would the applicant please make the assessment reports of the Traffic Appraisal, Modelling and Economics (TAME) Appraisal Certifying Officer and DfT Transport Appraisal and Strategic Modelling Team available to the examination?

4.9.5 *DfT Efficiency Improvements*. Re question 9 in the traffic forecasting hearing EV-008, regarding forecast efficiency improvements in DfT's Road Traffic Forecasts 2015 report, the applicant stated that: '*...these metrics have not been used in the air quality assessment for this Scheme. The air quality assessment has been based on Defra published emission rates and Defra tools, combined with post processing following Highways England's Interim Advice Note (IAN) 170/12 v3 ('Updated air quality advice on the assessment of future NO_x and NO₂ projections for users of DMRB Volume 11, Section 3, Part 1 'Air Quality')* ... no approved national emissions data sets have been released since recent revelations about the actual performance of certain parts of the fleet. As such, Highways England's air quality modelling is unable to reflect them.'

The ExA awaits with interest the new Defra plan for air quality, due by 31/12/2015, and will then need to assess its impact. See the air quality section below for ExA's questions on future proofing.

4.9.6 *Forecast Emissions*. Re questions 11-13 in the traffic forecasting hearing EV-008, regarding forecast emissions for CO₂, NO_x and PM₁₀ in DfT's Road Traffic Forecasts 2015 report, with large reductions in the emissions forecast over the scheme period, the applicant stated that: '*...these metrics have not been used in the air quality assessment for this Scheme. The (carbon) calculations have been completed using the (Defra) emissions factor toolkit ... Highways England summarised that the Department for Transport figures are not directly included but are reflected in the M4 traffic model which is bespoke to the Scheme. Highways England has provided a summary to clarify how the national assumptions feed through to the local model in Appendix B*'.

Can the applicant explain how the DfT transport figures are 'reflected in the M4 traffic model' when the DfT report post-dated the HE report by 6 months?

4.9.7 *Uncertainty in Forecasting*. Re question 14 in the traffic forecasting hearing (EV-008), which referenced Section 4.4 of the HE Traffic Forecasting Report concerning the treatment of uncertainty in forecasting, the responses of some affected and interested parties at Deadline IV, notably BCC REP4-027, LBHill REP4-033/038 have indicated that they were not convinced by the local modelling.

What is the current status of dialogue between these parties and the applicant, and what issues remain unresolved?

4.9.8 *Realism Tests*. Re question 15 in the traffic forecasting hearing ^{EV-008}, which sought clarity on the realism tests that have been undertaken to demonstrate that the modelled demand responses are plausible, the applicant stated ^{REP4-001} that the realism tests were undertaken by the modelling contractor in line with the guidance, and the results presented to the HE Appraisal Certifying Officer for approval.

Would the applicant please provide to the examination the realism tests undertaken by the modelling contractor and the scrutiny undertaken by the HE Appraisal Certifying Officer?

4.9.9 *Distributional Effects on Local Roads Networks*. Re question 19 in the traffic forecasting hearing ^{EV-008}, which asked interested and affected parties for their level of confidence in the high, core and low scenarios that had been modelled by the applicant, Reading Friends of the Earth (REP4-018) expressed its concerns and stated that it: *'...could not see how higher-level models could be accurate in predicting flows or routes between 'screen lines' if they did not model junction delays with some accuracy'*.

Re question 21 in the traffic forecasting hearing ^{EV-008}, which asked interested and affected parties, in particular local authorities, for their views on the stated distributional effects on local networks, Mr Dave Green (resident) ^{REP4-009} challenged the applicant's assertion that *'The scheme is predicted to have a neutral effect on the local road network'* and stated: *'As a professional who has worked in these fields locally for 27 years, who has an insight into the scale of local development pressures and who has been heavily involved with several of the current M4 junctions I find this conclusion totally unrealistic.'*

Mr Mike Knowles of RPS Group for the University of Reading ^{REP4-024} stated that: *'... the University of Reading is supportive of the Scheme but is seeking further clarification of the likely impacts on the wider local network'*.

Re question 22 in the traffic forecasting hearing ^{EV-008}, which asked the applicant to demonstrate that the study area used for traffic forecasting ensured that an accurate assessment was provided of changes to traffic flows in terms of the wider road network, the applicant ^{REP4-001} referenced the *Transport Analysis Guidance (TAG)* and *Design Manual for Roads and Bridges (DMRB)*, and explained that the model was validated on only a section of local roads as it was based on screen lines taken across a study area.

Re question 23 in the traffic forecasting hearing ^{EV-008}, which asked the applicant's response to **BCC's** assertion in its written representation at Deadline II ^{REP2-039} that the ES submitted in support of the dDCO did not adequately assess the impact of the proposed smart motorway scheme on the local road network during construction or operations and that no mitigation measures have been proposed, **BCC** in two submissions at Deadline IV, referenced a technical note provided by the applicant, and stated that: *'The impact of the local road network has not been quantified in the documents submitted in support of the DCO'*. At Deadline IV, BCC ^{REP4-027} identified 17 locations/junctions that in its view required additional assessments, including the A4 corridor, the A335 corridor, the A412 corridor, and the A4007. The County Council went on to state that: *'Due to the time of year it will not be possible to undertake Manual Classified Counts (MCC) prior to the determination of the DCO. As such, the County Council and Highways England are considering how the assessment and mitigation can be secured through the DCO process.'*

- i. Since the responses at Deadline IV indicated significant concerns among some interested and affected parties over distributional effects on the local networks, would the applicant please state its proposed response, the issues that remain unresolved, and measures for securing mitigation for impacts on the local road networks in the dDCO?**
- ii. Are local authorities content that the applicant's approach to local modelling is valid for local roads? If not, what are their alternative proposals and how would they wish them to be secured?**
- iii. What is the applicant's response to Reading Friends of the Earth's concerns with regard to the use of higher-level models to predict local flows between screen lines?**
- iv. What is the applicant's response to Mr Green's points about traffic distribution over the local roads network and the burden that this will place on local authorities?**
- v. What is the applicant's response to Mr Knowles's (for University of Reading) points on the likely impacts on the wider local network in the vicinity of the university?**
- vi. What is the applicant's response to the BCC submissions? If it is not possible within the timeframe to do surveys, what proposals do the applicant and BCC have, and what form of DCO requirement or Development Consent Obligation would secure the local road network both in the BCC locality and elsewhere along the scheme?**

4.10 Other matters

The applicant states that it is reconfirming the agreement from the DfT regarding carbon figures REP4-001, para 7.3. **The ExA expects submission of the information shared with the DfT and the DfT's response. In addition, can the applicant identify any circumstances in which the CO₂ attributable to the scheme would need to be re-assessed?**

5. Engineering and design

No further questions at this stage.

6. Traffic safety

No further questions at this stage.

7. Socio-economic impacts

No further questions at this stage.

8 Draft Development Consent Order (dDCO)

All questions relating to the draft DCO are principally addressed to the applicant

<i>First round question number</i>	<i>Article (A)/ Requirement (R)</i>	<i>Text</i>	<i>First round question(s)</i>	<i>December 2015 position</i>	<i>Second round question(s)</i>
8.1	General	Where relevant	<p>Can the applicant please apply the following?</p> <ul style="list-style-type: none"> i) All references to the Highways Agency should be amended to Highways England. ii) Provide contact details for Highways England (registered office address) in the Explanatory Note on the final page of the draft Development Consent Order (dDCO) APP-026. iii) Please correct typographical drafting errors and ensure all formatting is consistent with the statutory instrument template. iv) Correct use of future tense "shall" or "will" to present tense or "must" where appropriate. v) Correct use of capitals in heading above A44. vi) Each requirement must be checked to ensure that an implementation clause has been added e.g. R19 requires such a clause in order to ensure that lighting is installed in accordance with approved details. 	<p>Drafting improvements made by applicant in dDCO submitted to Deadlines II REP2-002 and III REP3-005.</p> <p>Residual drafting errors drawn to attention of applicant at issue specific hearing dealing with matters relating to the dDCO on 19 November 2015 (dDCO ISH). Applicant agreed to amend in dDCO submitted to Deadline V.</p> <p>In addition, the applicant agreed to:</p> <ul style="list-style-type: none"> • Insert definitions for "TSCS" and "CTMP"; • consider movement of the table within R6 to a separate schedule; and • consider duplication of relevant definitions in Schedule 2. <p>In respect of implementation clauses, at the dDCO ISH the applicant agreed to:</p> <ul style="list-style-type: none"> • Consider the consistency and deliverability of implementation clauses across all requirements; and in particular • consider the proposed two-stage mechanism for active consultation with local authorities and any means by which their interests could be safeguarded. 	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.2	Preamble	<i>"The application is for development which constitutes a nationally significant infrastructure project within</i>	In setting out the definition of highway related development which is within s14(1)(h) of the Planning Act 2008 (PA2008), s22 separately lists the alteration of a highway and the improvement of a highway. This application is described as the alteration and improvement of a highway. In the Statement	Applicant's response to first written questions (FRQ) REP2-002 states scheme falls within both s22(1)(b) and s22(1)(c), as constitutes both the alteration and improvement of a highway. Appended table differentiates individual works, but no	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.

		sections 14(1)(h) and 22 of the Planning Act 2008, being the alteration and improvement of a highway which is wholly within England, in relation to which the Secretary of State is the highway authority, and the area of development of which is greater than 15 hectares.”	of Reasons (SoR) ^{APP-030} , para 5.1.8 states that the proposed development is an alteration, and para 5.1.9 states that the development is also an improvement. Whilst the application would fall within the definition of a nationally significant infrastructure project, whichever it is considered to be, and has been accepted by the Secretary of State (SoS) as such, can the applicant clarify what is meant by paras 5.1.8 and 5.1.9? Furthermore, can the applicant clearly state which definition is being applied to which work?	attempt to reflect in dDCO Preamble.	
8.3	A2	“commence” means ...development other than operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, habitat creation and species translocation, establishment of site offices and the laying of services, erection of any temporary means of enclosure, the temporary display of site notices or	The SoS was reluctant “to permit significant elements of the development to commence before relevant approvals have been obtained from the planning authority under the requirements as appears to be intended by the definition of “commence”” in the decision letter for the Daventry International Rail Freight Interchange Alteration Order (see para 44 of the decision letter), and deleted the corresponding definition from the final Order. With this in mind, can each of these exclusions be fully justified?	Applicant’s position sustained in response to FRQ ^{REP2-002} . Following further oral questioning at the dDCO ISH, the applicant agreed to consider the deletion of “commence” from A2 and any derivative usage within the Order. Its purpose and function would be replaced by a new definition for “carry out”.	No further questioning required ahead of applicant’s fourth dDCO to be provided to Deadline V.

		<i>advertisements</i>			
8.4	A2	<i>"environmental statement" means the environmental statement submitted with the application for the Order, and certified as the environmental statement by the Secretary of State for the purposes of this Order</i>	<p>The environmental statement (ES) may be updated or amended before any decision is taken on the dDCO. To accommodate any such changes, can the applicant re-word as follows:</p> <p><i>"the environmental statement" means the document certified as the environmental statement by the decision-maker for the purposes of this Order.?</i></p>	<p>Applicant's position sustained in response to FRQ_{REP2-002}.</p> <p>Following further oral questioning at the dDCO ISH, the applicant agreed to provide a list of documents secured by the dDCO to each examination deadline, and for that list to be reflected in A45 of concurrent iterations of the dDCO.</p>	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.5	A2	<i>"maintain" in relation to the authorised development includes to inspect, repair, adjust, alter, remove, clear, refurbish, reconstruct, decommission, replace and improve and any derivative of "maintain" is to be construed accordingly.</i>	<p>This is a broad definition of maintain. Can it be justified and what guarantee can be given that, for example, "reconstruct" would not fall outside the parameters of the description of the authorised project in Schedule 1, and would not be such as to give rise to any significant environmental effects which have not been assessed in the ES? Please see the definition of maintain adopted by the SoS in the Whitemoss Landfill Western Extension DCO.</p>	<p>Applicant's position sustained in response to FRQ_{REP2-002}.</p> <p>On receipt of oral representations at dDCO ISH, the Examining Authority stated it would further consider the applicant's justification for the breadth of the definition as drafted.</p>	<p>In the applicant's summary of case for the dDCO hearing submitted to Deadline IV_{REP4-006}, it states that the proposed definition was included on the basis that it had been found acceptable in previously adopted DCO's, (with examples cited); and that the definition codifies the ability of Highways England (HE) to do what it already has the power to do under its permitted development rights under the Town and Country Planning (General Permitted Development) (England) Order 2015 and the Highways Act 1980.</p> <p>However if HE already has the powers to carry out these works, why is it necessary to include them within the definition of maintain in the dDCO?</p> <p>With regard to the examples given from previously adopted DCOs, as stated at the Hearing, best practice in relation to the content of DCOs is evolving. In the recently issued decision on the Ferrybridge Multifuel 2 (FM2) Power Station Order, the definition of "maintain" was amended by the Secretary of State "to ensure clarity and consistency with previous Orders", as follows:</p> <p><i>"maintain" includes (i) inspect, repair, adjust, alter, improve, refurbish, and (ii) in relation to a part of a work (but not the whole of a work) of the authorised</i></p>

					<p><i>development, remove, clear, demolish, decommission, reconstruct or replace; and "maintenance" and other cognate expressions are to be construed accordingly</i></p> <p><i>Article 7 of the Ferrybridge Order states as follows:</i></p> <p><i>"Power to maintain the authorised development</i></p> <p><i>7.—(1) The undertaker may at any time maintain the authorised development, except to the extent that this Order (including the requirements), or an agreement made under this Order, provides otherwise.</i></p> <p><i>(2) Paragraph (1) does not authorise any works—</i></p> <p><i>(a) not assessed in the environmental statement;</i></p> <p><i>(b) outside the Order limits; or</i></p> <p><i>(c) which would result in the authorised development varying from the description in Schedule 1."</i></p> <p>We would suggest that HE adopt the above wording as a replacement to the definition under A2 and to replace the wording currently set out in A4 to the dDCO submitted to Deadline III_{REP3-005}, in order to resolve the matter by and to more precisely restrict the scope of maintenance.</p>
8.6	A2	<i>"relevant planning authority" means the local planning authority for the land in question.</i>	Can this definition be amended to reflect that there is more than one relevant planning authority?	Applicant's position sustained in response to FRQ _{REP2-002} . No further oral questioning at dDCO ISH.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.7	A2	<i>"Secretary of State" means the Secretary of State for Transport</i>	In the Norwich Northern Distributor Road DCO, the SoS for Transport deleted the definition of SoS to allow for any future changes in the machinery of government. A generic SoS should be assumed. Can the applicant delete this definition?	Applicant's position sustained in response to FRQ _{REP2-002} . No further oral questioning at dDCO ISH.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.8	A3(2)	<i>For the purposes of</i>	This is a very general power, with little	Applicant's response to FRQ _{REP2-002}	No further questioning required ahead of

		<i>the authorised development, development consent granted by this Order is to include and permit the alteration, removal, clearance, refurbishment, reconstruction, decommissioning and demolition of any buildings or other structures within the Order limits to the extent that they relate to, are required by or are incidental to the carrying out of the authorised development.</i>	limitation on its scope. What is the purpose of this power and how can it be justified?	acknowledged wording not required as authorised development fully described in Schedule 1. Sub-paragraph 2 deleted in dDCO submitted to Deadline II <small>REP2-002</small> .	applicant's fourth dDCO to be provided to Deadline V.
8.9	A3(4)	<i>The numbered works comprised in the authorised development are to be constructed within the limits specified in article 6 (power to deviate).</i>	Does this clause duplicate the provision made in A3(3)?	Applicant's response to FRQ <small>REP2-002</small> acknowledged provision duplicated that in A3(3). A3(4) deleted in dDCO submitted to Deadline II <small>REP2-002</small> .	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.10	A6	<i>...these maximum limits do not apply where it is demonstrated to the Secretary of State's satisfaction that a deviation in excess of these limits would not give rise to any materially new or materially worse adverse environmental effects from those assessed in the</i>	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) <small>APP-027</small> . 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?	Applicant's position sustained in response to FRQ <small>REP2-002</small> . Following further oral questioning at the dDCO ISH, the applicant agreed to delete the wording " <i>except that these maximum limits do not apply where it is demonstrated to the Secretary of State's satisfaction that a deviation in excess of these limits would not give rise to any materially new or materially worse adverse environmental effects from those assessed in the environmental statement</i> " in the dDCO to be submitted to Deadline V.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.

		<i>environmental statement</i>			
8.11	A14(6)	<i>If a street authority which receives an application for consent under paragraph 14(5) fails to notify the undertaker of its decision before the end of the period of 28 days beginning with the date on which the application was made, it is deemed to have granted consent.</i>	This is an addition to the model provision. Is it appropriate for the consent of the street authority to be deemed to have been given after 28 days in this way?	Applicant's position sustained in response to FRQ _{REP2-002} . Following further oral questioning at the dDCO ISH, in respect of A16(6), A19(6) and A17(9) the applicant agreed to draft and agree wording with the Environment Agency in respect of deemed consent being provided after expiry of 28 day period. The applicant also agreed to consider the inclusion of street authorities in these provisions.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.12	A15	<i>The undertaker may for the purposes of the authorised development form and lay out means of access, or improve existing means of access at such locations within the Order limits as the undertaker reasonably requires for the purposes of the authorised development.</i>	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?	Applicant's position sustained in response to FRQ _{REP2-002} . No further oral questioning at dDCO ISH.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.13	A16	<i>Powers in relation to relevant navigations or watercourses</i>	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?	Applicant's position sustained in response to FRQ _{REP2-002} . Following further oral questioning at the dDCO ISH, the applicant agreed to consider the insertion of a similar clause to that in A17(7) in order to safeguard the requirement for environmental permits.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.

8.14	A17(9)	<i>If a person under paragraph (3) receives an application for consent and fails to notify the undertaker of its decision before the end of the period of 28 days beginning with the date on which the application was made, the person is deemed to have granted consent</i>	This is an addition to the model provision, which is not explained or justified in the EM APP-027. Is it appropriate for the consent of the relevant person to be deemed to have been given after 28 days in this way?	See 8.11, above.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.15	A19(6)	<i>If a highway authority under paragraph (4)(a) or a street authority under (4)(b) receives an application for consent and fails to notify the undertaker of its decision before the end of the period of 28 days beginning with the date on which the application was made, the highway authority or street authority, as relevant, is deemed to have granted consent.</i>	This is an addition to the model provision, which is not explained or justified in the EM APP-027. Is it appropriate for the consent of the relevant authority to be deemed to have been given after 28 days in this way?	See 8.11, above.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.16	A41	<i>Operational land for purposes of the 1990 Act</i>	Why is it necessary for the Order land to be treated as operational land? Which powers or rights does the undertaker seek to rely on based on this definition?	Applicant's position sustained in response to FRQ _{REP2-002} . No further oral questioning at dDCO ISH.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.17	A42	<i>...in relation to a nuisance falling within paragraphs</i>	The list of nuisances has been extended from that provided for in the model provision. How will these nuisances be controlled in relation	Applicant's position sustained in response to FRQ _{REP2-002} .	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.

		(c), (d), (e), (fb), (g), (ga) and (h) of section 79(1) (statutory nuisances and inspections therefor)	to the development?	No further oral questioning at dDCO ISH.	
8.18	A45	<i>Certification of plans etc</i>	There are a number of sheets which comprise the Land Plans APP-008 to APP-012 and the Works Plans APP-013 to APP-017. Would it be more precise to provide the referencing/numbering of those sheets to ensure that all are taken into account?	Request reflected in the dDCO submitted to Deadline II REP2-002.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.19	A49(2)	<i>Schedule 11 (procedure for discharge of requirements) shall have effect in relation to all agreements or approvals granted, refused or withheld in relation to requirements.</i>	Why is it considered necessary to have a bespoke approval procedure for this development? Why should the existing procedure in relation to planning conditions not be used instead, as provided for by A4(1) of the Brechfa Forest West Wind Farm DCO 2013?	<p>Applicant's position sustained in response to FRQ REP2-002.</p> <p>Explanatory note in respect of bespoke discharge procedure provided to Deadline III REP3-015. Schedule 11, as referred to in FRQs, is now Schedule 12 in the dDCO submitted to Deadline III REP3-005.</p> <p>Following further oral questioning at the dDCO ISH, the applicant acknowledged the concern expressed by the ExA. The applicant agreed to consider further:</p> <ul style="list-style-type: none"> consider the proposed two-stage mechanism for active consultation with local authorities and any means by which their interests could be safeguarded; including whether a service level agreement with the relevant planning authorities. <p>The applicant confirmed that it would provide a note on the matters discussed, and any consequential changes to the dDCO required, to Deadline V.</p>	No further questioning required ahead of applicant's fourth dDCO and associated note to be provided to Deadline V.
8.20	General	All drafting in Schedule 2	<p>In requirements which include provision for details to be submitted to and approved by the relevant planning authority, should it be made explicit that such approvals should be made in writing?</p> <p>A number of requirements include tailpieces</p>	Applicant's position sustained in response to FRQ REP2-002 and at dDCO ISH.	There is clearly a fine line between a variation of the DCO pursuant to the procedure in the Planning Act 2006 and "the provision of flexibility within the approved order limits", as HE suggests. HE also suggests that this flexibility is with "the terms of the DCO expressing, <u>and</u>

			such as “unless otherwise approved by the relevant planning authority”. Such a provision allows scope for the PA2008 procedures to be circumvented and runs the risk of enabling the final scheme to go beyond the envelope of the ES. Is there any reason why such a provision would be justified in any of the requirements to the proposed DCO?		<p><i>limiting, the extent of the flexibility that is acceptable</i>” (para 12.3.2, emphasis added).</p> <p>However, it is not clear that the flexibility being given is limited in any way. There appears to be no wording in the dDCO which limits the power to seek variations in R3 and R6, for example. Similarly, the ability to seek variations from the standards in R10 and R11 does not appear to be limited in any way.</p> <p>R5 does, in terms, have a limit placed upon it (the new material must have similar qualities to TSCS), so is more likely to be acceptable.</p> <p>Can the applicant please explain how they consider the flexibility to be limited in the way they suggest in these other requirements?</p>
8.21	R3	<p><i>3 Except where the authorised development is carried out in accordance with the plans listed in requirement 4, no authorised development may commence until details of the layout, scale, siting, design, dimensions and external appearance of Works No. 7a, 8c, 9b, 10c, 11c, 12e, 13c, 14c, 17, 19c, 20c, 22c, 24g, 24j and 25, earthworks and retaining structures comprised in the authorised development so far as they do not accord with the</i></p>	<p>This requirement would appear to seek to enable the applicant to amend aspects of the scheme with the approval of the relevant planning authority. Such a provision could circumvent the provisions of PA2008 and enable the construction of a modified scheme which goes beyond the scope of the ES. Can the applicant please review this requirement and provide justification for its inclusion?</p>	<p>Applicant’s position sustained in response to FRQ_{REP2-002}.</p> <p>Following further oral questioning at the dDCO ISH, the applicant agreed to consider:</p> <ul style="list-style-type: none"> • The insertion of relevant consultation bodies in R3, R4, R5, R7, R9 and R18; or • the insertion of a new standalone provision covering Schedule 2 in equivalent respect. 	<p>No further questioning required ahead of applicant’s fourth dDCO to be provided to Deadline V.</p>

		<p><i>development shown in the plans listed in requirement 6 have been submitted to and approved by the relevant planning authority. The authorised development must be carried out in accordance with the details shown in the plans listed in requirement 6 or approved under this requirement.</i></p>			
8.22	R6(2)	<p><i>6(1) The authorised development must be carried out in accordance with the approved plans submitted with the application (unless otherwise approved by the relevant planning authority and provided that the altered development accords with the principles of the engineering and design report and falls within the Order limits) as follows:</i></p> <p><i>6(2) Where any alternative details are approved pursuant to this requirement or requirements 3 or 20, those details are to be deemed to be substituted</i></p>	<p>The query raised in question 8.21 also applies to the provision in R6 for alterations to the development to be approved by the relevant planning authority. Can the applicant please review this requirement and provide justification for its inclusion?</p>	<p>Applicant's position sustained in response to FRQ <small>REP2-002</small> and at dDCO ISH.</p> <p>Following further oral questioning at the dDCO ISH, the applicant agreed to consider the insertion of the full title of the CEMP and EMP, and to reflect the amendment throughout Schedule 2.</p>	<p>No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.</p>

		<i>for the corresponding approved details set out above.</i>			
8.23	R5	<i>5 Where any carriageway comprised in Work No. 1a and 1b, or any slip road is to be resurfaced as part of the authorised works, thin surface course is to be provided, unless otherwise approved by the relevant planning authority.</i>	Can the applicant confirm that this requirement is intended to secure the low noise surface proposed in the ES? If so, can the applicant reconsider the wording of the requirement to make this explicit, and to specify that any material <i>"otherwise approved by the relevant planning authority"</i> would provide a low noise surface?	Applicant's response to FRQ _{REP2-002} proposed rewording to make mechanism for approval of any other surface clear. Rewording reflected on dDCO submitted to Deadline II _{REP2-002} . Following further oral questioning at the dDCO ISH, the applicant agreed to consider <ul style="list-style-type: none"> the insertion of wording to explain any intended maintenance programme; or the insertion of a new standalone provision covering any intended maintenance programme. 	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.24	R7	<i>7.-(1) No part of the authorised development is to be carried out...</i>	Would <i>"commenced"</i> be more consistent than <i>"carried out"</i> ?	See 8.3, above.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.25	R8	<i>8.-(1) No part of the authorised development is to be carried out...</i> <i>8.-(3) The undertaker may modify the CEMP at any time---</i>	Would <i>"commenced"</i> be more consistent than <i>"carried out"</i> ? Apart from where there is the potential for an impact on protected species or protected sites, this provision appears to give the undertaker unlimited powers to change the CEMP after it has been approved by the relevant planning authority. Is this a requirement which should make provision for any modifications to the CEMP to be agreed in writing with the relevant planning authority? (see Q4.1.5)	See 8.3, above. Applicant's response to FRQ _{REP2-002} agreed to delete R8(3). Deletion reflected in dDCO submitted to Deadline II _{REP2-002} . Concerns raised by local authorities concerning the lack of detail in early versions of the CEMP. Also concerns about potential cumulative construction impacts from other major developments.	Having regard to concerns raised in written submissions and at the issue specific hearing dealing with matters relating to the environment by local authorities about the lack of detail in the early version of the CEMP, can the applicant consider incorporating further detail into R9? The ExA's suggested requirement is largely based on that adopted in R8 of The Cornwall Council (A30 Temple to Higher Carblake Improvement) Order February 2015. Construction environmental management plan <i>8.-(1) No authorised development must commence until a CEMP, substantially in accordance with the outline Construction Environmental Management Plan, annexed to the outline EMP (dated ?), has been submitted to and approved by the Secretary of State, in consultation with the Environment Agency [and the relevant local</i>

					<p><i>planning authority, TBC].</i></p> <p><i>(2) The CEMP must include—</i></p> <p><i>(a) measures to mitigate the effects of noise and vibration during construction;</i></p> <p><i>(b) measures to mitigate the effects of dust and emissions during construction;</i></p> <p><i>(c) measures to mitigate the effects of lighting during construction;</i></p> <p><i>(d) measures to control and manage surface water during construction;</i></p> <p><i>(e) measures to control and manage site waste management;</i></p> <p><i>(f) measures to control and manage access by construction traffic;</i></p> <p><i>(g) traffic management measures, including provision for the mitigation of the effects of the authorised development on traffic in combination with the effects of the concurrent construction of any other major developments, including HS2 and HEX;</i></p> <p><i>(h) measures to mitigate any interruption of access to businesses, including agricultural holdings;</i></p> <p><i>(i) measures to control and manage the potential effects of contaminants and pollutants;</i></p> <p><i>(j) measures to mitigate the effects of construction activities on health and safety;</i></p> <p><i>(k) measures to exclude fish from watercourses;</i></p> <p><i>(l) measures to mitigate the construction effects on any sensitive ecological receptors;</i></p> <p><i>(m) measures to mitigate the construction effects on archaeology and cultural heritage;</i></p> <p><i>(n) landscape and visual mitigation;</i></p> <p><i>(o) measures for the protection of any European or nationally protected species from activities associated with the</i></p>
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					<p><i>authorised development;</i></p> <p><i>(p) repeat surveys to be undertaken to confirm the presence of any European or nationally protected species where necessary;</i></p> <p><i>(q) measures to mitigate the effects of the activities associated with the authorised development on European or nationally protected species and identified in the surveys required by sub-paragraph (p);</i></p> <p><i>(r) a programme for implementation of the proposed measures required by sub-paragraphs (o), (p) and (q); and</i></p> <p><i>(s) details of those measures.</i></p> <p><i>(3) The construction of the authorised development must be carried out in accordance with the CEMP.</i></p> <p><i>(4) Upon completion of construction of the authorised development the CEMP must be converted into the HEMP.</i></p> <p><i>(5) The authorised development must be operated and maintained in accordance with the HEMP.</i></p>
8.26	R13	<i>(5)(b) no activities requiring a protected species licence are to continue until a scheme of protection and mitigation measures for the protected species has been submitted to, and approved by, Natural England and the relevant planning authority.</i>	Would this provision be more precise if a protective distance from any protected species within which works could not take place was to be included in 5(b) and would such a definition within the requirement be feasible?	Applicant's position sustained in response to FRQ <small>REP2-002</small> . No further oral questioning at dDCO ISH.	No further questioning required ahead of applicant's fourth dDCO to be provided to Deadline V.
8.27	A36	<i>Power to operate and maintain the authorised works</i>	n/a	n/a	This Article appears to duplicate the provisions of A3 (Operation) and A4 (Maintenance). Is it necessary for A36 to

		36. <i>The undertaker may operate and maintain the authorised works.</i>			be retained?
8.28	R22	<p><i>Acoustic barriers</i></p> <p><i>22.—(1) No part of the authorised development is to be commenced until details of a scheme to install or replace acoustic barriers in the locations shown on figure 12.2 contained within the environmental statement has been submitted to and approved in writing by the Secretary of State following consultation with the relevant planning authorities.</i></p> <p><i>(2) The acoustic barriers installed in accordance with the scheme approved in paragraph (1) must—</i></p> <p><i>(a) match adjacent retained acoustic barriers so far as possible; and</i></p> <p><i>(b) be compliant with any engineering requirements governing the form of acoustic barriers which may be</i></p>	n/a	n/a	<p>It has become clear that there is existing fencing along the boundary of the M4 which does not provide adequate acoustic or visual barriers for adjoining residential properties and other sensitive receptors. The applicant has indicated that any barriers which have been included in the noise assessment as acoustic barriers and which are found to be not fit for purpose will be replaced with acoustic barriers.</p> <ul style="list-style-type: none"> • Can the applicant clarify the criteria to be used to assess whether a barrier is not fit for purpose? • Is R22 adequate to secure the replacement of acoustic barriers which do not meet this criteria? <p>Is there a typing error in R22(3)? Should this refer to operation rather than construction?</p>

		<i>installed. (3) The approved noise management scheme must be implemented before and maintained during construction of the authorised development.</i>			
8.29	General	Where relevant	n/a	n/a	<p>We note the applicant's submissions that there is insufficient space within the boundaries of the application to introduce the use of SuDs. However, Buckinghamshire County Council and LBHill identify land outside the confines of the site which could be used to introduce SuDs in to the scheme. The National Networks National Policy Statement (NN NPS) para 5.230 states that the project should adhere to any National standards for sustainable drainage systems. Whilst it is recognised in the NN NPS that it may not be feasible to adopt the most sustainable approach, the land identified by the local authorities represents opportunities to upgrade the approach which has currently been adopted.</p> <p>Can the applicant and local authorities identify a mechanism through the DCO whereby the drainage system could be upgraded through the use of off-site land either through an appropriate requirement or the use of a Development Consent Obligation?</p>

9 Compulsory acquisition and other land matters

Question Number	Question to	Question(s)
9.1	Applicant	<p>Can the applicant confirm that the arrangements for limiting the extent to which the Sipson Road subway is closed can be incorporated into the CEMP as requested by LBHill at Deadline IV <small>REP4-033</small>?</p> <p>Where there is a reduction in powers of temporary possession at Vine Close/Sipson Road subway can this be shown in updated Land Plans?</p>

9.2	South Bucks District Council (SBDC)	<p>SBDC Local Impact Report (LIR) ^{REP2-050} expresses outstanding concern in relation to temporary possession of lands in SBDC interest. The LIR contradicts the Statement of Common Ground (SoCG) agreed with the Council ^{REP2-057} in respect of its satisfaction with retained access arrangements at Dorney Village Hall.</p> <p>For the avoidance of doubt, can SBDC confirm which document represents the current position of the Council?</p>
9.3	Applicant	<p>At the compulsory acquisition hearing (CAH), the applicant stated that a SoCG would be available with Slough BC (SBC) for Deadline IV. No SoCG was received. Can the applicant update the examination in respect of negotiations with SBC?</p>
9.4	Applicant, Affinity Water, South East Water, Thames Water, British Pipeline Agency and Network Rail Infrastructure	<p>Can the applicant provide an update on the position in respect of negotiations with Affinity Water, South East Water, British Pipeline Agency and Network Rail Infrastructure with regard to protective provisions? Can confirmation of any agreements please be provided by all parties?</p>
9.5	Applicant	<p>The Category 1 interest in plot 26-12 is still listed in the Deadline III BoR ^{REP3-021} as Grundon Waste Management Ltd. For the avoidance of doubt, can the applicant and Thames Water (TW) please clarify whether TW or Grundon should appear as the freehold interest in this plot?</p>
9.6	Applicant	<p>At the CAH, the applicant asserted that a reduced extent in temporary possession (TP) powers at plot 23-35 had been reflected in the Deadline III Land Plans ^{REP3-008}. This does not appear to be the case. With reference to the detailed drawing attached to the applicant's response to Slough Allotment Federations' (SAF) written representation (WR) ^{REP3-023}, can the applicant please provide updated Land Plans showing the reduction of TP powers as agreed with SAF to Deadline V?</p>
9.7	Louise Maxwell-Watters and John Watters	<p>Ms Maxwell-Watters/John Watters are interested in plots 19-53 and 19-54. Their objection to the scheme is sustained in their WRS ^{REP2-026}.</p> <p>Have Ms Maxwell-Watters/John Watters read the applicant's response to their relevant representations (RRs) ^{REP1-003}? To what extent are the interested parties satisfied by the assurances provided by the applicant in the response to their RR, particularly in respect of the measures included in the Outline CEMP (in its current form) ^{REP3-10}? (Repeated from first round questions).</p>
9.8	Applicant	<p>The applicant is reminded of the intention to update Works Plans to show Shinfield Eastern Relief Road. Can this update please be provided to Deadline V?</p>
9.9	Applicant, Bloor Homes Southern and Anita Thomas	<p>Can the parties please update the examination on the progress of discussions in respect of plot 18-02?</p>
9.10	Applicant, Railway Pension Nominees Ltd	<p>Can the parties please update the examination on the progress of any discussions in respect of plots 18-07 and 18-08?</p>
9.11	Applicant	<p>With reference to the applicant's summary of oral representations put at the CAH ^{REP4-006}, can the applicant please provide updated Land Plans showing the removal of plots 05-11, 05-12 and 05-13 from the scheme?</p>
9.12	Applicant	<p>Can the applicant confirm the transfer of BK461004 to Highways England (HE)?</p>
9.13	Applicant	<p>The applicant's Deadline III submission states that, in addition to BK461004, Land Registry documentation is not available to evidence the transfer to HE for 68 other plots. Can the applicant confirm the registry or transfer of ownership of these 68 plots to HE?</p> <p>What would be the implications for the draft Order if registry/transfer to HE cannot be achieved before the end of the examination?</p>

9.14	Applicant	Can the applicant provide an update on its enquiries with the Government Clearing House in respect of the five plots listed as owned by Defra?
9.15	Applicant and Goodman Colnbrook (Jersey) Ltd (GCL)	Can an update be provided to the examination by the applicant and GCL with regard to the compatibility of the M4 scheme with the proposed strategic rail freight interchange on which an appeal decision is due in April 2016?
9.16	Applicant	Can the applicant demonstrate by means of a plan the relationship between the planning permission O/2006/8687 (Persimmon Homes and Bovis Homes) and the scheme proposals in the vicinity of the residential development site?
9.17	Applicant	Has the applicant reached any agreement with RBS in relation to the submissions made in the RBS RR dated 2 July 2015 <small>RR-239</small> ?
9.18	Applicant	Has the applicant held any discussions with Ms Rieseberg in relation to the land in which she has an interest?