

# M5 Junction 10 Improvements Scheme

## Consultation Report Appendix B - EIA Scoping Opinion TR010063 - APP 5.2

Regulation 5 (2) (q)

Planning Act 2008

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

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# Infrastructure Planning Planning Act 2008

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

### M5 Junction 10 Improvement Scheme Development Consent Order 202[x]

#### 5.2 Consultation Report Appendix B - EIA Scoping Opinion

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# Table of contents

Chapter	Page
<b>Appendix B. INS EIA Scoping Opinion Consultation Bodies</b>	<b>5</b>
<b>B.1. EIA Scoping Opinion</b>	<b>5</b>
<b>B.2. Prescribed Consultation Bodies</b>	<b>5</b>
<b>B.3. Relevant Statutory Undertakers</b>	<b>6</b>
<b>B.4. Section 43 Local Authorities (For the purposes of section 42(1)(b))</b>	<b>8</b>

# Appendix B. INS EIA Scoping Opinion Consultation Bodies

## B.1. EIA Scoping Opinion



# **SCOPING OPINION:**

## **Proposed M5 Junction 10 Improvements Scheme**

**Case Reference: TR010063**

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Adopted by the Planning Inspectorate (on behalf of the Secretary of State) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

**August 2021**

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## CONTENTS

<b>1.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Background .....	1
1.2	The Planning Inspectorate’s Consultation.....	2
<b>2.</b>	<b>THE PROPOSED DEVELOPMENT .....</b>	<b>4</b>
2.1	Introduction .....	4
2.2	Description of the Proposed Development.....	4
2.3	The Planning Inspectorate’s Comments.....	5
<b>3.</b>	<b>ES APPROACH.....</b>	<b>8</b>
3.1	Introduction .....	8
3.2	Relevant National Policy Statements (NPSs).....	8
3.3	Scope of Assessment .....	9
3.4	Coronavirus (COVID-19) Environmental Information and Data Collection	12
3.5	Confidential and Sensitive Information.....	13
<b>4.</b>	<b>ASPECT BASED SCOPING TABLES.....</b>	<b>14</b>
4.0	Air Quality.....	14
4.1	Noise and Vibration .....	16
4.2	Biodiversity .....	18
4.3	Road Drainage and the Water Environment .....	23
4.4	Landscape and Visual.....	25
4.5	Geology and Soils.....	28
4.6	Cultural Heritage.....	30
4.7	Materials and Waste .....	31
4.8	Population and Human Health.....	32
4.9	Climate.....	33
4.10	Cumulative Impact Assessment .....	35
<b>5.</b>	<b>INFORMATION SOURCES .....</b>	<b>36</b>
 <b>APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED</b>		
 <b>APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES</b>		



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# 1. INTRODUCTION

## 1.1 Background

- 1.1.1 On 20 July 2021, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from Gloucestershire County Council (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed M5 Junction 10 Improvements Scheme (the Proposed Development).
- 1.1.2 In accordance with Regulation 10 of the EIA Regulations, an Applicant may ask the SoS to state in writing its opinion *'as to the scope, and level of detail, of the information to be provided in the environmental statement'*.
- 1.1.3 This document is the Scoping Opinion (the Opinion) provided by the Inspectorate on behalf of the SoS in respect of the Proposed Development. It is made on the basis of the information provided in the Applicant's report entitled M5 Junction 10 Improvements Scheme Environmental Impact Assessment Scoping Report (the Scoping Report). This Opinion can only reflect the proposals as currently described by the Applicant. The Scoping Opinion should be read in conjunction with the Applicant's Scoping Report.
- 1.1.4 The Applicant has notified the SoS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the Proposed Development is EIA development.
- 1.1.5 Regulation 10(9) of the EIA Regulations requires that before adopting a scoping opinion the Inspectorate must take into account:
- (a) *any information provided about the proposed development;*
  - (b) *the specific characteristics of the development;*
  - (c) *the likely significant effects of the development on the environment; and*
  - (d) *in the case of a subsequent application, the environmental statement submitted with the original application.*
- 1.1.6 This Opinion has taken into account the requirements of the EIA Regulations as well as current best practice towards preparation of an ES.
- 1.1.7 The Inspectorate has consulted on the Applicant's Scoping Report and the responses received from the consultation bodies have been taken into account in adopting this Opinion (see Appendix 2).
- 1.1.8 The points addressed by the Applicant in the Scoping Report have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that when it comes to consider the ES, the Inspectorate will take account of relevant legislation and guidelines. The Inspectorate will not be precluded from requiring additional information if it

is considered necessary in connection with the ES submitted with the application for a Development Consent Order (DCO).

- 1.1.9 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (e.g., on submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or Associated Development or development that does not require development consent.
- 1.1.10 Regulation 10(3) of the EIA Regulations states that a request for a scoping opinion must include:
- (a) *a plan sufficient to identify the land;*
  - (b) *a description of the proposed development, including its location and technical capacity;*
  - (c) *an explanation of the likely significant effects of the development on the environment; and*
  - (d) *such other information or representations as the person making the request may wish to provide or make.*
- 1.1.11 The Inspectorate considers that this has been provided in the Applicant's Scoping Report. The Inspectorate is satisfied that the Scoping Report encompasses the relevant aspects identified in the EIA Regulations.
- 1.1.12 In accordance with Regulation 14(3)(a), where a scoping opinion has been issued in accordance with Regulation 10 an ES accompanying an application for an order granting development consent should be based on *'the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)'*.
- 1.1.13 The Inspectorate notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations'), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This assessment must be co-ordinated with the EIA in accordance with Regulation 26 of the EIA Regulations.

## **1.2 The Planning Inspectorate's Consultation**

- 1.2.1 In accordance with Regulation 10(6) of the EIA Regulations the Inspectorate has consulted the consultation bodies before adopting a scoping opinion. A list of the consultation bodies formally consulted by the Inspectorate is provided at Appendix 1. The consultation bodies have been notified under Regulation 11(1)(a) of the duty imposed on them by Regulation 11(3) of the EIA Regulations to make information available to the Applicant relevant to the preparation of the ES. The Applicant should note that whilst the list can inform their consultation, it should not be relied upon for that purpose.

- 1.2.2 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided, along with copies of their comments, at Appendix 2, to which the Applicant should refer in preparing their ES.
- 1.2.3 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.
- 1.2.4 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Inspectorate's website. The Applicant should also give due consideration to those comments in preparing their ES.

## **2. THE PROPOSED DEVELOPMENT**

### **2.1 Introduction**

2.1.1 The following is a summary of the information on the Proposed Development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the Proposed Development and the potential receptors/ resources.

### **2.2 Description of the Proposed Development**

2.2.1 The Applicant's description of the Proposed Development, its location and technical capacity (where relevant) is provided in Scoping Report in Chapter 1, and in further detail in Chapter 2. The Scoping Report includes Figures 1-1 which shows the operational layout of the Proposed Development, and Figure 2-5 which shows the proposed application boundary and permanent and temporary land-take for the purposes of scoping.

2.2.2 The Proposed Development is described as comprising three main elements, which are:

- replacing the existing M5 Junction 10 restricted junction with a new elongated oval-shaped all-movements junction;
- a new two-lane West Cheltenham Link Road east of Junction 10 from the A4019 southwards to the B4634;
- and widening of the A4019 to the east of Junction 10.

2.2.3 The stated objectives of the Proposed Development include provision of the necessary transport connections and network capacity to facilitate the delivery of housing and economic development in west and north-west Cheltenham (with specific reference to the Joint Core Strategy developed between Gloucestershire County Council, Cheltenham Borough Council (CBC) and Tewkesbury Borough Council (TBC)), and to provide better connectivity between the strategic road network and local network. The Scoping Report also states objectives to enable more sustainable transport modes and minimisation of environmental impacts.

2.2.4 The proposed application site is at Junction 10 of the M5 in Gloucestershire, described as located 48 miles to the south of Birmingham and 40 miles to the north of Bristol. The Proposed Development extends along the existing A4019 approximately 4 miles to the north-west of Cheltenham, and from the A4019 to the B4634 immediately north-west of Cheltenham. Figure 2-2 of the Scoping Report provides a location plan of the proposed development.

2.2.5 The current land use of the site is predominantly the existing motorway junction with a small number of adjacent residential properties and the A4019. The landscape is largely undeveloped agricultural land until the eastern extent of the site meets the outskirts of Cheltenham. The proposed West Cheltenham Link Road element crosses agricultural land as well as the River Chelt via a clear

span bridge. The existing environmental constraints in the vicinity of the Proposed Development are shown on Figure 2-4 of the Scoping Report.

## **2.3 The Planning Inspectorate's Comments**

### **Description of the Proposed Development**

2.3.1 The ES should include the following:

- a description of the Proposed Development comprising at least the information on the site, design, size, and other relevant features of the development; and
- a description of the location of the development and description of the physical characteristics of the whole development, including any requisite demolition works and the land-use requirements during construction and operation phases.

2.3.2 The Inspectorate notes the information in Chapter 2 of the Scoping Report providing information on the location, design, and aims and objectives of the Proposed Development, as well as the additional information on the selected option provided in Chapter 3.

2.3.3 The description of the Proposed Development in the Scoping Report does not provide the size of the proposed development, either in terms of the overall length, width of carriageways and other components, or the vertical alignments of cuttings or embankments. The likely dimensions, including height, of the proposed West Cheltenham Link Road viaduct crossing of the River Chelt are not described. The ES should describe the scale of the Proposed Development, in particular including all details which have been used to inform the assessment of environmental effects.

2.3.4 The description in the Scoping Report does not include any detailed information on proposed fencing, noise attenuation barriers, drainage features, lighting, gantries, or signage. Again, the ES should contain the relevant information necessary to establish the basis of the assessment of likely significant effects.

2.3.5 Figure 1-1 shows the proposed operational layout. While this figure includes a scale, it has been produced at a low resolution with a limited level of detail and is not annotated with any of the information highlighted above. The Inspectorate advises that the ES is accompanied by sufficiently detailed plans at an appropriate scale showing the design parameters on which the assessment of likely significant effects has been based.

2.3.6 Chapter 2 of the Scoping Report explains that the existing exit slip roads at M5 Junction 10 will be removed and the existing overbridge will be demolished under the Proposed Development. The ES should include a description of these works and any other demolition requirements and assess any significant effects where these could occur.

2.3.7 The Scoping Report describes the intention to include cycling and pedestrian routes within the new M5 Junction 10 arrangement, adjacent to the A4019 as

part of the widening works, and as segregated routes along the proposed West Cheltenham Link Road. The layout of these features is not visible on Figure 1-1. The integration of the new infrastructure with existing features is also briefly described, for example the inclusion of access to properties along the A4019 within Uckington. The Inspectorate would expect the ES to include a description of these features, supported by sufficiently detailed plans at an appropriate scale, and an assessment of any likely significant effects.

- 2.3.8 Paragraphs 2.4.2 and 3.3.48 to 3.3.49 of the Scoping Report discuss the option to designate Withybridge Lane as a quiet lane to enhance the equestrian, cycling, and walking facilities within the area as part of the scheme, and provide an outline of the traffic management measures required to achieve this. Should this element be taken forward as part of the Proposed Development, it should be fully described in the ES along with an assessment of the associated likely significant environmental effects.
- 2.3.9 Paragraph 2.4.17 of the Scoping Report discusses the intended restoration of land taken temporarily by the Proposed Development, and the areas affected are shown on Figure 2-5. The ES should provide as much detail as possible on the nature of the restoration works and proposed management operations (including timescales), and a description and assessment of the associated likely significant effects.
- 2.3.10 It is appreciated that at this stage details of the construction period are not known, although it is noted that potential construction compound locations are included within the temporary land-take identified in Figure 2-5. The ES must clearly set out the assumptions made in the environmental assessments with respect to construction phasing, working hours, relevant working methodologies, and overall timescales for the construction period. Where known, the nature and quantity of materials used (including soil) should be described and an assessment provided of the associated likely significant effects.
- 2.3.11 It is noted that the Proposed Development is not intended to be decommissioned, however, the Inspectorate would expect the ES to provide an assessment of any likely significant effects of the removal of any elements of the Proposed Development during construction and operation, as part of the relevant environmental aspect assessments carried out e.g., the materials and waste assessment.

### **Alternatives**

- 2.3.12 The EIA Regulations require that the Applicant provide 'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.
- 2.3.13 The Inspectorate notes the information provided in Chapter 3 of the Scoping Report and Paragraph 4.3.7 stating the Applicant's intention to consider alternatives within the ES. The Inspectorate would expect to see a discrete

section in the ES that provides details of the reasonable alternatives studied and the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects.

### **Flexibility**

- 2.3.14 The Inspectorate notes the Applicant's comments in Paragraphs 4.3.22 to 4.3.23 of the Scoping Report on dealing with uncertainty, and the intention to identify where flexibility is sought in their draft DCO (dDCO), and the application of a Rochdale Envelope approach for this purpose. The Inspectorate notes the intention to identify where the details of the Proposed Development cannot be defined precisely and assess the maximum potential adverse impacts. The Inspectorate understands from this approach that the Applicant will apply a worst-case scenario with regards to the assessment of environmental effects and supports this approach. The Inspectorate also notes the reference to Planning Inspectorate Advice Note nine 'Using the 'Rochdale Envelope'<sup>1</sup> in this regard.
- 2.3.15 A number of the chapters within the Scoping Report refer to 'scheme options' (Chapters 5, 7, 9, 10, 11, 13, and 14) and Chapter 7 refers to an 'Option 2B'. Chapter 3 of the Scoping Report states that a preferred option, 'Option 2' has been chosen and does not indicate that multiple options remain under consideration. The project description in the ES must be consistently reflected throughout the assessments presented. Where multiple options are being considered, these should be clearly defined and described within the project description in the ES.
- 2.3.16 The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different developments. The development parameters should be clearly defined in the dDCO and in the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations.
- 2.3.17 It should be noted that if the Proposed Development materially changes prior to submission of the DCO application, the Applicant may wish to consider requesting a new scoping opinion.

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<sup>1</sup> Advice Note nine: Using the Rochdale Envelope. Available at:  
<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>



## **3. ES APPROACH**

### **3.1 Introduction**

- 3.1.1 This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. General advice on the presentation of an ES is provided in the Inspectorate's Advice Note Seven 'Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements'<sup>2</sup> and associated appendices.
- 3.1.2 Aspects/ matters (as defined in Advice Note Seven) are not scoped out unless specifically addressed and justified by the Applicant and confirmed as being scoped out by the Inspectorate. The ES should be based on the Scoping Opinion in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.
- 3.1.3 The Inspectorate has set out in this Opinion where it has/ has not agreed to scope out certain aspects/ matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/ matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 3.1.4 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through dDCO requirements (or other suitably robust methods) and whether relevant consultation bodies agree on the adequacy of the measures proposed.

### **3.2 Relevant National Policy Statements (NPSs)**

- 3.2.1 Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES.
- 3.2.2 The designated NPS relevant to the Proposed Development is the NPS for National Networks (NPSNN). Chapter 1 of the Scoping Report identifies this and sets out the background to identification of the NSIP status of the Proposed Development, and the national, regional, and local policy considered relevant to the Proposed Development.

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<sup>2</sup> Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements and annex. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

### 3.3 Scope of Assessment

#### General

- 3.3.1 The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables:
- to demonstrate how the assessment has taken account of this Opinion;
  - to identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects;
  - to set out the proposed mitigation and/ or monitoring measures including cross-reference to the means of securing such measures (e.g., a dDCO requirement);
  - to describe any remedial measures that are identified as being necessary following monitoring; and
  - to identify where details are contained in the Habitats Regulations Assessment (HRA report) (where relevant), such as descriptions of National Site Network sites and their locations, together with any mitigation or compensation measures, that inform the findings of the ES.
- 3.3.2 The Inspectorate would expect the ES to include figures as necessary to show: the parameters of the Proposed Development assessed; the study areas applied in the assessments and predicted extent of impacts where applicable; relevant baseline data such as the locations of identified receptors; and the location and design of mitigation measures as applicable to the assessment of residual effects.
- 3.3.3 The Inspectorate considers that where a DCO application includes works described as 'Associated Development', that could themselves be defined as an improvement of a highway, the Applicant should ensure that the ES accompanying that application distinguishes between; effects that primarily derive from the integral works which form the proposed (or part of the proposed) NSIP and those that primarily derive from the works described as Associated Development. This could be presented in a suitably compiled summary table. This will have the benefit of giving greater confidence to the Inspectorate that what is proposed is not in fact an additional NSIP defined in accordance with s22 of the PA2008.
- 3.3.4 Additionally, the ES should identify any other types of works which are necessary to deliver the integral proposals but do not form part of the proposed road improvement NSIP, for example utilities works, and assess any associated environmental effects. It is noted from Figure 1-1 of the Scoping Report that the southern extent of the Proposed Development crosses the path of overhead electrical lines and the proposed DCO boundary appears to include existing electrical pylons. Where such utilities works comprise an NSIP in their own right, the relevant NPS should be identified and consideration should be given to the relevance of the environmental requirements of that NPS, for example

NPS for Electricity Networks Infrastructure (EN-5). The ES should clearly set out the NPSs which are of relevance to the Proposed Development.

### **Baseline Scenario**

- 3.3.5 The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.
- 3.3.6 The Inspectorate notes the information in the Scoping Report on the Joint Core Strategy (JCS) and the role of the Proposed Development in the delivery of strategic development plans. It is noted from Paragraph 1.1.1 that the time period for the JCS spans 2011 to 2031 and up to 2041 in relation to new homes and employment land. It is not clear from the information on the JCS allocation areas to what extent proposals may come forward within the timescales of the Proposed Development. The Inspectorate advises that the ES should provide relevant information on ongoing developments within the vicinity of the Proposed Development application site, and clearly state which developments will be assumed to be under construction or operational as part of the future baseline.

### **Forecasting Methods or Evidence**

- 3.3.7 The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.
- 3.3.8 The Inspectorate notes and welcomes the information in Chapter 4 of the Scoping Report and expects the ES to include a similar chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters.
- 3.3.9 The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

### **Residues and Emissions**

- 3.3.10 The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.
- 3.3.11 The Inspectorate notes from Chapter 4 of the Scoping Report that the methodologies within the Design Manual for Roads and Bridges (DMRB) are intended to be applied to the assessments, and that heat and radiation are not included within the scope of this guidance (Paragraph 4.1.6). The Scoping

Report proposes to scope out assessment of heat and radiation on the basis of advice from Highways England that they are not relevant to highways schemes. The Inspectorate agrees that while significant environmental effects from heat and radiation are not likely to result from the Proposed Development, the ES should provide information on the reasoning undertaken to reach this conclusion, supported by reference to industry standards and guidance, and professional judgement.

### **Mitigation and Monitoring**

- 3.3.12 Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured, with reference to specific dDCO requirements or other legally binding agreements.
- 3.3.13 The ES should identify and describe any proposed monitoring of significant adverse effects and how the results of such monitoring would be utilised to inform any necessary remedial actions.
- 3.3.14 The Inspectorate notes the information in Chapter 4 of the Scoping Report with regards to the application of the mitigation hierarchy. The ES should clearly distinguish between measures which are proposed as mitigation, compensation, or enhancement.

### **Risks of Major Accidents and/or Disasters**

- 3.3.15 The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development. The Applicant should make use of appropriate guidance (e.g., that referenced in the Health and Safety Executives (HSE) Annex to the Inspectorate's Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage, or the environment. Any measures that will be employed to prevent and control significant effects should be presented in the ES.
- 3.3.16 Relevant information available and obtained through risk assessments pursuant to national legislation may be used for this purpose. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
- 3.3.17 The Inspectorate notes the intention in Chapter 4 of the Scoping Report to assess these matters within the individual environmental assessment chapters and does not have any further comment on this approach. Comments specific to the relevant chapters are contained in the aspect based scoping tables within this Scoping Opinion.

### **Climate and Climate Change**

- 3.3.18 The ES should include a description and assessment (where relevant) of the likely significant effects the Proposed Development has on climate (for example having regard to the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from climate change.
- 3.3.19 The Inspectorate notes the information in Chapter 14 of the Scoping Report on the effects of the Proposed Development on climate and susceptibility of the Proposed Development to climate change. Specific comments related to this aspect chapter are provided in Table 4.9 below.

### **Transboundary Effects**

- 3.3.20 The Inspectorate notes the information provided in Chapter 4 of the Scoping Report which sets out the requirements of Regulation 32 of the EIA Regulations and the requirement of Schedule 4 Part 5 of the EIA Regulations for an ES to include a description of the likely significant transboundary effects to be provided in an ES. Chapter 4 identifies the nearest EEA State as France (250km from the Proposed Development) and sets out the anticipated spatial extent of the environmental effects considered. The Scoping Report states that the Proposed Development is not considered likely to have significant effects on a European Economic Area (EEA) State.
- 3.3.21 Having considered this information and the nature and location of the Proposed Development, the Inspectorate is not aware that there are potential pathways of effect to any EEA states but recommends that, for the avoidance of doubt, the ES details any such consideration and assessment.

### **A Reference List**

- 3.3.22 A reference list detailing the sources used for the descriptions and assessments must be included in the ES.

## **3.4 Coronavirus (COVID-19) Environmental Information and Data Collection**

- 3.4.1 The Inspectorate understands that measures adopted in response to COVID-19 may have consequences for an Applicant's ability to obtain relevant environmental information for the purposes of their ES. For example the ability to conduct specific surveys and obtain representative data may be affected by these measures. The ES should explain any such limitations and any assumptions made relating to the environmental information on which it relies.
- 3.4.2 The Inspectorate has a duty to ensure that the environmental assessments necessary to inform a robust DCO application are supported by relevant and up to date information. It is anticipated that Applicants will make every effort to

overcome any limitations encountered as a result of the COVID-19 situation. However, where this has not been possible, the Inspectorate will seek to adopt an approach which balances the requirement for suitable rigour and scientific certainty in assessments with pragmatism in order to support the preparation and determination of applications in a timely fashion.

- 3.4.3 Applicants should make effort to agree their approach to the collection and presentation of information with relevant consultation bodies. In turn the Inspectorate expects that consultation bodies will work with Applicants to find suitable approaches and points of reference to allow preparation of applications. The Inspectorate is required to take into account the advice it receives from the consultation bodies and will continue to do so in this regard.

### **3.5 Confidential and Sensitive Information**

- 3.5.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to personal information specifying the names and qualifications of those undertaking the assessments and / or the presence and locations of rare or sensitive species such as badgers, rare birds, and plants where disturbance, damage, persecution, or commercial exploitation may result from publication of the information.
- 3.5.2 Where documents are intended to remain confidential the Applicant should provide these as separate documents with their confidential nature clearly indicated in the title and watermarked as such on each page. The information should not be incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2004.
- 3.5.3 The Inspectorate adheres to the data protection protocols set down by the Information Commissioners Office<sup>3</sup>. Please refer to the Inspectorate's National Infrastructure privacy notice<sup>4</sup> for further information on how personal data is managed during the Planning Act 2008 process.

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<sup>3</sup> <https://ico.org.uk>

<sup>4</sup> <https://www.gov.uk/government/publications/planning-inspectorate-privacy-notice>

## 4. ASPECT BASED SCOPING TABLES

### 4.0 Air Quality

(Scoping Report Section 5)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.0.1	Paragraphs 5.5.1, 5.3.27-28, 5.3.24, 5.12.4,	Further assessment of ecological receptors	<p>Paragraph 5.12.4 states that further assessment is not recommended based on the absence of sensitive ecological receptors. The Inspectorate does not agree to scope out assessment of air quality effects on ecological receptors for the following reasons:</p> <ul style="list-style-type: none"> <li>i. Paragraph 5.5.1 states an absence of 'designated ecological receptors' 'within the vicinity of the study area'. It goes on to state that the study area will be reviewed as the ARN is revised so it is not yet known if the absence of designated sites will remain the case once this process of refinement is undertaken;</li> <li>ii. There is no information on whether any non-designated sensitive ecological receptors may be affected, for example the hedgerow network, orchards, and deciduous woodland identified in Chapter 7 of the Scoping Report; and</li> </ul> <p>There is insufficient information on the receptors likely to be affected to scope out further assessment of this matter. The ES should provide an assessment of the likely significant effects of air quality changes on ecological receptors, with cross reference to the relevant aspect chapter as appropriate.</p>

ID	Ref	Other points	Inspectorate's comments
4.0.2	Paragraph 5.4.2	Baseline environment	The ES should ensure that it is based on the most up to date information possible, including the location, extent, and nature of

ID	Ref	Other points	Inspectorate's comments
			existing Air Quality Management Areas (AQMA). Comments from CBC are noted regarding recent changes to AQMA within its administrative area and the Inspectorate advises the Applicant to discuss the applicable baseline with CBC and other relevant stakeholders.
4.0.3	Paragraph 5.4.9	Continuous monitoring data	The Scoping Report mentions a delayed CBC plan to install additional monitoring stations. It is not clear whether these stations will be operational in time for any monitoring data to be included in the ES, however the Inspectorate advises that all sources of data and any limitations to data collection are set out in the ES.
4.0.4	Paragraph 5.4.14, Section 5.6	Study area for air quality modelling.	While it is considered likely that roads within central Cheltenham within the AQMA will be susceptible to changes in operational traffic, other areas may also be similarly susceptible, in particular any roads close to the threshold of air quality objective compliance. The Inspectorate notes the intention to consult with CBC and recommends that the Applicant seeks to agree the final extent of the study area for modelling of air quality effects with CBC.



## 4.1 Noise and Vibration

(Scoping Report Section 6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.1.1	Paragraph 6.9.9	Operational vibration	Given the information provided on the nature of the Proposed Development and the surrounding area, the Inspectorate agrees that significant effects from vibration during operation are unlikely to occur and that this matter can be scoped out of the assessment in the ES.

ID	Ref	Other points	Inspectorate's comments
4.1.2	Paragraph 6.4.3	Noise surveys	The Scoping Report states that baseline noise surveys were planned for Spring 2021. The ES should explain why the chosen survey period is representative of typical baseline conditions, given the potential for variations in traffic flows and therefore noise levels during the COVID-19 pandemic.
4.1.3	Paragraph 6.4.4	Noise sources	The Scoping Report states that all other noise sources aside from road traffic have been excluded from this stage of assessment of the baseline, given the land use within 600m of the Proposed Development. The Inspectorate notes that as the proposed DCO boundary and the study area are yet to be finalised, further survey of the baseline noise environment is proposed. As part of this survey work consideration should be given to the potential overlap of the construction phases of nearby areas allocated for development described in Chapter 1 of the Scoping Report.  It would be helpful if the ES included cross-reference between the noise assessment and the assessment of cumulative effects, as appropriate.

ID	Ref	Other points	Inspectorate's comments
4.1.4	Paragraph 6.7.5	Mitigation measures	Where mitigation measures involve physical construction such as bunds, noise barriers and screening, the ES should consider the environmental effects and opportunities associated with these, eg the potential for significant effects on visual receptors or ecological receptors.
4.1.5	Paragraph 6.8.1	Extent of residual effects	The Scoping Report states that properties within 100m of works could be subject to significant effects from construction noise. The Inspectorate notes that this is not consistent with the extent prior to mitigation of 300m (Paragraph 6.2.2), and it is not explained how this level of effectiveness of the currently undefined mitigation measures has been arrived at. The ES should clearly explain the anticipated effectiveness of the specific mitigation measures proposed when reporting the predicted residual effects.
4.1.6	Paragraph 6.8.1 and 6.8.2	Determination of significance of residual effects	It is noted that noise levels may be significant following mitigation. The ES should explain whether construction noise levels will be of sufficient magnitude and duration to trigger a requirement for noise insulation or temporary rehousing.

## 4.2 Biodiversity

(Scoping Report Section 7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.2.1	Paragraph 7.4.30	Features identified to be of less than local importance	It is not possible based on the information provided to identify the specific features included in this broad valuation, and whether the valuation applied has been agreed with the relevant consultees. Therefore, it is not possible to scope this matter out at this stage and the Inspectorate advises that details of the features identified and to what extent their valuation has been discussed with stakeholders are reported in the ES, and further justification provided for exclusion of significant environmental effects.
4.2.2	Paragraph 7.6.9	Wye Valley and Forest of Dean Bat Sites SAC	The Inspectorate understands from the Scoping Report that the SAC is located 20km from the Proposed Development site and notes the application of the Bat Conservation Trust (BCT) core sustenance zones. The Inspectorate agrees that there is evidence to suggest that significant effects are unlikely. However it is unclear how the bat survey data (noted as ongoing) has informed the exclusion of significant effects. The ES should include this information.
4.2.3	Paragraph 7.6.11	Severn Estuary SAC/SPA/Ramsar/SSSI	The Scoping Report presents generalised information on the likely quantities and types of pollutants taken into account and the mitigation to be applied to minimise adverse effects to watercourses which are hydrologically connected to the Severn Estuary. Given the distance between the potentially affected watercourses and the designations, the Inspectorate agrees that the likelihood of significant effects is low. However, information on the specific residual effects is not provided and the Inspectorate would expect to see a fully reasoned rationale for excluding significant effects, supported by more detailed information in the ES. The Inspectorate welcomes the intended inclusion of these designated sites in the HRA screening

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			report for the Proposed Development and advises that this is co-ordinated with the EIA reported in the ES.
4.2.4	Paragraph 7.6.14 and 7.6.16	Walmore Common SPA and Coombe Hill Canal SSSI	The Scoping Report suggests that based on surveys and research, Bewick's swan, the qualifying feature of the SPA, does not utilise habitats within the study area. Based on the information provided, it is agreed that there is no evidence for a pathway for significant effects to occur, and the Inspectorate agrees to scope this site out of the EIA subject to this remaining the case. Specific information on the location of wintering bird surveys is not provided in the Scoping Report and the Inspectorate would expect this information to be included within the ES.
4.2.5	Paragraph 7.4.14, Table 7-1, Paragraph 7.9.4	Water vole and dormouse, further surveys for these species	The Inspectorate notes that these species are considered to be absent following the survey work undertaken of the suitable habitat present, and that no further surveys are proposed. The Inspectorate accepts that if these species are demonstrated to be absent from the Proposed Development area no significant effects will occur. However, the reasoning behind the exclusion of likely significant effects should be included in the ES, supported by evidence of the survey locations and specific information on the habitats affected by the Proposed Development.
4.2.6	Paragraph 7.6.19	Terrestrial invertebrates	The Scoping Report proposes to scope out effects on terrestrial invertebrates on the basis that there will be no relevant habitat loss. However, habitat loss is not the only relevant impact-effect pathway. While the Inspectorate accepts the rationale regarding noble chafer habitat loss in this paragraph in principle, insufficient information has been provided regarding other impact pathways and resulting effects for terrestrial invertebrates to allow these to be scoped out. The ES must include an assessment of the likely significant effects on this ecological feature from habitat loss in the case of the terrestrial

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			invertebrates in general, and from other impacts in the case of noble chafer.
4.2.7	Paragraph 7.13.5	Badger and plants	<p>Paragraph 7.13.5 proposes to scope badgers and plants out of the assessment in the ES due to these features being of below local value. From Table 7-1 this statement appears to relate to common and widespread plant species, but it is not clear if it extends to invasive non-natural species (INNS) and it is noted that the Scoping Report records Himalayan balsam as present within the study area.</p> <p>For clarity, the ES should provide sufficient information on ecological features that require record and assessment for legal reasons to allow the need for appropriate mitigation to be identified and subsequently considered by the decision-maker. The Inspectorate expects badger and INNS to be addressed in the ES in this capacity.</p> <p>While the desk study data is reported in Table 7-1 as having an absence of records of notable plant species, no targeted botanical surveys are reported in the Scoping Report and it is acknowledged within the document that desk study data alone cannot be relied upon as confirmation of absence. The Inspectorate does not agree to scope notable plant species of conservation concern out of the ES at this stage due to the uncertainty around the risk of significant effects. Should further information be available to provide certainty that no significant effects would occur, this feature can be scoped out of the assessment.</p>

ID	Ref	Other points	Inspectorate's comments
4.2.8	Paragraph 7.2.1	Study area and changes to the Proposed Development boundary	The ES should respond to any changes to the extent of the Proposed Development, updating the environmental assessments as necessary,

ID	Ref	Other points	Inspectorate's comments
			including a review of the appropriateness of the study areas applied in capturing the extent of likely significant effects.
4.2.9	Sections 7.9, and 7.10	Currency of data and validation surveys	The Inspectorate notes the suite of work already carried out and the information provided in the Scoping Report on ongoing data collection and the need for survey validation in order to ensure the ES is based on up-to-date information. The Applicant is advised that as well as the work discussed in the Scoping Report, other survey work may be required (e.g. an arboricultural survey as advised by CBC and Tewkesbury Borough Council in their responses provided in Appendix 2 of this Scoping Opinion). The desk study information may also need to be updated. The Applicant is encouraged to seek advice as far in advance as possible from relevant stakeholders to ensure a robust basis for the assessment.
4.2.10	Table 7-1	Valuation of ecological features	In Table 7-1 all terrestrial habitats, all bat species, all other notable mammals, and all breeding and wintering bird species are grouped together and assigned the same value. The Inspectorate considers that this approach may lead to under valuation of some features within these wider groups. The Applicant is advised to seek agreement on the valuation assigned to ecological features with relevant stakeholders.
4.2.11	Paragraph 7.6.6	Potential Impacts	<p>The Inspectorate notes the statement that this is not an exhaustive list of potential impacts, but advises that lighting impacts during construction and operation, and increased recreational disturbance should be considered in the ES where applicable. It is noted that prevention of illumination is listed under mitigation for bat species in Paragraph 7.7.8, however disturbance from lighting is not acknowledged as a potential impact of the Proposed Development.</p> <p>While pollution events and dust are listed here, nitrogen deposition (including from ammonia emissions) is not and the Inspectorate</p>

ID	Ref	Other points	Inspectorate's comments
			would expect the ES to include an assessment of likely significant effects in this regard.
4.2.12	Section 7.7	Potential effects and mitigation measures	There remains uncertainty around the risks of encountering some protected species and species of conservation concern. Within this section potential effects are described in a general way and typical mitigation measures are outlined. The ES should identify specific mitigation for particular features/ locations and describe these measures in detail, including how they will be secured in the dDCO or other legal mechanism. Monitoring is mentioned in Chapter 4 in general terms. The ES should explain what monitoring or ongoing management is intended for the ecological mitigation measures to ensure their effectiveness and appropriateness.
4.2.13	Paragraph 7.7.25, 7.7.26	Mitigation for great crested newts – District Level Licensing (DLL) Scheme	<p>The Inspectorate notes the possibility of pursuing the DLL Scheme as an alternative to the mitigation described for great crested newts. The ES should provide evidence regarding how and where this approach has been used in relation to the proposal, which should include a counter-signed certificate from Natural England, or a similar approval from an alternative DLL provider.</p> <p>It is noted that the mitigation for great crested newt may also be relied upon to reduce adverse effects on common toad. Should the DLL Scheme approach be adopted the implications for other ecological features including common toad should be considered and if necessary alternative mitigation for these features should be included within the ES.</p>

## 4.3 Road Drainage and the Water Environment

(Scoping Report Section 8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.3.1	Section 8.9	Flood risk from tidal flooding, from sewers, and from artificial waterbodies	The Inspectorate considers that it is appropriate to scope out the risks of flooding from tidal flooding based on absence of these sources within the study area. Noting the information on the likely risk from sewers and in relation to the Dowdeswell Reservoir, the Inspectorate agrees that likely significant effects from flooding are unlikely to occur from these sources. The Inspectorate agrees to scope out these sources from detailed assessment, however the ES should present the rationale provided in the scoping information.

ID	Ref	Other points	Inspectorate's comments
4.3.2	Paragraphs 8.4.21 – 8.4.31, Table 8-4	Flood risk – sequential test	It is noted that the Proposed Development is located in areas classified as Flood Zone 2 and 3. The Scoping Report does not currently refer to the sequential/ exemption test, however it is assumed that this information will be provided in the Flood Risk Assessment intended to support the ES (Table 8-4). The ES should explain how the tests have been applied and they have informed the design layout and flood mitigation requirements for the Proposed Development, where relevant.
4.3.3	Section 8.4	Baseline Information	The ES should include the necessary information to establish whether shallow perched groundwater or springs could be present and subject to significant environmental effects.
4.3.4	Paragraph 8.5.2,	Assumptions and Limitations	The Scoping Report details that information relating to flood risk baseline conditions and known incidents of flooding will be sourced from the Environment Agency. The Inspectorate would expect this to



ID	Ref	Other points	Inspectorate's comments
	Paragraph 8.10.3		include the most up to date climate change allowances, as stated in the Scoping Report as being applied to the FRA (Paragraph 8.10.3). Whilst noting that the applicant is Gloucestershire County Council, the ES should ensure to include data from the relevant council(s) departments as the Lead Local Flood Authority, other relevant local authorities responsible for preparing flood plans, or the relevant internal drainage boards(s).
4.3.5	Paragraph 8.7.7	Mitigation measures	The Scoping Report mentions temporary and permanent flood / surface water storage and compensation areas as part of the intended mitigation measures for the Proposed Development. The ES should confirm the location and design parameters/specifications of these features and the intended timing of implementation. The ES should assess any associated significant environmental effects of their construction and operation as part of the Proposed Development.

## 4.4 Landscape and Visual

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.4.1	Table 9-1	Landscape character at a national and county level	The Inspectorate agrees that based on the information provided, the Proposed Development is unlikely to give rise to significant effects on landscape character at a national and county level. The Inspectorate agrees that this matter can be scoped out of the assessment in the ES.
4.4.2	Table 9-2	Visual receptors at Hardwicke, Hayden and Hayden Green, Springbank and Springbank Primary Academy, Pilgrove Way and Pilgrove Way playground, Hayden allotments, and Swindon Village.	The Inspectorate understands the reasoning presented in Table 9-2, and considers it likely that subject to finalisation of the study area and design of the Proposed Development that this reasoning would lead to a conclusion of neutral visual effects. However, little evidence to support the reasoning provided is included in the Scoping Report, and importantly, the study area and understanding of the Proposed Development's impacts are yet to be finalised. Therefore, the ES should provide an assessment of the likely significant effects on these receptors where these could occur, or provide evidenced reasoning to support the conclusion that they would be unaffected.
4.4.3	Paragraph 9.2.2 and 9.2.4	Landscape and visual receptors outside of 1km	<p>The Scoping Report states that the Zone of Theoretical Visibility (ZTV) and study area will remain under review during the assessment.</p> <p>The Inspectorate agrees that given the information provided on the location of the Proposed Development and the surrounding landscape features, that landscape receptors beyond 1km can be scoped out of further assessment in the ES.</p> <p>The Inspectorate notes the rationale in Paragraph 9.2.4 of the Scoping Report with regard to the identified visual receptors. Subject to the outcomes of the further refinements to the Proposed Development and to the ZTV providing evidence that no significant</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			visual effects beyond 1km are likely, The Inspectorate agrees to scope out visual receptors beyond 1km from the DCO boundary.

ID	Ref	Other points	Inspectorate's comments
4.4.4	Paragraph 9.2.5	Study area and use of ZTV	It is noted from the Scoping Report that the proposed ZTV may be applied along with field work and consultation to identify the final selection of viewpoints. The Inspectorate notes the approach is not yet defined, and advises that the ES must fully explain and justify the methodology used to refine the study area.
4.4.5	Figure 9-1, Table 9-2	Identification of receptors	Figure 9-1 indicates the location of potential landscape and visual receptors; with visual receptors labelled as VR1, VR2 etc. The receptors are not identified by name on this Figure however Table 9-2 lists visual receptors by name/description but without reference to these labels. The ES should ensure that where number references are used that they are consistent on any relevant figures and tables presented within it.
4.4.6	Section 9.5	Assumptions and limitations	The ES should include an assessment of potential landscape and visual effects for both daytime and night-time conditions, in particular in relation to the identified requirement to assess the effects on longer distance views and on adjacent residential receptors.
4.4.7	Paragraph 9.6.2	Operational impacts	As well as the environmental design features specifically mentioned in the Scoping Report, the Inspectorate advises that impacts from noise attenuation measures should also be assessed.
4.4.8	Section 9.7, and 9.8	Mitigation and likely residual effects	The phrases 'short term' and 'long term' are not defined here. As proposed elsewhere in this chapter of the Scoping Report, the ES

ID	Ref	Other points	Inspectorate's comments
			<p>must consider the temporal aspect of the likely significant effects, and explain any assumptions made around the length of time needed for mitigation measures to become effective eg maturation of the mitigation planting identified in Section 9.7. This information should be clearly defined in the ES when identifying the residual effects of the Proposed Development.</p>

## 4.5 Geology and Soils

(Scoping Report Section 10)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.5.1	Paragraph 10.4.25 and 10.12.3	Soils of other importance eg <ul style="list-style-type: none"> <li>designated nature conservation sites; or</li> <li>deciduous woodland designated as Priority Habitats and/or National Forest Inventory sites</li> </ul>	<p>The Inspectorate agrees that where a particular type of feature is absent from the study area and therefore no pathway exists for significant effects to occur, that effect can be scoped out of the ES. The Scoping Report states that no relevant nature conservation designated sites are present within the study area, but provides limited evidence in this regard. While the Inspectorate agrees to scope out soils of importance associated with these designations, this evidence should be presented in the ES.</p> <p>Areas of woodland which are designated as Priority Habitats and/or National Forest Inventory sites are identified within the vicinity of Junction 10. The Scoping Report states that effects on soils associated with the priority habitats can be scoped out based on the habitats' limited dependence on the soil type present. The Inspectorate is content to scope this matter out of the geology and soils assessment.</p>
4.5.2	Paragraph 10.9.3 and 10.12.3	Bedrock geology and superficial deposits (including geological designations)	Given the information provided the Inspectorate agrees that it is appropriate to scope out geological designations, given the absence of any such designations within the study area.

ID	Ref	Other points	Inspectorate's comments
4.5.3	Paragraph 10.4.9	Hydrology	The Scoping Report refers to the study area and then states that there are no licenced surface water abstractions "on site". The ES should be clear in its terminology when referring to the study area applied. Hydrological and hydrogeological assessments should also

ID	Ref	Other points	Inspectorate's comments
			include, where available, information on private water abstraction supplies.
4.5.4	Paragraph 10.7.6	Design and mitigation – requirements for ground Investigation	The ES should indicate whether ground investigations are proposed to be undertaken to inform the ES or for detailed design works. Where ground investigation information is not proposed to inform the assessments within the ES, the data sources and methodology that have been applied should be explained and justified in the ES.
4.5.5	Paragraph 10.1.3, Table 10-1 and 10-2	Effects associated with water quality	The Inspectorate notes that Paragraph 10.1.3 of the Scoping Report states that effects associated with water quality are assessed within Chapter 8 (Road Drainage and the Water Environment). However, Table 10-1 and Table 10-2 set out the methodology for determining significance of effects to surface water features based on DMRB LA113. Chapter 8 also states that this methodology has been applied within its proposed scope. The ES should avoid duplication of the assessment of significant effects on surface water quality, making cross reference between relevant chapters where necessary.

## 4.6 Cultural Heritage

(Scoping Report Section 11)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.6.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.6.2	Paragraph 11.4.5	Geophysical Survey	The Scoping Report refers to the requirement to undertake a geophysical survey in order to identify unknown archaeological assets. The ES should explain how the geophysical survey will be used to inform the requirement for additional mitigation measures, for example trial trenching or other intrusive survey methods.
4.6.3	Paragraph 11.7.4	Archaeological Management Plan	The Scoping Report recommends production of an Archaeological Management Plan. The ES should make it clear as to what stage of the Proposed Development this is required, eg in advance of or during construction, and set out how the plan is to be legally secured eg by DCO requirement.

## 4.7 Materials and Waste

(Scoping Report Section 12)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.1	Paragraph 12.6.3 and Section 12.2	Material demand and waste produced during operation (including maintenance)	The Inspectorate considers that significant effects from operational and maintenance material demand and waste arisings are unlikely, based on the predicted minimal volume and low hazard potential of waste. It is agreed to scope out the effects of material demand and waste produced during operation and maintenance of the Proposed Development.

ID	Ref	Other points	Inspectorate's comments
4.7.2	Paragraph 12.4.4, Table 12-4, Sections 12.6 and 12.7	Mineral Safeguarding areas and mitigation	The Scoping Report states that Mineral Consultation / Safeguarded Areas have been identified, and the assessment criteria in Table 12-4 include consideration of sterilisation of safeguarding sites. However, this potential impact is not explicitly identified in Section 12.6 and mitigation is not discussed. The ES should include an assessment of the potential for mineral sterilisation as a result of the proposed Development, and any required mitigation measures to prevent sterilisation occurring, for example whether prior extraction could be included as a mitigation measure for the scheme.



## 4.8 Population and Human Health

(Scoping Report Section 13)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.8.1	Section 13.14	Financial compensation	No environmental matters have been proposed to be scoped out of the assessment. The Inspectorate agrees that financial compensation lies outside the scope of EIA.

ID	Ref	Other points	Inspectorate's comments
4.8.2	Section 13.7 and 13.8	Timing of construction effects and of mitigation	Whilst the precise timing of construction activities and phasing of the Proposed Development are not yet known, these have potential to alter the magnitude of impacts. The ES should clearly set out the anticipated timing and duration of construction effects and the proposed implementation of mitigation measures, within the context of the overall phasing of the proposals. This should include any relevant 'advance works', and works included within the Proposed Development as mitigation for other environmental effects
4.8.3	Paragraph 13.8.20	Population effects – WCH enhancement opportunities	The Scoping report states that opportunities exist for enhancement to routes used by walkers, cyclists, and horse riders. The ES should clearly describe any such measures to be implemented, ensuring consistency between the proposed DCO, the overall project description in the ES, and relevant aspect assessments in the ES such as the assessment of population effects.

## 4.9 Climate

(Scoping Report Section 14)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.9.1	Paragraph 14.18.3	Extreme weather events during construction	The Inspectorate considers that further assessment of extreme weather events during construction may be scoped out on the basis that proposed measures for management of extreme weather events would be incorporated within the CEMP.
4.9.2	14.11.1	Specific major accident scenarios and quantitative assessment	The Scoping Report states that no assessment of specific major accident and disaster scenarios requiring repair, maintenance or replacement works to be carried out that would lead to additional GHG emissions beyond those anticipated in normal operation. On the basis of the uncertain nature of such events, the Inspectorate considers that this matter may be scoped out.

ID	Ref	Other points	Inspectorate's comments
4.9.3	Paragraph 14.7.7	Mitigation for carbon emissions	If opportunities to reduce and sequester carbon emissions are sought through third-party projects, the ES must demonstrate what if any elements of this are to be included within the proposed DCO, and how any such measures on which the ES relies are intended to be legally secured.
4.9.4	Paragraph 14.4.2, Table 14-2	Carbon budgets and project stages	The Scoping Report indicates that construction would take place within the third carbon budget (up to the end of 2022), the anticipated opening year of the Proposed Development is 2025 within the fourth carbon budget. The operational year of assessment is not identified in this chapter, although it is understood that the operational phase extends beyond the end of the 5 <sup>th</sup> Carbon Budget period (2032) and that the 6 <sup>th</sup> Carbon Budget has been set at 2033-

ID	Ref	Other points	Inspectorate's comments
			2037.. The ES should clearly explain the anticipated contributions of each project phase within the context of the applicable carbon budget when emissions would occur, including in relation to a defined operational phase.
4.9.5	Table 14-2	Construction material supply and transport	The Scoping Report states that emissions from these sources will be included in the assessment, however, no study area has been set and it is not explained how the activity data or the emissions factors are to be determined. This information should be provided in the ES.
4.9.6	Paragraph 14.10.9	Emissions from change in land use	For clarity, the ES should define the threshold of 'significant areas of land use change' which would trigger this specific assessment.

## 4.10 Cumulative Impact Assessment

(Scoping Report Section 15)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.10.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.10.2	15.5.2	Reasonably Foreseeable Future Projects (RFFP) long List Review	The review of the developments to be included within the RFFP list for cumulative effects should be undertaken as close as possible to the commencement of the ES assessment to ensure the most up to date information is used. The Applicant should seek to agree the list with relevant stakeholders, in particular the local planning authorities.
4.10.3	Table 15-1	RFFP long list for consultation	It is noted that this table does not include the other proposals identified in Chapter 1 of the Scoping Report included in the package of improvements to be taken forward separately, namely the upgrade to Arle Court Park and Ride (Arle Court Transport Hub) and junction improvements at Coombe Hill. It is acknowledged that this list will be subject to review and refinement, however the ES should ensure that the other developments of relevance to each aspect assessment are clearly justified and that the summary chapter for cumulative effects is consistent with this information.

## 5. INFORMATION SOURCES

5.0.1 The Inspectorate's National Infrastructure Planning website includes links to a range of advice regarding the making of applications and environmental procedures, these include:

- Pre-application prospectus<sup>5</sup>
- Planning Inspectorate advice notes<sup>6</sup>:
  - Advice Note Three: EIA Notification and Consultation;
  - Advice Note Four: Section 52: Obtaining information about interests in land (Planning Act 2008);
  - Advice Note Five: Section 53: Rights of Entry (Planning Act 2008);
  - Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements;
  - Advice Note Nine: Using the 'Rochdale Envelope';
  - Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects (includes discussion of Evidence Plan process);
  - Advice Note Twelve: Transboundary Impacts;
  - Advice Note Seventeen: Cumulative Effects Assessment; and
  - Advice Note Eighteen: The Water Framework Directive.

5.0.2 Applicants are also advised to review the list of information required to be submitted within an application for Development as set out in The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009.

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<sup>5</sup> The Planning Inspectorate's pre-application services for applicants. Available from: <https://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-applicants/>

<sup>6</sup> The Planning Inspectorate's series of advice notes in relation to the Planning Act 2008 process. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

## APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

**TABLE A1: PRESCRIBED CONSULTATION BODIES<sup>7</sup>**

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	NHS Gloucestershire Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Gloucestershire Fire and Rescue Service
The relevant police and crime commissioner	Gloucestershire Police and Crime Commissioner
The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council	Boddington Parish Council
	Elmstone Hardwicke Parish Council
	Stoke Orchard and Tredington Parish Council
	Staverton Parish Council
	Uckington Parish Council
	Swindon Parish Council
The Environment Agency	The Environment Agency
The Civil Aviation Authority	Civil Aviation Authority
The Relevant Highways Authority	Gloucestershire County Council
The relevant strategic highways company	Highways England

<sup>7</sup> Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')

SCHEDULE 1 DESCRIPTION	ORGANISATION
The relevant internal drainage board	Lower Severn Internal Drainage Board
The Canal and River Trust	The Canal and River Trust
Public Health England, an executive agency of the Department of Health	Public Health England
The Forestry Commission	The Forestry Commission

**TABLE A2: RELEVANT STATUTORY UNDERTAKERS<sup>8</sup>**

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	NHS Gloucestershire Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Trust	South West Ambulance Service NHS Trust
Canal Or Inland Navigation Authorities	Canal and Rivers Trust
Civil Aviation Authority	Civil Aviation Authority
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes England
The relevant Environment Agency	The Environment Agency
The relevant water and sewage undertaker	Severn Trent
The relevant public gas transporter	Cadent Gas Limited
	Last Mile Gas Ltd
	Energy Assets Pipelines Limited
	ES Pipelines Ltd

<sup>8</sup> 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

STATUTORY UNDERTAKER	ORGANISATION
	ESP Networks Ltd
	ESP Pipelines Ltd
	ESP Connections Ltd
	Fulcrum Pipelines Limited
	Harlaxton Gas Networks Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Leep Gas Networks Limited
	Murphy Gas Networks limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
	Wales and West Utilities Ltd
The relevant electricity distributor with CPO Powers	Eclipse Power Network Limited
	Last Mile Electricity Ltd
	Energy Assets Networks Limited
	ESP Electricity Limited
	Forbury Assets Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Indigo Power Limited
	Leep Electricity Networks Limited



STATUTORY UNDERTAKER	ORGANISATION
	Murphy Power Distribution Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	Western Power Distribution (South West) Plc
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc

**TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))<sup>9</sup>**

LOCAL AUTHORITY <sup>10</sup>
Cotswold District Council
Tewkesbury Borough Council
Gloucester City Council
Cheltenham Borough Council
Malvern Hills District
Wychavon District Council
Forest of Dean District Council
Stroud District Council
South Gloucestershire Council
Sir Fynwy - Monmouthshire County Council
Herefordshire Council

<sup>9</sup> Sections 43 and 42(B) of the PA2008

<sup>10</sup> As defined in Section 43(3) of the PA2008

<b>LOCAL AUTHORITY<sup>10</sup></b>
Swindon Borough Council
Wiltshire Council
Oxfordshire County Council
Warwickshire County Council
Worcestershire County Council
Gloucestershire County Council

## APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

<b>CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:</b>
Cadent Gas Limited
Cheltenham Borough Council
Environment Agency
ESP Utilities
Forest of Dean District Council
Forestry Commission
Gloucestershire County Council
Health and Safety Executive
Highways England
Historic England
Natural England
Public Health England
South Gloucestershire Council
Stoke Orchard and Tredington Parish Council
Stroud District Council
Tewkesbury Borough Council
Uckington Parish Council
Wychavon District Council

**From:** [REDACTED]  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** RE: \*\*LS-6563\*\* - TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation  
**Date:** 04 August 2021 10:05:07

---

Dear Sir/Madam

Having reviewed the EIA scoping report for this proposed DCO, I can confirm that this falls outside of Cadent's network area and therefore we have no further comments to make.

Kind Regards  
Vicky

**Vicky Cashman**  
Planning & Consents  
General Counsel Department

**Cadent**

Ashbrook Court, Prologis Park, Central Boulevard, Coventry, CV7 8PE

[REDACTED]  
[cadent.gov.uk](#)

\*\* Please note Thursdays are my non-working day \*\*

[REDACTED]

---

**From:** M5 Junction 10 Highways Improvements Scheme  
<[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)>  
**Sent:** 21 July 2021 10:51  
**Cc:** M5 Junction 10 Highways Improvements Scheme <[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)>  
**Subject:** \*\*LS-6563\*\* - TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation

Dear Sir/ Madam

Please see attached correspondence on the proposed M5 Junction 10 Improvements project.

Please note the deadline for consultation responses is **18 August 2021**, and is a statutory requirement that cannot be extended.

Kind regards  
Laura

Laura Feekins-Bate  
EIA Advisor  
Environmental Services  
Email: [REDACTED]

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)  
Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)



**CHELTENHAM**  
BOROUGH COUNCIL

The Planning Inspectorate  
FAO Gail Boyle  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

[REDACTED]  
Our ref: 21/01741/SCOPE  
Planning Officer: Mr Craig Hemphill  
Date: 17th August 2021

Dear Sir/Madam

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING  
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017(THE EIA  
REGULATIONS) – REGULATIONS 10 AND 11**

**SCOPING OPINION ON THE CONTENT OF AN ENVIRONMENTAL IMPACT  
ASSESSMENT UNDER REGULATION 13**

Applicants name: Gloucestershire County Council  
Planning application reference: 21/01741/SCOPE  
Proposal: Application by Gloucestershire County Council (the Applicant) for an Order granting Development Consent for the M5 Junction 10 Improvements Scheme (the Proposed Development).  
Location: M5, A4017 and surroundings

I refer your letter of 21 July 2021 inviting the Council's comments on as to the information to be provided in an Environmental Statement (ES) relating to the Proposed Development.

It is understood that the Planning Inspectorate have consulted all other statutory consultees independently and therefore Cheltenham Borough Council response is in respect of comments received from internal consultees.

**Environmental Health**

**Air Quality**

The report submitted for comment includes a chapter on the air quality impacts of the proposed highway scheme. The scheme is expected to have a significant impact on traffic

flows not just in the immediate area, but in a wider area that includes the CBC area, and will likely affect the AQMA in CBC. The report indicates at 5.4.2 that the air quality study area includes the CBC AQMA, declared in 2020.

At this stage it seems appropriate to clarify the AQMA situation in CBC: In September 2020 a new AQMA was declared, as this report notes. The 2020 AQMA covers a limited area of properties with facades to High Street, Poole Way and Swindon Road. This new AQMA replaces the previous whole-borough AQMA, declared in 2011. These changes to the AQMA had previously been approved by DEFRA when considered in the ASR 2018. All the relevant reports and documents are available via the CBC website. CBC is now in the process of producing a new AQAP to reflect changes in the AQMA. This process has identified an intent to produce a wider-ranging air quality plan which will go beyond the minimum standards required by the statutory AQMA / AQAP process. The wider plan will cover the whole of the borough and will set ambitious targets for pollution levels.

These relatively recent changes to the AQMA may explain the confusion in the report provided. At 5.4.3 the report notes that the new AQMA replaces a whole borough AQMA, but table 5.2 then refers to “Cheltenham Whole Borough AQMA”, which has been revoked. This confusion is then carried on into the rest of the report, where para 5.4.14 mentions locations as being in the AQMA which are not, in fact the only “Project Specific Monitoring” sited in the 2020 AQMA was the triplicate co-location study at St Georges Street (D1).

Section 5.6.5 – 5.6.7 of the report consider the effects of the operational phase of the scheme. This reports that the roads most susceptible to changes in traffic will be in central Cheltenham, within the AQMA. I would disagree with this assessment, as the scheme has potential (in fact its intention is) to affect roads around the north and west of the town. Some of these roads are only marginally in compliance, as the report has noted in reporting monitoring results in table 5-4 (Location 28 – Princess Elizabeth Way North) and DEFRA modelling in section 5.4.18.

The Proposed Assessment Methodology in section 5.10 appears to be sound, and I welcome the intention to consult with CBC highlighted in section 5.11. My only recommendation is that detailed modelling of the AQ effects of the scheme be extended beyond the 2020 AQMA boundary to include the corridor extending from A40 Arle Court roundabout – A4013 Princess Elizabeth Way to A4019 roundabout, which is currently in marginal compliance with limit values.

## **Noise**

The issue of noise is less of a concern to CBC. The area of the scheme that extends into the CBC area is minimal, and largely consists of existing dual carriageway, so the effects of construction work on this part of the borough will be minimal. I note that an assessment of the impact of diversion routes will be made, which may have short-term effects, during their use.

The longer term operational phase effects of the scheme are also expected to have minimal effect on noise sensitive premises within the borough.

The report has identified a suitable method of assessment for impact from noise and vibration, and our officers will be happy to discuss or review further, as required.

## **Cheltenham Borough Council Tree Section**

The CBC Tree Section would anticipate the following studies as a part of any application to develop land where it pertains to Cheltenham:

- 1) BS 5837 (2012) Tree Survey of all trees within the line of and within the sphere of influence of the proposed development.
- 2) Arb Implications Assessment of the proposal as it pertains to Cheltenham.
- 3) Tree Retention and Removal Plan.
- 4) Tree Protection Plan.
- 5) Tree planting plans including species, numbers, locations etc to mitigate for any proposed tree losses. It is encouraging to note in para 9.7.1 that advance planting of trees will be implemented.

Whilst it is noted in para 7.4.4 and table 7.1 of the Scoping Report that there is no Ancient Woodland adjacent nor Ancient or Veteran Trees (as determined by the Woodland Trust Ancient Tree Inventory), this is not to say that such features do not exist and all trees should be assessed by a suitably qualified and experienced arboriculturist.

Similarly woodland and orchards referred to within this report should be thoroughly assessed for their arboricultural, social and historic values and as per para 9.7.9, development should avoid mature trees and arb features as appropriate.

There does not appear to be any existing CBC administered Tree Protection Orders within Cheltenham which would likely affect the proposed development.

#### **Other**

Comments have been received from Highways England, Environment Agency, Historic England, Gloucestershire County Council Archaeologist and Lead Local Flood Authority. It is noted that the Planning Inspectorate has consulted these bodies directly, for completeness these comments have been attached separately as part of the Cheltenham Borough Council email response to M5Junction10@planninginspectorate.gov.uk

The Council requests that these comments be taken into account when issuing any Scoping Opinion.

Yours faithfully

Craig Hemphill

Principal Planning Officer

For the Interim Head of Planning

The Planning Inspectorate  
3/18 Eagle Wing  
Temple Quay House (2 The Square)  
Temple Quay  
Bristol  
Avon  
BS1 6PN

**Our ref:** SV/2021/111053/01-L01  
**Your ref:** TR010063-000006  
**Date:** 13 August 2021

Dear Madam/Sir

## **SCOPING CONSULTATION AND NOTIFICATION OF THE APPLICANT'S CONTACT DETAILS AND DUTY TO MAKE AVAILABLE INFORMATION TO THE APPLICANT IF REQUESTED - M5 J10 CHELTENHAM GLOUCESTERSHIRE**

Thank you for consulting the Environment Agency (EA) on the above Environmental Impact Assessment (EIA) Scoping Consultation. We have reviewed the EIA Scoping Report dated 05 July 2021 undertaken by Atkins on behalf of Gloucestershire County Council (GCC). We have the following comments on matters within our remit:

### **FLOOD RISK**

With regards the requirements set out in Chapter 8 Road Drainage and the Water Environment, that includes flood risk, we have the following comments to make.

All the relevant sources of flooding and potential impacts have been identified in the Scoping Report that will need to be included within the final Flood Risk Assessment (FRA).

We have already had extensive pre-application discussions with GCC (via their consultants Atkins) regards the hydraulic modelling report which we are awaiting to be submitted to us for its final review.

Initial discussions have also been undertaken with regards the principles of appropriate mitigation. However, these issues can only be progressed once the hydraulic modelling has been signed off and detailed designs submitted.

We are satisfied with the content of the Scoping Report with regards to flood risk, and have no further comments to make.

Our focus, role and remit in this regard relates to fluvial flooding from main river sources. The Lead Local Flood Authority (LLFA) leads on other sources of flooding and surface water drainage matters, including Sustainable Drainage Systems (SuDS).

### **BIODIVERSITY**

The general approach of the Scoping Report aligns with standard practice. The key reports and surveys we would expect to be undertaken have been identified in the Scoping Report, including the requirement for a Water Framework Directive (WFD) Compliance Assessment. We have the following comments on some of the detail of the scoping report. Our focus, role and remit in this regard relates primarily to water based

Environment Agency

Riversmeet House, Newtown Industrial Estate, Northway Lane, Tewkesbury, Gloucestershire, GL20 8JG.

Customer services line: 03708 506 506

[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

Cont/d..



ecology. For wider biodiversity advice the comments of Natural England, Gloucestershire Wildlife Trust and GCC's biodiversity Officer may all be sought.

We welcome the intention in 4.3.27. to report embedded mitigation in the project description but have requested that assessment of impacts without embedded mitigation is also clarified.

Whilst we welcome Objective 5 for the scheme to deliver a package of measures which is in keeping with the local environment and minimises any adverse environmental impacts there should be a clear commitment to include enhancement which could, at least in part, be characterised as Net Environmental Gain.

We consider it premature, as described in 4.3.48 and elsewhere, to conclude it not likely that the Scheme could give rise to impacts on any European Sites, either for the Scheme alone, or in combination with other plans or projects. This is because the watercourses being affected are in hydrological continuity with the Severn Estuary SAC/Ramsar and there are mechanisms to impact on the designated fish assemblage which use the tributaries of the Severn as functionally linked habitat.

We agree with 7.6.18. that although the impacts have not been characterised in detail at this stage, there is potential for significant effects (i.e. moderate significance or above) on ecological features including Bats, Otter; Breeding and wintering birds, Great crested newt and aquatic habitats and species. The latter however is not limited to the River Chelt, although this is the most significant watercourse. The associated species should include specific reference to notable priority Biodiversity Action Plan (BAP) species, for example eel and brown trout, in their own right; the latter species is suffering a dramatic decline.

We cannot support the conclusion in 7.13.4. that with further baseline information to enable refinement of the current 'likely worst case' assumptions, considered option selection and commitment to appropriate mitigation, it is plausible that the majority of the residual effects on biodiversity would be reduced to a Neutral level. The residual operational impacts will adversely affect connectivity for a wide range of biodiversity including aquatic and riparian species, as well as herptiles, birds and bats. In conjunction with landscape, hydrological, noise and air quality impacts the requirement for mitigation and offsetting should not be underestimated.

The mitigation described in section 7.7.14. regarding the design of the culverts with respect to otters would reduce or minimise the obstruction to connectivity for otter rather than prevent obstruction. Mitigation, including offsetting for otters and other wildlife should make reference to the wetland associated with floodplain compensation and SuDS. There should also be specific reference to improving the connectivity of the culvert under the M5 for otters and other wildlife, including fish. It should also be noted that otters move overland between watercourses.

The proposed draft site boundary (identified by a red line) including any associated development and permanent land Figure 2-5 should not be prematurely fixed so as to exclude the possibility of meaningful and comprehensive habitat compensation and enhancement.

The need to ensure that SuDS design is multifunctional should be further expanded and committed to. In Section 9.7.4. it is 'anticipated' that design development would include exploring "naturalistic" formations, utilising underground storage features and introducing well-considered landscaping, which would help to integrate the ponds and

mitigate any significant adverse effect on the character of the landscape due to the introduction of incongruent and potentially intrusive features.

We broadly agree with the key considerations in environmentally sensitive culvert design described in section 7.7.31 and elsewhere, where if a clear span structure is not technically feasible or economically viable but the depth of embedded culvert inverts for all box culverts and piped culverts to allow for the formation of a natural watercourse bed are likely to require a culvert invert to a depth of more than 0.15m to 0.3m below design bed level to minimise the formation of a hydraulic jump, and effectively a weir avoid erosion at the upstream or downstream end of a culvert.

Whilst we agree with 7.9.3. that the need for further bird, otter and aquatic species surveys will be reviewed following the completion of surveys and analysis of survey data the development of mitigation needs to take into account the current, past and future population trends and aspirations, particularly given the lifetime of the scheme. Otter populations, for example, are increasing their range. Therefore their requirements should be considered as standard on watercourses.

Conversely, contrary to policy drivers for restoration of biodiversity many species are at a low point or declining. In other words the current baseline, needs to be interpreted in line with the capacity of the environment to support a greater abundance and diversity of species and habitats including the need not to preclude plans and projects to enhance population resilience and habitat quality.

We agree that the Scheme has the potential to significantly impact the water environment, therefore further assessment is warranted. Appropriate mitigation measures that are proportionate to the significance of impacts however needs to take into account the full range of impacts.

We welcome the conclusion that where river realignments are proposed, the designs should replicate the natural character of the watercourse (which may currently be modified) and be considered appropriate improvements to the hydro-morphological and biological quality of the watercourse.

## **GROUNDWATER AND SURFACE WATER PROTECTION**

The Scoping Report (chapter 10 Geology and Soils) has identified the main issues that will need to be considered during the engineering works. The issues being groundwater, surface water and presence of landfills.

The site works overlie Cheltenham sand and gravel and alluvium overlying charmouth mudstone bedrock for the main with part of the site on Rugby/limestone. The superficial deposits are classified as High vulnerability secondary A aquifer. The mudstone bedrock is classified as medium vulnerability undifferentiated aquifer and the limestone as high vulnerability secondary A aquifer.

The proposed works are not in any source protection zones, and there are no licensed groundwater abstractions within the site area. It does not appear that attempts have been made to locate any private water supplies/abstractions. The Local Councils should be contacted with respect to location of private water supplies and this information should be included in the EIA.

There are 2 surface water abstractions and 28 surface water discharges within the site area. The surface water abstractions seem to be mainly downstream on the River Chelt.

It is likely that the greatest area for risk with the project (in the context of groundwater and surface water protection) will be to surface water. Two main rivers intersect the study area: The River Chelt to the south of the M5 junction 10 and the Leigh Brook to the north. Both rivers flow in westerly direction joining the River Severn approximately 53km west of the study area. It is important that the proposed development and associated mitigation measures protect and enhance these surface water features, as well as ground water. This is a requirement under the WFD.

Even though there are no licensed groundwater abstractions in the area we consider it is necessary to undertake a Water Features Survey (WFS) within the vicinity of the development as it is not only active de-watering that may impact upon any sources, but if the proposed development were to involve changes to ground conditions or surface water flow paths this could have an effect. There is the potential for shallow and perched groundwater given the number of springs on the Ordnance Survey map for this location. In addition a large part of the area is floodplain.

If dewatering is necessary in the superficial deposits during construction the applicant will have to apply for an abstraction licence which will require a full WFS to be undertaken. The application for an abstraction licence will need to be undertaken well ahead of the construction works commencing. At this stage it is not known which consents, permits and licences may be part of the Development Consent Order (DCO), and which may be separate.

In addition, any excavations for borrow pits should also be subject to the need to carry out a WFS. For example it would be appropriate to check for water features within at least a 100m radius of the borrow pit. This would certainly would be the case if the borrow pit excavation involved excavating into the water table (be it perched or the main water table). Furthermore an abstraction licence would also be needed for any dewatering associated with borrow pits.

The EIA should include all the above assessments associated with any borrow pits as well as the road scheme itself.

I trust the above will assist in determining the Scope of the EIA. Please do not hesitate to contact us if you have any queries. We look forward to working further with GCC and their consultants on this scheme through the next stages.

Yours faithfully

**Ms Ruth Clare** BA (Hons), MSc, MRTPI, PIEMA  
**Planning Specialist – Sustainable Places**



**From:** [REDACTED]  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** Reference: PE161093. Plant Not Affected Notice from ES Pipelines  
**Date:** 22 July 2021 12:20:03

---

M5 Junction 10 Highways Improvements  
Planning Inspectorate

22 July 2021

Reference: TR010063 - M5 Junction 10 Improvements

Dear Sir/Madam,

Thank you for your recent plant enquiry at:

I can confirm that ESP Utilities Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.

ESP Utilities Group Ltd are continually laying new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

### **Important Notice**

Please be advised that any enquiries for ESP Connections Ltd, formerly known as British Gas Connections Ltd, should be sent directly to us at the address shown above or alternatively you can email us at: [PlantResponses@espug.com](mailto:PlantResponses@espug.com)

**ESP have provided you with all the information we have to date however, there may be inaccuracies or delays in data collection and digitisation caused by a range of practical and unforeseeable reasons and as such, we recommend the following steps are taken as a minimum before work is commenced that involves the opening of any ground and reference made to HSG47 (Avoiding danger from underground services).**

**A. Plans are consulted and marked up on site**

**B. The use of a suitable and sufficient device to locate underground utilities before digging (for example the C.A.T and Genny)**

**C. Trial holes are dug to expose any marked up or traced utilities in the ground**

**D. If no utilities are shown on any plans and no trace is received using a suitable and sufficient device, trial holes are dug nonetheless using hand tools at the**

location or at regular intervals along the location that the work is being carried out depending on the length of excavation work being undertaken  
**E. All location work is carried out by individuals with sufficient experience and technical knowledge who may choose to control this activity under a Safe System Of Work**

Yours faithfully,

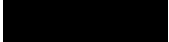
Plant Protection Team  
**ESP Utilities Group Ltd**



Bluebird House  
Mole Business Park  
Leatherhead  
KT22 7BA

<http://www.espug.com>

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**From:**   
**To:** [Highways Improvements Scheme](#)  
**Subject:** TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation  
**Date:** 18 August 2021 16:13:31  
**Attachments:** [image001.jpg](#)

---

Dear Sir/Madam,

The Forest of Dean District Council acting in its role as a Statutory Consultee has undertaken a full assessment of the proposed development. Based on an assessment of the M5 Junction 10 Improvements Scheme Environmental Impact Scoping Report, on behalf of the Local Planning Authority (LPA) I can confirm that the LPA have no comments to provide in regards to the proposed development.

Kind regards,

Mr Matthew Green  
Graduate Planning Officer

Matthew Green  
Graduate Placement

---



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---

**From:** M5 Junction 10 Highways Improvements Scheme  
<[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)>  
**Sent:** 21 July 2021 11:08  
**Cc:** M5 Junction 10 Highways Improvements Scheme  
<[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)>  
**Subject:** TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation

### **FAO Head of Planning**

Dear Sir/ Madam

Please see attached correspondence on the proposed M5 Junction 10 Improvements project.

Please note the deadline for consultation responses is **18 August 2021**, and is a statutory requirement that cannot be extended.

Kind regards  
Laura

Laura Feekins-Bate  
EIA Advisor  
Environmental Services

[\[REDACTED\]@planninginspectorate.gov.uk](mailto: [REDACTED]@planninginspectorate.gov.uk)

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)

Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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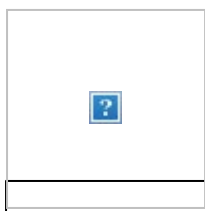



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DPC:76616c646f72



**From:**   
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** RE: TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation  
**Date:** 12 August 2021 09:31:54  
**Attachments:** [~WRD0002.jpg](#)

---

Dear Sir/Madam

### **Development management and ancient woodland – Forestry Commission approach**

Thank you for consulting the Forestry Commission. On this occasion due to the scale of the proposed development and/or the distance from the ancient woodland we have no comments to make. We would like to refer you to the [standing advice](#) ‘*Ancient woodland, ancient trees and veteran trees: protecting them from development*’ that we prepared jointly with Natural England.

The advice gives links to [Natural England’s Ancient Woodland Inventory](#), assessment guides and other tools to assist you in assessing potential impacts. This should be taken into account by planning authorities where relevant when determining planning applications.

Ancient woodland is an irreplaceable habitat. National Planning Policy Framework paragraph 175c states:

*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons<sup>58</sup> and a suitable compensation strategy exists;*

Footnote 58 states: *For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.*

The Forestry Commission is a [non-statutory consultee](#) on developments in or within 500m of ancient woodland which cannot be addressed by the information within the standing advice. If you believe that a more detailed bespoke response is required please do not hesitate to contact me.

Kind regards

Tracy Fry  
Area Admin Officer

Forestry Commission  
SW Area Office  
Bullers Hill, Kennford, Exeter, EX6 7XR  
T :0300 067 5549





[www.forestry.gov.uk/southwest](http://www.forestry.gov.uk/southwest)

Following the [government's guidance issued about the coronavirus \(COVID-19\) outbreak](#), I am working from home/working at the office and at home. You can contact me by email/mobile number.

Some Forestry Commission offices are currently closed for the safety of our staff. Those that are open are operating in a COVID-Secure way. You can find out about our current working arrangements on [GOV.UK](#).

If you need to contact us about a grant, licence or other enquiries please contact the Admin Hub on: [adminhub.bullershill@forestrycommission.gov.uk](mailto:adminhub.bullershill@forestrycommission.gov.uk)

Keep safe

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**From:** M5 Junction 10 Highways Improvements Scheme  
<M5Junction10@planninginspectorate.gov.uk>  
**Sent:** 21 July 2021 10:51  
**Cc:** M5 Junction 10 Highways Improvements Scheme  
<M5Junction10@planninginspectorate.gov.uk>  
**Subject:** TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation

**This Message originated outside your organisation.**

---

Dear Sir/ Madam

Please see attached correspondence on the proposed M5 Junction 10 Improvements project.

Please note the deadline for consultation responses is **18 August 2021**, and is a statutory requirement that cannot be extended.

Kind regards  
Laura

Laura Feekins-Bate  
EIA Advisor  
Environmental Services  
Email: [REDACTED]

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)  
Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** 21/01741/SCOPE  
**Date:** 10 August 2021 14:26:45  
**Attachments:** [image001.png](#)

---

FAO: Craig Hemphill

**LOCATION:** Land For M5 Junction Improvements Tewkesbury Road Cheltenham

**PROPOSAL:** Application by Gloucestershire County Council (the applicant) for an order granting development consent for the M5

Thank you for consulting the archaeology department on this scoping opinion. We note that in the Environmental Impact Assessment Scoping Report provided it states that all aspects of the historic environment should be scoped into the EIA assessment: designated and non-designated known heritage assets, the potential for as-yet unknown archaeological remains, built heritage, and historic landscape. Direct physical impacts will be assessed, as well as potential indirect impacts to the significance of heritage assets through changes in setting.

Desk based research, geophysical survey and archaeological trial trenching have been undertaken which will inform the assessment of impacts on the historic environment. We therefore can advise that all necessary elements will be included in the Cultural Heritage chapter of the Environmental Impact Assessment.

Please do not hesitate to contact us should you wish to discuss further.

Yours sincerely

Rachel

Rachel Foster  
Archaeologist  
Gloucestershire County Council  
Shire Hall, Gloucester, GL1 2TH



**Please send all planning related emails to [planadvice@gloucestershire.gov.uk](mailto:planadvice@gloucestershire.gov.uk)**

**Please send any large files via <https://gloucestershire.egressforms.com/> or these may not be received**

[www.gloucestershire.gov.uk/archaeology](http://www.gloucestershire.gov.uk/archaeology)

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## Lead Local Flood Authority

Shire Hall  
Gloucester  
GL1 2TH

Craig Hemphill  
Cheltenham Borough Council  
P.O. Box 12  
Municipal Offices  
Promenade  
Cheltenham Glos  
GL50 1PP

Please ask for: Peter Siret

Phone:

Our Ref: B/2021/048548

Your Ref: 21/01741/SCOPE Date: 10 August 2021

Dear Craig Hemphill,

### **TOWN AND COUNTRY PLANNING ACT 1990 LEAD LOCAL FLOOD AUTHORITY RECOMMENDATION**

**LOCATION: Land For M5 Junction Improvements Tewkesbury Road Cheltenham Gloucestershire**

**PROPOSED: Application by Gloucestershire County Council (the applicant) for an order granting development consent for the M5 junction 10 improvements scheme (the proposed development)**

I refer to the notice received by the Lead Local Flood Authority (LLFA) requesting comments on the above proposal. The LLFA is a statutory consultee for surface water flood risk and management and has made the following observations.

As identified in the scoping report, the development has the potential to adversely impact flood risk to the surrounding area if not mitigated against. The report also states that any necessary mitigations will be presented in a Flood Risk Assessment and Drainage Strategy. These should be submitted along with any planning application either as part of an EIA or submitted separately and should be completed in line with the Environment Agency's guidance (<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>) and with reference to the CIRIA SuDS Manual C753, the Non-statutory technical standards for sustainable drainage, the latest Environment Agency guidance on climate change and any local planning guidance.

NOTE 1 :The Lead Local Flood Authority (LLFA) will give consideration to how the proposed sustainable drainage system can incorporate measures to help protect water quality, however pollution control is the responsibility of the Environment Agency

NOTE 2 : Future management of Sustainable Drainage Systems is a matter that will be dealt with by the Local Planning Authority and has not, therefore, been considered by the LLFA.

NOTE 3: Any revised documentation will only be considered by the LLFA when resubmitted through [suds@gloucestershire.gov.uk](mailto:suds@gloucestershire.gov.uk) e-mail address. Please quote the planning application number in the subject field.

Yours sincerely,

Peter Siret  
Sustainable Drainage Engineer

## **Scoping Opinion on content of an Environmental Statement (ES of an EIA)**

**Planning Inspectorate ref:** TR010063-000006

**Proposal:** EIA Scoping consultation [*Application by Gloucestershire County Council (the Applicant) for an Order granting Development Consent for the M5 Junction 10 Improvements Scheme*]

**Location:** Gloucestershire

Dear Sir/Madam

Thank you for consulting Gloucestershire County Council (GCC) on the above matter. I have the following officer comments to make.

### **Cultural Heritage Comments**

This section is supported with no further comments to add.

### **Ecology (Biodiversity) Comments**

#### **Habitats Regulations Assessment & General Observations**

The EIA Scoping Report suggests the content of the eventual ES will be detailed and potentially comprehensive, however we do have a few specific and some general points to make.

It is noted at 4.3.48 of the EIA Scoping Report that a Habitats Regulations Assessment (HRA) will be undertaken. The biodiversity and the air quality chapters of the ES must reference HRA information. The HRA could be presented as a detailed appendix to the ES. Air quality and recreational pressure changes may be brought about by the proposed Scheme and are the key issues to be considered in the HRA information supplied to the Planning Inspectorate. The Cotswold Beechwoods air quality limits are already exceeded so would the scheme help or hinder or be neutral for European Site condition? The Scheme is needed to support already planned development but would this unwittingly further increase already predicted (and mitigated) recreational pressure on accessible parts of the European Sites, particularly the Severn Estuary and the Cotswold Beechwoods? It is however observed that currently it is considered that the chosen Scheme option is not likely to give rise to impacts on any European Sites, either for the Scheme alone, or in combination with other plans or projects

The ES chapter on 'Biodiversity' should cover the following items as detailed below.

#### **Terminology and Local Mapping**

Firstly we would like to add some caution to the statement made at 7.3.14 of the EIA Scoping Report. Please be mindful that the term 'UK BAP' species or habitat should not be used extensively in the ES. Habitats and species of this status should be prefixed with the word 'priority' (or suffixed with 'of Principal Importance') to bring things into line with the S41 NERC Act List for England and the framework used by the Gloucestershire Local Nature Partnership.

#### **Existing Records and Surveys (Baseline Information)**

Please note that the September 2019 search with GCER should be repeated if the ES is to be presented much beyond summer 2022. With reference to 7.3.22 and 7.4.1 to 7.4.7 of the EIA Scoping Report local Natural capital mapping incorporating the Nature Recovery Network and related opportunities can be found at <https://naturalcapital.gcerdata.com/> . This will be useful as part of the desk study and in designing landscaping and off-site compensatory/net gain measures as appropriate. A draft version of the Local Nature Recovery Strategy may be available by the spring of 2022 (requirement of the Environment Bill/Act) and could be an important reference point for the Scheme's EIA.

### Survey Methods and Results

Please include details of survey work carried out which should be as recent as possible. For some species the field data should be no older than 3 years when the ES is completed. Any surveys older than 3 years should be reassessed with some new survey information to see if site conditions have changed or not. We see this point is recognised at 7.10.1 of the EIA Scoping Report. Survey methodologies should be described adequately. All survey work should be carried out at an appropriate time of year but if not the implications of this should be clearly stated.

### Assessment Methodology

A rigorous methodology should be used for assigning a value to each ecological resource (sites, habitats, features and species). The methodology must set out how the magnitude of impact has been measured and how the significance of any residual effect has been assessed.

### Assessment of Effects

It is observed that assessment of effects will follow CIEEM and Highways England guidance. A summary table is recommended showing magnitude, extent and duration of impacts as well as significance. We note the results of baseline surveys undertaken so far (Table 7-1 in the EIA Scoping Report). Please note that Walmore Common is also a SAC site. We are surprised not to see Dixon Wood SAC/SSSI mentioned in the EIA Scoping Report even though it is at some distance. The Planning Inspectorate should expect the ES to contain sufficient information to assist it in confirming an HRA decision on the likelihood for significant effects or an adverse effect on the integrity of any European Site, e.g. Cotswold Beechwoods, Dixon Wood, Severn Estuary, Walmore Common or Rodborough Common (see HRA observations above)

### Mitigation Measures & Biodiversity Enhancement

Describe mitigation measures for identified adverse effects on biodiversity. Opportunities for the enhancement of biodiversity (i.e. overall biodiversity net gain) must be investigated and implemented alongside essential mitigation measures. This would be consistent with meeting existing and emerging local and national planning policy. Use of the new Natural England metric 3.0 (or 2.0 if already used) will help to inform matters although should be referred to with a degree of caution given it does not implicitly take into account all protected and priority species requirements.

It is noted that a Construction Environmental Management Plan (CEMP) will be produced which may need to include ecological avoidance and mitigation measures too. This is important if such measures are not to be covered by a recommended Landscape and Ecology Management Plan (a LEMP is often just focused on the restoration/landscaping and aftercare phases but can include the construction phase also)?

### Site Restoration and After-care Management

Landscaping/restoration/compensation/enhancement proposals should be described. An outline Landscape and Ecology Management Plan (LEMP) is recommended as an appendix to the ES. This would include more detail on the measures to create, extend and manage habitats, species

and landscape features in the short to medium term. These may need to include areas beyond the red line to achieve a Biodiversity Net Gain (BNG).

### Monitoring

Post-scheme monitoring should be described (e.g. as part of an outline LEMP – see above). This should be targeted towards where potentially significant impacts to resources of ecological value have been identified and where mitigation cannot be guaranteed to be successful. The results of the monitoring proposed must be used to vary or alter the mitigation where the actual effects are greater than the predicted impacts. Contingencies must also be set out to rectify any ineffective mitigation.

## **Minerals and Waste Policy Comments**

All of the details set out within this section are made by officers of GCC in its capacity as the Mineral and Waste Planning Authority (MWPA): -

### **Paragraph 12.4.1**

It is recommended that monitoring data contained within the South West Aggregate Working Party (SW AWP) Annual Reports is used as the baseline for aggregate mineral supplies from within the region. The MPA trade association publication from 2018 (*The Mineral Products Industry at a Glance, 2018 Edition*) is a useful resource. However, it is not the universally accepted view on aggregate supplies at both a regional and national level. The annual reports prepared by regional AWP's represent the most reliable data source. AWP's are central government-funded bodies made up of representation from local mineral planning authorities, the mineral industry (both Mineral Products Association and British Aggregate Association), central government; Environment Agency (EA) and the Marine Management Organisation (MMO). The most recent annual report for the South West presents quantitative information on the sales of aggregates during 2018 along with the landbank of permitted reserves at the end of that year. The SW AWP Annual Report for 2018 can be downloaded from: - <https://www.cornwall.gov.uk/planning-and-building-control/planning-policy/adopted-plans/south-west-aggregates-working-party/>

It is also recommended that the latest version of the Environment Agency Waste Data Interrogator (WDI) is employed through the EIA. The '2019' dataset was published in December 2020 and can be accessed from: - <https://data.gov.uk/dataset/d409b2ba-796c-4436-82c7-eb1831a9ef25/2019-waste-data-interrogator>

### **Paragraph 12.6.1**

In addition to the two main impacts from construction, it is advised that the risk of mineral resource sterilisation should be included. This is due to the fact the proposed scheme will occur over designated local Mineral Safeguarding Areas (MSAs).

## **Section 12.7 | Potential effects and mitigation measures**

In terms of mineral resource matters the mostly likely potential effect would be the loss of access and / or permanent sterilisation by surface development of valuable mineral resources.

### **Paragraphs 12.7.4 to 12.7.6 | Potential Mitigation Measures**

In terms of mineral resource matters a potential means of mitigation would be the prior extraction of underlying mineral resources.

### **Paragraph 12.9.1**

An additional task is recommended. The potential opportunities to achieve the prior extraction of underlying mineral resources of value should be identified.

## **Section 12.10 | Proposed assessment methodology**

It is recommended that the methodology is revised to include an approach for determining the significance of effects associated with the risk of mineral resource sterilisation.

### **Paragraph 12.11.1**

It is recommended that the paragraph is revised to acknowledge the County Council's role as the local

Minerals and Waste Planning Authority (M&WPA), which includes upholding the strategic objectives and policy requirements of the 'saved' policies of the adopted Gloucestershire Waste Local Plan (WLP); adopted Gloucestershire Waste Core Strategy (WCS); and adopted Minerals Local Plan for Gloucestershire (MLP).

I understand Flood Risk Management comments are being sent separately.

If you would like to discuss any of the points raised above please do not hesitate to contact me.



CEMHD Policy - Land Use Planning,  
NSIP Consultations,  
Building 1.2,  
Redgrave Court,  
Merton Road,  
Bootle, Merseyside  
L20 7HS.

HSE email: [NSIP.applications@hse.gov.uk](mailto:NSIP.applications@hse.gov.uk)

FAO Laura Feekins-Bate  
The Planning Inspectorate  
Temple Quay House  
Temple Quay  
Bristol  
BS1 6PN  
By email only

Dear Ms Feekins-Bate

05 August 2021

**PROPOSED M5 JUNCTION 10 IMPROVEMENTS (the project)  
PROPOSAL BY GLOUCESTERSHIRE COUNTY COUNCIL (the applicant)  
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) REGULATIONS 10 and 11**

Thank you for your letter of the 21 July 2021 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

**HSE's Land Use Planning Advice**

**Will the proposed development fall within any of HSE's consultation distances?**

With reference to **Figure 2-5 Proposed Land Take For The Scheme** contained within document **M5 Junction 10 Improvements Scheme, Environmental Impact Assessment Scoping Report - Date 05/07/21** on which is shown a redlined area, passing through several sections of the redlined area are two Major Accident Hazard Pipelines operated by Wales and West Utilities:

- Uckington / Gloucester (Ref: UG) [Transco ref: 1490, HSE ref: 7220]
- Fiddington / Uckington (Ref: FU) [Transco ref: 1476, HSE ref: 7207]

The redlined area does not currently fall within the consultation distances of any Major Accident Hazard Installation(s).

At this stage of the consultation process it is not possible for HSE to provide an indication of its public safety Land Use Planning advice; There is currently insufficient information available to determine to what extent the proposed development will impact on new or existing populations (permanent or temporary) that may fall within Major Accident Hazard Pipeline(s) HSE's public safety consultation zones.

Please note if at any time a new Major Accident Hazard Pipeline is introduced or existing Pipeline modified prior to the determination of a future application, then the HSE reserves the right to revise its advice.

Likewise if prior to the determination of a future application, a Hazardous Substances Consent is granted for a new Major Hazard Installation or a Hazardous Substances Consent is varied for an existing Major Hazard Installation in the vicinity of the proposed project, then again the HSE reserves the right to revise its advice.

### **Would Hazardous Substances Consent be needed?**

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 2015.

Hazardous Substances Consent would be required if the proposed development site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Further information on HSC should be sought from the relevant Hazardous Substances Authority.

### Explosives sites

HSE has no comment to make as there are no licensed explosives sites in the vicinity.

### Electrical Safety

No comment from a planning perspective.

At this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at [nsip.applications@hse.gov.uk](mailto:nsip.applications@hse.gov.uk). We are currently unable to accept hard copies, as our offices have limited access.

Yours sincerely,

*Monica*

Monica Langton  
CEMHD4 NSIP Consultation Team

Our ref: as yours  
Your ref: TR010063-000006

The Planning Inspectorate

Via email: M5Junction10@planninginspectorate.gov.uk

Sally Parish  
Planning Manager (Highways  
Development Management)  
South West Operations Directorate  
L1 Ash House  
Falcon Road  
Sowton Industrial Estate  
Exeter EX2 7LB

[www.highways.gov.uk](http://www.highways.gov.uk)

Dear Sir/Madam

## Highways England and Environmental Impact Assessment Reports

**M5: Request for EIA Scoping Opinion for proposed all-movements junction at M5 Junction 10; A new West Cheltenham Link Road east of Junction 10 from the A4019, to the West Cheltenham Cyber Park; and widening of the A4019 to the east of Junction 10, Tewkesbury Road, Uckington, Cheltenham, Gloucestershire.**

Thank you for inviting Highways England to provide comments on the above request for a scoping opinion. Highways England is a Statutory Consultee on Planning Applications under the Town and Country Planning (Development Management Procedure) Order 2015. In discharging this responsibility, we act as a proactive partner and therefore welcome pre-application discussion, including the opportunity to provide advice on the scope of any Environmental Statement pursuant to the procedures set out in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, which also identifies the Highways Agency (now Highways England) as a statutory party.

The request is in respect of a proposed Housing and Infrastructure Fund (HIF) Improvement Scheme, at M5 Junction 10. The scheme, which is classed as a Nationally Significant Infrastructure Project, comprises three elements of work:

- An all-movements junction at M5 Junction 10;
- A new West Cheltenham Link Road east of Junction 10 from the A4019, to the West Cheltenham Cyber Park; and
- Widening of the A4019 to the east of Junction 10.

Our comments herein are made in response to the Gloucestershire County Council and Atkins Environmental Impact Assessment Scoping Report, July 2021 and are provided without prejudice to any future recommendations or advice which maybe sought in response to the submission of further technical information or a planning application.

The proposed improvement scheme is regionally significant so with this in mind, we have set out below general areas of concern that Highways England would wish to see considered as part of any Environmental Statement followed by a focus on ensuring that DMRB standards, have been applied in terms of the assessment methodology.

## General aspects to be addressed

- An assessment of transport related impacts of the proposal should be carried out and reported as described in the current Ministry of Housing, Communities and Local Government guidance.
- Environmental impacts arising from any disruption during construction, traffic volume, composition or routing change and transport infrastructure modification should be fully assessed and reported, along with the environmental impact of the road network upon the development itself.
- Adverse changes to noise and air quality should be considered, including in relation to compliance with the European air quality Limit Values and/or Local Authority designated Air Quality Management Areas (AQMAs) and World Health Organisation (WHO) criteria.
- There are a number of incidents where it is considered that there is a lack of evidence in the reporting to confirm compliance with Highways England's published standards included within the Design Manual for Roads and Bridges. Works undertaken on Highways England's Network should be compliant with these standards. Topic specific issues are outlined further below.
- The report appears to make reference to option selection for some topics e.g. biodiversity and cultural heritage. At this stage it is understood that a single option will be assessed and that this should be reflected in the reporting and be consistent with the project description included in Chapter 2.

## Topic specific considerations

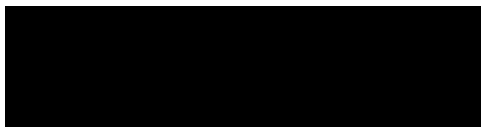
- It is not clear if the Air Quality assessment has been scoped in accordance with the criteria set out in DMRB LA 105. The focus appears to be on changes in AADT, LA 105 states that the criteria used for scoping should also include changes in speed band and carriageway alignment.
- The report states no impacts to ecological receptors associated with an increase in nitrogen deposition because of the scheme. However, paragraph 5.5.1 implies that a revision may be required to the Affected Road Network defined for the scheme. This could have an impact on the traffic-related assessments and the scoping decisions made for ecological receptors.
- The Biodiversity chapter records a decision to scope out 'plants' and badgers for further assessment as features identified are considered to have no more than local ecological value. Plants also appears to be a broad term that captures numerous habitat types, potentially of low distinctiveness. It is considered that there is limited evidence to support the conclusion to scope out these receptors at this stage.
- Regarding surface water in section 8, a simple assessment has been proposed, however, it is important to acknowledge what happens if there is a fail in the HEWRAT Assessment, i.e. a detailed assessment should be undertaken.
- It's important to acknowledge that DMRB requires the consideration of a number of factors (see 3.11 of LA107) rather than just applying a 1km buffer when considering a study area for landscape and visual assessments and the applicant is recommended to consider

providing additional detail to clarify the approach they have taken to scoping. In addition, there appears to be no conclusions regarding what aspects have been scoped in or out for further assessment for this topic.

- The study area stated for the assessment of impacts to heritage assets appears to reference the scheme footprint for non-designated assets, but to refer to the option alignments plus 1km for designated heritage assets. The scoping report should reflect the scope of the assessment proposed relative to the Preferred Route confirmed for the scheme and described in Chapter 2 of the Scoping Report.
- We note 'The methodology will generally follow DMRB LA112 (Population and Human Health)' - The assessment should follow LA112 and any deviations from this standard should be confirmed and a Departure from Standards considered (if appropriate) in consultation with Highways England's Technical Specialists.
- We also note that significant impacts within the Population and Human Health chapter are anticipated because of the demolition of a number of properties, where compensation is the only proposed mitigation measure.

These comments are only advisory, as the responsibility for determining the requirement for, and the scope and form of, any EIA Report rests with the Local Planning Authority.

Yours sincerely



Sally Parish  
Highways Development Management, Operations.





Ms Laura Feekins-Bate  
The Planning Inspectorate  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

Our ref: PL00753143

17 August 2021

Dear Ms Feekins-Bate

## **M5 JUNCTION 10 IMPROVEMENTS SCHEME ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCOPING REPORT**

Thank you for your letter of 2nd August 2021 consulting us about the above EIA Scoping Report.

This development could, potentially, have an impact upon a number of designated heritage assets and their settings in the area around the site. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

We would also expect the Environmental Statement to consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance and make an important contribution to the character and local distinctiveness of an area and its sense of place. This information is available via the local authority Historic Environment Record ([www.heritagegateway.org.uk](http://www.heritagegateway.org.uk)) and relevant local authority staff.

We would strongly recommend that you involve the Conservation Officer of Tewkesbury Borough Council and the archaeological staff at Gloucestershire HER in the development of this assessment. They are best placed to advise on: local historic environment issues and priorities; how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets.

Given the size of the structures associated with the proposed development and the surrounding landscape character, this development is likely to be visible across a very large area and could, as a result, affect the significance of heritage assets at



1ST FLOOR FERMENTATION NORTH FINZELS REACH HAWKINS LANE BRISTOL BS1 6JQ

Telephone 0117 975 1308  
[HistoricEngland.org.uk](http://HistoricEngland.org.uk)



some distance from this site itself. We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.

It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this.

The assessment should also take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to *in situ* decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.

We also have wish to make comments to make regarding the content of the Scoping Report. The scoping document dated 05/07/2021, does not appear to contain any of the advice or recommendations provided at pre-application by the Inspector of Ancient Monuments, as sent to Mr Cartwright of Atkins Global on 25/11/2020 (our ref PA01121745). This advice considered the potential impacts of the proposal and gave detailed and specific information regarding further work required.

We also note from the limitations section in 11.5 that no site visit had been made to inform the scoping document or familiarise with the landscape as part of the baseline assessment.

If you have any queries about any of the above, or would like to discuss anything further, please contact me.

Yours sincerely,

Simon Hickman  
Principal Inspector of Historic Buildings and Areas

cc John Hinett, Tewkesbury Borough Council  
Craig Hemphill, Cheltenham Borough Council



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Telephone 0117 975 1308  
HistoricEngland.org.uk



Date: 18 August 2021  
Our ref: 361074  
Your ref: TR010063



The Planning Inspectorate  
[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)

**BY EMAIL ONLY**

Customer Services  
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CW1 6GJ

T 0300 060 3900

Dear Ms. Boyle,

**Planning consultation: M5 Junction 10 Improvements Scheme - EIA Scoping notification & consultation - Scheme elements include an 'all movements' junction at M5 Junction 10, complemented by a new link road to the west of Cheltenham, and improvements along the A4019 and at Coombe Hill junction.**

Thank you for your consultation on the above. We welcome the opportunity to provide comments on biodiversity, geology and soils, landscape, air quality and climate change.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

### **Approach**

Natural England notes the EIA Scoping Report and the purpose of the consultation, which is summarised below;

- Inform the Planning Inspectorate of the information you consider should be provided in the ES; or
- Confirm that you do not have any comments.

### **Previous advice provided to applicant**

Natural England has provided previous ecological advice to the applicant in relation to the M5 J10 Scheme. We enclose a copy of our advice dated 15<sup>th</sup> April 2021, to Atkins Global, in response to their Habitat Regulations Assessment. Most recently, we understand that further work is being done to provide an updated Habitat Regulations Assessment in response to Natural England's comments. We await this updated report.

To date, no advice has been provided from Natural England regarding protected species licensing.

### **Comments on the proposed scope of EIA**

#### Description of the development

Natural England notes that the submitted EIA Scoping Report has outlined the chosen scheme it wishes to follow;



- An all-movements junction at M5 Junction 10 (scheme element 1);
- A new West Cheltenham Link Road east of Junction 10 from the A4019 (scheme element 1);
- Widening of the A4019 to the east of Junction 10 (scheme element 3).

We are satisfied that the proposed approach to EIA adequately addresses those themes and issues within our remit.

#### Aspects of the environment likely to be significantly affected and interrelationships between these

Natural England is satisfied that the report indicates those aspects of the environment within our remit that are likely to be significantly affected – landscape (protected areas), soils and land quality, internationally and nationally designated sites and protected and priority species.

We offer the following comments regarding specific themes;

#### Air Quality (Chapter 5)

Natural England note the reference to *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001)*, in relation to the Cotswold Beechwoods SAC. This is welcomed.

This internal operational Guidance Note describes how Natural England advises competent authorities and others on the assessment of plans and projects (as required by the Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations')) likely to generate road traffic emissions to air which are capable of affecting European Sites. It has been published for information to help competent authorities to better understand Natural England's own approach when applying the Habitats Regulations to these matters in its role as statutory adviser.

As part of the process, through the Habitat Regulations Assessment, consideration of designated sites is sought and the impacts from air quality examined. This will include for example, consideration of nitrogen deposition on any SSSI's. We would draw attention to the two pieces of case law; the Wealden Judgement and Dutch Nitrogen Case.

Consideration should be given to the relevant methodology set out in Highways England's 'Design Manual for Roads and Bridges'. The Air Pollution Information System (APIS) also provides specific information on the air quality theme for each designated site, which may be affected, and should be factored into the methodology when establishing the 'baseline'.

#### Biodiversity (Chapter 7)

We note the protected species surveys completed or being undertaken.

We note the reference to designated sites, in particular the Severn Estuary Ramsar/SPA/SAC. We would caution against screening this site of the EIA basely on distance alone.

We would draw the Inspector's attention to the issue of Functional Linkage for the Severn Estuary SPA Wild Birds. Natural England has recently commissioned a report, currently unpublished, "Identification of land with proven or possible functional linkages with the Severn Estuary SSSI/SPA – Phase 5 (Gloucestershire and Worcestershire)" (Link Ecology). From our understanding of the report we would conclude that significant effects on functionally linked land may be screened out though the report shows that such land lies much closer to the project area than the SPA itself. This report can be made available.

Consideration should be given to all Severn Estuary fish designated as part of the Special Protection Area (SPA). This includes;

- Atlantic salmon
- Sea trout

- Allis shad
- European eel

We would recommend that the Environmental Statement considers the ecology of all these species and the functional linkages between these. Consultation with the Environment Agency, if not already, may provide up to date local knowledge of which species are to be found in the River Chelt and other nearby watercourses.

We would also caution against using the SSSI Impact Risk Zones as evidence to support screening out significant effects. Our advice above regarding the functional linkage research is provided in order to ensure your reasoning is based on the most up to date available scientific information and takes account of the recent Holohan judgement (Ref C461/17) case law. This reinforces the need for an appropriate assessment, to include an examination of the implications of the proposed project for habitat types and species to be found outside the boundaries of the site provided those implications are likely to affect the conservation objectives of the site.

#### Priority habitats, ecological networks and priority and/or legally protected species populations

Priority habitats and species are those listed under Section 41 of the Natural Environment and Rural Communities Act, 2006 and UK Biodiversity Action Plan (UK BAP). Further information is available here: [Habitats and species of principal importance in England](#). Local Biodiversity Action Plans (LBAPs) identify the local action needed to deliver UK targets for habitats and species. They also identify targets for other habitats and species of local importance and can provide a useful blueprint for biodiversity enhancement in any particular area.

Protected species are those species protected under domestic or European law. Further information can be found here [Standing advice for protected species](#). Sites containing watercourses, old buildings, significant hedgerows and substantial trees are possible habitats for protected species.

Ecological networks are coherent systems of natural habitats organised across whole landscapes so as to maintain ecological functions. A key principle is to maintain connectivity - to enable free movement and dispersal of wildlife e.g. badger routes, river corridors for the migration of fish and staging posts for migratory birds. Local ecological networks will form a key part of the wider Nature Recovery Network proposed in the 25 Year Environment Plan. Where development is proposed, opportunities should be explored to contribute to the enhancement of ecological networks.

Planning positively for ecological networks will also contribute towards a strategic approach for the creation, protection, enhancement and management of green infrastructure, as identified in paragraph 171 of the NPPF.

#### Landscape and Visual Character (Chapter 9)

We note that visual receptors will include areas outside the 1km study area zone. These will include the Cotswold AONB. This is welcomed. However, as the proposal is located adjacent to this AONB, consideration should be given to the direct and indirect effects upon this designated landscape and in particular the effect upon its purpose for designation, as well as the content of the relevant management plan for Cotswold AONB. For Areas of Outstanding Natural Beauty, the views of the AONB Partnership should be sought. Development should avoid significant impacts on protected landscapes, early consideration should be given to the major development tests set out in paragraph 172 of the National Planning Policy Framework (NPPF).

It is not clear whether the scheme will cut through the PRow. Recognition should be given to the value of rights of way and access to the natural environment in relation to health and wellbeing and links to the wider green infrastructure network. The scheme should seek to link existing rights of way where possible, and provides for new access opportunities. The scheme should avoid building on open space of public value as outlined in paragraph 97 of the NPPF.

It is noted the reference to the National Character Area (NCA) 106 Severn and Avon Vales, Gloucestershire Landscape Character Area at a local level, and that local landscape features have been recognised. It is noted impacts from construction and operation have been outlined. The report references potential adverse effects on landscape character from vegetation removal and construction activities. Mitigation has included vegetation planting. Reference should be made as to when the mitigation planting should become effective. Any enhancement opportunities should make reference to the landscape character, the Cotswold AONB and the PRoW.

### Geology and Soils (Chapter 10)

Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably.

The applicant should consider the following issues as part of the Environmental Statement:

1. The degree to which soils are going to be disturbed/harmed as part of this development and whether 'best and most versatile' agricultural land is involved.

This may require a detailed survey if one is not already available. For further information on the availability of existing agricultural land classification (ALC) information see [www.magic.gov.uk](http://www.magic.gov.uk). Natural England Technical Information Note 049 - [Agricultural Land Classification: protecting the best and most versatile agricultural land](#) also contains useful background information.

2. If required, an agricultural land classification and soil survey of the land should be undertaken. This should normally be at a detailed level, e.g. one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres.
3. The Environmental Statement should provided details of how any adverse impacts on soils can be minimised. Further guidance is contained in the [Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites](#).

### Noise and Vibration (Chapter 6)

It is noted that a CEMP will be implemented to deal with any traffic and construction noise from the proposal, by putting the relevant mitigation measures in place. This is welcomed.

### Climate (Chapter 14)

It is advised that the scheme considers climate change adaption and recognises the role of the natural environment to deliver measures to reduce the effects of climate change, for example tree planting to moderate heat island effects. In addition factors which may lead to exacerbate climate change (through more greenhouse gases) should be avoided (e.g. pollution, habitat fragmentation, loss of biodiversity) and the natural environment's resilience to change should be protected. Green Infrastructure and resilient ecological networks play an important role in aiding climate change adaptation.

### Cumulative Impact Assessment (Chapter 15)

We refer back to our comments regarding air quality and the need to consider recent case law; the Wealden judgement and the Coöperatie Mobilisation (Dutch Nitrogen case).

### Positive environmental effects

We would anticipate that the scheme has the potential to encourage positive environmental outcomes within the local area and landscape. We would expect that consideration be given to the

benefits of net gain and green/blue infrastructure. The proposed road scheme has the potential to further connect areas of Cheltenham, as well as scope for the M5 J10 scheme to include the creation of a significant area of wetland that might also perform a GI/blue infrastructure /recreation resource role connected with the West of Cheltenham and North-west of Cheltenham strategic housing/employment allocations (part of the Gloucester/Cheltenham and Tewkesbury Joint core strategy).

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.

For any new consultations in relation to the M5 J10 Scheme, please send all correspondence to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours sincerely

Rebecca Underdown  
Planning for a Better Environment Team



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England

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Your Ref: TR010063-000006

Our Ref: CIRIS 57794

Ms Gail Boyle  
Senior EIA Advisor  
The Planning Inspectorate  
Temple Quay House,  
2 The Square  
Bristol, BS1 6PN

18<sup>th</sup> August 2021

Dear Ms Boyle,

**Nationally Significant Infrastructure Project  
M5 Junction 10 Improvements Scheme TR010063-000006  
Scoping Consultation Stage**

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Advice offered by PHE is impartial and independent.

PHE exists to protect and improve the nation's health and wellbeing and reduce health inequalities; these two organisational aims are reflected in the way we review and respond to Nationally Significant Infrastructure Project (NSIP) applications.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report we wish to make the following specific comments and recommendations:

**Environmental Public Health**

We recognise the promoter's proposal to include a health section. We believe the summation of relevant issues into a specific section of the report provides a focus which ensures that public health is given adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions, and residual impacts, relating to human health.

V1.0 March 2021

Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an Environmental Statement (ES), we recognise that the differing nature of projects is such that their impacts will vary. The attached appendix summarises PHE's requirements and recommendations regarding the content of and methodology used in preparing the ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

Our position is that pollutants associated with road traffic or combustion, particularly particulate matter and oxides of nitrogen are non-threshold; i.e., an exposed population is likely to be subject to potential harm at any level and that reducing public exposures of non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent.

It is noted that the current proposals do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF). We request that the ES clarifies this and if necessary, the proposer should confirm either that the proposed development does not impact any receptors from potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.

We welcome the inclusion of assessments relating to air, land, water, noise and human health and wellbeing in the scoping report. We direct the applicant to the appendices below which contain PHE's recommendations relating to environmental assessment as part of the NSIP application.

### **Human Health and Wellbeing**

PHE exists to protect and improve the nation's health and wellbeing and reduce health inequalities; these two organisational aims are reflected in the way we review and respond to Nationally Significant Infrastructure Project (NSIP) applications. The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy built and natural environments to global ecosystem trends.

Having considered the submitted scoping report, we wish to make the following specific comments and recommendations:

- We would recommend the final ES includes the broad definition of health proposed by the World Health Organisation (WHO) and we welcome a specific reference to mental health.
- There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both. A systematic approach to the assessment of the effects on mental health, including suicide, is required. Particular attention should be given to those who may experience demolition of their property. Therefore, the assessment should identify vulnerable populations and provide clear mitigation strategies that are adequately linked to any local services or assets

- The ES shall also provide details on how health effects from the development will be monitored and assessed during construction and up to 15 years of operation.

Yours sincerely

For and on behalf of Public Health England  
[nsipconsultations@phe.gov.uk](mailto:nsipconsultations@phe.gov.uk)

*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

## Appendix 1: PHE recommendations regarding the scoping document

### Introduction

The Planning Inspectorate's Advice Note 11: Working with Public Bodies covers many of the generic points of interaction relevant to the Planning Inspectorate and Public Health England (PHE). The purpose of these appendices is to help applicants understand the issues that PHE expect to see addressed by applicants preparing an Environmental Statement (ES) as part of their Nationally Significant Infrastructure Planning (NSIP) submission.

We have included a comprehensive outline of the type of issues we would expect to be considered as part of an NSIP which falls under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). PHE encourages applicants to contact us as early in the process as possible if they wish to discuss or clarify any matters relating to chemical, poison, radiation or wider public health.

### General Information on Public Health England

PHE was established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service. We are an executive agency of the Department of Health and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the National Health Service (NHS) in a professionally independent manner.

We work closely with public health professionals in Wales, Scotland and Northern Ireland, and internationally.<sup>1</sup> We have specialist teams advising on specific issues and the potential impacts arising from environmental public health including chemicals, noise, air quality, ionising and non-ionising radiation.

### PHE's NSIP roles and responsibilities

PHE is a statutory consultee in the NSIP process for any *applications likely to involve chemicals, poisons or radiation which could potentially cause harm to people and are likely to affect significantly public health*.<sup>2</sup> PHE will consider potential significant effects (direct and indirect) of a proposed development on population and human health and the impacts from chemicals, radiation and environmental hazards. We also consider other factors which may have an impact on public health, such as the wider determinants of health, health improvement and health inequalities (where PHE has a legal duty specified in the Health and Social Care Act 2012)<sup>3</sup>.

Under certain circumstances PHE may provide comments on radiation on behalf of the Scottish Government. If a proposer is submitting a planning application in Scotland which may require advice on radiation you are recommended to contact the appropriate Scottish Planning Authority for advice on how to proceed.

In the case of applications in Wales, PHE remains a statutory consultee but the regime applies to a more limited range of development types. For NSIP applications likely to affect land in Wales, an applicant should still consult PHE but, additionally will be required to consult the Welsh Government.

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<sup>1</sup> <https://www.gov.uk/government/organisations/public-health-england/about#priorities>

<sup>2</sup> The Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015

<sup>3</sup> <http://www.legislation.gov.uk/ukpga/2012/7/contents/enacted>



## **Environmental Impact Assessments – PHE Responsibilities**

PHE has a statutory role as a consultation body under the EIA Regulations. Where an applicant has requested a scoping opinion from the Planning Inspectorate<sup>4</sup>, PHE will be consulted regarding the scope, and level of detail, of the information to be provided in the ES. PHE has a duty to make information available to the applicant.

PHE provides advice relating to EIA within this document and during the NSIP consultation stages. PHE encourages applicants to discuss the scope of the ES with us at an early stage to explore, for example, whether careful site selection or other design issues could minimise or eliminate public health impacts or to outline the requirement for, scope and methodology of any assessments related to public health. PHE's standard recommendations in response to EIA scoping consultations are below.

## **PHE's recommendations to applicants regarding Environmental Impact Assessments**

### **General approach**

PHE provides advice relating to EIA within this document and during the NSIP consultation stages. It is the role of the applicant to prepare the ES.

When preparing an ES the applicant should give consideration to best practice guidance such as the Government's Handbook for scoping projects: environmental impact assessment<sup>5</sup>, and Guidance: on Environmental Impact Assessment<sup>6</sup>

The [Planning Inspectorate's Advice Note Seven](#): Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements also provide guidance to applicants and other persons with interest in the EIA process as it relates to NSIPs. It is important that the submitted ES identifies and assesses the potential public health impacts of the activities at, and emissions from, the development.

**Applicants are reminded that Section 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 specifically includes a requirement that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on population and human health.**

PHE is of the opinion that this requirement encompasses the wider determinants of public health, as well as chemicals, poisons and radiation. Further information on PHE's recommendations and requirements is included below.

PHE understands that there may be separate sections of the ES covering the assessment of impacts on air, land, water and so on, but expects an ES to include a specific section summarising potential impacts on population and health. This section should bring together and interpret the information from other assessments as necessary. The health, wellbeing and population impacts section should address the following steps.

1. Screening: Identify any significant effects.
  - a. Summarise the methodologies used to identify health impacts, assess significance and sources of information

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<sup>4</sup> The scoping process is administered and undertaken by the Planning Inspectorate on behalf of the Secretary of State

<sup>5</sup> <https://www.gov.uk/government/publications/handbook-for-scoping-projects-environmental-impact-assessment>

<sup>6</sup> <https://www.gov.uk/guidance/environmental-impact-assessment#the-purpose-of-environmental-impact-assessment>

- b. Evaluate any reference standards used in carrying out the assessment and in evaluating health impacts (e.g., environmental quality standards)
  - c. Where the applicant proposes the 'scoping out' of any effects a clear rationale and justification should be provided along with any supporting evidence.
2. Baseline Survey:
- a. Identify information needed and available, evaluate quality and applicability of available information
  - b. Undertake assessment
3. Alternatives:
- a. Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, the EIA process should start at the stage of site selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES<sup>7</sup>.
4. Design and assess possible mitigation
- a. Consider and propose suitable corrective actions should mitigation measures not perform as effectively predicted.
5. Impact Prediction: Quantify and Assess Impacts:
- a. Evaluate and assess the extent of any positive and negative effects of the development. Effects should be assessed in terms of likely health outcomes, including those relating to the wider determinants of health such as socio-economic outcomes, in addition to health outcomes resulting from exposure to environmental hazards. Mental health effects should be included and given equivalent weighting to physical effects.
  - b. Clearly identify any omissions, uncertainties and dependencies (e.g., air quality assessments being dependant on the accuracy of traffic predictions)
  - c. Evaluate short-term impacts associated with the construction and development phase
  - d. Evaluate long-term impacts associated with the operation of the development
  - e. Evaluate any impacts associated with decommissioning of the development
  - f. Evaluate any potential cumulative impacts as a result of the development, currently approved developments which have yet to be constructed, and proposed developments which do not currently have development consent
6. Monitoring and Audit
- a. Identify key modelling predictions and mitigation impacts and consider implementing monitoring and audit to assess their accuracy / effectiveness.

Any assessments undertaken to inform the ES should be proportionate to the potential impacts of the proposal, therefore we accept that, in some circumstances particular assessments may not be relevant to an application, or that an assessment may be adequately completed using a qualitative rather than quantitative methodology. In cases where this decision is made, the applicant should fully explain and justify their rationale in the submitted documentation.

### **Human and environmental receptors**

The applicant should clearly identify the development's location and the distance of the development to off-site receptors that may be affected by emissions from, or activities at, the development. Off-site receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land.

<sup>7</sup> DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

Identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities, as well as other vulnerable population groups such as those who are young, older, with disabilities or long-term conditions, or on low incomes) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

### **Impacts arising from construction and decommissioning**

Any assessment of impacts arising from emissions or activities due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the applicant to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential negative impact on health from emissions (point source, fugitive and traffic-related) and activities. An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The applicant should ensure that there are robust mechanisms in place to respond to any complaints made during construction, operation, and decommissioning of the facility.

### **Emissions to air and water**

PHE has a number of comments regarding the assessment of emissions from any type of development in order that the ES provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these should:

- include an evaluation of the public health benefits of development options which reduce air pollution – even below limit values – as pollutants such as nitrogen dioxide and particulate matter show no threshold below which health effects do not occur;<sup>8, 9</sup>
- consider the construction, operational, and decommissioning phases;
- consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts;
- fully account for fugitive emissions;
- include appropriate estimates of background levels (i.e., when assessing the human health risk of a chemical emitted from a facility or operation, background exposure to the chemical from other sources should be taken into account);
- encompass the combined impacts of all pollutants which may be emitted by the development with all pollutants arising from associated development and transport, considered in a single holistic assessment (i.e., of overall impacts);
- identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions. This should include consideration of any new receptors arising from future development;

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<sup>8</sup> <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

<sup>9</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/795185/Review\\_of\\_interventions\\_to\\_improve\\_air\\_quality.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/795185/Review_of_interventions_to_improve_air_quality.pdf)

- identify cumulative and incremental impacts (i.e., assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e., rail, sea, and air);
- compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium. Where available, the most recent UK standards for the appropriate media (i.e., air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants;
- where UK standards or guideline values are not available, or other reputable International bodies e.g. European Union or OECD:
  - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (e.g., a Tolerable Daily Intake or equivalent);
  - This should consider all applicable routes of exposure (e.g., include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion).
- include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary;
- include Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES;
- include consideration of local authority, Environment Agency, Natural Resources Wales, Defra national network, and any other local site-specific sources of monitoring data;
- when quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants, PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the Committee on Carcinogenicity of Chemicals approach<sup>10</sup> is used.

Whilst screening of impacts using qualitative methodologies is common practice (eg, for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the applicant should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure. Further to assessments of compliance with limit values, for non-threshold pollutants (ie, those that have no threshold below which health effects do not occur) the **benefits** of development options which reduce population exposure should be evaluated.

#### *Additional points specific to emissions to air*

When considering baseline conditions (of existing air quality) and the assessment and future monitoring of impacts, these should include:

- consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs) or Clean Air Zones (CAZ). The applicant should demonstrate close working/consultation with the appropriate local authorities
- modelling using appropriate meteorological data (i.e. from the nearest suitable meteorological station and include a range of years and worst-case conditions)
- modelling taking into account local topography, congestion and acceleration

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<sup>10</sup> <https://www.gov.uk/government/publications/cancer-risk-characterisation-methods>

#### *Additional points specific to emissions to water*

When considering baseline conditions (of existing water quality) and the assessment and future monitoring of impacts, these should:

- include assessment of potential impacts on human health and not focus solely on ecological impacts
- identify and consider all routes by which emissions may lead to population exposure (e.g., surface watercourses, recreational waters, sewers, geological routes etc.)
- assess the potential off-site effects of emissions to groundwater (eg, on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- include consideration of potential impacts on recreational users (eg, from fishing, canoeing etc.) alongside assessment of potential exposure via drinking water

#### **Land quality**

We would expect the applicant to provide details of any hazardous contamination present on site (including ground gas) as part of a site condition report and associated risk assessment.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, during construction and once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed in accordance with the Environment Agency publication Land Contamination: risk management<sup>11</sup> and the potential impact on nearby receptors; control and mitigation measures should be outlined.

#### **Waste**

The applicant should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the development the ES should assess:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

If the development includes wastes delivered to the installation:

- Consider issues associated with waste delivery and acceptance procedures (including delivery of prohibited wastes) and should assess potential off-site impacts and describe their mitigation

#### **Other aspects**

Within the ES, PHE would expect to see information about how the applicant would respond to accidents with potential off-site emissions (e.g., flooding or fires, spills, leaks or releases off-site). Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

PHE would expect the applicant to consider the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations: both in terms of their applicability to the development itself, and the development's potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.

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<sup>11</sup> Available from <https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks>

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report<sup>12</sup>, jointly published by Liverpool John Moores University and the Health Protection Agency (HPA), examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: “*Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible.*” PHE supports the inclusion of this information within ES’ as good practice.

### **Electromagnetic fields (EMF)**

This advice relates to electrical installations such as substations and connecting underground cables or overhead lines. PHE advice on the health effects of power frequency electric and magnetic fields is available on the Gov.UK website.<sup>13</sup>

There is a potential health impact associated with the electric and magnetic fields around substations, overhead power lines and underground cables. The field strengths tend to reduce with distance from such equipment.

The following information provides a framework for considering the health impact associated with the electric and magnetic fields produced by the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

### **Policy Measures for the Electricity Industry**

A voluntary code of practice is published which sets out key principles for complying with the ICNIRP guidelines.<sup>14</sup> Companion codes of practice dealing with optimum phasing of high voltage power lines and aspects of the guidelines that relate to indirect effects are also available.<sup>15, 16</sup>

### **Exposure Guidelines**

PHE recommends the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP). Formal advice to this effect, based on an accompanying comprehensive review of the scientific evidence, was published in 2004 by the National Radiological Protection Board (NRPB), one of PHE’s predecessor organisations<sup>17</sup>

Updates to the ICNIRP guidelines for static fields have been issued in 2009 and for low frequency fields in 2010. However, Government policy is that the ICNIRP guidelines are implemented as expressed in the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):<sup>18</sup>

### **Static magnetic fields**

For static magnetic fields, the ICNIRP guidelines published in 2009 recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council

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<sup>12</sup> Available from: [http://allcatsrgrey.org.uk/wp/download/public\\_health/Health-Risk-Perception-Env-Probs.pdf](http://allcatsrgrey.org.uk/wp/download/public_health/Health-Risk-Perception-Env-Probs.pdf)

<sup>13</sup> <https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields>

<sup>14</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf)

<sup>15</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf)

<sup>16</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/224766/powerlines\\_vcop\\_microshocks.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf)

<sup>17</sup>

<http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/>

<sup>18</sup> [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/Healthprotection/DH\\_4089500](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/Healthprotection/DH_4089500)

Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT.

### **Power frequency electric and magnetic fields**

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to electric fields. The ICNIRP guidelines published in 1998 give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m<sup>-1</sup> (kilovolts per metre) and 100 µT (microtesla). The reference level for magnetic fields changes to 200 µT in the revised (ICNIRP 2010) guidelines because of new basic restrictions based on induced electric fields inside the body, rather than induced current density. If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with underlying basic restrictions and reducing the risk of indirect effects.

### **Long term effects**

There is concern about the possible effects of long-term exposure to extremely low frequency electric and magnetic fields, from power lines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia in relation to power frequency magnetic fields, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

### **The Stakeholder Advisory Group on ELF EMFs (SAGE)**

SAGE was set up to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), which include power frequency fields, and to make practical recommendations to Government:<sup>19</sup>

Relevant here is SAGE's 2007 First Interim Assessment, which makes several recommendations concerning high voltage power lines. In responding, Government supported the implementation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines in which development would be restricted on health grounds, which was considered to be a disproportionate measure given the evidence base on the potential long term health risks arising from exposure. The Government response to SAGE's First Interim Assessment is available on the national archive website.<sup>20</sup>

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages.

### **Ionising radiation**

Particular considerations apply when an application involves the possibility of exposure to ionising radiation. In such cases it is important that the basic principles of radiation protection recommended

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<sup>19</sup> <http://www.emfs.info/policy/sage/>

<sup>20</sup> [http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publication/PublicationsPolicyAndGuidance/DH\\_107124](http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publication/PublicationsPolicyAndGuidance/DH_107124)

by the International Commission on Radiological Protection<sup>21</sup> (ICRP) are followed. PHE provides advice on the application of these recommendations in the UK. The ICRP recommendations are implemented in the Euratom Basic Safety Standards<sup>22</sup> (BSS) and these form the basis for UK legislation, including the Ionising Radiation Regulations 1999, the Radioactive Substances Act 1993, and the Environmental Permitting Regulations 2016.

As part of the EIA process PHE expects applicants to carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report and should not require any further analysis by PHE. In particular, the important principles of justification, optimisation and radiation dose limitation should be addressed. In addition compliance with the Euratom BSS and UK legislation should be clear.

When considering the radiological impact of routine discharges of radionuclides to the environment PHE would, as part of the EIA process, expect to see a full radiation dose assessment considering both individual and collective (population) doses for the public and, where necessary, workers. For individual doses, consideration should be given to those members of the public who are likely to receive the highest exposures (referred to as the representative person, which is equivalent to the previous term, critical group).

Different age groups should be considered as appropriate and should normally include adults, 1 year old and 10 year old children. In particular situations doses to the fetus should also be calculated<sup>23</sup>.

The estimated doses to the representative person should be compared to the appropriate radiation dose criteria (dose constraints and dose limits), taking account of other releases of radionuclides from nearby locations as appropriate. Collective doses should also be considered for the UK, European and world populations where appropriate.

The methods for assessing individual and collective radiation doses should follow the guidance given in 'Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012'<sup>24</sup>

It is important that the methods used in any radiological dose assessment are clear and that key parameter values and assumptions are given (for example, the location of the representative persons, habit data and models used in the assessment).

Any radiological impact assessment, undertaken as part of the EIA, should also consider the possibility of short-term planned releases and the potential for accidental releases of radionuclides to the environment. This can be done by referring to compliance with the Ionising Radiation Regulations and other relevant legislation and guidance.

The radiological impact of any solid waste storage and disposal should also be addressed in the assessment to ensure that this complies with UK practice and legislation; information should be

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<sup>21</sup> These recommendations are given in publications of the ICRP notably publications 90 and 103 see the website at <http://www.icrp.org/>

<sup>22</sup> Council Directive 96/29/EURATOM laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation.

<sup>23</sup> HPA (2008) Guidance on the application of dose coefficients for the embryo, fetus and breastfed infant in dose assessments for members of the public. Doc HPA, RCE-5, 1-78, available at <https://www.gov.uk/government/publications/embryo-fetus-and-breastfed-infant-application-of-dose-coefficients>

<sup>24</sup> The Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency, Health Protection Agency and the Food Standards Agency (FSA).

Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/296390/geho1202bklh-e-e.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296390/geho1202bklh-e-e.pdf)



provided on the category of waste involved (e.g. very low level waste, VLLW). It is also important that the radiological impact associated with the decommissioning of the site is addressed.

Of relevance here is PHE advice on radiological criteria and assessments for land-based solid waste disposal facilities<sup>25</sup>. PHE advises that assessments of radiological impact during the operational phase should be performed in the same way as for any site authorised to discharge radioactive waste. PHE also advises that assessments of radiological impact during the post operational phase of the facility should consider long timescales (possibly in excess of 10,000 years) that are appropriate to the long-lived nature of the radionuclides in the waste, some of which may have half-lives of millions of years.

The radiological assessment should consider exposure of members of hypothetical representative groups for a number of scenarios including the expected migration of radionuclides from the facility, and inadvertent intrusion into the facility once institutional control has ceased.

For scenarios where the probability of occurrence can be estimated, both doses and health risks should be presented, where the health risk is the product of the probability that the scenario occurs, the dose if the scenario occurs and the health risk corresponding to unit dose.

For inadvertent intrusion, the dose if the intrusion occurs should be presented. It is recommended that the post-closure phase be considered as a series of timescales, with the approach changing from more quantitative to more qualitative as times further in the future are considered.

The level of detail and sophistication in the modelling should also reflect the level of hazard presented by the waste. The uncertainty due to the long timescales means that the concept of collective dose has very limited use, although estimates of collective dose from the 'expected' migration scenario can be used to compare the relatively early impacts from some disposal options if required.

### **Noise from National Networks and Airports**

Public Health England's mission is to protect and improve the nation's health and wellbeing and reduce health inequalities. Environmental noise can cause stress and disturb sleep, which over the long term can lead to a number of adverse health outcomes.<sup>26 27</sup>

The Noise Policy Statement for England (NPSE)<sup>28</sup> sets out the government's overall policy on noise. Its aims are to:

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life; and
- contribute to the improvement of health and quality of life.

These aims should be applied within a broader context of sustainable development, where noise is considered alongside other economic, social and environmental factors. PHE expects such factors may include<sup>29</sup>:

- Ensuring healthy lives and promoting well-being for all at all ages;
- promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation;
- reducing inequality; and

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<sup>25</sup> HPA RCE-8, Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes, February 2009

<sup>26</sup> World Health Organisation, *Environmental Noise Guidelines for the European Region*. 2018.

<sup>27</sup> Lercher, P., G. Aasvang, and Y.e. de Kluizenaar, *WHO Noise and Health Evidence Reviews*.

<sup>28</sup> DEFRA, *Noise Policy Statement for England*. 2010.

<sup>29</sup> United Nations. *Sustainable Development Goals*. 2020 [01/06/2020]; Available from: <https://sustainabledevelopment.un.org/?menu=1300>.

- making cities and human settlements inclusive, safe, resilient and sustainable.

PHE's consideration of the effects of health and quality and life attributable to noise is guided by the recommendations in the 2018 Environmental Noise Guidelines for the European Region 27 published by the World Health Organization, and informed by high quality systematic reviews of the scientific evidence<sup>28 30 31</sup> The scientific evidence on noise and health is rapidly developing, and PHE's recommendations are also informed by relevant studies that are judged to be scientifically robust and consistent with the overall body of evidence.

In line with its mission, PHE believes that Nationally Significant Infrastructure Projects (NSIP) should not only limit significant adverse effects, but also explore opportunities to improve the health and quality of life of local communities and reduce inequalities.

PHE also recognises the developing body of evidence showing that areas of tranquillity offer opportunities for health benefits through psychological restoration. NSIP applications need to demonstrate that they have given due consideration to the protection of the existing sound environment in these areas.

Further, more detailed, guidance on PHE's scoping advice for noise issues associated with road schemes is included in Appendix 3.

### **Wider Determinants of Health**

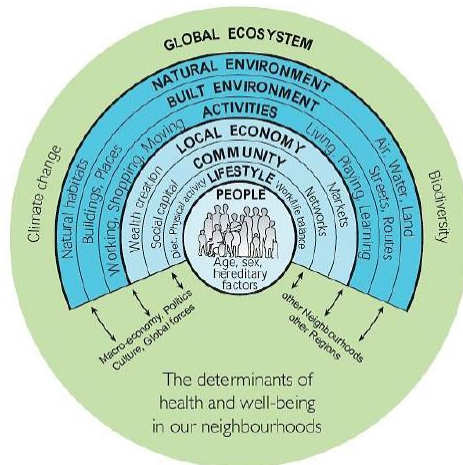
The World Health Organization (WHO's) defines health as "a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity" (WHO, 1948).

The health and wellbeing of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people.

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<sup>30</sup> Clark, C., C. Crumpler, and A.H. Notley, *Evidence for Environmental Noise Effects on Health for the United Kingdom Policy Context: A Systematic Review of the Effects of Environmental Noise on Mental Health, Wellbeing, Quality of Life, Cancer, Dementia, Birth, Reproductive Outcomes, and Cognition*. Int J Environ Res Public Health, 2020. **17**(2).

<sup>31</sup> van Kamp, I., et al., *Evidence Relating to Environmental Noise Exposure and Annoyance, Sleep Disturbance, Cardio-Vascular and Metabolic Health Outcomes in the Context of IGCB (N): A Scoping Review of New Evidence*. Int J Environ Res Public Health, 2020. **17**(9).



Barton and Grant<sup>32</sup>

PHE recognises that evaluating an NSIP’s impacts on health through the wider determinants is more complex than assessing a project’s direct impacts against clearly defined regulatory protections. The 2017 EIA Regulations clarify that the likely significant effects of a development proposal on population and human health must be assessed.

PHE’s expectations are that the proponent of an NSIP will conduct a proportionate and evidence-based assessment of the anticipated direct and indirect effects on health and wellbeing in line with the relevant regulatory and policy requirements. Consideration should be given to impacts during the construction, operation and decommissioning phase of NSIPs. Consideration should be given to the avoidance or mitigation of any negative impacts, as well as to how the NSIP could be designed to maximise potential positive benefits.

We accept that the relevance of wider determinants and associated impacts will vary depending on the nature of the proposed development. PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements.

The four themes are:

- Access
- Traffic and Transport
- Socioeconomic
- Land Use

PHE has developed a list of 21 determinants of health and wellbeing under these four broad themes. These determinants should be considered within any scoping report and if the applicant proposes to scope any areas out of the assessment, they should provide clear evidence-based reasoning and justification. Appendix 2 provides greater detail on the nature of each determinant.

### Methodology

PHE will expect assessments to set out the methodology used to assess impacts on each determinant included in the scope of the assessment. In some instances, the methodologies described may be established and refer to existing standards and/or guidance. In other instances, there may be no pre-defined methodology, which can often be the case for the wider determinants of health; as such there should be an application of a logical evidence based impact assessment method that:

- identifies the temporal and geographic scope of assessment

<sup>32</sup> Barton H, Grant M. A health map for the local human habitat. The Journal of the Royal Society for the Promotion of Health 2006; 126(6): 252-3.

- identifies affected sensitive receptors (general population and vulnerable populations) to impacts from the relevant determinant
- establishes the current baseline situation
- identifies the NSIP's potential direct and indirect impacts on each population
- if impacts are identified, evaluates whether the potential effect is likely to be significant in relation to the affected population
- identifies appropriate mitigation to eliminate or minimise impacts or the subsequent effects on health and inequalities
- identifies opportunities to achieve benefits from the scheme for health and inequalities
- considers any in combination or cumulative effects
- identifies appropriate monitoring programmes

Currently there is no standard methodology for assessing the population and human health effects of infrastructure projects, but a number of guides exist, including:

- Institute of Environmental Management and Assessment, 2017: Health in Environmental Assessment, a primer for a proportionate approach;<sup>33</sup>
- NHS London Healthy Urban Development Unit (HUDU), 2015. Healthy Urban Planning Checklist and Rapid Health Impact Assessment Tool;<sup>34</sup>
- Wales Health Impact Assessment Unit, 2012: HIA a practical guide;<sup>35</sup>
- National Mental Wellbeing Impact Assessment Development Unit 2011: Mental Wellbeing Impact Assessment Toolkit;<sup>36</sup>

PHE expects assessments to follow best practice from these guides and from methodologies adopted within other successful health/environmental impacts assessments.

### **Determining significant effects**

Neither the EIA regulations nor the National Policy Statements provide a definition of what constitutes a 'significant' effect, and so PHE have derived a list of factors which it will take into consideration in the assessment of significance of effects, as outlined below. These list of factors should be read in conjunction with guidance from the above guides.

#### **1. Sensitivity:**

Is the population exposed to the NSIP at particular risk from effects on this determinant due to pre-existing vulnerabilities or inequalities (for example, are there high numbers in the local population of people who are young, older, with disabilities or long-term conditions, or on a low income)? Will the NSIP widen existing inequalities or introduce new inequalities in relation to this determinant?

#### **2. Magnitude:**

How likely is the impact on this determinant to occur? If likely, will the impact affect a large number of people / Will the impact affect a large geographic extent? Will the effects be frequent or continuous? Will the effects be temporary or permanent and irreversible?

#### **3. Cumulative effects:**

Will the NSIP's impacts on this determinant combine with effects from other existing or proposed NSIPs or large-scale developments in the area, resulting in an overall cumulative effect different to that of the project alone?

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[https://www.researchgate.net/publication/316968065\\_Health\\_in\\_Environmental\\_Impact\\_Assessment\\_a\\_primer\\_for\\_a\\_proportionate\\_approach](https://www.researchgate.net/publication/316968065_Health_in_Environmental_Impact_Assessment_a_primer_for_a_proportionate_approach)

<sup>34</sup> <https://www.healthyrbandevelopment.nhs.uk/our-services/delivering-healthy-urban-development/health-impact-assessment/>

<sup>35</sup> [https://whiasu.publichealthnetwork.cymru/files/1415/0710/5107/HIA\\_Tool\\_Kit\\_V2\\_WEB.pdf](https://whiasu.publichealthnetwork.cymru/files/1415/0710/5107/HIA_Tool_Kit_V2_WEB.pdf)

<sup>36</sup> <https://q.health.org.uk/document/mental-wellbeing-impact-assessment-a-toolkit-for-wellbeing/>

What are the cumulative effects of the impacts of the scheme on communities or populations. Individual impacts individually may not be significant but in combination may produce an overall significant effect.

**4. Importance:**

Is there evidence for the NSIP's effect on this determinant on health? Is the impact on this determinant important in the context of national, regional or local policy?

**5. Acceptability:**

What is the local community's level of acceptance of the NSIP in relation to this determinant? Do the local community have confidence that the applicants will promote positive health impacts and mitigate against negative health effects?

**6. Opportunity for mitigation:**

If this determinant is included in the scope for the EIA is there an opportunity to enhance any positive health impacts and/or mitigate any negative health impacts?

**Vulnerable groups**

Certain parts of the population may experience disproportionate negative health effects as a result of a development. Vulnerable populations can be identified through research literature, local population health data or from the identification of pre-existing health conditions that increase vulnerability.

The effects on health and wellbeing and health inequalities of the scheme will have particular effect on vulnerable or disadvantaged populations, including those that fall within the list of protected characteristics. Some protected groups are more likely to have elevated vulnerability associated with social and economic disadvantages. Consideration should be given to language or lifestyles that influence how certain populations are affected by impacts of the proposal, for example non-English speakers may face barriers to accessing information about the works or expressing their concerns.

Equality Impact Assessments (EqIA) are used to identify disproportionate effects on Protected Groups (defined by the Equality Act, 2010), including health effects. The assessments and findings of the Environmental Statement and the EqIA should be cross referenced between the two documents, particularly to ensure the assessment of potential impacts for health and inequalities and that resulting mitigation measures are mutually supportive.

The Wales Health Impact Assessment Support Unit (WHIASU), provides a suggested guide to vulnerable groups

*Age related groups*

- Children and young people
- Older people

*Income related groups*

- People on low income
- Economically inactive
- Unemployed/workless
- People who are unable to work due to ill health

*Groups who suffer discrimination or other social disadvantage*

- People with physical or learning disabilities/difficulties
- Refugee groups
- People seeking asylum
- Travellers
- Single parent families
- Lesbian, gay or transgender people

- Black and minority ethnic groups
- Religious groups

#### *Geographical groups*

- People living in areas known to exhibit poor economic and/or health indicators
- People living in isolated/over-populated areas
- People unable to access services and facilities

#### **Mental health**

PHE supports the use of the broad definition of health proposed by the World Health Organisation (WHO). Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life. NSIP schemes can be of such scale and nature that they will impact on the over-arching protective factors, which are:

- Enhancing control
- Increasing resilience and community assets
- Facilitating participation and promoting inclusion.

There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both. A systematic approach to the assessment of the impacts on mental health, including suicide, is required. The Mental Well-being Impact Assessment (MWIA) could be used as a methodology. The assessment should identify vulnerable populations and provide clear mitigation strategies that are adequately linked to any local services or assets

Perceptions about the proposed scheme may increase the risk of anxiety or health effects by perceived effects. “Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard.

#### **Evidence base and baseline data**

Baseline population / community health data (quantitative and qualitative) should be sufficient to represent current health status and identify areas or groups with poor health or inequalities. This should provide sufficient information on the physical and mental health and wellbeing and social determinants of health for the affected populations and any vulnerable groups identified.

A baseline health assessment could include:

- General population data (including size, density, age, gender, income and employment, socio-economic status, crime and disorder etc, health status.)
- Environmental information (housing, transport, access to services, provision and access to green space, tranquillity or sound environment)
- Data on behaviour, such as levels of physical activity, smoking, car usage, walking and cycling
- Surveys of local conditions
- Local concerns and anxieties (where documented)
- Secondary analysis of existing local data
- Resident surveys or consultations
- Health status, particularly of the population groups already identified as vulnerable and likely to benefit or be harmed by the proposal. This should include mental health and suicide.
- Quality of life indicators (if available / relevant)
- Local people’s views of the area and of the services provided (community engagement exercises)

There will be a range of publicly available health data including:

- National datasets such as those from the Office of National Statistics,
- PHE, including the fingertips data sets,
- Non-governmental organisations,

- Local public health reports, such as the Joint Strategic Needs Assessment and Health and Wellbeing Strategies;
- Consultation with local authorities, including public health teams
- Information received through public consultations, including community engagement exercises

There should be a narrative which interprets the data collected in the context of the project. A list of tables and data is not sufficient, so the report should consider:

- Are particular groups or vulnerable groups likely to be impacted more than others and is this clearly described and explained?
- What indicators within the current health baseline that are worse than England average/ local ward or LSOA levels?
- What are the levels of inequality in the study area?  
What are the potential inequalities in the distribution of impacts?

### **Mitigation**

If the assessment has identified that significant negative effects are likely to occur with respect to the wider determinants of health, the assessment should include a description of planned mitigation measures the applicant will implement to avoid or prevent effects on the population.

Mitigation and/or monitoring proposals should be logical, feasible and have a clear governance and accountability framework indicating who will be responsible for implementation and how this will be secured during the construction and/or operation of the NSIP.

Any proposed mitigation should have sufficient detail to allow for an assessment of the adequacy of the proposed mitigation measures.

### **Positive benefits from the scheme**

The scale of many NSIP developments will generate the potential for positive impacts on health and wellbeing; however, delivering such positive health outcomes often requires specific enabling or enhancement measures. For example, the construction of a new road network to access an NSIP site may provide an opportunity to improve the active transport infrastructure for the local community. PHE expects developments to consider and report on the opportunity and feasibility of positive impacts. These may be stand alone or be considered as part of the mitigation measures.

### **Replacement publicly accessible space or community assets**

The replacement of community assets provides opportunity for positive impacts and the design, location and operation of the replacement asset should be considered in consultation with user, the local community and agencies.

Any replacement recreational land, open space or other community assets should be located and designed to:

- Not unreasonably extend journey times or increase transport costs, or result in too many people being prevented from travelling sustainably due to unsuitable walking or cycling routes.
- Ensure that accessibility planning has been properly taken into account and that the proposal will not adversely impact on disadvantaged groups.
- Meet identified community needs which may go beyond direct replacement but can be reasonably incorporated
- Provide acceptable recreational amenity, including noise environment, for outdoor spaces associated with the individual community facilities
- The design of the sites should be carried out in consultation with the local community. It should incorporate features and designs to enable access and use across the life course.
- The PEIR should contain sufficient detail regarding the location and design in order to determine the acceptability of the replacement facilities.

- Quality, quantity and accessibility should be determined against defined criteria agreed with stakeholders. The following evidence based assessment tools should be considered:

The quality of the provision of replacement green space should be assessed, for example by the use of:

[Building with Nature](#) - There are 6 wellbeing standards, which are:

- Accessible
- Inclusive
- Seasonal enjoyment
- Locally relevant
- Socially sustainable
- Distinctive

The [ANGSt standards](#) address amount, access and quality

The [ORVaL tool](#) - This tool works on areas that are currently publicly accessible and looks at welfare values for this area. The site functionality allows users to investigate how altering the land cover, features or the area of existing recreation sites will change usage and welfare values. This allows a comparison between existing and the proposed sites. Contact should be made with the ORVaL team to establish the functionality of the tool relevant to the DCO and interpretation of the findings<sup>37</sup>.

[Green Flag Award](#)- a robust framework for assessing the quality of public green spaces of all types and sizes.

## **Employment**

NSIP schemes have the potential to negatively impact through the relocation or loss of local businesses. Equally they can offer an opportunity for new business activity and employment both at the construction stage and operation of the development approved by the DCO.

There is clear evidence that good work improves health and wellbeing across people's lives and protects against social exclusion. Conversely, unemployment is bad for health and wellbeing, as it is associated with an increased risk of mortality and morbidity. For many individuals, in particular those with long-term conditions such as mental health problems, musculoskeletal (MSK) conditions and disabilities, health issues can be a barrier to gaining and retaining employment. Employment rates are lowest among disabled people, with only 51.3% in work, meaning there is a substantial employment rate gap in the UK between disabled and non-disabled people (81.4% in employment). Among these working age disabled people in the UK, 54% have a mental health or MSK condition as their main health condition<sup>38</sup>. Enabling people with health issues to obtain or retain work, and be productive within the workplace, is a crucial part of the economic success and wellbeing of every community and industry.

It is important that people are supported to gain employment and maintain economic independence for themselves and their families, especially as they age. This is of particular importance for individuals with long-term conditions and disabilities, due to the barriers they face in gaining employment and retaining a job.

Where relevant any assessments should include:

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<sup>37</sup> [https://www.leep.exeter.ac.uk/orval/pdf-reports/ORVal2\\_User\\_Guide.pdf](https://www.leep.exeter.ac.uk/orval/pdf-reports/ORVal2_User_Guide.pdf)

<sup>38</sup> [PHE \(Jan 2019\). Guidance - Health matters: health and work \(https://publichealthmatters.blog.gov.uk/2019/01/31/health-matters-health-and-work/\)](https://publichealthmatters.blog.gov.uk/2019/01/31/health-matters-health-and-work/)



- The impact of business relocation in order to identify the likely level of job losses within the study area
- The proposed support mechanisms to be established for business owners and employees
- A clear strategy and action plan that addresses barriers to employment within the local population and those that cease employment due to the DCO.

### **Compulsory purchase**

NSIP schemes can involve the compulsory acquisition of property from land take. Mitigation will involve supporting home-owners and tenants in understanding and utilising the compensation and support offered through the compensation policies.

The impacts from compulsory acquisition of land and property can affect health and wellbeing, including mental health, for example from home, school and employment relocation and loss of employment. This will be particularly relevant to sensitive receptors within communities, many of which will form part of the private rented sector.

Compensation and support can be an important element of mitigation, but developers should consider opportunities to work through partners and local Voluntary, Community and Social Enterprise (VCSE) organisations. These organisations offer the potential for engagement with vulnerable groups and may gain greater acceptance by the wider community.

Any compulsory purchase support schemes should ensure sufficient competency in public health, including public mental health, in order to help support local communities. The aim would be to establish a workforce that is confident, competent and committed to:

- promote good physical and mental health across the population
- prevent mental illness and suicide
- improve the quality and length of life of people living within affected communities

The Public mental health leadership and workforce development framework<sup>39</sup> published by PHE offers a skills framework for the wider public health workforce. As well as the competences in this framework. Health Education England (HEE) have published a course content guide entitled Public Mental Health Content Guide For introductory courses or professional development in mental health and wellbeing<sup>40</sup>.

### **Monitoring**

PHE expects an assessment to include consideration of the need for monitoring and the ES should clearly state the principles on which the monitoring strategy has been established, including monitoring in response to unforeseen impacts or effects.

It may be appropriate to undertake monitoring where:

- Critical assumptions have been made in the absence of supporting evidence or data
- There is uncertainty about whether significant negative effects are likely to occur and it would be appropriate to include planned monitoring measures to track their presence, scale and nature.
- There is uncertainty about the potential success of mitigation measures
- It is necessary to track the nature of the impact or effect and provide useful and timely feedback that would allow action to be taken should negative effects occur

The monitoring strategy should set out:

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<sup>39</sup> [Public mental health leadership and workforce development framework - Confidence, competence, commitment. PHE \(2015\)](#)

<sup>40</sup> [Public Mental Health Content Guide for introductory courses or professional development in mental health and wellbeing. Health education England](#)

- Monitoring methodologies
- Data sources, particularly if being obtained from third parties or open access data
- Assessment methods
- Publication methodology
- Reporting frequency
- Temporal and geographic scope

For very large controversial schemes it may be worth considering the need to have an independent organisation undertake / report on the monitoring and the need for academic robustness.

### **Community based reports**

Large complex schemes that involve significant effects on communities or significant cumulative effects can benefit from identifying impacts and reporting at an individual community level. This assists in the identification of the overall potential effects across a range of impacts. These community level reports will also aid local communities to engage with consultations by providing relevant and accessible information.

### **How to contact PHE**

If you wish to contact us regarding an existing or potential NSIP application please email: [nsipconsultations@phe.gov.uk](mailto:nsipconsultations@phe.gov.uk)

## Appendix 2 Wider Determinants of Health

Table 1 – Wider determinants of health and wellbeing

Health and wellbeing themes			
Access	Traffic and Transport	Socioeconomic	Land Use
<b>Wider determinants of health and wellbeing</b>			
<p>Access to :</p> <ul style="list-style-type: none"> <li>• local public and key services and facilities.</li> <li>• Good quality affordable housing.</li> <li>• Healthy affordable food.</li> <li>• The natural environment.</li> <li>• The natural environment within the urban environment.</li> <li>• Leisure, recreation and physical activities within the urban and natural environments.</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility.</li> <li>• Access to/by public transport.</li> <li>• Opportunities for access by cycling and walking.</li> <li>• Links between communities.</li> <li>• Community severance.</li> <li>• Connections to jobs.</li> <li>• Connections to services, facilities and leisure opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Employment opportunities, including training opportunities.</li> <li>• Local business activity.</li> <li>• Regeneration.</li> <li>• Tourism and leisure industries.</li> <li>• Community/social cohesions and access to social networks.</li> <li>• Community engagement.</li> </ul>	<ul style="list-style-type: none"> <li>• Land use in urban and/or /rural settings.</li> <li>• Quality of Urban and natural environments</li> </ul>

### 1) Access

#### a. Access to local, public and key services and facilities

Access to local facilities can increase mobility and social participation. Body mass index is significantly associated with access to facilities, including factors such as the mix and density of facilities in the area. The distance to facilities has no or only a small effect on walking and other physical activities. Access to recreational facilities can increase physical activity, especially walking for recreation, reduce body weight, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions.

Local services include health and social care, education, employment, and leisure and recreation. Local facilities include community centres, shops, banks/credit unions and Post Offices. Services and facilities can be operated by the public, private and/or voluntary sectors. Access to services and facilities is important to both physical and mental health and wellbeing. Access is affected by factors such as availability, proximity to people's place of residence, existence of transport services or active travel infrastructure to the location of services and facilities, and the quality of services and facilities.

The construction or operation of an NSIP can affect access adversely: it may increase

demand and therefore reduce availability for the existing community; during construction, physical accessibility may be reduced due to increased traffic and/or the blockage of or changes to certain travel routes. It is also possible that some local services and facilities are lost due to the land-take needed for the NSIP.

Conversely if new routes are built or new services or facilities provided the NSIP may increase access. NSIPs relating to utilities such as energy and water can maintain, secure or increase access to those utilities, and thereby support health and wellbeing.

b. Access to good-quality affordable housing

Housing refurbishment can lead to an improvement in general health and reduce health inequalities. Housing improvements may also benefit mental health. The provision of diverse forms and types of housing is associated with increased physical activity. The provision of affordable housing is strongly associated with improved safety perceptions in the neighbourhood, particularly among people from low-income groups. For vulnerable groups, the provision of affordable housing can lead to improvements in social, behavioural and health related outcomes. For some people with long term conditions, the provision of secure and affordable housing can increase engagement with healthcare services, which can lead to improved health-related outcomes. The provision of secure and affordable housing can also reduce engagement in risky health-related behaviours. For people who are homeless, the provision of affordable housing increases engagement with healthcare services, improves quality of life and increases employment, and contributes to improving mental health.

Access to housing meets a basic human need, although housing of itself is not necessarily sufficient to support health and wellbeing: it is also important that the housing is of good quality and affordable. Factors affecting the quality of housing include energy efficiency (eg effective heating, insulation), sanitation and hygiene (eg toilet and bathroom), indoor air quality including ventilation and the presence of damp and/or mould, resilience to climate change, and overcrowding. The affordability of housing is important because for many people, especially people on a low income, housing will be the largest monthly expense; if the cost of housing is high, people may not be able to meet other needs such as the need for heating in winter or food. Some proposals for NSIPs include the provision of housing, which could be beneficial for the health and wellbeing of the local population. It is also possible that some housing will be subject to a compulsory purchase order due to the land-take needed for an NSIP.

c. Access to affordable healthy food

Access to healthy food is related to the provision of public and active transport infrastructure and the location and proximity of outlets selling healthier food such as fruit and vegetables. For the general population, increased access to healthy, affordable food through a variety of outlets (shops, supermarkets, farmers' markets and community gardens) is associated with improved dietary behaviours, including attitudes towards healthy eating and food purchasing behaviour, and improved adult weight. Increased access to unhealthier food retail outlets is associated with increased weight in the general population and increased obesity and unhealthy eating behaviours among children living in low-income areas. Urban agriculture can improve attitudes towards healthier food and increase fruit and vegetable consumption.

Factors affecting access to healthy affordable food include whether it is readily available from local shops, supermarkets, markets or delivery schemes and/or there are opportunities to grow food in local allotments or community gardens. People in environments where there is a high proportion of fast food outlets may not have easy

access to healthy affordable food.

d. Access to the natural environment

Availability of and access to safe open green space is associated with increased physical activity across a variety of behaviours, social connectedness, childhood development, reduced risk of overweight and obesity and improved physical and mental health outcomes. While the quantity of green space in a neighbourhood helps to promote physical activity and is beneficial to physical health, eg lower rates of mortality from cardiovascular disease and respiratory disease in men, the availability of green environments is likely to contribute more to mental health than to physical health: the prevalence of some disease clusters, particularly anxiety and depression, is lower in living environments which have more green space within a 1-km radius.

The proximity, size, type, quality, distribution, density and context of green space are also important factors. Quality of green space may be a better predictor of health than quantity, and any type of green space in a neighbourhood does not necessarily act as a venue for, or will encourage, physical activity. 'Walkable' green environments are important for better health, and streetscape greenery is as strongly related to self-reported health as green areas. Residents in deprived areas are more likely to perceive access to green space as difficult, to report poorer safety, to visit the green space less frequently and to have lower levels of physical activity. The benefits to health and wellbeing of blue space include lower psychological distress.

The natural environment includes the landscape, waterscape and seascape. Factors affecting access include the proximity of the natural environment to people's place of residence, the existence of public transport services or active travel infrastructure to the natural environment, the quality of the natural environment and feelings of safety in the natural environment. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local area. It is also possible that green or blue infrastructure will be lost due to the land-take needed for the NSIP.

e. Access to the natural environment within the urban environment

Public open spaces are key elements of the built environment. Ecosystem services through the provision of green infrastructure are as important as other types of urban infrastructure. It supports physical, psychological and social health, although the quality, perceptions of safety and accessibility of green space affects its use. Safe parks may be particularly important for promoting physical activity among urban adolescents. Proximity to urban green space and an increased proportion of green space are associated with decreased treatment of anxiety/mood disorders, the benefits deriving from both participation in usable green space near to home and observable green space in the neighbourhood. Urban agriculture may increase opportunities for physical activity and social connections.

A view of 'greenery' or of the sea moderates the annoyance response to noise. Water is associated with positive perceptive experiences in urban environments, with benefits for health such as enhanced contemplation, emotional bonding, participation and physical activity. Increasing biodiversity in urban environments, however, may promote the introduction of vector or host organisms for infectious pathogens, eg green connectivity may potentiate the role of rats and ticks in the spread of disease, and bodies of water may provide habitats for mosquitoes.

The natural environment within the urban environment includes the provision of green and blue space in towns and cities. Factors involved in access include the proximity of the green and/or blue space to people's place of residence, the existence of transport services or active travel infrastructure to the green and/or blue space, the quality of the green and/or blue space and feelings of safety when using the green and/or blue

space. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local urban environment. It is also possible that green or blue infrastructure in the urban environment will be lost due to the land-take needed for the NSIP.

- f. Access to leisure, recreation and physical activity opportunities within the urban and natural environments.

Access to recreational opportunities, facilities and services is associated with risk factors for long-term disease; it can increase physical activity, especially walking for recreation, reduce body mass index and overweight and obesity, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. It can also enhance social connectedness. Children tend to play on light-traffic streets, whereas outdoor activities are less common on high-traffic streets. A perception of air pollution can be a barrier to participating in outdoor physical activity<sup>41</sup>. However, the health co-benefits from physical activity outweigh the adverse effects of air pollution. There is a positive association between urban agriculture and increased opportunities for physical activity and social connectivity. Gardening in an allotment setting can result in many positive physical and mental health-related outcomes. Exercising in the natural environment can have a positive effect on mental wellbeing when compared with exercising indoors.

Leisure and recreation opportunities include opportunities that are both formal, such as belonging to a sports club, and informal, such as walking in the local park or wood. Physical activity opportunities include routine activity as part of daily life, such as walking or cycling to work, and activity as part of leisure or recreation, such as playing football. The construction of an NSIP may enhance the opportunities available for leisure and recreation and physical activity through the provision of new or improved travel routes, community infrastructure and/or green or blue space. Conversely, construction may reduce access through the disruption of travel routes to leisure, recreation and physical activity opportunities.

## 2) **Traffic and Transport**

### a. Accessibility

Walkability, regional accessibility, pavements and bike facilities are positively associated with physical activity and negatively related to body weight and high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. Body mass index is associated with street network accessibility and slope variability.

Accessibility in relation to transport and travel has several aspects including whether potential users can gain physical access to the infrastructure and access to the services the infrastructure provides. The design and operation of transport infrastructure and the associated services should take account of the travel needs of all potential users including people with limited mobility. People whose specific needs should be considered include pregnant women, older people, children and young people and people with a disability. Other aspects of transport infrastructure affecting accessibility include safety and affordability, both of which will affect people's ability to travel to places of employment and/or key local services and facilities and/or access

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<sup>41</sup> Annear, M., Keeling, S., Wilkinson, T., Cushman, G., Gidlow, B., & Hopkins, H. (2014). Environmental influences on healthy and active ageing: A systematic review. *Ageing & Society*, 34 (4), 590-622. Available at [https://www.academia.edu/34314864/Environmental\\_influences\\_on\\_healthy\\_and\\_active\\_ageing\\_a\\_systematic\\_review](https://www.academia.edu/34314864/Environmental_influences_on_healthy_and_active_ageing_a_systematic_review)

their social networks.

b. Access to / by public transport

Provision of high-quality public transport is associated with higher levels of active travel among children and among people commuting to work, with a decrease in the use of private cars. Combining public transport with other forms of active travel can improve cardiovascular fitness. Innovative or new public transport interventions may need to be marketed and promoted differently to different groups of transport users, eg by emphasising novelty to car users while ensuring that the new system is seen by existing users as coherently integrated with existing services.

Transport facilitates access to other services, facilities and amenities important to health and wellbeing. Public transport is any transport open to members of the public including bus, rail and taxi services operated by the public, private or community sectors. For people who do not have access to private transport, access to public transport is important as the main agency of travel especially for journeys >1 mile. Access to public transport is not sufficient, however, and access by public transport needs to be taken into account: public transport services should link places where people live with the destinations they need or want to visit such as places of employment, education and healthcare, shops, banks and leisure facilities. Other aspects of access to public transport include affordability, safety, frequency and reliability of services.

c. Opportunities for / access by cycling & walking

Walking and cycling infrastructure can enhance street connectivity, helping to reduce perceptions of long-distance trips and providing alternative routes for active travel. Awareness of air pollution could be a barrier to participating in active travel, however those that choose to walk or cycle often experience lower exposure to pollution, and create less pollution than those in vehicles<sup>42</sup>. Prioritising pedestrians and cyclists through changes in physical infrastructure can have positive behavioural and health outcomes, such as physical activity, mobility and cardiovascular outcomes. The provision and proximity of active transport infrastructure is also related to other long-term disease risk factors, such as access to healthy food, social connectedness and air quality.

Perceived or objective danger may also have an adverse effect on cycling and walking, both of which activities decrease with increasing traffic volume and speed, and cycling for leisure decreases as local traffic density increases. Health gains from active travel policies outweigh the adverse effects of road traffic incidents. New infrastructure to promote cycling, walking and the use of public transport can increase the time spent cycling on the commute to work, and the overall time spent commuting among the least-active people. Active travel to work or school can be associated with body mass index and weight, and may reduce cardiovascular risk factors and improve cardiovascular outcomes. The distance of services from cycle paths can have an adverse effect on cycling behaviour, whereas mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

d. Links between communities

Social connectedness can be enhanced by the provision of public and active transport infrastructure and the location of employment, amenities, facilities and services.

e. Community severance

In neighbourhoods with high volumes of traffic, the likelihood of people knowing and

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<sup>42</sup> Defra 2019, Clean Air Strategy 2019. Available at <https://www.gov.uk/government/publications/clean-air-strategy-2019>

trusting neighbours is reduced.

f. Connections to jobs

The location of employment opportunities and the provision of public and active transportation infrastructure are associated with risk factors for long-term disease such as physical activity. Good pedestrian and cycling infrastructure can promote commuting physical activity. Improved transport infrastructure has the potential to shift the population distribution of physical activity in relation to commuting, although a prerequisite may be a supportive social environment. Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

The ease of access to employment, shops and services including the provision of public and active transport are important considerations and schemes should take any opportunity to improve infrastructure to promote cycling, walking and the use of public transport

g. Connections to services, facilities and leisure opportunities

Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking. Access to recreational opportunities and the location of shops and services are associated with risk factors for long-term disease such as physical activity, access to healthy food and social connectedness. Increased distance of services from cycle paths can have an adverse effect on cycling behaviour.

### 3) **Socio Economic**

a. Employment opportunities including training opportunities

Employment is generally good for physical and mental health and well-being, and worklessness is associated with poorer physical and mental health and well-being. Work can be therapeutic and can reverse the adverse health effects of unemployment for healthy people of working age, many disabled people, most people with common health problems and social security beneficiaries. Account must be taken of the nature and quality of work and its social context and jobs should be safe and accommodating. Overall, the beneficial effects of work outweigh the risks of work and are greater than the harmful effects of long-term unemployment or prolonged sickness absence. Employment has a protective effect on depression and general mental health.

Transitions from unemployment to paid employment can reduce the risk of distress and improve mental health, whereas transitions into unemployment are psychologically distressing and detrimental to mental health. The mental health benefits of becoming employed are also dependent on the psychosocial quality of the job, including level of control, demands, complexity, job insecurity and level of pay: transition from unemployment to a high-quality job is good for mental health, whereas transition from unemployment to a low-quality job is worse for mental health than being unemployed. For people receiving social benefits, entry into paid employment can improve quality of life and self-rated health (physical, mental, social) within a short time-frame. For people receiving disability benefits, transition into employment can improve mental and physical health. For people with mental health needs, entry into employment reduces the use of mental health services.

For vocational rehabilitation of people with severe mental illness (SMI), Supported Employment is more effective than Pre-vocational Training in helping clients obtain competitive employment; moreover, clients in Supported Employment earn more and work more hours per month than those in Pre-vocational Training.



- b. Local Business Activity  
It is important to demonstrate how a proposed development will contribute to ensuring the vitality of town centres. Schemes should consider the impact on local employment, promote beneficial competition within and between town centres, and create attractive, diverse places where people want to live, visit and work

In rural areas the applicant should assess the impact of the proposals on a prosperous rural economy, demonstrate how they will support the sustainable growth and expansion of all types of business and enterprise in rural areas, promoting the development and diversification of agricultural and other land based rural businesses.

- c. Regeneration  
Following rebuilding and housing improvements in deprived neighbourhoods, better housing conditions are associated with better health behaviours; allowing people to remain in their neighbourhood during demolition and rebuilding is more likely to stimulate life-changing improvements in health behaviour than in people who are relocated. The partial demolition of neighbourhoods does not appear to affect residents' physical or mental health. Mega-events, such as the Olympic Games, often promoted on the basis of their potential legacy for regeneration, appear to have only a short-term impact on mental health.
- d. Tourism and Leisure Industries  
The applicant should assess the impact of the proposed development on retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. In rural locations assessment and evaluation of potential impacts on sustainable rural tourism and leisure developments that benefit businesses in rural areas, communities and visitors should be undertaken.
- e. Community / social cohesion and access to social networks  
The location of employment, shops and services, provision of public and active transport infrastructure and access to open space and recreational opportunities are associated with social connectedness. Access to local amenities can increase social participation. Neighbourhoods that are more walkable can increase social capital. Urban agriculture can increase opportunities for social connectivity. Infrastructure developments, however, can affect the quality of life of communities living in the vicinity, mediated by substantial community change, including feelings of threat and anxiety, which can lead to psychosocial stress and intra-community conflict.
- f. Community engagement  
Public participation can improve environmental impact assessments, thereby increasing the total welfare of different interest groups in the community. Infrastructure development may be more acceptable to communities if it involves substantial public participation.

#### 4) **Land Use**

- a. Land use in urban and / or rural settings  
Land-use mix including infrastructure:  
Land use affects health not only by shaping the built environment, but also through the balance of various types of infrastructure including transport. Vulnerable groups in the population are disproportionately affected by decisions about land use, transport and the built environment. Land use and transport policies can result in negative health impacts due to low physical activity levels, sedentary behaviours, road traffic incidents, social isolation, air pollution, noise and heat. Mixed land use can increase both active travel and physical activity. Transportation walking is related to land-use mix, density and distance to non-residential destinations; recreational walking is

related to density and mixed use. Using modelling, if land-use density and diversity are increased, there is a shift from motorised transport to cycling, walking and the use of public transport with consequent health gain from a reduction in long-term conditions including diabetes, cardiovascular disease and respiratory disease.

b. Quality of urban and natural environments

Long-term conditions such as cardiovascular disease, diabetes, obesity, asthma and depression can be moderated by the built environment. People in neighbourhoods characterised by high 'walkability' walk more than people in neighbourhoods with low 'walkability' irrespective of the land-use mix. In neighbourhoods associated with high 'walkability' there is an increase in physical activity and social capital, a reduction in overweight and blood pressure, and fewer reports of depression and of alcohol abuse. The presence of walkable land uses, rather than their equal mixture, relates to a healthy weight. Transportation walking is at its highest levels in neighbourhoods where the land-use mix includes residential, retail, office, health, welfare and community, and entertainment, culture and recreation land uses; recreational walking is at its highest levels when the land-use mix includes public open space, sporting infrastructure and primary and rural land uses. Reduced levels of pollution and street connectivity increase participation in physical activity.

Good-quality street lighting and traffic calming can increase pedestrian activity, while traffic calming reduces the risk of pedestrian injury. 20-mph zones and limits are effective at reducing the incidence of road traffic incidents and injuries, while good-quality street lighting may prevent them. Public open spaces within neighbourhoods encourage physical activity, although the physical activity is dependent on different aspects of open space, such as proximity, size and quality. Improving the quality of urban green spaces and parks can increase visitation and physical activity levels.

Living in a neighbourhood overlooking public areas can improve mental health, and residential greenness can reduce the risk of cardiovascular mortality. Crime and safety issues in a neighbourhood affect both health status and mental health. Despite the complexity of the relationship, the presence of green space has a positive effect on crime, and general environmental improvements may reduce the fear of crime. Trees can have a cooling effect on the environment – an urban park is cooler than a non-green site. Linking road infrastructure planning and green infrastructure planning can produce improved outcomes for both, including meeting local communities' landscape sustainability objectives.

### **Appendix 3**

#### **NSIP National Networks – Road schemes (scoping stage)**

#### **Public Health England Generic Response: Noise and Public Health**

#### **Guiding principles**

Public Health England's mission is to protect and improve the nation's health and wellbeing and reduce health inequalities. Environmental noise can cause stress and disturb sleep, which over the long term can lead to a number of adverse health outcomes [1, 2]. The Noise Policy Statement for England (NPSE) [3] sets out the government's overall policy on noise. Its aims are to:

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life; and
- contribute to the improvement of health and quality of life.

These aims should be applied within a broader context of sustainable development, where noise is considered alongside other economic, social and environmental factors. PHE expects such factors may include [4]:

- Ensuring healthy lives and promoting well-being for all at all ages;
- promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation;
- reducing inequality; and
- making cities and human settlements inclusive, safe, resilient and sustainable.

PHE's consideration of the effects of health and quality and life attributable to noise is guided by the recommendations in the 2018 Environmental Noise Guidelines for the European Region [1] published by the World Health Organization, and informed by high quality systematic reviews of the scientific evidence [2, 5, 6]. The scientific evidence on noise and health is rapidly developing, and PHE's recommendations are also informed by relevant studies that are judged to be scientifically robust and consistent with the overall body of evidence.

In line with its mission, PHE believes that Nationally Significant Infrastructure Projects (NSIP) should not only limit significant adverse effects, but also explore opportunities to improve the health and quality of life of local communities and reduce inequalities.

PHE also recognises the developing body of evidence showing that areas of tranquillity offer opportunities for health benefits through psychological restoration. NSIP applications need to demonstrate that they have given due consideration to the protection of the existing sound environment in these areas.

#### **Significance of Impacts**

Determining significance of impacts is an essential element of an Environmental Impact Assessment, and therefore significance needs to be clearly defined at the earliest opportunity by the Applicant. PHE recommends that the definition of significance is discussed and agreed with relevant stakeholders, including local authority environmental health and public health teams and local community representatives, through a documented consultation process. PHE recommends that any disagreement amongst stakeholders on the methodology for defining significance is acknowledged in the planning application documentation and could inform additional sensitivity analyses.

For noise exposure, PHE expects assessments of significance to be closely linked to the associated impacts on health and quality of life, and not on noise exposure per se (in line with the NPSE). The latest revision of the Design Manual for Roads and Bridges (DMRB) Table 3.49 LA111 [7] includes proposed values for the Lowest Observable Adverse Effect Level (LOAEL) and Significant

Observable Adverse Effect Level (SOAEL)<sup>43</sup> for operational noise, and these values are likely to inform judgements on significance of impact. Whilst DMRB does not explicitly reference the underpinning evidence that informed these numbers, the night time LOAEL and SOAEL of 40 dB L<sub>night</sub> (outside, free-field) and 55 dB L<sub>night</sub> (outside, free-field) respectively, correspond to the guideline value and interim target proposed in the WHO Night Noise Guidelines (2009) [8]. The Night Noise Guidelines emphasized that the interim target was “not a health-based limit value by itself. Vulnerable groups cannot be protected at this level”.

The daytime SOAEL of 68 dB LA<sub>10,18hr</sub> (façade) appears to be derived from the relative noise level in the Noise Insulation Regulations (NIR) [9], which is linked to the provision of enhanced noise insulation for new highway infrastructure. The NIR does not explicitly refer to the underpinning evidence on which the relevant noise level is based, and there is a lack of good quality evidence linking noise exposure expressed in the LA<sub>10</sub> metric to health effects. Therefore, it is helpful to convert these levels to L<sub>den</sub> and LA<sub>eq,16hr</sub> metrics, which are more widely used in the noise and health literature. Assuming motorway traffic, a level of 68 dB LA<sub>10,18hr</sub> (façade) is approximately equivalent to 44 free-field outdoor levels of 69dB L<sub>den</sub> (or 45 64LA<sub>eq,16hr</sub>). The corresponding internal noise levels are<sup>46</sup> approximately 54dB LA<sub>eq,16hr</sub> (open windows), 48dB LA<sub>eq,16hr</sub> (tilted windows) and 36dB LA<sub>eq,16hr</sub> (closed windows).

For construction noise the latest revision of the DMRB makes reference to Section E3.2 and Table E.1 in Annex E (informative) of BS 5228-1:2009+A1:2014 [10] for the definition of SOAELs. Table E.1 of BS 5228-1:2009+A1:2014 provides examples of threshold values in three categories, based on existing ambient values. Threshold values are higher when ambient noise levels are higher. Daytime (07:00-19:00, weekdays) thresholds can be traced back to principles promoted by the Wilson Committee in 1963 [11]: “Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut.” The Wilson committee also recommended that “Noisy work likely to cause annoyance locally should not be permitted between 22.00 hours and 07.00 hours.” BS 5228 states that these principles have been expanded over time to include a suite of noise levels covering the whole day/week period taking into account the varying sensitivities through these periods.

With reference to the noise exposure hierarchy table in the Planning Practice Guidance (Noise) [14], PHE is not aware of good quality scientific evidence that links specific noise levels to behavioural/attitudinal changes in the general population. Reactions to noise at an individual level are strongly confounded by personal, situational and environmental non-acoustic factors [16, 17], and large inter-personal variations are observed in the reaction of a population to a particular noise level [18-21]. For these reasons PHE is not able to provide evidence-based general recommendations for SOAELs that are able to achieve the aims and objectives of the Noise Policy Statement for England and the Planning Practice Guidance on noise. DMRB allows for project specific LOAELs and SOAELs to be defined if necessary, and PHE recommends that for each scheme the Applicant gives careful consideration of the following:

- The existing noise exposure of affected communities – in particular, consideration of any designated Noise Important Areas identified in proximity to the scheme;
- The size of the population affected – for example an effect may be deemed significant if a large number of people are exposed to a relatively small noise change;
- The relative change in number and type of vehicle pass-bys;
- Changes in the temporal distribution of noise during day/evening/night, or between weekdays and weekends;

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<sup>43</sup> As defined in the Noise Policy Statement for England [3] and the Planning Practice Guidance [14].

<sup>44</sup> Using equation 4.16 from [22], assuming free-field levels;  $L_{A10,18hr}(\text{free-field}) = L_{A10,18hr}(\text{façade}) - 2.5\text{dB(A)}$  as per CRTN [13].

<sup>45</sup> Using conversion factors in para. 2.2.13 Transport Analysis Guidance (TAG) Unit A3 [15]

<sup>46</sup> Using external – internal level differences reported by Locher et al. (2018) [12], based on measurements at 102 dwellings in Switzerland in 2016.

- Soundscape and tranquillity, in particular the value that communities put on the lack of environmental noise in their area, or conversely, on the lack of public areas within walking distance that are relatively free from environmental noise;
- Opportunities for respite (predictable periods of relief from noise), either spatially or temporally;
- Cumulative exposure to other environmental risk factors, including other sources of noise and air pollution,
- Local health needs, sensitivities and objectives.

The WHO Environmental Noise Guidelines (2018) do not define LOAELs for environmental noise sources, partly because the scientific evidence suggests that there is no clear threshold where adverse impacts on health and quality of life cease to occur in the general population. Based on the systematic reviews that informed the 2018 WHO Environmental Noise Guidelines [2], the daytime operational noise LOAEL quoted in DMRB is equivalent to approximately 8% of the population Highly Annoyed<sup>47</sup>, and the night time LOAEL is equivalent to approximately 2% of the population Highly Sleep Disturbed<sup>48</sup>. Therefore, the impact assessment should acknowledge that adverse health effects will occur beyond the assessment threshold (LOAEL). PHE recommends that the Applicant explains what its chosen SOAELs for a specific scheme mean in population health terms in a similar fashion.

PHE does not believe that the current scientific evidence supports the modification of SOAELs and UAELs based on the existing noise insulation specification of residential dwellings, and in particular whether enhanced sound insulation avoids significant adverse effects on health and quality of life. See also sections on Mitigation and Step Changes in Noise Exposure.

### Health Outcomes

PHE encourages the applicant to present noise exposure data in terms of the Lden metric (in addition to Leq and L10), to facilitate interpretation by a broad range of stakeholders. This is because most recent scientific evidence on the health effects of environmental noise is presented in terms of Lden [1, 5, 6]. PHE believes that quantifying the health impacts associated with noise exposure and presenting them in health-based metrics allows decision makers to make more informed decisions.

For transportation sources, PHE recommends the quantification of health outcomes using the methodology agreed by the Interdepartmental Group on Costs and Benefits - Noise subgroup [IGCB(N) [23] (currently under review)], and more recent systematic reviews [1, 5, 6]. PHE believes there is sufficient evidence to quantify the following health outcomes: long-term annoyance, sleep disturbance, ischaemic heart disease (IHD), and potentially stroke<sup>49</sup> and diabetes<sup>50</sup>. Effects can be expressed in terms of number of people affected, number of disease cases, and Disability Adjusted Life Years (DALYs). THE IGCB(N) guidance can also be used to translate these effects into monetary terms.

Some health outcomes, namely annoyance and self-reported sleep disturbance, can be influenced by the local context and situation. In these cases, it would be preferable to use exposure-response functions (ERFs) derived in a local context. However, PHE is not aware of any ERFs for road traffic being available for a UK context from data gathered in the last two decades. Therefore, in PHE's view the ERFs presented in the WHO-commissioned systematic reviews offer a good foundation for

<sup>47</sup> 55 dB LA10,18hr (façade) is approximately equal to 57 dB Lden (free-field), assuming motorway traffic [13, 22]. Applying the exposure-response function presented in Guski et al., 2017 [19] for road traffic noise and annoyance (excluding Alpine and Asian studies), approximately 8% of a population is highly annoyed at 57 dB Lden.

<sup>48</sup> Applying the exposure-response function presented in Basner et al., 2018 [20] for road traffic noise and sleep disturbance gives the result that approximately 2% of a population is highly sleep disturbed at 40 dB Lnight.

<sup>49</sup> A literature review commissioned by Defra [6] identified nine longitudinal studies on road traffic noise and incidence of stroke, and eight longitudinal studies on road traffic noise and stroke mortality.

<sup>50</sup> A literature review commissioned by Defra [6] identified four longitudinal studies on road traffic noise and incidence of diabetes.

appraisal of the health effects associated with road traffic noise [2]. For annoyance, the average curve derived excluding Alpine and Asian studies may be considered more transferable to a UK context. For metabolic outcomes, no ERF was published in the WHO ENG 2018. A recent meta-analysis of five cohort studies of road traffic noise and incidence of diabetes was reported by Vienneau in 2019 [24].

Where schemes have the potential to impact a large number of people, PHE expects the Applicant to carry out literature scoping reviews to ensure that the most robust and up-to-date scientific evidence is being used to quantify adverse effects attributable to the Scheme.

PHE expects to see a clear outline of the steps taken to arrive at the final judgement of significance based on these health outcomes, including a description of local circumstances and modifiers anticipated, and how reasonably foreseeable changes in these circumstances will be dealt with during the assessment process.

### **Identification and Consideration of Receptors**

The identification of noise sensitive receptors in proximity to the proposed scheme - or route options - is essential in providing a full assessment of potential impacts. Examples of noise sensitive receptors include but are not limited to:

- Noise Important Areas
- Residential areas
- Schools, hospitals and care homes
- Community green and blue spaces and areas valued for their tranquillity, such as local and national parks
- Public Rights of Way (PRoWs)

Noise Important Areas (NIAs) are areas with the highest levels of noise exposure at a national level and as such require very careful consideration in terms of protection from increased noise levels as well as opportunities for noise mitigation that can lead to an improvement in health and quality of life. DMRB requires a list of noise mitigation measures that the project will deliver in Noise Important Areas. PHE supports this requirement - new development should offer an opportunity to reduce the health burden of existing transport infrastructure, particularly for those worst affected. PHE would encourage this approach to extend beyond NIAs, in line with the third aim of NPSE [3].

### **Baseline Sound Environment**

The greater the understanding of the baseline sound environment, the greater the potential for the assessment to reflect the nature and scale of potential impacts, adverse or beneficial, associated with the Scheme. PHE recommends that traditional averaged noise levels are supplemented by a qualitative characterisation of the sound environment, including any particularly valued characteristics (for example, tranquillity) and the types of sources contributing to it [25].

PHE recommends that baseline noise surveys are carried out to provide a reliable depiction of local diurnal noise variations for both weekdays and weekends, in a variety of locations, including the difference between day (07:00-19:00), evening (19:00-23:00) and night-time (23:00-07:00) periods. This is particularly important if there are areas within the scheme assessment boundary with atypical traffic day/evening/night distributions. Achieving these aims is likely to require long-term noise monitoring in multiple locations for a period greater than seven days. This information should be used to test the robustness of any conversions between noise metrics (e.g. converting from LA10,18hr to LAeq,2300-0700 and Lden).

PHE suggests that a variety of metrics can be used to describe the sound environment with and without the scheme – for example, levels averaged over finer time periods, background noise levels expressed as percentiles, and number of event metrics (e.g. N65 day, N60 night) – and that, where possible, this suite of metrics is used to inform judgements of significance. There is emerging

evidence that intermittency metrics can have an additional predictive value over traditional long-term time-averaged metrics for road traffic noise [27].

### **Mitigation**

PHE expects decisions regarding noise mitigation measures to be underpinned by good quality evidence, in particular whether mitigation measures are proven to reduce adverse impacts on health and quality of life. For interventions where evidence is weak or lacking, PHE expects a proposed strategy for monitoring and evaluating their effectiveness during construction and operation, to ensure the effectiveness of said measures.

With regards to road traffic noise, low-noise road surfaces, acoustic barriers, traffic management and noise insulation schemes can all be considered. Priority should be given to reducing noise at source, and noise insulation schemes should be considered as a last resort. PHE expects any proposed noise insulation schemes to take a holistic approach which achieves a healthy indoor environment, taking into consideration noise, ventilation, overheating risk, indoor air quality and occupants' preference to open windows. There is, at present, insufficient good quality evidence as to whether insulation schemes are effective at reducing long-term annoyance and self-reported sleep disturbance [28], and initiatives to evaluate the effectiveness of noise insulation to improve health outcomes are strongly encouraged.

PHE notes the suggestion in DMRB methodology that post-construction noise monitoring cannot provide a reliable gauge for reference against predicted impacts of operational noise. The issues highlighted in DMRB relate to noise exposure, and not to health outcomes. PHE suggests that monitoring of health and quality of life can be considered pre and post operational phases, to ascertain whether mitigation measures are having the desired effect for local communities. PHE expects consideration of potential adverse effects due to noise and vibration during construction and recommends that a full and detailed Construction Environmental Management Plan (CEMP) is developed and implemented by the Applicant and/or the contractor responsible for construction. PHE recommends that the CEMP includes a detailed programme of construction which highlights the times and durations of particularly noisy works, the measures taken to reduce noise at source, the strategy for actively communicating this information to local communities, and procedures for responding effectively to any specific issues arising.

There is a paucity of scientific evidence on the health effects attributable to construction noise associated with large infrastructure projects [5, 6] where construction activities may last for a relatively long period of time. PHE recommends that the Applicant considers emerging evidence as it becomes available and reviews its assessment of impacts as appropriate.

### **Green Spaces and Private Amenity Areas**

PHE expects proposals to take into consideration the evidence which suggests that quiet areas can have both a direct beneficial health effect and can also help restore or compensate for the adverse health effects of noise in the residential environment [29-31]. Research from the Netherlands suggests that people living in noisy areas appear to have a greater need for areas offering quiet than individuals who are not exposed to noise at home [29]. Control of noise at source is the most effective mitigation for protecting outdoor spaces; noise insulation schemes do not protect external amenity spaces (such as private gardens and balconies or community recreation facilities and green spaces) from increased noise exposure.

PHE expects consideration to be given to the importance of existing green spaces as well as opportunities to create new tranquil spaces which are easily accessible to those communities exposed to increased noise from the scheme. These spaces should be of a high design quality and have a sustainable long-term management strategy in place.

### **Step-changes in Noise Exposure and the Change-effect**

The Applicant should take into consideration the "change-Effect", i.e. the potential for a real or anticipated step-change in noise exposure to result in attitudinal responses that are greater or lower

than that which would be expected in a steady state scenario [28, 32]. Where a perception of change is considered likely, PHE recommends that the change-effect is taken into account in the assessment for the opening year of the proposed development. For longer term assessments, the effects of population mobility need to be taken into consideration.

### **Community Engagement and Consultation Feedback**

PHE recommends that public consultations carried out during the planning application process clearly identify the predicted changes to the sound environment during construction and operation of the Scheme, the predicted health effects on neighbouring communities, proposed noise mitigation strategies and any proposed measures for monitoring that such mitigation measures will achieve their desired outcomes.

PHE encourages the Applicant to use effective ways of communicating any changes in the acoustic environment generated by the scheme to local communities. For example, immersive and suitably calibrated audio-visual demonstrations can help make noise and visual changes more intuitive to understand and accessible to a wider demographic. If the proposed scheme will have an impact over a relatively large geographical area, the Applicant should consider community-specific fact-sheets and/or impact maps, which are easily accessible to all individuals both in hard copy and online. If online, search functionality can potentially be included, for example, by postcode.

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**From:** [Infrastructure](#)  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** Planning Act 2008 EIA M5 Junction 10 Improvements Scoping Report consultation  
**Date:** 18 August 2021 15:42:42  
**Attachments:** [image001.png](#)

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Dear Sir or Madam

Further to your letter of 21 July 2021, we write to provide a delegated officer response to the above, following consultation with the Cabinet Member for Regeneration, Environment and Strategic Infrastructure, and in our capacity as an adjacent authority.

We have reviewed the submitted information and due to the nature of the works and their distance from the South Gloucestershire boundary, we do not envisage that there will be any significant effects on this Council area. We therefore have no comment to make on the Environmental Impact Assessment Scoping Report dated 05 July 2021.

We would however request that this Council continues to be informed and consulted as the M5 J10 scheme progresses.

Please could all future consultations/ contact with this council on this project be via the above email address and note my name as main contact. This will ensure that future consultations come straight to those processing them, and can be dealt with efficiently and within the set timeframes.

We would be most grateful if you would confirm receipt of this Scoping consultation response and amendment of your records to include the above email address for all future communications on this proposed project.

Kind regards

Gillian Ellis-King  
Strategic Projects Manager  
Strategic Infrastructure Service



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**From:**  
**To:**  
**Cc:**  
**Subject:**

Consent for the M5 Junction 10 Improvements Scheme  
10 August 2021 16:58:26

Good Afternoon,

**Response to the Planning Application by Gloucestershire County Council for an Order granting Development Consent for the M5 Junction 10 Improvements Scheme**

Further to the recent Stoke Orchard and Tredington Parish Council Meeting, the members would like to submit the following response to the M5 Junction 10 Statutory Consultation:

- (i) GCC had been unable to tell the Council what impact Junction 10 Improvements would have on traffic through the Parish, or at any rate, have not yet done so
- (ii) GCC had only taken into account the impact of developments close to the Junction, presumably on the naïve assumption that it was only traffic accessing or generated by those developments (“unlocked” by the Junction) which would impact on the highway network
- (iii) GCC had not yet carried out any analysis of the potential impact of the Tewkesbury Garden Town on traffic using the Junction (or anywhere further distant than the developments close to the junction)

The Council is not disputing the need for the Junction 10 improvements. However, without (a) addressing each of issues (i) and (iii), and (b) including any necessary remedial measures to mitigate the impact on the Parish in the proposals, to consider the application now is woefully premature.

Kind regards,

Jules

-----  
**Jules Owen PSLCC**  
Parish Clerk & Responsible Financial Officer  
Stoke Orchard & Tredington Parish Council

[www.stokeorchardandtredington.org.uk](http://www.stokeorchardandtredington.org.uk)

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**From:** [REDACTED]  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** M5 Junction 10 Improvements Scheme  
**Date:** 29 July 2021 16:54:24

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Your Ref: TR010063-000006

Our ref: S.21/1808/MISC

Dear Sir/Madam

Thank you for consulting us on this Scoping opinion consultation.

Having reviewed the Scoping report we have no comment to make.

Regards

John

## John Chaplin

Majors & Environment Team Manager  
**Stroud District Council**

Ebley Mill, Ebley Wharf  
Stroud, Gloucestershire. GL5 4UB

**W** [www.stroud.gov.uk](http://www.stroud.gov.uk)

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### **IMPORTANT – COVID-19 and Lockdown**

Please note, the current situation has impact on our ability to consider enquiries and determine applications. Our aim is to ensure delays are kept to a minimum. Site visits will continue to occur respecting social distancing measures, with prior notification as necessary. For the latest information on our response to the pandemic and updates to our services, please visit our website: <https://www.stroud.gov.uk/environment/planning-and-building-control/coronavirus>.

Please use our website to view planning documents and applications and register for email notifications/alerts. <https://www.stroud.gov.uk/planning>

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**Our Contact:** John Hinett



17 August 2021

Gail Boyle Senior EIA Advisor  
The Planning Inspectorate  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
Bristol,  
BS1 6PN

Dear Sir/Madam

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING  
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017(THE EIA REGULATIONS) –  
REGULATIONS 10 AND 11**

**SCOPING OPINION ON THE CONTENT OF AN ENVIRONMENTAL IMPACT ASSESSMENT  
UNDER REGULATION 13**

<b>Applicants name:</b>	<b>Gloucestershire County Council</b>
<b>Planning application reference:</b>	<b>21/00001/SCO</b>
<b>Proposal.</b>	<b>Application by Gloucestershire County Council (the Applicant) for an Order granting Development Consent for the M5 Junction 10 Improvements Scheme (the Proposed Development).</b>
<b>Location:</b>	<b>Highway, Tewkesbury Road, Uckington, Cheltenham, Gloucestershire</b>

Dear Sir/Madam

I refer your letter of 21 July 2021 inviting the Council's comments on as to the information to be provided in an Environmental Statement (ES) relating to the Proposed Development.

It is understood that the Planning Inspectorate have consulted all other statutory consultees independently and therefore Tewkesbury Borough Council will provide comments in respect of the following matters:

*Air quality: Chapter 5 'Air Quality'*

A detailed air quality assessment (AQA) is advised to be included in the Environmental Impact Assessment to examine the predicted changes in air quality at sensitive receptors as a result of the scheme. Chapter 5 details the parameters for the AQA for the construction & operational phases of the proposed scheme that will be undertaken. We agree with the conclusions and the scope of the AQA is appropriate, therefore have no additional comments to make.

### Noise and Vibration: Chapter 6. Noise and Vibration

The submitted Scoping Report appears satisfactory and adequately addresses potential noise and vibration impacts during the construction and operational phases and should be incorporated into the Environmental Statement.

### Road Drainage and the Water Environment

As identified in the scoping report, the development has the potential to adversely impact flood risk to the surrounding area if not mitigated against. The report also states that any necessary mitigations will be presented in a Flood Risk Assessment and Drainage Strategy. These should be submitted along with any planning application either as part of an EIA or submitted separately and should be completed in line with the Environment Agency's guidance (<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>) and with reference to the CIRIA SuDS Manual C753, the Non-statutory technical standards for sustainable drainage, the latest Environment Agency guidance on climate change and any local planning guidance.

### Cultural Heritage

Note that in the Environmental Impact Assessment Scoping Report states that all aspects of the historic environment should be scoped into the EIA assessment: designated and non-designated known heritage assets, the potential for as-yet unknown archaeological remains, built heritage, and historic landscape. Direct physical impacts will be assessed, as well as potential indirect impacts to the significance of heritage assets through changes in setting.

Desk based research, geophysical survey and archaeological trial trenching have been undertaken which will inform the assessment of impacts on the historic environment. We therefore can advise that all necessary elements will be included in the Cultural Heritage chapter of the Environmental Impact Assessment.

### Tree Officer Comments

There are Tree Preservation Orders (TPOs) that are located within the Tewkesbury Borough area and although should not be directly affected they are in near proximity. The TPOs are TPO 294 (Elmstone Hardwicke Parish), TPO 325 (Uckington Parish) and TPO 400 (Staverton Parish).

Tree and hedgerow surveys and the understanding of the tree and hedgerow population that they provide are important considerations at this design stage of a development, so that the best trees and the qualities they bring can be better incorporated into the final development layout. It is of the opinion that all too often trees and hedgerows are only considered during the later phases of the planning application stage of the development process. The latter approach means that appropriate redesign of the site layout to integrate trees and hedgerows optimally cannot happen.

Therefore, it is encouraging to see in para 9.7.9. Vegetation removal should be kept to that necessary for the works and where possible new road alignments should be adjusted during design development to avoid mature trees and hedgerows.

It is not known for certain if there are any Ancient or Veteran trees that do exist within the parameters of the proposed development as not all trees may be recorded on the Woodland Trust Ancient Tree Inventory. If there are such trees, NPPF Para 180 (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons 63 and a suitable compensation strategy exists; will apply. It is important all trees are assessed by a suitably qualified and experienced arboriculturist.

A joined-up approach would be desirable and to engage with the adjoining Local Authority Tree Officer at Cheltenham Borough Council, arboriculturist and developer as suggested in para 9.11.1 where we could have a considered and fully informed approach which will allow for proposed trees to be planted in the most suitable locations. The right trees to be retained and also protected during construction. This will enable the new development to have a sound population of healthy mature trees as a platform for further environmental enhancement post construction as in accordance with NPPF Para 131.

The following will be required to accompany an application that is in accordance with BS5837:2012 Trees in relation to design, demolition and construction recommendations:

- Topographical survey
  
- Soil assessment this can determine whether this soil is shrinkable, particularly with clay and chalk soils underneath the road, shrinkage or swelling can occur as this is very common near trees where roots may eventually go under the surface. In my opinion this is an important consideration for the existing trees and proposed new trees to ensure the longevity and retention of these trees in their locations.
  
- Arboricultural Impact Assessment to include a full Tree and Hedgerow Survey within the line of and adjacent to the proposed development that may be affected by the development.
  
- Tree and hedgerow retention and removal plan
  
- Tree and hedgerow protection plan
  
- Full details of proposed tree/hedgerow planting, these details shall include location, species and sizes, planting specifications, maintenance schedule, provision for guards or other protective measures. The details shall include the tree pit design and location, type and materials to be used for hard landscaping including specifications.
  
- Location details of proposed storage of materials, soil, equipment, machinery or plant, site compounds, cabins or other temporary buildings, vehicle parking and delivery areas to ensure impacts to existing/retained trees and hedgerows are avoided.

Comments have been received from Highways England, Environment Agency, Gloucestershire County Council Archaeologist and Lead Local Flood Authority, It is noted that the Planning Inspectorate has consulted these bodies directly, for completeness these comments have been attached separately.

The Council requests that these comments be taken into account when issuing any Scoping Opinion.

Yours faithfully



Development Manager



**From:** [REDACTED]  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Subject:** RE: TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation  
**Date:** 16 August 2021 11:52:50  
**Attachments:** [~WRD1529.jpg](#)

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Uckington Parish Council now wish to submit our response to the consultation as follows:

Uckington Parish Council is grateful for the opportunity to comment upon the M5 Junction 10 Environmental Impact Assessment scoping report. Whilst the document appears to be quite robust in its content, the Parish Council contends that it does not comply with the Joint Core Strategy 2017 or Gloucestershire County Council's Local Transport Plan. It is stated that the objectives of the M5 Junction 10 Improvement Scheme are as follows:

- *Provide the transport connections and network capacity in west and north-west Cheltenham to facilitate the delivery of housing and economic development sites allocated or safeguarded in the JCS.*
- *Provide a transport network in the west and north-west Cheltenham area with the levels of service, safety and accessibility to meet current and future needs.*
- *Provide greater connectivity between the strategic road network (SRN) and the transport network in west and north-west Cheltenham.*
- *Provide a more integrated transport network by enabling opportunities to switch to more sustainable transport modes within and to west, north-west and central Cheltenham.*
- *Deliver a package of measures which is in keeping with the local environment and minimises any adverse environmental impacts.*

With these objectives in mind (particularly the highlighted ones), the Parish Council cannot understand why there is still no mention of a Park & Ride facility for the traffic exiting at Junction 10 (from north and south) and heading for Cheltenham along the A4019. Both the Joint Core Strategy (JCS) Transport Strategy 2016 and the Elms Park outline planning application (16/02000/OUT) clearly stated that a 600 space Park & Ride facility should be sited adjacent to Junction 10 to support sustainable transport and modal shift. The Parish Council is extremely concerned that the Park and Ride has not been included in the proposed scheme, since it constitutes an essential plank in any road improvement strategy/ scheme for the area, by alleviating traffic volumes serving North and West Cheltenham, the Cyber Park development, the possible ribbon development along the A4019 and the eventual Elms Park development. It has been recognised that the Park & Ride facility at Arle Court is an essential contribution to a coherent and sensible traffic management strategy for the A40 etc. and indeed it is proposed to double its capacity as part of a £20 million revamp. With the additional Park & Ride facility at Cheltenham Racecourse, it beggars belief that such a facility is not included as an integral part of the M5 Junction 10 road improvement scheme and the benefits of such a proposal are well documented and understood by all.

The Parish Council also wish to state that there appears to be little evidence concerning the traffic implications from the Elms Park development, and no mention of improving existing feeder roads/rat runs and in particular the widening of the Gloucester Old Spot/ Stoke road junction. This is a well used local road and the junction is such that it cannot be safely negotiated with existing traffic levels, let alone any increase in volumes.

Finally, the Parish Council is concerned about the cumulative environmental impacts of pollution on existing and future residents from the increase in traffic movements, in particular those associated with air quality, noise, odour and flooding. Again, a Park & Ride facility would contribute so much to alleviating such pollution and assist the county in reaching its carbon reduction targets, builds in sustainability and contributes greatly to future necessary modal shift and behaviours.

Yours faithfully,

David M Roscoe  
Parish Clerk

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**From:** M5 Junction 10 Highways Improvements Scheme  
<M5Junction10@planninginspectorate.gov.uk>

**Sent:** 21 July 2021 10:51

**Cc:** M5 Junction 10 Highways Improvements Scheme  
<M5Junction10@planninginspectorate.gov.uk>

**Subject:** TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation

Dear Sir/ Madam

Please see attached correspondence on the proposed M5 Junction 10 Improvements project.

Please note the deadline for consultation responses is **18 August 2021**, and is a statutory requirement that cannot be extended.

Kind regards  
Laura

Laura Feekins-Bate  
EIA Advisor  
Environmental Services  
Email: [REDACTED]

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)

Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

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DPC:76616c646f72



**From:** [REDACTED]  
**To:** [M5 Junction 10 Highways Improvements Scheme](#)  
**Cc:** [REDACTED]  
**Subject:** FW: TR010063 - M5 Junction 10 Improvements - EIA Scoping Notification and Consultation  
**Date:** 27 July 2021 17:14:38  
**Attachments:** [image003.jpg](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)  
[image008.png](#)

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Dear Laura

Thank you for contacting Wychavon district council about the proposed alterations to J10 of the M5.

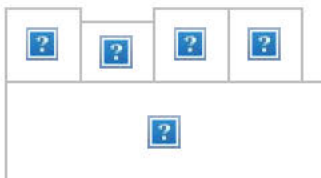
I am writing to confirm that Wychavon has no objections or comments to make regarding the suggested proposals to extend junction 10 of the M5 to provide a southbound access and egress (currently only northbound access and egress are provided). It is understood that the proposed works are to help alleviate congestion caused at peak times as a result of traffic travelling through Cheltenham to and from the M5. Junction 10 is near to Cheltenham and so is some distance from the district of Wychavon.

Regards, Denise

[Mrs Denise Duggan](#)  
[Senior Planning Officer \(Policy\)](#)

[Malvern Hills & Wychavon Planning Policy Team](#)  
[Civic Centre](#)  
[Queen Elizabeth Drive](#)  
[Pershore](#)  
[Worcs WR10 1PT](#)

[www.wychavon.gov.uk](#)



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**From:** [M5 Junction 10 Highways Improvements Scheme](#)  
<[M5Junction10@planninginspectorate.gov.uk](mailto:M5Junction10@planninginspectorate.gov.uk)>

## B.2. Prescribed Consultation Bodies

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	NHS Gloucestershire Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Gloucestershire Fire and Rescue Service
The relevant police and crime commissioner	Gloucestershire Police and Crime Commissioner
The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council	Boddington Parish Council
	Elmstone Hardwicke Parish Council
	Stoke Orchard and Tredington Parish Council
	Staverton Parish Council
	Uckington Parish Council
	Swindon Parish Council
The Environment Agency	The Environment Agency
The Civil Aviation Authority	Civil Aviation Authority
The Relevant Highways Authority	Gloucestershire County Council
The relevant strategic highways company	Highways England

SCHEDULE 1 DESCRIPTION	ORGANISATION
The relevant internal drainage board	Lower Severn Internal Drainage Board
The Canal and River Trust	The Canal and River Trust
Public Health England, an executive agency of the Department of Health	Public Health England
The Forestry Commission	The Forestry Commission

### B.3. Relevant Statutory Undertakers

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	NHS Gloucestershire Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Trust	South West Ambulance Service NHS Trust
Canal Or Inland Navigation Authorities	Canal and Rivers Trust
Civil Aviation Authority	Civil Aviation Authority
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes England
The relevant Environment Agency	The Environment Agency
The relevant water and sewage undertaker	Severn Trent
The relevant public gas transporter	Cadent Gas Limited
	Last Mile Gas Ltd
	Energy Assets Pipelines Limited
	ES Pipelines Ltd

STATUTORY UNDERTAKER	ORGANISATION
	ESP Networks Ltd
	ESP Pipelines Ltd
	ESP Connections Ltd
	Fulcrum Pipelines Limited
	Harlaxton Gas Networks Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Leep Gas Networks Limited
	Murphy Gas Networks limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
	Wales and West Utilities Ltd
The relevant electricity distributor with CPO Powers	Eclipse Power Network Limited
	Last Mile Electricity Ltd
	Energy Assets Networks Limited
	ESP Electricity Limited
	Forbury Assets Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Indigo Power Limited
	Leep Electricity Networks Limited

STATUTORY UNDERTAKER	ORGANISATION
	Murphy Power Distribution Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	Western Power Distribution (South West) Plc
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc

#### B.4. Section 43 Local Authorities (For the purposes of section 42(1)(b))

LOCAL AUTHORITY <sup>10</sup>
Cotswold District Council
Tewkesbury Borough Council
Gloucester City Council
Cheltenham Borough Council
Malvern Hills District
Wychavon District Council
Forest of Dean District Council
Stroud District Council
South Gloucestershire Council
Sir Fynwy - Monmouthshire County Council
Herefordshire Council

LOCAL AUTHORITY <sup>10</sup>
Swindon Borough Council
Wiltshire Council
Oxfordshire County Council
Warwickshire County Council
Worcestershire County Council
Gloucestershire County Council



**ATKINS**

Member of the SNC-Lavalin Group

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