

HS2 Phase 2b: Crewe to Manchester and West Midlands to Leeds

Environmental Impact Assessment

Scope and Methodology Report

Consultation Summary Report

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**Environmental Impact Assessment
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Consultation Summary Report**



Department
for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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Executive summary

High Speed Two (HS2) Ltd consulted on the HS2 Phase 2b: Crewe to Manchester and West Midlands to Leeds draft Environmental Impact Assessment (EIA) Scope and Methodology Report (SMR), hereafter referred to as the 'draft EIA SMR', from 17 July to 29 September 2017.

The purpose of the draft EIA SMR consultation was to seek responses on the appropriateness of the proposed approach to the preparation of the EIA and subsequent formal Environmental Statement (ES) for Phase 2b of the proposed high speed rail network.

Stakeholders were formally invited to participate in the draft EIA SMR consultation. In addition, the consultation documents were hosted on www.gov.uk/hs2 and open for wider stakeholders and members of the public to participate.

A total of 107 consultees submitted responses to the draft EIA SMR consultation. Each of these comments has been reviewed and considered by the appropriate environmental topic authors of the draft EIA SMR.

This Consultation Summary Report (CSR) comprises the findings of the consultation exercise on the draft EIA SMR. The report provides a summary of the key themes which emerged from analysis of the responses and will be hereafter referred to as 'the CSR'. Consultation responses reviewed and considered directly relevant to the draft EIA SMR have been incorporated into the EIA SMR where appropriate.

1 Introduction

1.1 Background

- 1.1.1 The HS2 Phase 2b: Crewe to Manchester and West Midlands to Leeds draft Environment Impact Assessment (EIA) Scope and Methodology Report (SMR) sets out the proposed method, structure and content of the EIA for Phase 2b of the proposed high speed rail network (HS2).
- 1.1.2 For the purpose of this report, Phase 2b of HS2 is hereafter referred to as the 'Proposed Scheme'. The draft Environmental Impact Assessment (EIA) Scope and Methodology Report (SMR) is hereafter referred to as the 'draft EIA SMR' and the revised version of the draft EIA SMR is hereafter referred to as the 'EIA SMR'.
- 1.1.3 The draft EIA SMR was published for consultation on www.gov.uk/hs2 for a period of approximately 10 weeks from 17 July to 29 September 2017. HS2 Ltd also wrote to stakeholders informing them of the draft EIA SMR consultation, and concurrent draft Equality Impact Assessment (EQIA) SMR consultation, to obtain their views on the proposed EIA and its appropriateness in determining likely significant environmental effects.

1.2 The Consultation Summary Report

- 1.2.1 This report comprises the findings of the consultation exercise on the draft EIA SMR. This Consultation Summary Report (CSR) is hereafter referred to as 'the CSR' of the draft EIA SMR consultation.
- 1.2.2 The purpose of this report is to summarise the key themes and comments raised during consultation, explaining how these have been considered through the development and EIA of the Proposed Scheme. This report does not consider feedback from ongoing engagement with stakeholders outside of the draft EIA SMR consultation.
- 1.2.3 Consultation responses have been reviewed and considered and those directly relevant to the draft EIA SMR have been incorporated into the EIA SMR where appropriate.
- 1.2.4 Comments that did not relate to the draft EIA SMR, but which were relevant to the project in general, do not form part of this report but have been passed onto the relevant part of the project team and are being considered where appropriate as part of the development of the Proposed Scheme.

1.3 Structure of this Consultation Summary Report

- 1.3.1 This report is structured as follows:
- Section 2: provides a summary of the consultation methodology implemented, namely timeframes, responses, channels and process for logging of responses;
 - Section 3: describes the process adopted for addressing the responses received as a result of the consultation;

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- Sections 4 – 23: provide a summary of the key themes which emerged from consultation and the technical response to these, including key changes which have been made to the draft EIA SMR:
 - Section 4: General comments on EIA;
 - Section 5: Stakeholder engagement;
 - Section 6: EIA methodology;
 - Section 7: Alternatives;
 - Section 8: Agriculture, forestry and soils;
 - Section 9: Air quality;
 - Section 10: Climate change;
 - Section 11: Community;
 - Section 12: Ecology and biodiversity;
 - Section 13: Electromagnetic interference;
 - Section 14: Health;
 - Section 15: Historic environment;
 - Section 16: Land quality;
 - Section 17: Landscape and visual;
 - Section 18: Major accidents and disasters;
 - Section 19: Socio-economics;
 - Section 20: Sound, noise and vibration;
 - Section 21: Traffic and transport;
 - Section 22: Waste and material resources; and
 - Section 23: Water resources and flood risk.
- Section 24: describes the next steps that will be taken following this consultation exercise;
- Annex A of this report contains the list of organisations contacted by HS2 Ltd to inform them about the consultation; and
- Annex B of this report contains the list of organisations who responded to the consultation; and
- Annex C of this report contains the response form that consultees were asked to complete as part of the consultation;

2 Consultation methodology

2.1 Consultation timeframe and response channels

- 2.1.1 The draft EIA SMR was published for consultation on www.gov.uk/hs2 for a period of approximately 10 weeks from 17 July to 29 September 2017.
- 2.1.2 The website hosted a response form (shown in Annex C of this report) and dedicated email and FREEPOST addresses through which responses to consultation could be provided.
- 2.1.3 The email address was: HS2EIASMRPhase2B@arup.com.
- 2.1.4 The FREEPOST address was: Freepost HS2 2B SMR CONSULTATION 2017.
- 2.1.5 HS2 Ltd sent out a series of 'test responses' to the dedicated email and FREEPOST addresses in order ensure the systems operated smoothly and to also establish the length of any potential lag between the send and receipt of FREEPOST responses. HS2 Ltd sent test emails that were received on the same day they were sent.
- 2.1.6 HS2 Ltd also sent test letters to the FREEPOST address. All of the test responses were received, although this process revealed that letters could take up to 15 days to be delivered. Consequently, a 15 day grace period following the 29 September 2017 consultation deadline was allowed for the receipt of consultation responses by post.

2.2 Consultees

- 2.2.1 The consultation was open to all through www.gov.uk/hs2.
- 2.2.2 HS2 Ltd also sent letters to stakeholder organisations listed in Annex A of this report, to inform them about the consultation. The stakeholders invited to participate included statutory consultees and other groups likely to have an interest in the EIA SMR or the area potentially affected by the Proposed Scheme.
- 2.2.3 The organisations that responded are listed within Annex B of this report.

2.3 Processing of responses

- 2.3.1 On receipt, consultation responses were registered and logged with a unique response number. Responses were checked for validity and null representations¹ and late responses were discounted. From each response, various general information was recorded, including:
- organisation and address; and
 - type of response (email or letter).
- 2.3.2 Responses were then processed for technical review, as set out in Section 3 of this report.

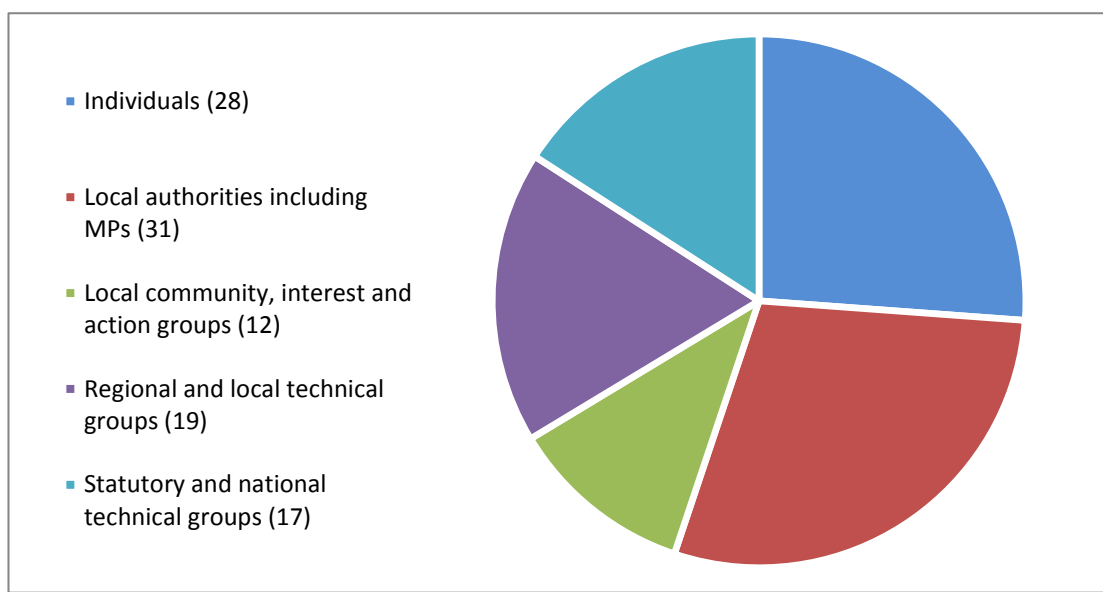
¹ A null representation was considered to be any duplicate response, blank response forms or responses with no name.

3 Overview of responses

3.1 Introduction

3.1.1 A total of 107 responses were received on the draft EIA SMR. The breakdown of the types of respondents is shown in Figure 1.

Figure 1 - Breakdown of types of respondents to the draft EIA SMR consultation



3.1.2 Consultees who submitted responses comprised 79 stakeholder organisations and 28 individuals.

3.1.3 The names of the stakeholder organisations which responded to the draft EIA SMR consultation are listed within Annex B of this report.

3.1.4 For data protection purposes, the details of the individuals who responded are not included in this report.

3.2 Processing of consultation responses

3.2.1 Consultation responses were reviewed and individual comments identified and attributed codes, based primarily on the different sections of the draft EIA SMR in order to aid analysis.

3.3 Technical review

3.3.1 Comments were passed onto technical members of the project team to consider whether a change needed to be made to the draft EIA SMR.

3.3.2 Comments were considered and actions were identified in line with the following:

- the comment relates to a point that is already included in the draft EIA SMR, and therefore, no change is required;
- the comment is relevant to the draft EIA SMR and the project agrees that a change should be made to the draft EIA SMR;

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- the comment is relevant to the draft EIA SMR, but is not considered to provide any new evidence that would make the EIA SMR more robust, and therefore, no change should be made to the draft EIA SMR;
- the comment is one that will be addressed during the detailed EIA process or through the Technical Notes and does not require a change to the EIA SMR; or
- the comment is considered a wider issue, such as general stakeholder engagement which does not have direct relevance to the content of the EIA SMR and, therefore, no change should be made to the draft EIA SMR.

3.3.3 Key changes that have been made to the draft EIA SMR in response to a consultee comment are identified in the relevant sections.

3.3.4 Not all of the comments received related to the draft EIA SMR. Comments that did not relate to the draft EIA SMR included comments relating to scheme design and engineering, and issues relating to the strategic or commercial case for high speed rail generally. These were passed on to the appropriate wider team within HS2 Ltd and discounted from the analysis of the draft EIA SMR consultation responses.

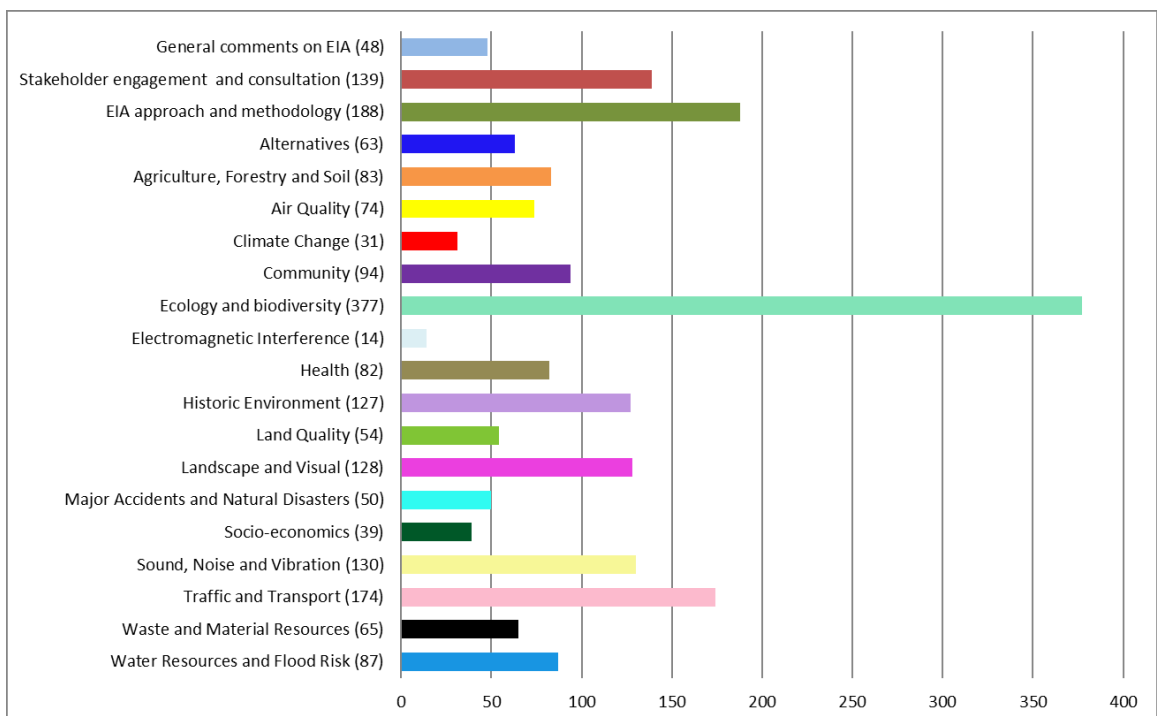
3.4 Consultee comments

3.4.1 Where appropriate, comments were considered by more than one technical team, depending on the issues raised.

3.4.2 Figure 2 shows the breakdown of comments reviewed by technical topic, identified from responses to the draft EIA SMR consultation.

3.4.3 Where appropriate, comments were considered by more than one technical team, depending on the issues raised.

Figure 2 - Breakdown of the draft EIA SMR comments by topic and SMR section



3.5 Themes and sub-themes

- 3.5.1 Themes were identified from the review of consultee comments, these being identified by grouping together comments that were associated or similar in content.
- 3.5.2 Where considered appropriate, a range of sub-themes have been listed under individual themes to convey the range of distinct but related comments raised by consultees.
- 3.5.3 The list of themes and sub-themes is indicative and not exhaustive.
- 3.5.4 Comments relating to individual circumstances are not reported directly in this report, but are collectively summarised under the relevant theme or sub-theme.
- 3.5.5 The remainder of this report summarises the main themes and sub-themes identified from the review of consultee responses received for each section of the draft EIA SMR.
- 3.5.6 The respective environmental topic teams have reviewed and responded to the themes and sub-themes and a summary of their responses is provided in sections 4 to 23 of this report.

3.6 Comments not related to the draft EIA SMR

- 3.6.1 Consultee responses included comments which were not directly related to the draft EIA SMR. These comments included:
- position statements on HS2;
 - general commentary on the Phase 2b Proposed Scheme and level of investment;
 - comments relating to Phase One or Phase 2a;
 - comments relating to Phase 2b scheme design and engineering; and
 - comments relating only to commercial or compensatory matters.
- 3.6.2 These comments have been referred to the wider Phase 2b project team.

3.7 Quality assurance

- 3.7.1 Quality assurance exercises were carried out at different stages of the process to ensure that the receipt, coding and reporting of responses was consistent and fair. A sample of responses was read by the HS2 Ltd consultation team and cross-checked for consistency against the coding framework, in order to understand how codes had been developed and applied against respondents' comments. HS2 Ltd was satisfied with the outcome of the quality assurance exercise.

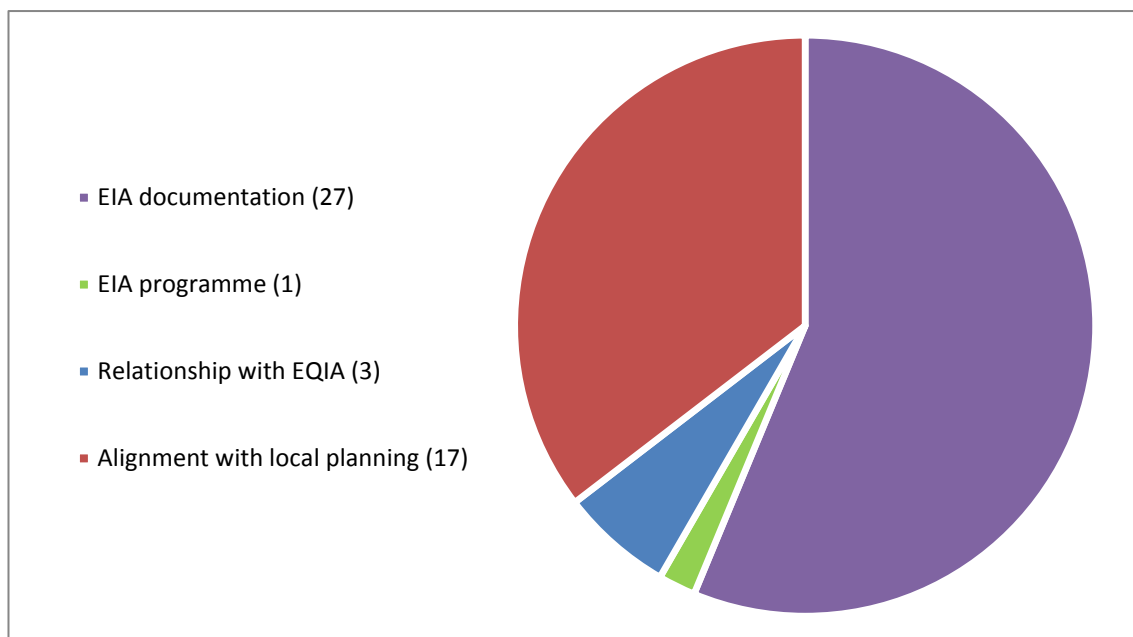
4 General comments on EIA

4.1 Introduction

4.1.1 This section summarises consultee comments made in relation to EIA as an overarching process in the draft EIA SMR. Consultee response themes

4.1.2 A total of 48 comments were made by consultees in relation to the EIA as an overarching process as shown in Figure 3.

Figure 3 - Comments by type – general comments on EIA



4.2 Consultee response themes

4.2.1 The main themes which have been identified from consultee responses in relation to this technical topic include:

- layout of ES documentation;
- Technical Notes;
- planning information; and
- construction programme.

Theme: Layout of ES documentation

Sub-theme:

4.2.2 Consultees commented on the length and complexity of the draft EIA SMR documentation. It was also stated that links to the draft EIA SMR document had not been provided in communications to affected people, making it difficult to locate.

Response:

- 4.2.3 While the draft EIA SMR is intended to be reviewed by technical stakeholders, it has been presented to be accessible to a broader audience. The length of the draft EIA SMR is dictated by the scope and methodological detail of the EIA and its constituent technical topics.
- 4.2.4 A mail drop, sent to households along the route of the Proposed Scheme, provided details of the draft EIA SMR consultation.

Sub-theme:

- 4.2.5 Consultees stated that the ES must be easily readable in its presentation, and available in multiple formats. The presentation of assessment in community areas was welcomed and it was noted that any maps must be of high definition.

Response:

- 4.2.6 The working draft ES and the formal ES will be presented in both digital and printed formats and can be made available in alternative formats (e.g. braille, audio and translations into different languages) upon request on a case by case basis, as for both Phase One and Phase 2a. For Phase 2b, maps will be included to enable the reader to understand the Proposed Scheme on both a route wide and local level.

Sub-theme:

- 4.2.7 Consultees commented on the correlation between different documents and maps such as the EIA and EQIA SMRs, and plans in other reports such as on HS2 Ltd's website. In some instances consultees commented that the plans and maps did not correlate.

Response:

- 4.2.8 All reports and maps are subject to checks for consistency as part of the process of developing the working draft ES and subsequently the formal ES.

Theme: Technical Notes

Sub-theme:

- 4.2.9 Consultees commented that the Technical Notes referred to throughout the EIA SMR should have been made available for consultation and asked questions around the timing and process for consulting on these.

Response:

- 4.2.10 Where relevant, Technical Notes will be issued as part of the formal ES. Relevant Technical Notes will be consulted on with statutory consultees. Technical Notes for Phase 2b will build upon those prepared for Phase One and/or Phase 2a.

Theme: Planning information

Sub-theme:

- 4.2.11 Details were provided on planning designations and information that may be relevant to planning for the Proposed Scheme. This included areas that are allocated and safeguarded for strategic waste uses in local development plans.

Response:

- 4.2.12 These comments will be relevant to the EIA and will be considered in the assessment.

Theme: Construction programme

Sub-theme:

- 4.2.13 Consultees requested that further detail on the construction programme be provided.

Response:

- 4.2.14 The purpose of the draft EIA SMR is to provide the methodology that will be used for the EIA and not the specific details of the Proposed Scheme, which will continue to evolve. The ES will include further information on the construction programme and construction activities that will be used to inform the assessment.

5 Stakeholder engagement and consultation

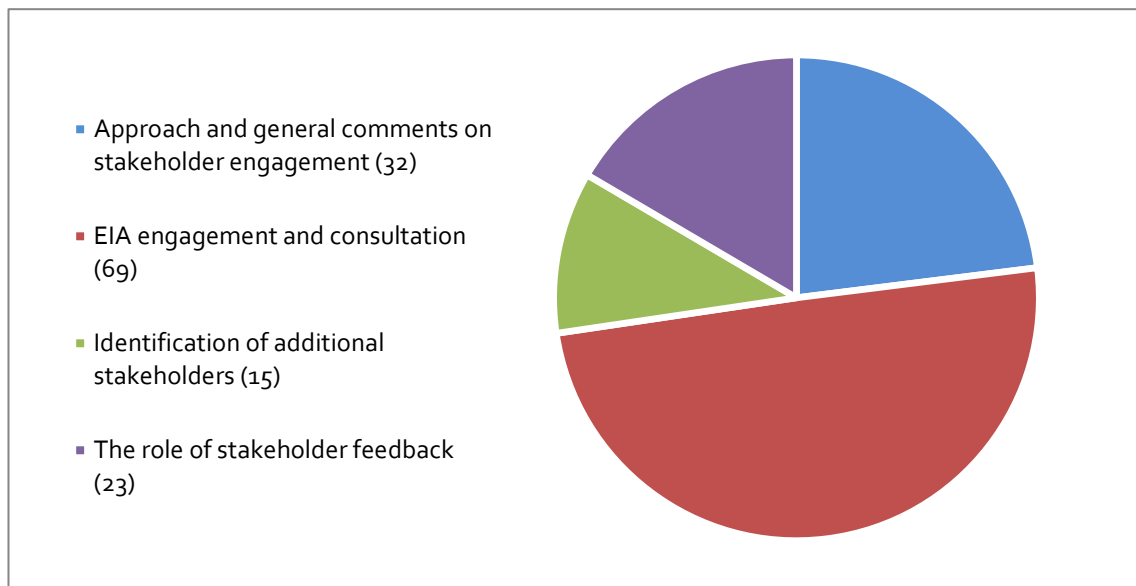
5.1 Introduction

5.1.1 This section summarises consultee comments made in relation to stakeholder engagement and consultation (Section 3) of the draft EIA SMR.

5.2 Consultee comments

5.2.1 A total of 139 comments were made in relation to the approach to stakeholder engagement and consultation set out in Section 3 and within the environmental topic sections of the draft EIA SMR, as summarised in Figure 4.

Figure 4 - Comments by type – stakeholder engagement and consultation



5.3 Consultee response themes

5.3.1 The main themes which have been identified from consultee responses in relation to this technical topic include:

- approach to engagement and constructive dialogue;
- identification of stakeholders; and
- stakeholder feedback informing assessment.

Theme: Approach to engagement and constructive dialogue

Sub-theme:

5.3.2 Consultees welcomed the opportunity to respond to the draft EIA SMR and expressed positive interest in continuing to provide comments as the project progresses. Consultees also noted their support of early and constructive dialogue and the continuation of broad, clear and proactive engagement with stakeholders.

Response:

- 5.3.3 HS2 Ltd welcomes the engagement and feedback from stakeholders to this draft EIA SMR consultation but also through wider engagement. HS2 Ltd is committed to an open and constructive dialogue with its stakeholders and to ongoing engagement in support of the evolving scheme design and assessment.

Sub-theme:

- 5.3.4 Consultees sought further clarity in terms of how stakeholder engagement is conducted and emphasised the need for effective communication and consultation with affected parties in relation to how information is being disseminated. Consultees commented that there was an expectation that lessons learnt from Phase One are incorporated into Phase 2b, namely the need for inclusive communication across all levels of engagement.

Response:

- 5.3.5 HS2 Ltd's approach to engagement is set out in the HS2 Phase Two Community Engagement Strategy². This strategy sets out the key principles of HS2 Ltd's approach, including its commitment to an open and inclusive dialogue with stakeholders. The strategy has been informed by learning from Phase One and Phase 2a, as well as feedback from stakeholders.

Theme: Identification of stakeholders

Sub-theme:

- 5.3.6 While some consultees commented that the identified group of consultees was considered comprehensive and appropriate, others identified stakeholders whom they felt should be engaged during the course of the EIA. Consultees also requested that due attention be given to engagement with affected individuals and communities, especially those in deprived areas.

Response:

- 5.3.7 HS2 Ltd will actively review suggestions of additional stakeholders for Phase 2b, and such stakeholders will be engaged, as appropriate, during the undertaking of the EIA. The list of organisational stakeholders who were actively engaged with during the draft EIA SMR consultation was set out in the draft EIA SMR and is also reproduced in Annex A of this report.
- 5.3.8 HS2 Ltd will continue to work with local authorities to identify and engage with all sections of the community, including those in deprived areas along the route of the Proposed Scheme.

² HS2 Limited (2017) *HS2 Ltd Community Engagement Strategy*. Available online at: <https://www.gov.uk/government/publications/hs2-ltds-community-engagement-strategy>

Theme: Stakeholder feedback informing assessment

Sub-theme:

- 5.3.9 Consultees questioned how stakeholder feedback is gathered, processed and then taken into consideration, particularly at a local level. It was also questioned whether feedback previously submitted had been taken into account.

Response:

- 5.3.10 Feedback from local and route-wide stakeholders, whether through ongoing engagement or formal consultation, is recorded, processed and reviewed by the project team to inform the development of the design of the Proposed Scheme and the assessments being undertaken. Lessons learned, and best practice from earlier phases, are also included in the iterative design and assessment process.
- 5.3.11 Feedback provided by stakeholders in previous consultation exercises has been collated and published through previous CSRs. These reports are available on www.gov.uk/hs2.

Sub-theme:

- 5.3.12 It was questioned whether an online form was appropriate for the project demographic.

Response:

- 5.3.13 HS2 Ltd seeks to engage stakeholders through a variety of techniques which are accessible and appropriate for all sections of the community. It is recognised that an online form is not a preferred response mechanism for all stakeholders. Two alternative formats were, therefore, provided to enable stakeholders to respond to consultation, namely: a FREEPOST letter address and an email address. Feedback from stakeholders is welcomed in whichever format is most suitable to their needs.

6 EIA methodology

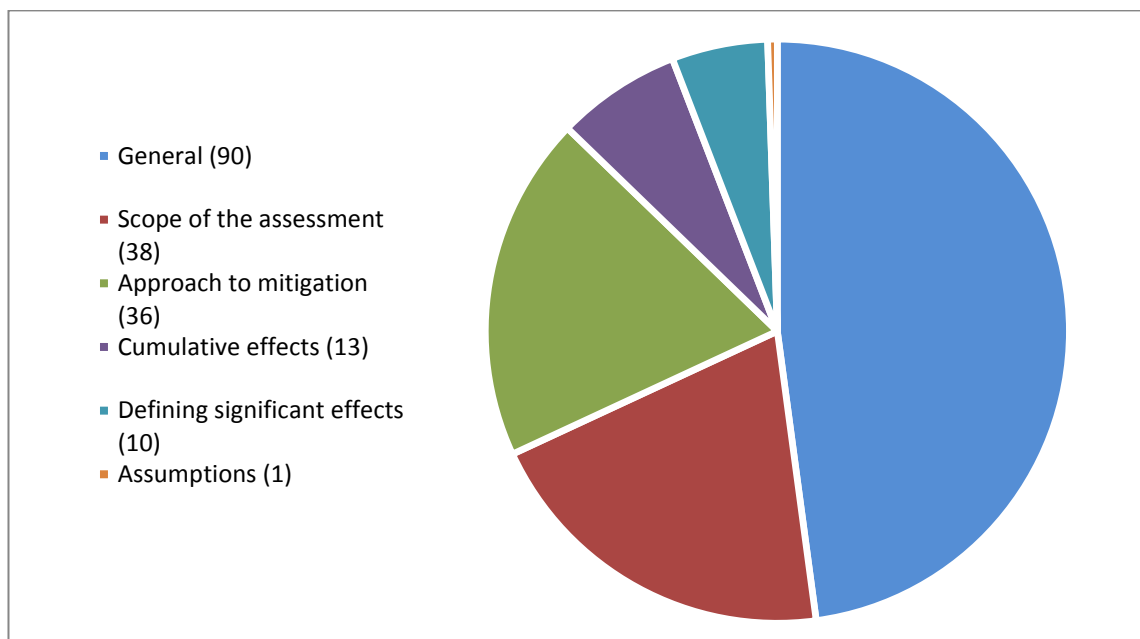
6.1 Introduction

6.1.1 This section summarises consultee comments made in relation to the EIA approach and methodology (Section 4) of the draft SMR.

6.2 Consultee comments

6.2.1 A total of 188 comments were made in relation to the EIA approach and methodology section as summarised in Figure 5.

Figure 5 - Comments by type – EIA methodology



6.3 Consultee response themes

6.3.1 The main themes which have been identified from the comment types listed in Figure 5 include:

- overarching comments;
- professional judgement and expertise;
- scope of the assessment;
- community areas and local level scoping;
- managing baseline or Proposed Scheme changes;
- cumulative impact assessment;
- mitigation;
- monitoring; and

- clarifications.

Theme: Overarching comments

Sub-theme:

- 6.3.2 A number of consultees commented that they welcomed the proposed scope and methodological approach presented in the draft EIA SMR.

Response:

- 6.3.3 The overarching comments from stakeholders are noted and welcomed.

Theme: Professional judgement and expertise

Sub-theme:

- 6.3.4 Consultees commented upon the use of professional judgement as part of the methodology for undertaking the EIA, and requested this be applied transparently. Consultees suggested that the EIA should include a section specifically describing the expertise and qualifications of individuals that have been involved in the assessment.

Response:

- 6.3.5 EIA as a process requires the application of professional judgement, and the EIA team and approach that HS2 Ltd has set up enables experienced EIA practitioners to apply expert professional judgement on a consistent basis. Representatives of environmental statutory authorities and Government departments are also involved in the development of the EIA. The individual topic impact assessments will be undertaken in line with recognised industry best practice.

Theme: Scope of the assessment

Sub-theme:

- 6.3.6 Consultees commented on the overall scope of the assessment including expectations that the EIA scope would include the rolling stock depot and any infrastructure works such as road re-alignments and haulage roads. It was also requested that detailed earthworks and construction footprint information that was not available at the SMR stage, be included in the ES.

Response:

- 6.3.7 The environmental effects of modifications to existing infrastructure, including road and highway infrastructure, will be assessed and reported within the working draft and formal ES. Where these modification works are adjacent to the Phase 2b route corridor, they will be assessed and reported in the appropriate Volume 2 Community area report. Where these modifications are determined to be 'off-route' they will be assessed and reported in the ES, within Volume 4: Off-route effects.

- 6.3.8 Volume 4: Off-route effects, provides an assessment of the likely significant environmental effects of the Proposed Scheme at locations beyond the Phase 2b route corridor and its associated local environment. This includes but is not limited to modification works to the existing conventional rail network, highway modifications

and off-route rail station modifications to accommodate HS2 trains or additional passenger numbers.

- 6.3.9 The Proposed Scheme is not defined in detail at any location in the draft EIA SMR, nor are the construction works including detailed earthworks or construction footprint or ancillary features associated with the Proposed Scheme. The working draft ES will provide a snapshot of the emerging engineering design, including plans for construction and operational design, and will be made publically available alongside this CSR.

Theme: Community areas and local level scoping

Sub-theme:

- 6.3.10 The concept of community areas was acknowledged to be helpful; however some consultees requested clarity on how community areas had been defined and some suggested that the boundaries should align with local authority boundaries. It was suggested that some areas were too broad, containing too diverse a mix of receptors to group together. Consultees also noted that, as well as breaking the Proposed Scheme down into smaller areas, there is also still a need to discuss impacts at a higher overview level for those interested in impacts overall.

Response:

- 6.3.11 Community area boundaries were set geographically to make reporting and engagement more targeted and relevant to those living in or near particular groups of communities. Account was taken of local authority administrative boundaries in developing the community areas.
- 6.3.12 The EIA will report upon impacts and effects that are likely to occur in each community area through the Volume 2 reports of the ES. The EIA will also report impacts that will occur at the route-wide scale through the ES Volume 3: Route-wide effects. The EIA methodologies will take into account diversity of receptors present in any one community area as part of individual assessment methodologies.

Sub-theme:

- 6.3.13 Due to the difficulty of identifying detail at this scoping stage of the project, it was suggested that HS2 Ltd could conduct additional 'local level' scoping which would focus more on local issues at a local scale. It was also suggested that study areas for various topics should potentially be revised at the local scale to reflect local contexts.

Response:

- 6.3.14 The purpose of the community area reports is to provide a description of the Proposed Scheme (including proposed environmental mitigation) and the environmental information at a 'local' scale specific to adjacent communities which share similar local issues and concerns. The spatial scope (or geographic scope) for different environmental topics will take into account the distance from the Proposed Scheme over which changes to the environment are likely to occur as a result of the construction or operation of the Proposed Scheme. In doing so, the assessment will take into account local context and scale.

Theme: Managing baseline or Proposed Scheme changes

Sub-theme:

- 6.3.15 Consultees questioned the assumption in the draft EIA SMR that existing land uses along the Proposed Scheme will remain unchanged, noting that there will be possible changes such as due to extant planning permissions.

Response:

- 6.3.16 Projections of future land use will be incorporated in the definition of the future baseline for each environmental topic assessment. For assessment purposes it will be necessary to assume that the baseline characteristics established during each environmental topic assessment process will remain largely unchanged. However, where it is possible to predict change, or to identify planned land use change, these will be incorporated into the future baseline. The general assumption in paragraph 4.6.4 of the draft EIA SMR has been updated in the EIA SMR to reflect that the future baseline will change regardless of the Proposed Scheme, as a result of extant planning permissions, commitments in statutory development plans and/or natural changes over time, and that this will be reported where it is possible to predict these changes.

Sub-theme:

- 6.3.17 Comments were received about how changes to the design of the Proposed Scheme will be managed as part of the assessment process.

Response:

- 6.3.18 The Proposed Scheme reflects work by HS2 Ltd undertaken since 2010 to examine a substantial number of possible strategic, route-wide and local alternatives to the proposed route alignment. There will continue to be refinement to the design, in response to environmental assessment and the stakeholder engagement being undertaken and planned by HS2 Ltd.

Theme: Cumulative impact assessment

Sub-theme:

- 6.3.19 Consultees provided comments on the proposed methodology for the cumulative impact assessment including suggesting that mapping of existing or committed developments should be included in this assessment, including Crewe Hub and Northern Powerhouse Rail (NPR). Consultees also suggested that the methodology explained in Section 4 of the draft EIA SMR for cumulative impact assessment is not applied consistently in other topic areas.

Response:

- 6.3.20 Following the approach taken on HS2 Phase One and Phase 2a, mapping of committed developments will be included within appropriate map series. A schedule of committed and proposed developments will be included in an appropriate section of the formal ES.

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- 6.3.21 The methodology in the draft EIA SMR will ensure that cumulative effects are consistently assessed across topics. The draft EIA SMR sets out in section 4.4 the approach to cumulative effects, and sets out that the cumulative effects will be identified in each environmental topic assessment.
- 6.3.22 Other proposed schemes that could be included in the assessment of cumulative effects in combination with HS2 will be considered during the EIA and reported in the formal ES, including Crewe Hub, NPR and Midlands Connect.

Sub-theme:

- 6.3.23 Comments suggested that the difference between in-combination and cumulative impacts be made clearer, and that more detail be given in the EIA about the combined impact from different phases within the overall Phase 2b programme.

Response:

- 6.3.24 As noted in paragraph 4.4.2 of the draft EIA SMR, cumulative effects can arise from intra-project effects where works may give rise to 'in-combination' effects on a particular receptor (e.g. through noise, visual and transport effects). 'Cumulative effects' can also arise between HS2 Phase 2b with other developments which either have planning permission or are subject to site allocation in a statutory development plan, by including those other developments within the future baseline. This will include changes brought about by HS2 Phase One and Phase 2a as part of the future baseline. Consideration will also be given to the potential combined effects of all phases of HS2 against a no-HS2 baseline for relevant environmental topics, where possible.

Theme: Mitigation

Sub-theme:

- 6.3.25 It was suggested that the section on the Appraisal of Sustainability (AoS) could more clearly explain where EIA activities fall within the broader environmental framework and decision-making process.

Response:

- 6.3.26 The AoS process reflects the first stages of the early development and optioneering work that has been used to appraise and report on the sustainability performance of the Phase 2b proposals throughout their development up until the EIA process. Throughout the EIA process, there will continue to be a refinement to the design in response to environmental assessment and stakeholder engagement to address local environmental sensitivities and local issues raised through consultations.

Sub-theme:

- 6.3.27 Consultees suggested that statements that mitigation will be implemented 'where appropriate and practicable' require further elaboration. Specifically, consultees stated that cost could not be used to justify not implementing a particular piece of mitigation. It was also stated that enhancement opportunities should be considered alongside mitigation.

Response:

- 6.3.28 Mitigation measures vary on a case by case basis and are influenced by finding a reasonable balance between environmental and engineering constraints, cost and construction programme impacts, hence 'where appropriate and practicable'. Mitigation measures are not solely decided on cost. The extent and scale of mitigation will be designed to control and reduce significant adverse environmental effects as well as reflect opportunities to promote positive environmental effects. Priority has been given to avoiding or preventing effects; and then (if this is not possible), to reducing or abating them; and then, if necessary, to offsetting them through restoration or compensation.

Sub-theme:

- 6.3.29 Consultees sought clarification that some impacts cannot be mitigated or compensated, such as the loss of ancient woodland and that this should be explicitly acknowledged.

Response:

- 6.3.30 It is recognised that some habitats, such as ancient woodland, are irreplaceable (paragraph 10.4.1 of the draft EIA SMR). Where such habitats are unavoidably affected, loss should be reduced as far as is reasonably practicable. Priority has been given to avoiding or preventing effects; and then (if this is not possible), to reducing or abating them; and then, if necessary, to offsetting them through restoration or compensation. In the event that any significant residual impacts remain, procedures for monitoring those significant effects will be developed, as appropriate, as part of the overall monitoring approach

Theme: Monitoring

Sub-theme:

- 6.3.31 Further detail was requested on how the environmental effects of the Proposed Scheme would be monitored to ensure that they remain as described in the EIA through the detailed design and implementation processes and that monitoring be given more prominence in the draft EIA SMR.

Response:

- 6.3.32 The revised EIA Regulations (2017)³ require authorities to determine procedures for the "monitoring of significant adverse effects on the environment". The requirement needs to be 'proportionate' and existing monitoring arrangements may be used if appropriate (e.g. planning conditions). This is covered in Section 1.7 of the draft EIA SMR. This will be achieved through a combination of the arrangements within the hybrid Bill for approving details of design and construction and policies, commitments

³ EIA Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (transposed into English legislation on 16 May 2017 as the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/571) (the EIA Regulations 2017)

and undertakings entered into, such as the suite of documents comprising the Environmental Minimum Requirements (EMRs).

Sub-theme:

- 6.3.33 It was also suggested that lessons learned from monitoring impacts from Phase One should be taken on board.

Response:

- 6.3.34 The revised EIA Regulations (2017) make provision for post-EIA monitoring of significant adverse effects on the environment in appropriate cases. HS2 Ltd will work with the relevant responsible authorities to develop the necessary monitoring in appropriate cases. Post EIA-monitoring will be undertaken in line with evolving legislation, guidance and best practice.

Sub-theme:

- 6.3.35 A number of comments were received regarding the EMRs, requesting clarification on the meaning of 'significantly exceed' and suggesting that the statement that levels will not be breached 'unless unforeseeable changes' arise could be perceived as potentially allowing impacts to be breached too easily in the future.

Response:

- 6.3.36 The EMRs, together with the controls in the hybrid Bill, will ensure that the impacts identified in the ES will not be exceeded. If there is a change to the design to that which is set out in the ES, that design change will be assessed. The assessment will be used to determine if the design change will result in new or different residual effects and, therefore, whether the change introduces a significant exceedance of the effect set out in the ES.

Theme: Clarifications

Sub-theme:

- 6.3.37 Consultees asked for clarification around terminology used in the draft EIA SMR, including the definition of 'temporary' in regard to construction impacts. Consistency was also requested on what comprises short, medium or long-term impacts across all environmental topics.

Response:

- 6.3.38 The ES will set out the proposed construction programme in order to establish the likely duration of works in each location. There is no general definition of short, medium or long-term impact terms in EIA practice and, as set out in paragraph 4.5.3 of the draft EIA SMR, it is recognised that the use of the terms would depend on the viewpoint of the user, especially where the user is subjected to the impact or effect. In general, and given the length of the construction programme, the EIA will consider those impacts that last a matter of months to be 'short-term' and those that continue through to the commencement of operations as 'long-term'.

7 Alternatives

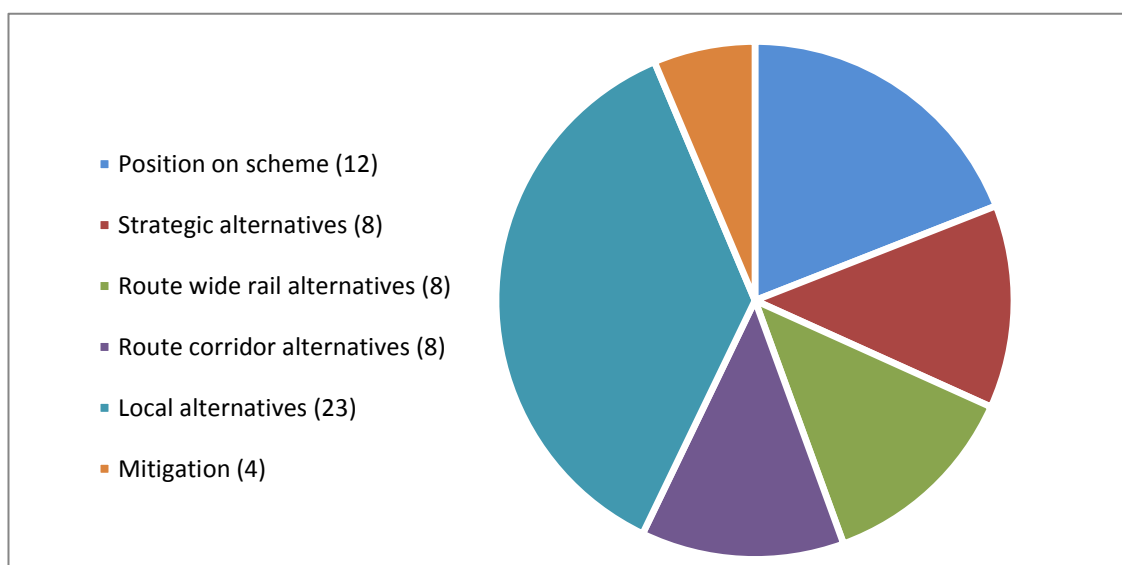
7.1 Introduction

7.1.1 This section summarises consultee comments made in relation to Section 5 (alternatives) of the draft EIA SMR.

7.2 Consultee comments

7.2.1 A total of 63 comments were made in relation to alternatives as summarised in Figure 6.

Figure 6 - Comments by type – alternatives



7.3 Consultee response themes

7.3.1 The main themes which have been identified from the comment types set out in Figure 6 include:

- the case for HS2 and strategic alternatives;
- reporting and terminology; and
- local alternatives.

Theme: The case for HS2 and strategic alternatives

Sub-theme:

7.3.2 Comments were received regarding strategic alternatives to HS2, for example suggesting other types of rail projects that could be pursued instead, such as alternative forms of railway, an east-west rather than north-south route, or pursuing electrification programmes.

Response:

- 7.3.3 An assessment of alternatives will be undertaken and reported in the ES using the hierarchy of alternatives, as set out in Section 5.4 of the draft EIA SMR.

Theme: Reporting and terminology

Sub-theme:

- 7.3.4 Consultees requested clear and transparent reporting of alternatives considered, based on evidence and with published criteria, scoring and metrics.

Response:

- 7.3.5 Section 5 of the draft EIA SMR explains the approach that will be taken to report the consideration of alternatives. The justification for selected alternatives is made taking into account considerations including engineering feasibility, environmental information and stakeholder engagement. The outcomes of the appraisal for local alternatives, with a clear justification of options taken forward, will be reported in the ES.

Sub-theme:

- 7.3.6 Clarification was sought on use of the terms 'relevant' and 'reasonable' alternatives.

Response:

- 7.3.7 The use and description of the term 'reasonable alternatives' within the alternatives section of the draft EIA SMR is as provided by the revised EIA Regulations (2017), i.e. "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." The types of reasonable alternatives to be considered specific to HS2 Phase 2b are also defined within the alternatives hierarchy in Section 5.4 of the draft EIA SMR.

Theme: Local alternatives

Sub-theme:

- 7.3.8 A number of local alternatives were proposed by consultees, including some requests that the route be altered in the context of particular local features or requests that specific alternative routes be considered. Consultees requested clarity on how stakeholders will be engaged in consideration of local alternatives.

Response:

- 7.3.9 The ES will provide an outline of reasonable alternatives studied during development of the Proposed Scheme and the reasons for the option chosen, taking into account the effects of the Proposed Scheme on the environment.

8 Agriculture, forestry and soils

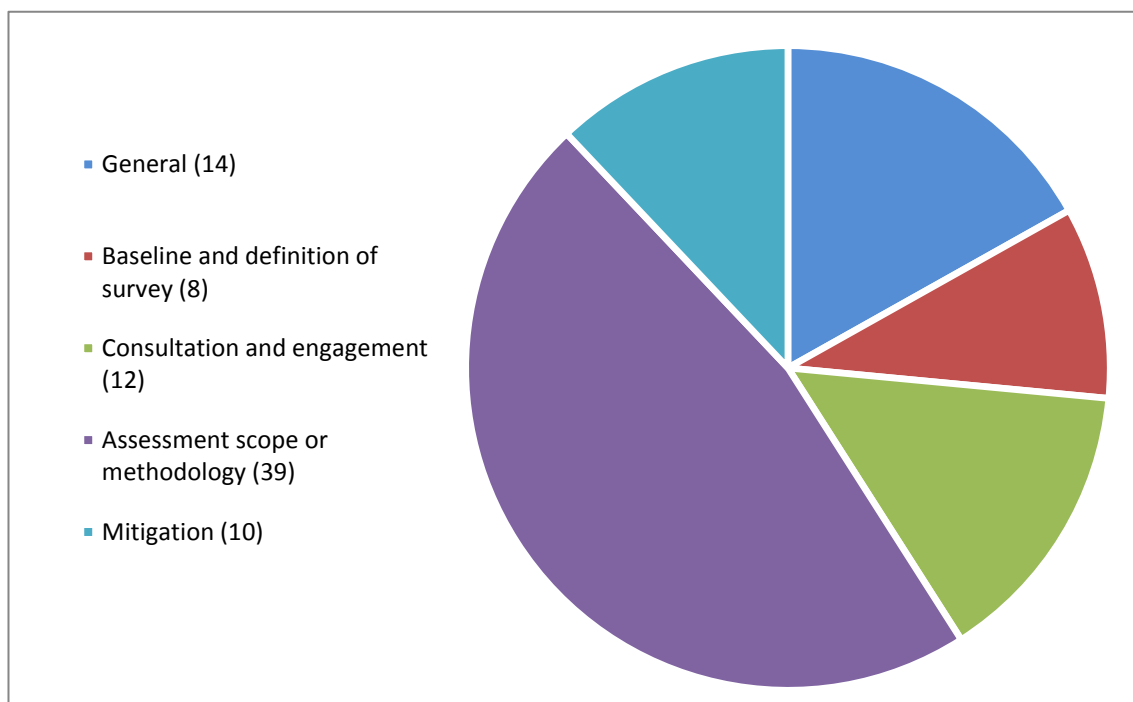
8.1 Introduction

8.1.1 This section sets out comments raised by consultees in their response to Section 6 (agriculture, forestry and soils) of the draft EIA SMR.

8.2 Consultee comments

8.2.1 A total of 83 comments were made in relation to the agriculture, forestry and soils topic as summarised in Figure 7.

Figure 7 - Comments by type – agriculture, forestry and soils



8.3 Consultee response themes

8.3.1 The main themes which have been identified from the comment types set out in Figure 7 include:

- overarching comments;
- effect on agricultural land;
- effect on rural businesses and agri-environmental schemes;
- mitigation of effects; and
- cumulative effects.

Theme: Overarching comments

Sub-theme:

- 8.3.2 The inclusion of agriculture, forestry and soils in the scope of the EIA was generally well-received and consultees were pleased that the assessment includes the effects of noise on livestock. In addition, the provision of farm packs was welcomed.

Response:

- 8.3.3 The overarching comments from stakeholders are noted and welcomed.

Theme: Effect on agricultural land

Sub-theme:

- 8.3.4 Consultees queried the approach by which agricultural land is valued both at a route-wide and local level. In circumstances where land is valued as low quality, consultees commented that this should not imply that lower quality land is omitted from both levels of assessment and the application of mitigation measures.

- 8.3.5 It was noted that the impact on all grades of agricultural land should be considered. Consultees feel that sensitivity should not be linked to the abundance of the best and most versatile land in the local area.

Response:

- 8.3.6 The route-wide assessment defines the total amount of all grades of agricultural land affected and the distribution of the land among the various grades of agricultural quality. Effects on land of best and most versatile agricultural quality are accorded greater weight in land use planning policy terms than on land of lesser quality, and therefore are reflected in the ES as inherently significant.
- 8.3.7 The EIA SMR text has been amended to add the following: "At the route-wide level, the proportion of each grade of agricultural land that would be required for the Proposed Scheme will be compared to national estimates of all grades of agricultural land as a measure of the significance of effect on the national resource of agricultural land".
- 8.3.8 At the local level, and under the 'Agricultural land' heading of the EIA SMR, it is explained that the community area assessments relate the amount of best and most versatile agricultural land required for the Proposed Scheme to the abundance or scarcity of best and most versatile land within a 4km corridor in each community area. This is rather than a threshold in hectares, which would immediately be passed on a development of this scale. This gives the opportunity to judge the significance of effect in terms of best and most versatile agricultural land along different parts of the route.
- 8.3.9 Also at the local level, and under 'Agricultural receptors', it is explained that the effects of the Proposed Scheme on all grades of land are assessed for each farm holding. This gives the opportunity to judge the significance of effect on the individual interests of land owners and occupiers.

- 8.3.10 This bespoke assessment methodology, at both the national and local levels, was successfully applied in Phase One and Phase 2a and is considered appropriate for a large linear project with limited locational flexibility.

Theme: Effect on rural businesses and agri-environment schemes

Sub-theme:

- 8.3.11 Consultees requested that the impacts on agricultural businesses as a whole be considered. It was noted that disruption can result in a number of impacts to businesses, for example as a result of impacts on yield or impacts on livestock. It was also noted that temporary loss of access to land required for construction of the Proposed Scheme can be significant for some businesses.

Response:

- 8.3.12 The assessment of effects in the ES is centred on impacts affecting the physical viability of farm holdings, ranging from land required for the Proposed Scheme, severance and disruption of farm infrastructure, as set out in Table 2 of the draft EIA SMR. This provides an objective basis for the identification of the significance of the effects, and of the measures needed to mitigate any adverse effects. Agricultural land owners and occupiers, and rural businesses, are a particular sub-set of the local communities considered in the draft EIA SMR chapter on socio-economics. Within the EIA, their interests are considered separately under agriculture, forestry and soils. The assessment of compensation available to land owners and occupiers is a separate exercise to the EIA, and addresses their particular economic circumstances.

Sub-theme:

- 8.3.13 Consultees suggested that consideration should be given to the extent that agri-environment schemes will be affected by the Proposed Scheme and how this will need to be dealt with.

Response:

- 8.3.14 The EIA will consider the presence of agricultural stewardship schemes within farm holdings but the administration of the schemes, termination of agreements, recovery of payments and resources required for this do not relate to the EIA. The loss of, or adverse effects on, habitats or landscape features created or enhanced as a consequence of agri-environment schemes will be included in the assessment made by the appropriate disciplines.

Theme: Mitigation of effects

Sub-theme:

- 8.3.15 Consultees welcomed the commitment to safeguarding the best and most versatile agricultural land and requested further efforts be made to restore soil to a better standard than is its current condition prior to its disturbance by the Proposed Scheme, especially for soil classed as having low value. In addition, it was noted that the future baseline of the assessment should take into account programmes which are already working towards improving agricultural land quality.

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- 8.3.16 Consultees sought further information on the proposed mitigation measures and expressed concern that land proposed for mitigation measures must be appropriate to the scale of land lost. It was stated that large areas of prime agricultural land should not be taken for habitat mitigation and compensation.

Response:

- 8.3.17 Where agricultural uses are to be resumed on land disturbed during the construction of the Proposed Scheme, the design objective is to avoid any reduction in long-term capability, which would downgrade the quality of the disturbed land, through the adoption of good practice techniques in handling, storing and reinstating soils on that land. Section 6 of the draft Code of Construction Practice (CoCP) sets out the measures that will be undertaken to restore temporarily disturbed agricultural land back to agricultural use. This will involve the stripping, storage and reinstatement of soils disturbed by the Proposed Scheme, largely with reference to the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (DEFRA 2009). The CoCP assumes a five-year aftercare period for land restored to agriculture. The CoCP will be supplemented by a HS2 Ltd information paper on soil handling.
- 8.3.18 HS2 Ltd aims to design a high speed railway that meets modern standards of design that will include earthworks, landscape planting and habitat creation, to reduce impacts on the environment and protect communities. In seeking to achieve no net loss to biodiversity through ecological habitat creation, this cannot necessarily be achieved through a 'like for like' approach whereby one hectare or lost habitat is replaced by one hectare of new habitat.

Theme: Cumulative effects

- 8.3.19 Consultees noted that the cumulative assessment for agricultural land and soils needs to consider other large-scale projects which are taking place nationally and locally (including other phases of HS2 and other major infrastructure projects).

Response:

- 8.3.20 As set out in Section 4.4 of the draft EIA SMR, cumulative effects across all environmental topics in the ES will be assessed in relation to Phase One and Phase 2a, together with other developments in the area which either are under construction, have planning permission or are subject to site allocation in a statutory development plan.

9 Air quality

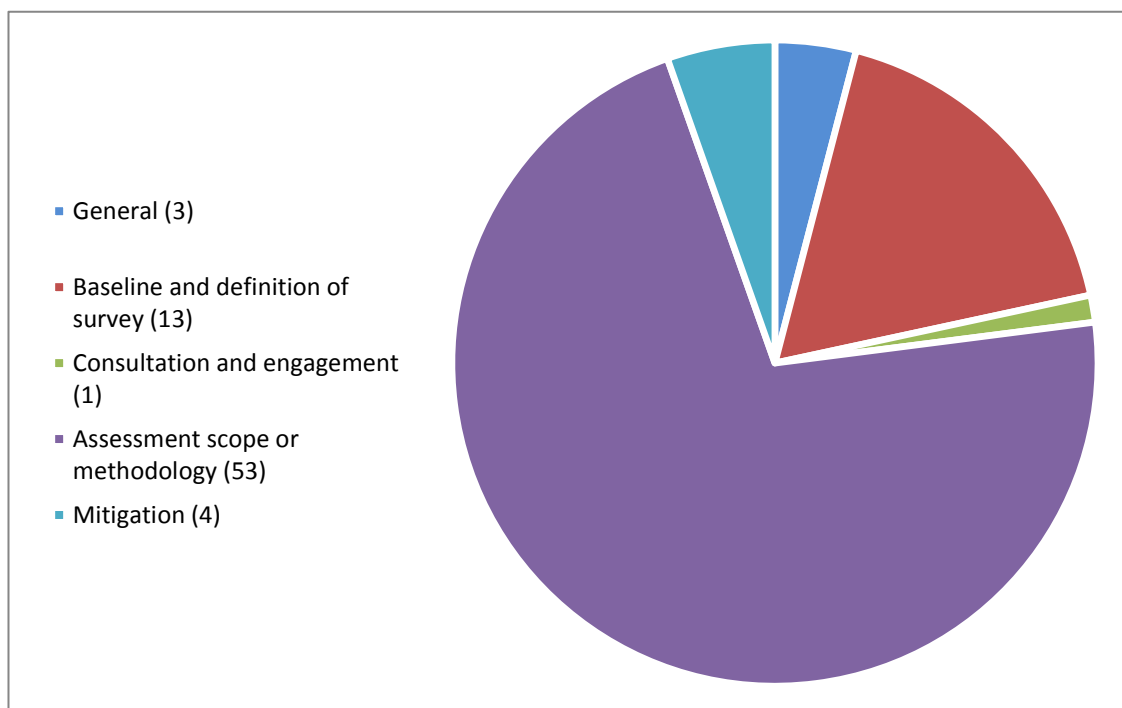
9.1 Introduction

9.1.1 This section sets out comments made by consultees in their response to Section 7 (air quality) of the draft EIA SMR, air quality.

9.2 Consultee comments

9.2.1 A total of 74 comments were made in relation to the air quality topic as summarised in Figure 8.

Figure 8 - Comments by type – air quality



9.3 Consultee response themes

9.3.1 The main themes which have been identified from comment types in Figure 8 include:

- overarching comments;
- criteria, legislation and guidance;
- baseline information;
- assessment scope and approach;
- air quality impacts to ecological receptors;
- Air Quality Management Areas (AQMA); and
- mitigation and monitoring.

Theme: Overarching comments

Sub-theme:

- 9.3.2 Consultees noted their agreement with aspects of the proposed approach to the air quality assessment and requested that ongoing dialogue be maintained with stakeholders as the assessment progresses.

Response:

- 9.3.3 Agreement on the approach is welcomed. Ongoing engagement with stakeholders is intended to take place, including local authority workshops.

Theme: Criteria, legislation and guidance

Sub-theme:

- 9.3.4 Consultees commented on the criteria, legislation and guidance proposed including identifying suggestions of additional guidance for consideration. Suggestions included that it would be more appropriate to use World Health Organisation criteria in relation to particulate matter and that the Institute of Air Quality Management (IAQM) criteria for screening changes to road traffic flows would be more suitable to follow than the Design Manual for Roads and Bridges (DMRB) criteria.

Response:

- 9.3.5 The assessment will be based on European and United Kingdom (UK) air quality standards. This is the standard approach used for air quality assessments of major schemes in the UK. The health assessment would examine the health impacts from exposure to air pollutants in more detail. The IAQM/Environmental Protection UK (EPUK) criteria for screening changes to road traffic flows will not be applied as previous HS2 assessments using the DMRB criteria have shown that very small impacts are predicted when the DMRB thresholds are breached and, consequently, the proposed approach will include any significant impacts.

Theme: Baseline information

Sub-theme:

- 9.3.6 Consultees provided specific information about potential receptors within their specific geographical area, or information on particular designations or plans and policies in their area. Some noted areas of concern, or offered to provide data in the future.

Response:

- 9.3.7 The suggestions made by consultees will be considered. Ongoing engagement with stakeholders will take place throughout the EIA process to identify any further data which should be considered as part of the EIA, as appropriate.

Theme: Assessment scope and approach

Sub-theme:

- 9.3.8 Consultees were generally pleased with the scope of air quality pollutants to be included, but some commented that odour and sulphur dioxide (SO₂) were not included.

Response:

- 9.3.9 No significant odour impacts are anticipated to arise from the Proposed Scheme and are not, therefore, considered in the criteria. Any indirect odour impacts that may arise, for example if moving contaminated site waste during construction of the scheme, this will be dealt accordingly as per the draft CoCP. SO₂ is not a significant pollutant from motor vehicles as sulphur levels are controlled in diesel fuel and it is therefore not considered in the criteria.

Sub-theme:

- 9.3.10 Consultees commented on the definition of what is included within 'worksites' and suggested this should include Heavy Goods Vehicle (HGV) movements to satellite compounds and dust and emissions from Non Road Mobile Machinery (NRMM) and other vehicles accessing sites. Comments also related to expectations that construction vehicles should meet minimum environmental criteria.

Response:

- 9.3.11 HGV movements would be included if they have significant traffic impacts or local dust impacts. NRMM are not in the scope of the assessment as NRMM emissions are likely to be very small and HS2 is committed to using low emission NRMM, as detailed in the Phase 2a Information Paper E14⁴.

Sub-theme:

- 9.3.12 Consultees commented on the approach to traffic modelling, including requesting clarity on the use and definition of 'peak years'. The temporal scope of key factors such as the strategic road network was also highlighted as requiring consideration.

Response:

- 9.3.13 Peak year traffic data are selected across the construction period but these are all assumed to take place in the first year of construction as this is when vehicle emissions will be at their highest. This is a 'worst-case scenario' as emissions from individual vehicles will reduce as new emission controls affect the fleet.
- 9.3.14 The assessment addresses impacts from road traffic emissions during construction and operation of the Proposed Scheme. In the long-term, traffic changes should have less impact on air quality given that emissions are expected to reduce in the future.

⁴ HS2 Limited (2017), *Phase 2a Information Paper E14: Air quality*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/628460/E14_Air_Quality_v1.0.pdf

Sub-theme:

- 9.3.15 Consultees were generally pleased that dust was considered in the assessment methodology, but provided further comment on the detail of how this assessment should be carried out so as to capture local level impacts appropriately. Consultees also suggested that historic buildings be considered as a sensitive receptor to dust and that tunnelling should be explicitly acknowledged as a source of dust impacts.

Response:

- 9.3.16 If there are unusual features at any site, this would be considered in the assessment but the overall approach outlined in the draft EIA SMR is not affected. The draft EIA SMR does not go into the detail of all those receptors that will be considered sensitive to dust. Sensitive receptors to dust will be identified and detailed as the EIA assessment is undertaken. A draft CoCP will be produced as part of the ES which will include measures to mitigate dust impacts at sensitive receptors close to construction works.

Theme: Air quality impacts to ecological receptors

Sub-theme:

- 9.3.17 A number of respondents advised on the approach that should be taken in this assessment of air quality impacts to ecological receptors, including suggesting a broadening of the scope of ecological receptors that are considered with respect to nitrogen deposition to local, as well as statutory, designated sites.

Response:

- 9.3.18 Following discussion with Natural England, the EIA SMR has been amended to align the assessment with the agreed approach for Phase 2a. The relevant wording of the EIA SMR has been changed to: "Assessment of nitrogen deposition will be required for ecologically sensitive sites within 200m of roads meeting the DMRB screening criteria. The assessment will follow the methodology set out in the DMRB guidance. Ecological resources and other ecological issues are described in Section 10 (Ecology and biodiversity) of this SMR".
- 9.3.19 An assessment of nitrogen deposition would be conducted for ecological sites with a statutory designation. For local designations, an assessment would be undertaken if there was reasonable concern about air quality impacts on the site.

Theme: Air Quality Management Areas (AQMA)

Sub-theme:

- 9.3.20 Comments were made that AQMA that could be affected by the Proposed Scheme will change over time, and that the assessment methodology, and ongoing engagement, should allow for identification of additional AQMA that may be designated as the assessment progresses.

Response:

- 9.3.21 AQMA will be identified and engagement undertaken in relation to these. Air quality assessments will be undertaken in all locations where the traffic change thresholds are exceeded, whether these locations are in AQMA or not.

Theme: Mitigation and monitoring

Sub-theme:

- 9.3.22 Consultees commented upon mitigation proposals, with suggestions for specific mitigation and the need for monitoring around local areas.

Response:

- 9.3.23 The assessment will identify necessary mitigation, and stakeholder mitigation proposals will be reviewed and incorporated, where appropriate. Details of mitigation, including those at the local level, will be discussed in the ES. Paragraph 7.2.3 of the draft EIA SMR acknowledges the need for monitoring to be conducted where appropriate.

10 Climate change

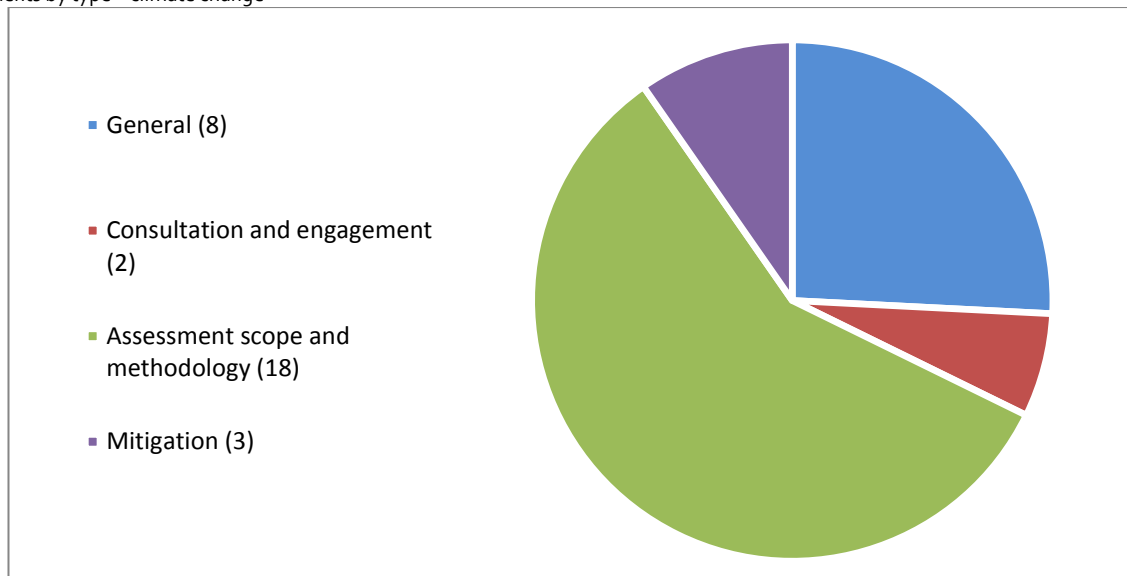
10.1 Introduction

10.1.1 This section sets out comments made by consultees in their response to Section 8 (climate change) of the draft EIA SMR.

10.2 Consultee comments

10.2.1 A total of 31 comments were made in relation to the climate change topic as summarised in Figure 9.

Figure 9 - Comments by type – climate change



10.3 Consultee response themes

10.3.1 The main themes which have been identified from comment types set out in Figure 9 include:

- baseline data and expertise;
- scope of the climate change assessments; and
- assessing significance in the GHG assessment.

Theme: Baseline data and expertise

Sub-theme:

10.3.2 Several consultees provided offers of data or expertise and highlighted the availability of local plans and strategies that could be drawn on for the climate change assessments.

Response:

10.3.3 Relevant supplementary information identified in stakeholder comments will be reviewed and used to inform the climate change assessments where appropriate.

Sub-theme:

- 10.3.4 Consultees provided clarity on how some of their specific guidance should be used for the climate change resilience and in-combination climate change impact assessments, and requested this be clarified in the draft EIA SMR. Consultees also highlighted additional sources of guidance or policy they believe should be considered, for example in relation to consideration of biodiversity and the effects of climate change. Clarification was sought over the use of the Environment Agency's Accounting for residual uncertainty guidance.

Response:

- 10.3.5 The England Biodiversity Strategy published by Defra has already been referenced within the climate change chapter of the draft EIA SMR. HS2 Ltd is seeking to achieve no net loss of biodiversity for the Proposed Scheme and the combined impact of climate change and the Proposed Scheme on the ecological environment will be considered during the in-combination climate change impacts assessment.
- 10.3.6 The EIA SMR text has been amended to reflect the fact that climate change uncertainty is not considered in the accounting for residual uncertainty freeboard guidance.

Sub-theme:

- 10.3.7 Consultees requested clarification on the environmental baseline for the Greenhouse Gas (GHG) assessment.

Response:

- 10.3.8 The existing and future environmental baseline for the GHG assessment for the Proposed Scheme is based on a 'without the Proposed Scheme' scenario. The GHG assessment therefore considers the full extent of GHG emissions arising from the construction and operation of the Proposed Scheme.

Theme: Scope of the climate change assessments

Sub-theme:

- 10.3.9 Consultees requested that carbon emissions from journeys to access the Proposed Scheme be included in the GHG assessment.

Response:

- 10.3.10 Table 12 of the draft EIA SMR notes that 'electricity and fuel use for surface access journeys to the Proposed Scheme' are included in the scope of the GHG assessment.

Sub-theme:

- 10.3.11 Consultees commented on the scope of the in-combination climate change impacts and climate change resilience assessments, including that the scope should consider resilience to climate driven changes in the surface and underground hydraulic regime in respect of discussing route choice and the 120-year lifetime design of the Proposed Scheme.

Response:

- 10.3.12 The mechanism for the consideration of resilience to climate driven changes that this comment refers to is already incorporated in the methodology for the climate change resilience and in-combination climate change impact assessments. The level of detail in the draft EIA SMR does not allow the inclusion of such location-specific considerations. During the in-combination climate change impact assessment, discussions will be held with the water resources and flood risk topic team to identify potential climate change impacts to key resources and receptors. This recommendation is noted, and this will be addressed during the EIA.

Sub-theme:

- 10.3.13 Consultees suggested using the phrase 'cumulative' rather than 'in-combination' to be in line with terminology used in other topics.

Response:

- 10.3.14 The use of 'in-combination' throughout the climate change topic is distinct from uses of the terms 'combined effects' and 'cumulative effects' used elsewhere in the draft EIA SMR.

Sub-theme:

- 10.3.15 It was requested that the climate change resilience and in-combination climate change impact assessments be clear on what mitigation has been assumed as part of the assessments.

Response:

- 10.3.16 The methodology for the in-combination climate change impact assessment incorporates consideration of existing mitigation measures for all topics, and if necessary, additional mitigation measures are identified to address adverse effects on the ability of resources and receptors to adapt to climate change. Similarly, the methodology for the climate change resilience assessment ensures any necessary additional resilience measures would be identified and incorporated in the design of the Proposed Scheme.

Theme: Assessing significance in the GHG assessment

Sub-theme:

- 10.3.17 Consultees suggested that any increase in greenhouse gas emissions should be deemed significant.

Response:

- 10.3.18 As stated in paragraph 8.4.3 of the draft EIA SMR the assessment methodology will be in accordance with 'IEMA's Guide to assessing GHG Emissions and Evaluating their Significance in EIA'.

11 Community

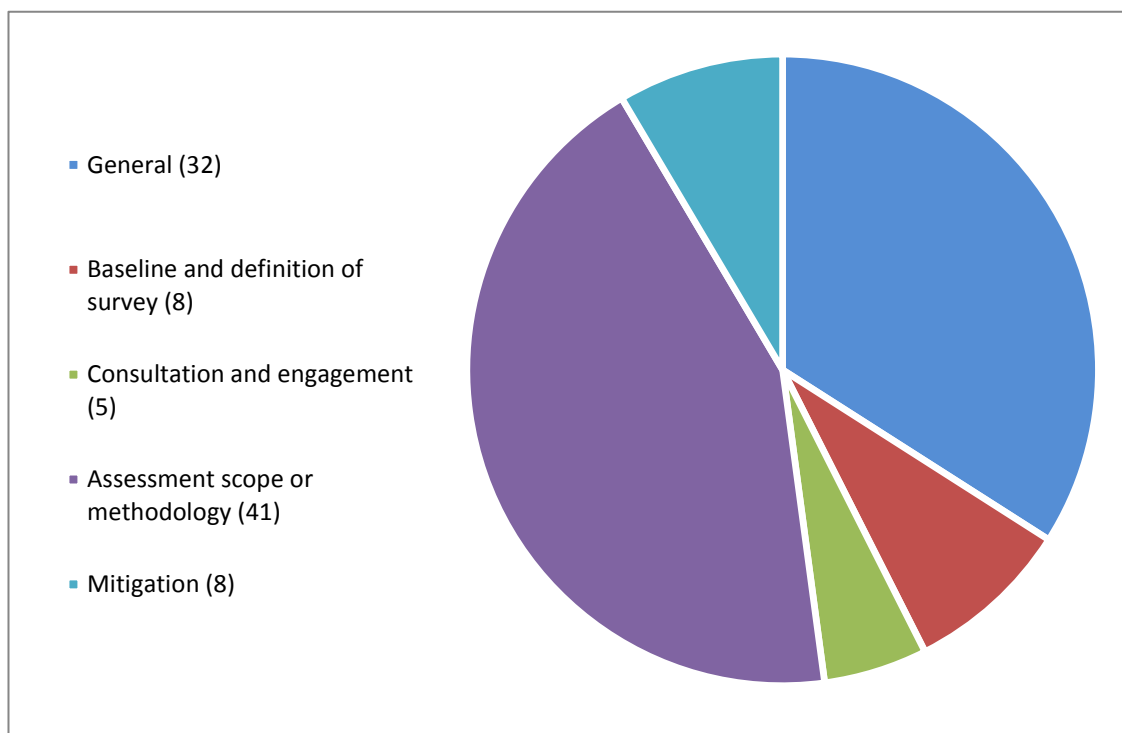
11.1 Introduction

11.1.1 This section sets out comments made by consultees in their response to Section 9 (community) of the draft EIA SMR.

11.2 Consultee comments

11.2.1 A total of 94 comments were made in relation to the community topic as summarised in Figure 10.

Figure 10 - Comments by type – community



11.3 Consultee response themes

11.3.1 The main themes which have been identified from the comment types set out in Figure 10 include:

- scope of the assessment;
- community severance and isolation;
- community and stakeholder engagement; and
- community concerns and recommendations.

Theme: Scope of the assessment

Sub-theme:

- 11.3.2 A number of consultees made suggestions in relation to the assessment of impacts on Public Rights of Way (PRoW) and suggested that the word 'recreational' should be removed from the description of PRoW in the community assessment section.

Response:

- 11.3.3 The community assessment considers effects on promoted PRoW only. These are all recreational in nature. Effects on all other PRoW are assessed through the Transport Assessment.

Sub-theme:

- 11.3.4 Consultees suggested that access to the natural environment should be more explicitly included within the scope of resources and receptors affected, making use of the Accessible Natural Greenspace Standard (ANGSt). Consultees requested to see a clearer link between communities and access to nature.

Response:

- 11.3.5 Access to the natural environment is assessed within the community chapter in relation to PRoW and publicly accessible open space. The assessment considers a worst case scenario in terms of impacts on the natural environment, i.e. any loss of publically available open space or impact on access to publically available open space is assessed. Therefore, it is not considered necessary to apply standards such as ANGSt to the impact assessment.

Sub-theme:

- 11.3.6 Consultees suggested that 'residents' should include residents of boats and tourism related boaters, and that 'residential property' should include residential moorings.

Response:

- 11.3.7 The community assessment has, in Phase One and Phase 2a, included these receptors within the assessment and the same approach will be taken for Phase 2b. Residential moorings will be considered as residential receptors and tourism related moorings will be considered as recreational facilities. The definitions of these receptor types were provided in Section 9.1 of the draft EIA SMR.

Sub-theme:

- 11.3.8 A suggestion was also made that the list of 'resources' to be considered in the baseline is expanded to contain public houses, shops, bus stops, post boxes, noticeboards and technology elements such as broadband access.

Response:

- 11.3.9 Public houses and shops are included within the scope of the community assessment as town or local centre uses. Any isolation effect resulting from impacts on bus stops

would be considered as part of the assessment. It is assumed that post boxes and noticeboards would be relocated as required and that any effect to broadband services would be immediately addressed and are not in scope.

Sub-theme:

- 11.3.10 A comment was also made that the temporal scope of the assessment should be longer than the first year after operation.

Response:

- 11.3.11 The temporal scope set out in the draft EIA SMR is consistent with the approach taken for previous phases of HS2, and is considered appropriate for the assessment.

Theme: Community severance and isolation

Sub-theme:

- 11.3.12 Consultees were concerned about effects of community severance and isolation, and requested clarity on the significance criteria used to assess severance and delay.

Response:

- 11.3.13 The detailed methodology for assessing community severance and isolation effects is set out within the Technical Note: Community assessment approach. Where relevant, Technical Notes will be issued as part of the formal ES.

Sub-theme:

- 11.3.14 A number of individuals responded to the consultation and expressed their concerns around how their lives will be affected and their communities altered, including facilities and associated ways of life. It was questioned how any loss of amenity for these communities will be measured.

Response:

- 11.3.15 Engagement will continue to identify impacts to individuals and households, and mitigation where appropriate. Concerns raised about particular community features will be considered as the EIA is undertaken and reported in the formal ES. As explained in paragraph 9.4.1 of the draft EIA SMR, the community assessment will consider, and report in the formal ES, any in-combination effects on amenity value as a result of environmental factors including noise and vibration, HGV traffic, air quality, and visual impacts. All relevant information received will be taken into account in the assessment.

Theme: Community and stakeholder engagement

Sub-theme:

- 11.3.16 Consultees suggested data which could be used to inform the community impact assessment, and requested that HS2 Ltd considers surveys and studies that some communities are undertaking themselves to inform the assessment.

Response:

- 11.3.17 All relevant available data will be taken into account for the EIA through the stakeholder engagement process.

Theme: Community concerns and recommendations

Sub-theme:

- 11.3.18 Consultees commented that the proposed methodology gives inadequate weight to communities' own perception of impact on their affected infrastructure. It was also suggested that too little consideration is being given to community infrastructure overall in comparison to impacts on employment or residential facilities.
- 11.3.19 Consultees also commented that HS2 Ltd should consider the provision of community benefits and contributing to community facilities, as well as consideration of opportunities that can be taken to enhance green infrastructure networks.

Response:

- 11.3.20 Engagement with relevant organisations and communities will continue to take place to enable an understanding of the potential effects. The assessment gives equal weighting to effects on community infrastructure and effects on residential facilities. It will include the assessment of effects on community infrastructure and organisations including education, health, emergency services, places of worship, sports and recreational facilities, publicly accessible open spaces, and recreational PRow.
- 11.3.21 HS2 Ltd operated a Community Fund during Phase One and will look to replicate this for Phase 2a and Phase 2b.

Sub-theme:

- 11.3.22 It was noted that properties may become unsaleable and that appropriate mitigation has not been proposed for this.

Response:

- 11.3.23 Effects on residential property will be considered as part of the assessment (see Section 9.5 of the draft EIA SMR). This includes loss of housing stock or associated land (for example gardens) as well as in-combination effects on residential amenity, as a result of the Proposed Scheme.

12 Ecology and biodiversity

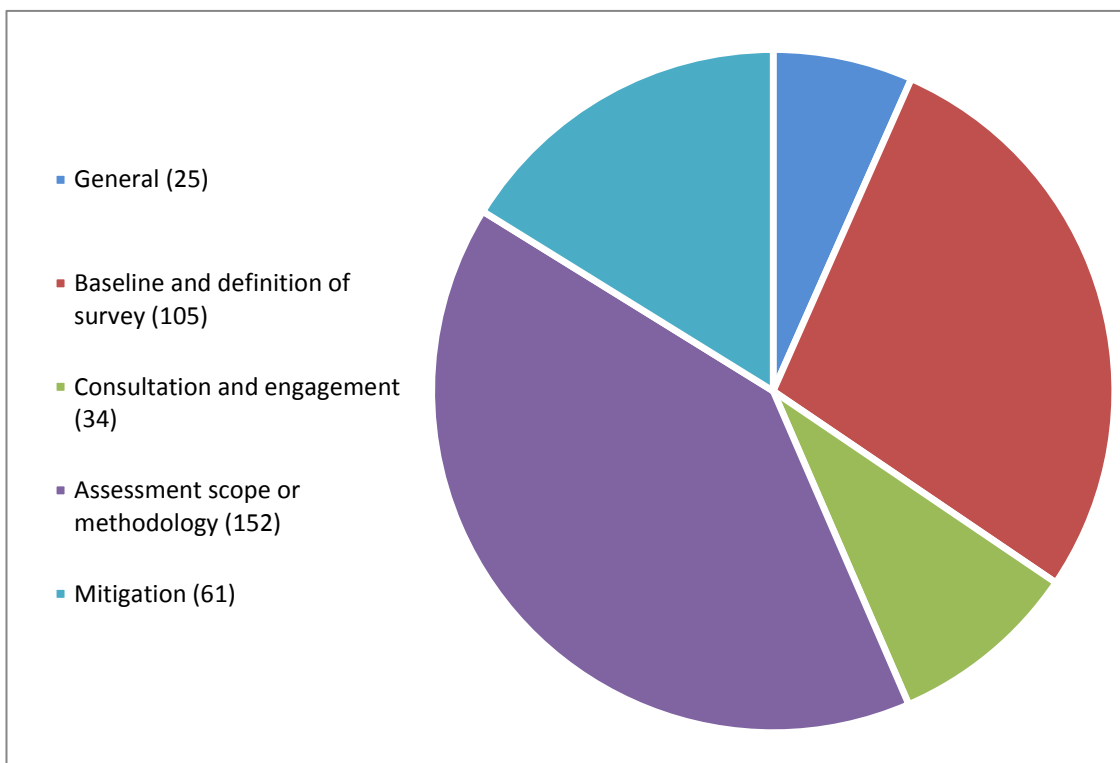
12.1 Introduction

12.1.1 This section sets out comments made by consultees in their response to section 10 (ecology) of the draft EIA SMR, and identifies any changes that will be made in response to these comments. In the EIA SMR, the title of this topic has been revised to 'ecology and biodiversity'. This title is used in this CSR and the EIA SMR.

12.2 Consultee comments

12.2.1 A total of 377 comments were made in relation to ecology and biodiversity as shown in Figure 11.

Figure 11 - Comments by type – ecology and biodiversity



12.3 Consultee response themes

12.3.1 The main themes which have been identified from the comment types set out in Figure 11 include:

- overarching comments;
- scope of the assessment;
- baseline data;
- survey scope and scheduling;
- assessment approach;

- mitigation;
- monitoring; and
- Technical Notes.

Theme: Overarching comments

Sub-theme:

- 12.3.2 A number of comments were received agreeing or welcoming aspects of the methodology including the use of the precautionary principle and the approach to strategic and local level mitigation.

Response:

- 12.3.3 These are noted and agreement on the approach is welcomed.

Sub-theme:

- 12.3.4 Consultees commented that links could be clarified between the ecology and biodiversity section and other topic sections, for example making the link between communities and access to nature. A number of comments were received suggesting that there should be strong links between the ecology and biodiversity section, the water resources and flood risk section and the separate Water Framework Directive (WFD) assessment.

Response:

- 12.3.5 Other sections of the EIA will consider the effects on access and the implications for flooding and the WFD. The assessment will take into account the relationship between ecology and biodiversity and water resources and flood risk.

Theme: Scope of the assessment

Sub-theme:

- 12.3.6 Consultees suggested that the temporal scope of the EIA should account for the length of time required for habitat creation areas to establish.

Response:

- 12.3.7 An additional sentence has been added to the EIA SMR to say that "The assessment will include the period of time required for the establishment of created habitats".

Sub-theme:

- 12.3.8 Suggestions were made on specific details that were considered relevant to include within the scope of the assessment. Clarification was also sought that any references to the 'route' also include any associated infrastructure.

- 12.3.9 Comment was received that the section on the spatial scope of the assessment is too narrow and not clear in certain places. A comment was also received on paragraph 4.2.8 of the draft EIA SMR which states that transboundary effects will not be considered further.

Response:

- 12.3.10 It is not considered appropriate to list in the SMR all the various ways that effects can be produced. The term 'route' does include all associated infrastructure. All works identified in the hybrid Bill will be considered in the EIA.
- 12.3.11 Although it is unlikely that transboundary effects will occur, if there are any such likely effects they would be considered. The EIA SMR has therefore been amended to reflect that "transboundary effects will not be considered further unless individual environmental topic areas identify any such significant effects".

Sub-theme:

- 12.3.12 Consultees noted that the England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. Consultees suggested that the draft EIA SMR should reflect these principles and identify how the route's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained.

Response:

- 12.3.13 This report and guidance has been referenced within the climate change section of the draft EIA SMR. The Government and HS2 Ltd are seeking to achieve no net loss of biodiversity for the Proposed Scheme, and the combined impact of climate change and the Proposed Scheme on the ecological environment will be considered during the in-combination impacts assessment.

Sub-theme:

- 12.3.14 Consultees noted that the assessment of nitrogen deposition which is proposed to apply where there are significant changes in traffic flows within 200m of ecologically sensitive sites only relates to statutory designated sites, following the DMRB guidance. It was suggested that the assessment should be expanded to include local wildlife sites and irreplaceable/sensitive sites such as ancient woodlands and peatland sites.

Response:

- 12.3.15 Given the scale of potential sites which would be involved, this expanded assessment is not considered feasible to assess. The assessment will therefore focus on traffic flows within 200m of ecologically sensitive statutorily designated sites, following the DMRB guidance.

Sub-theme:

- 12.3.16 It was suggested that the statement that mortality of wildlife could result from collision with passing trains should be extended to cover impacts from turbulence and changes in air pressure.

Response:

- 12.3.17 The reference to collision here should be taken to include all mortality resulting from passing trains. The EIA SMR has been changed to reflect this.

Theme: Baseline data

Sub-theme:

- 12.3.18 Consultees commented on the importance of carrying out baseline surveys in time to allow the findings to influence route selection and design features. Some consultees suggested that the ecology and biodiversity section lacks information to suggest that the mitigation hierarchy has been implemented i.e. to avoid damage by design rather than relying on mitigation and compensation.

Response:

- 12.3.19 Section 4 of the draft EIA SMR explains how the baseline data will be used to inform the design of the Proposed Scheme as it progresses through the EIA process. The effects on ecological receptors were considered during the route selection process through an AoS as described in paragraph 1.6.6 of the draft EIA SMR and in more detail in Section 5. The Proposed Scheme was developed through a route selection process that included consideration of a wide range of environmental constraints as set out in the AoS report. Further opportunities to avoid or reduce the environmental effects will be considered during the EIA process prior to submission of the hybrid Bill for the Proposed Scheme.

Theme: Survey scope and scheduling

Sub-theme:

- 12.3.20 Some clarifications on general aspects of the survey methodology were requested by consultees. A number of consultees suggested that the methodology should include predictive or connectivity modelling in addition to desk studies, fieldwork and consultation. Broader comments were also received requesting more detail on survey methodologies more generally or about the timeframe over which surveys will be undertaken.

Response:

- 12.3.21 It is not considered necessary to undertake connectivity or predictive modelling in order to develop the appropriate habitat creation measures. Connectivity will be assessed using professional judgement based on the physical location of existing habitats and the observed and likely movements of key species. The HS2 Phase 2b Technical Note: Ecological field survey methods and standards will be made available to statutory consultees through the EIA process. Where relevant, Technical Notes will be issued as part of the formal ES.

Sub-theme:

- 12.3.22 Some clarifications on aspects of the methodology related to specific species or receptors were requested by consultees. For example some comments related to

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survey methodologies for great crested newts (GCN), UK Biodiversity Action Plan Priority species and habitats such as the hedgehog, and for the survey of individual trees and hedgerows.

Response:

- 12.3.23 The HS2 Phase 2b Technical Note: Ecological field survey methods and standards will be made available to statutory consultees through the EIA process. Where relevant, Technical Notes will be issued as part of the formal ES.
- 12.3.24 The Technical Note: Ecological field survey methods and standards will confirm that traditional methods for assessing GCN population size classes will be used where appropriate.
- 12.3.25 Tree and hedgerow features will be identified during Phase 1 survey and further survey for protected species that may be using these features will be undertaken where appropriate to inform the EIA.
- 12.3.26 Paragraph 10.2.2 of the draft EIA SMR explains that existing records of protected, priority or otherwise notable species occurring in the vicinity of the route of the Proposed Scheme will be obtained. This will help inform the requirement for specialist surveys. Phase 1 habitat survey will also be undertaken to help understand which further surveys will be required. As set out in section 10.2.7 of the draft EIA SMR, this may include, for example, surveys of terrestrial or aquatic invertebrates where appropriate. However, it is not practical to survey for all Natural Environment and Rural Communities (NERC) Act Section 41 species in all locations, and selection of the appropriate surveys will be determined from the potential for significant effects to occur for example depending on the results of the initial walk-over surveys and existing baseline information.

Theme: Assessment approach

Sub-theme:

- 12.3.27 Comments were received that local wildlife sites and land meeting the criteria for designation should be reported as being of high value and that it is important that locally designated sites are considered.

Response:

- 12.3.28 All relevant local wildlife sites will be taken into consideration during the EIA as confirmed in paragraphs 10.2.2 and 10.5.5 of the draft EIA SMR. The approach to identifying the significance of ecological receptors is set out in the EIA SMR, which has been amended. Significance is related to geographical frames of reference and the term 'high value' is not used in this context. The ecological assessment will be informed by the baseline datasets developed as set out in the draft EIA SMR.

Sub-theme:

- 12.3.29 Consultees requested that more detail is included in the draft EIA SMR about issues relating to requirements for Habitats Regulations Assessments (HRA), and more detail

about various protected sites and areas, such as sites of special scientific interest (SSSI) and special areas of conservation (SAC).

Response:

- 12.3.30 Several Natura 2000 sites will be affected by the HS2 route and Habitat Regulations screening were developed for all of them at the AoS stage. These will be updated as the design progresses through the EIA stage. Further details about SSSI and other designated sites will be provided in the ES.

Sub-theme:

- 12.3.31 Consultees suggested that it was inappropriate for the draft EIA SMR to state that adverse effects 'could' arise from direct land take, and that this 'may' result in loss or degradation of ecological corridors and networks. It was suggested that since such effects are bound to occur, the wording should change to reflect this.

Response:

- 12.3.32 The purpose of this text in the draft EIA SMR is to identify likely effects that need to be considered in the assessment. It would be inappropriate for the SMR to prejudge the EIA, and the purpose here is simply to highlight major issues that must be considered.

Theme: Mitigation

Sub-theme:

- 12.3.33 Consultees requested more clarity around the mitigation hierarchy. Consultees requested more clarity around how impacts have been avoided for example during route selection, and will be avoided, whether impacts will be assessed with or without consideration to mitigation options, and overall more clarity on how mitigation measures will reduce the impact and what the residual effect will be.

Response:

- 12.3.34 HS2 Ltd is committed to the appropriate use of the mitigation hierarchy. Paragraph 4.3.1 of the draft EIA SMR confirms that the ES will identify the measures taken to avoid, reduce, repair or offset significant effects. The EIA will clearly identify avoidance measures and any residual effects. The route selection process took account of environmental constraints as set out in the AoS. This considered the full range of environmental topics, and took account of high level designations including SSSI and ancient woodlands. Relevant stakeholders will be consulted appropriately during development of the EIA and the formal ES will clearly identify avoidance measures and any residual effects.

Sub-theme:

- 12.3.35 Consultees welcomed the commitment to enhancement of habitats and provision of compensation noted in the draft EIA SMR. Consultees welcomed the reference to landscape scale initiatives such as green infrastructure strategies and living landscape initiatives, and a number of consultees offered information and willingness to be

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involved in designing such initiatives. A request was received for more information on how compensation schemes will actually be delivered, with a suggestion that it is a good opportunity to develop long lasting relationships with delivery partners. A number of consultees requested that they be consulted during development of the mitigation measures.

Response:

- 12.3.36 HS2 Ltd confirms that a strategic approach to development of mitigation will be adopted during the EIA process, taking a landscape scale approach. The development of ecological mitigation will consider the effects on landowners and their views will be taken into account insofar as they are compatible with the provision of habitat creation measures necessary to mitigate significant ecological effects. HS2 Ltd will discuss potential opportunities for strategic habitat creation with relevant consultees.

Sub-theme:

- 12.3.37 Consultees commented on their expectations for treatment of the concept of 'no net loss' to biodiversity, highlighting the importance of compensation and enhancement measures in addition to mitigation. It was also suggested that HS2 Ltd should seek to achieve net gain, rather than no net loss and that the wording should be made more committal, avoiding phrases such as 'where possible' or 'wherever appropriate and practicable'.
- 12.3.38 Consultees expressed concern that the outputs from the 'no net loss' calculations (part of the biodiversity offsetting) would not form part of the EIA.

Response:

- 12.3.39 HS2 Ltd's commitments to no net loss of biodiversity were fully considered by Parliament in response to this point during the approval of the Phase One scheme. The objective of seeking to achieve no net loss to biodiversity was confirmed during this process and remains the objective for Phase 2b. The caveats in wording are required as it is not always possible to fully mitigate or offset an effect, for example where ancient woodland is unavoidably lost.

Sub-theme:

- 12.3.40 Consultees provided comments relating to irreplaceable habitats such as ancient woodlands, wood pasture, traditional grassland, historic parkland and ancient and veteran trees. This included comments about the methodology to identify and avoid ancient woodlands prior to finalisation of the route. Comments also related to how information on ancient woodlands will be provided in the final EIA documentation and a request that the project's Ancient Woodlands Strategy be published. A request was also made that the SMR makes it clearer that ancient woodlands are not included in the 'no net loss' calculations, which refer to replaceable habitats only.

Response:

- 12.3.41 It is recognised that there are other irreplaceable habitats. The draft EIA SMR gives an example of such a habitat but it is not appropriate for this document to provide a full

list of such habitats that may occur. Irreplaceable habitats will not be included in the no net loss biodiversity calculation. This has been clarified in the EIA SMR.

Compensatory measures will be developed on the basis of professional judgement, based on the extent and quality of the habitats to be lost.

Sub-theme:

- 12.3.42 Comments were received about the need to balance the use of agricultural land for ecological mitigation; concern was raised about the extent and scale of mitigation that may be proposed, for example if tree planting for habitat mitigation potentially exceeds the area of trees lost. There was a suggestion that habitat mitigation should be like for like and that areas of prime agricultural land should not be used for habitat creation and improvement which exceeds the area of habitat lost.

Response:

- 12.3.43 During the development of ecological mitigation, the effects on agricultural land will be considered and such effects will be reduced where this is compatible with the provision of the habitat creation necessary to mitigate the significant ecological effects that have been identified. However, HS2 Ltd's objective of seeking to achieve no net loss to biodiversity cannot be achieved through a 'like for like' approach whereby one hectare or lost habitat is replaced by one hectare of new habitat. The ecological reasons for this are widely accepted. HS2 Ltd's approach to habitat creation as part of its biodiversity objective for Phase One was scrutinised in Parliament, taking account of representations from both nature conservation bodies and landowners prior to the proposals being approved. The process that is proposed for Phase 2b follows the same approach. The location and extent of proposed habitats will be discussed with landowners prior to finalising the mitigation measures as part of the consultation process set out in paragraphs 6.2.13 and 6.2.14 of the draft EIA SMR.

Theme: Monitoring

Sub-theme:

- 12.3.44 Consultees felt that more details should be provided about the monitoring that would be carried out to show how effective mitigation measures were.

Response:

- 12.3.45 Monitoring proposals will be developed as the project develops. An Ecological Monitoring Strategy will be prepared after the EIA has identified all the significant effects and the mitigations requirements are known.

Theme: Technical Notes

Sub-theme:

- 12.3.46 It was commented that the Technical Notes mentioned in the draft EIA SMR have not been made available for consultation or were not easy to locate, so consultees feel that they have not been able to fully comment on the proposed mitigation.

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Response:

12.3.47 Where relevant, Technical Notes will be issued as part of the formal ES.

13 Electromagnetic interference

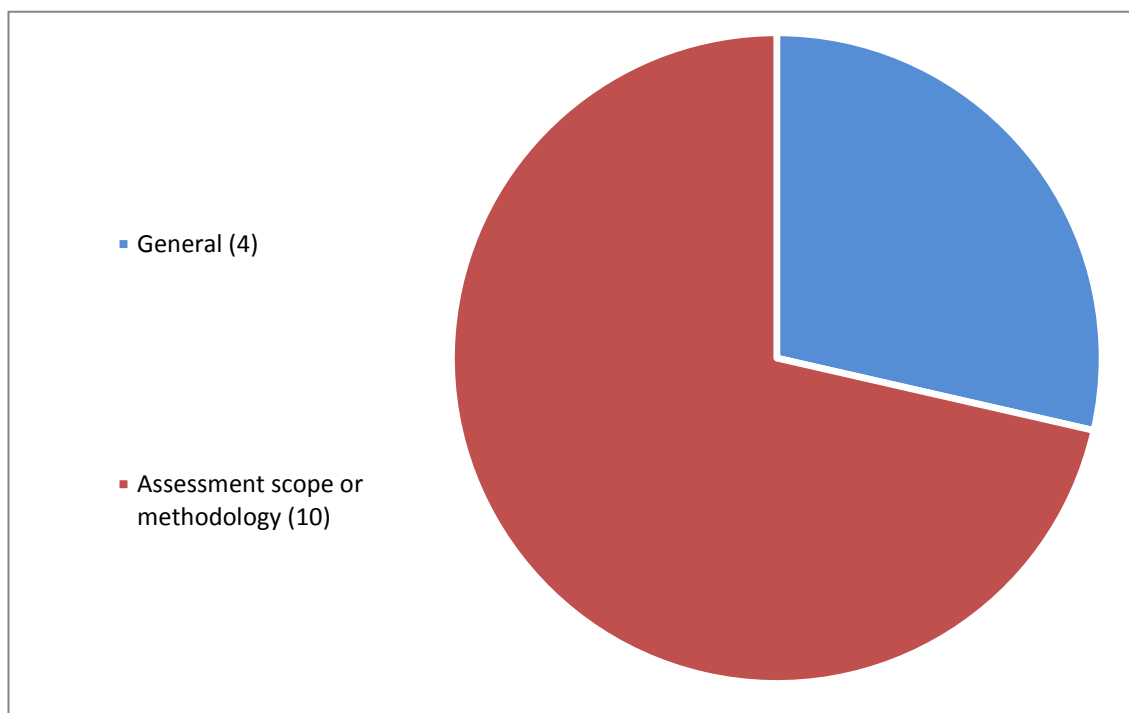
13.1 Introduction

13.1.1 This section sets out comments made by consultees in their response to section 11 (electromagnetic interference (EMI)) of the draft EIA SMR.

13.2 Consultee comments

13.2.1 A total of 14 comments were made in relation to the electromagnetic interference topic as shown in Figure 12.

Figure 12 - Comments by type – electromagnetic interference



13.3 Consultee response themes

13.3.1 The main themes which have been identified from consultee responses in relation to this technical topic include:

- potential health and equipment impacts; and
- data sources.

Theme: Potential health and equipment impacts

Sub-theme:

13.3.2 It was requested that the assessment consider the potential health impacts arising from electromagnetic interference.

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Response:

- 13.3.3 The Proposed Scheme will be assessed and designed to comply with published standards and guidelines^{5, 6} applicable to the protection of health and electrical interference to equipment. The standards were listed in the draft EIA SMR and are kept under review as the assessment and design progresses to ensure the latest information is considered.

Sub-theme:

- 13.3.4 In relation to section 11 of the draft EIA SMR, direct EMF health effects should be distinguished clearly from indirect effects such as pacemaker interference related to electromagnetic compatibility issues, and from other effects that may arise from electromagnetic disturbance of electrical and electronic equipment more generally.

Response:

- 13.3.5 The EMI assessment will address the direct and indirect effects of EMF.
- 13.3.6 If equipment does not meet the Electromagnetic Compatibility (EMC) immunity performance specified in applicable harmonised standards, then there could be residual effects on equipment. The design of all railway equipment and systems will be required to meet the EMC standards for direct and indirect EMF effects to both the public and workforce.
- 13.3.7 In relation to active medical implants including pacemakers the regulator, Medicines and Healthcare Products Regulatory Agency, does not consider EMF generated from power lines a significant risk to the operation of pacemakers⁷.

Sub-theme:

- 13.3.8 Consultees commented that the scope of the assessment should include the blocking and degrading of mobile telephony and microwave antenna signals by structures related to the Proposed Scheme.

Response:

- 13.3.9 Paragraph 12.1 of the draft EIA SMR explains that EMI is an issue that can normally be mitigated through the application of EMC industry accepted practice during railway design and installation. The detailed design of the Proposed Scheme will seek to address any identified impacts on radio-frequency emissions across all relevant frequency bands.

⁵ BS EN 50121 series of standards, Railway Applications, Electromagnetic Compatibility, which contains the following parts : BS EN 50121-1:2017 Part 1: General; BS EN 50121-2:2017 Part 2: Emissions of the whole railway system to the outside world; BS EN 50121-3-1:2017 Part 3-1: Rolling stock - train and complete vehicle; BS EN 50121-3-2:2015 Part 3-2: Rolling stock – apparatus; BS EN 50121-4:2016 Part 4: Emissions and immunity of the signalling and telecommunications apparatus; BS EN 50121-5:2017 Part 5: Emissions and immunity of fixed power supply installations and apparatus; and ICNIRP (International Commission on non -Ionizing Radiation Protection) Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (1Hz to 100kHz): 2010, required for the protection of human health and protection of electrical equipment.

⁶ International Commission on non-Ionizing Radiation Protection guidance (2016), Guidance on the Application of the Control of Electromagnetic Fields at Work Regulations

⁷ Department of Energy and Climate Change (DECC) (2011), *National Policy Statement for Electricity Networks Infrastructure (EN-5)*, London: The Stationery Office

Theme: Data sources

Sub-theme:

- 13.3.10 Consultees provided data sources, codes of practice, suggested exposure limits and other guidance relevant that they suggest should be utilised in such an assessment.

Response:

- 13.3.11 The data sources and guidance provided relate to relevant standards that will be considered in the scope of the EIA assessment, as described in paragraph 11.5 of the draft EIA SMR.

Sub-theme:

- 13.3.12 Consultees suggested the SAGE⁸ publication on high voltage power lines be considered as guidance to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF-EMF). The consultee has recommended Department of Energy and Climate Change (DECC) Codes of Practice applicable to the electricity industry on optimum phasing, indirect effects and demonstrating compliance with public exposure guidelines set out in the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields.

Response:

- 13.3.13 The railway traction overhead line equipment system and associated traction power supply of 25kV for the Proposed Scheme will be designed to be located within the land required for the Proposed Scheme and as such the Proposed Scheme will not have infrastructure crossing residential and public areas.
- 13.3.14 The connections from utility providers to the equipment of the Proposed Scheme will comply with the DECC Codes of Practice; however, this is the responsibility of National Grid and/or the Distribution Network Operators (DNO). Once the National Grid/DNO locations have been determined during the design phase it will be the DNO suppliers' responsibility to undertake their own assessment to demonstrate compliance with the DECC Codes of Practice. The overhead line system and associated traction power supply of 25kV for the Proposed Scheme will be designed to be located within the land required for the Proposed Scheme and will comply with the BS EN 50121 and 50122 series of standards relevant to railway systems and meet the ICNIRP 2010 Guidelines. Any diversion designs (to be produced by National Grid or the DNO supplier) of grid/distribution high voltage lines required to facilitate construction of the Proposed Scheme will also need to comply with the DECC Codes of Practice.

⁸ Stakeholder Advisory Group on extremely low frequency electric and magnetic fields (ELF-EMF) (SAGE)

14 Health

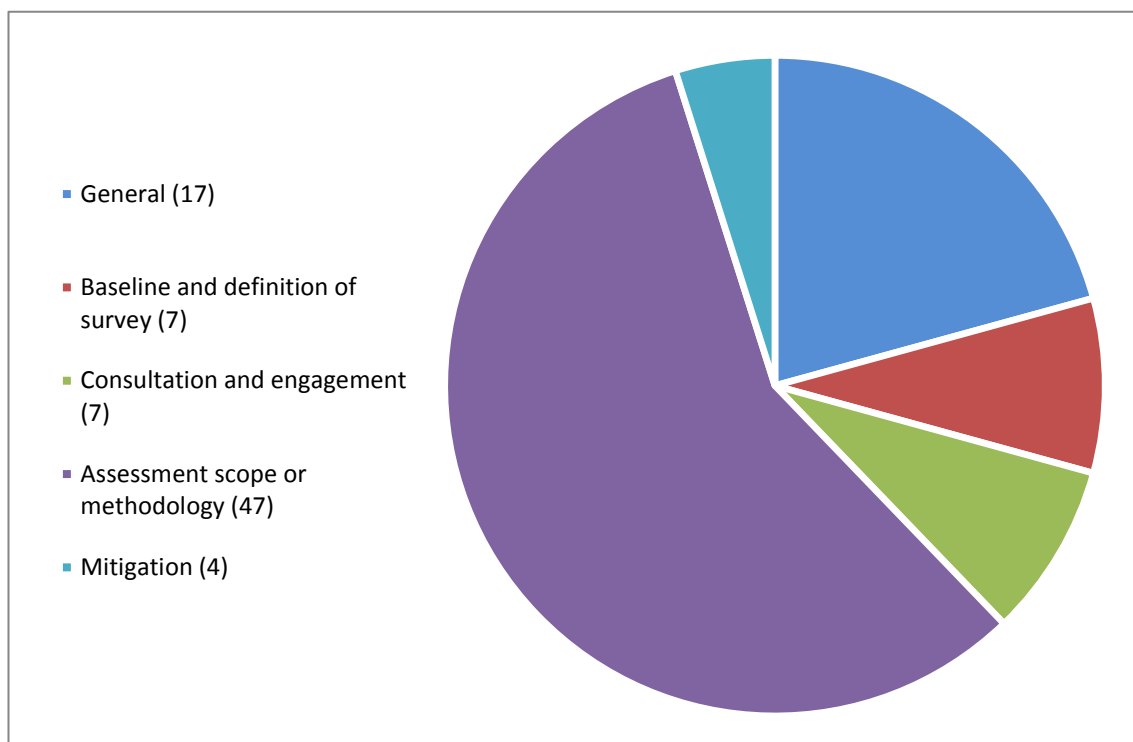
14.1 Introduction

14.1.1 This section sets out comments raised by consultees in their response to Section 12 (health) of the draft EIA SMR.

14.2 Consultee comments

14.2.1 A total of 82 comments were made in relation to the health topic as summarised in Figure 13.

Figure 13 - Comments by type – health



14.3 Consultee response themes

14.3.1 The main themes which have been identified from the comment types set out in Figure 13 include:

- separate Health Impact Assessment (HIA);
- qualitative assessment;
- consideration of vulnerable groups;
- assessment of stress and anxiety;
- traffic related impacts;
- impacts to the emergency services; and
- green space.

Theme: Separate Health Impact Assessment

Sub-theme:

- 14.3.2 Consultees suggested that it would be more appropriate to conduct a separate HIA. A number of reasons were suggested for this, such as the large scale and importance of the Proposed Scheme, the level of detail needed and the requirement for competent experts to undertake the assessment.

Response:

- 14.3.3 Health effects will be assessed within the formal ES, as required under the revised EIA Regulations (2017). The assessment will be consistent with the approach used for the Phase One HIA and Phase 2a Health assessment. It will consider the impacts of the wider environmental, social and economic determinants of community health and wellbeing.

Sub-theme:

- 14.3.4 Consultees requested more information on the role of 'professional judgement' in conducting a HIA and suggested that the health assessment should be carried out by appropriate and competent people, independent of HS2 Ltd or its contractors.

Response:

- 14.3.5 The health assessment will be undertaken by experienced and competent practitioners contracted by HS2 Ltd to conduct an independent and unbiased assessment. The report will describe the information, evidence and assumptions on which the professional judgements are based. The health assessment team will engage with Public Health England and the local authority public health departments and the assessment conclusions will be subject to scrutiny through the hybrid Bill process.

Theme: Qualitative assessment

Sub-theme:

- 14.3.6 Consultees pointed out that, due to the largely qualitative nature of the health assessment, whatever the results are, they will be interpreted as controversial. Consultees also queried the suitability of applying a qualitative assessment methodology, pointing out that this is likely to give rise to more challenges in the long-term and that it is difficult to understand how, for example, impacts to people's enjoyment of the countryside will be assessed.

Sub-theme:

- 14.3.7 This issue is common to any health assessment, since the extent of scientific evidence relating to health effects varies between health determinants. The assessment will clearly state the evidence and assumptions on which qualitative conclusions are based.

Theme: Consideration of vulnerable groups

Sub-theme:

- 14.3.8 Consultees mentioned potential impacts to the health of vulnerable people. These included impacts on children, who may be dissuaded from playing outdoors, undermining attempts to reduce childhood obesity. Other consultees provided baseline information on school children with special needs, older people and communities with high levels of social deprivation.

Response:

- 14.3.9 The health assessment will include a health and demographic profile of the communities along the route of the Proposed Scheme. Any specific impacts on vulnerable groups within the population will be identified. The EQIA will also focus on specific impacts on protected characteristics as defined in the Equality Act 2010.

Theme: Assessment of stress and anxiety

Sub-theme:

- 14.3.10 Consultees agreed with the importance of considering stress and anxiety as part of the health assessment, and pointed out that this can be related to financial worries as well as related to other aspects of the Proposed Scheme during construction and operation. Consultees asked whether stress levels will be monitored and also highlighted that perceived risk is an important part of the health assessment connected to mental health.

Response:

- 14.3.11 HS2 Ltd recognises the effects that perceived impacts can have on mental health and wellbeing, and this will be addressed in the health assessment. The health assessment team will engage with local authority public health teams to discuss, among other things, the scope and approach to the assessment, local health issues and priorities, vulnerable groups, local stakeholder organisations and local health data sources. The draft EIA SMR has been updated.

Sub-theme:

- 14.3.12 Consultees raised the importance of considering mental illness specifically and how this can be exacerbated by noise and vibration, particularly for vulnerable people.

Response:

- 14.3.13 The route-wide assessment in Volume 3 of the formal ES will quantify health effects of noise including sleep deprivation and annoyance, which relate to mental and physical health. The potential for vulnerable people to be disproportionately affected will be discussed, although it is not possible to quantify this effect. In Volume 2 of the formal ES, the neighbourhood quality sections of each community area report will consider the impacts of noise, in combination with other changes to the physical environment, on mental and physical wellbeing.

Theme: Traffic related impacts

Sub-theme:

- 14.3.14 Consultees acknowledged that ensuring vehicles adhere to regulatory standards will help to avoid impacts, but raised the importance of having mechanisms in place to respond to complaints about traffic related pollution during construction.

Response:

- 14.3.15 The EIA process will identify the environmental and health effects during construction and operation of the Proposed Scheme. The effects of decommissioning will not be assessed. The formal ES and draft CoCP will describe the proposed mechanisms for responding to complaints during construction.

Theme: Impacts to the emergency services

Sub-theme:

- 14.3.16 It was requested that the draft EIA SMR include reference to emergency vehicle access and the assessment include potential impacts on emergency response time. The importance of engagement with the emergency services was also highlighted.

Response:

- 14.3.17 The EIA will identify changes to access and journey times for all users, which includes all emergency vehicles. HS2 Ltd is committed to engaging with the emergency services throughout the development of the Proposed Scheme and this dialogue is ongoing. The draft CoCP sets out the approach to construction which will be adhered to through the construction period.

Theme: Green space

Sub-theme:

- 14.3.18 The acknowledgement that green spaces influence health and wellbeing was welcomed and consultees requested that the assessment seek opportunities for new provision of green infrastructure.

Response:

- 14.3.19 The health assessment will assess the potential impacts on the determinants of health, including access to green space and contact with nature. Where there is a requirement for new green infrastructure or public open space to be considered in relation to mitigating the effects of the Proposed Scheme, this will be undertaken.

15 Historic environment

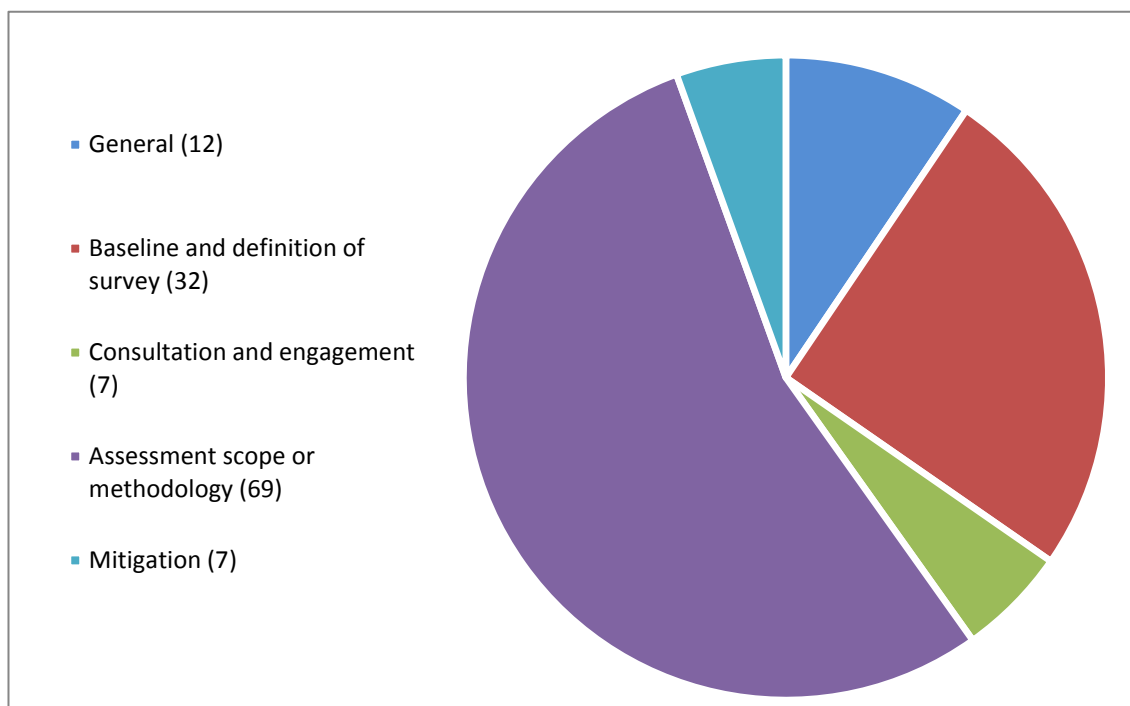
15.1 Introduction

15.1.1 This section sets out comments made by consultees in their response to Section 13 (historic environment) of the draft EIA SMR.

15.2 Consultee comments

15.2.1 A total of 127 comments were made in relation to the historic environment topic as summarised in Figure 14.

Figure 14 - Comments by type – historic environment



15.3 Consultee response themes

15.3.1 The main themes which have been identified from the comment types set out in Figure 14 include:

- overarching comments;
- undertaking of surveys;
- scope of the assessment;
- assessment criteria;
- assessment approach to indirect impacts;
- assessment of impacts to setting and asset viability; and
- mitigation.

Theme: Overarching comments

Sub-theme:

- 15.3.2 A number of consultees noted they were happy with the approach and that comments made on previous phases had informed the approach taken for Phase 2b.

Response:

- 15.3.3 This is noted and acceptance of the proposed approach is welcomed.

Theme: Undertaking of surveys

Sub-theme:

- 15.3.4 Consultees noted that the proposed approach to data gathering would benefit from further fieldwork, proposing that without fieldwork, the assessment may not be able to adequately identify all non-designated heritage assets of archaeological interest.

Response:

- 15.3.5 As with Phase One and Phase 2a where land is made available surveys will be undertaken where required. HS2 Ltd notes there will be limitations to their ability to undertake field surveys where there are access restrictions. HS2 Ltd is providing a robust desk-based assessment and will undertake more detailed field assessments before and during construction.

Theme: Scope of the assessment

Sub-theme:

- 15.3.6 It was questioned whether the spatial scope of the study area should be extended, in particular with regard to identification of non-designated heritage assets.

Response:

- 15.3.7 The spatial scope was developed in consultation with stakeholders and refined on the basis of HS2 Phase One and Phase 2a. HS2 Ltd considers it unlikely that any significant effects would occur beyond the specified areas of search and is content with the areas of search as proposed and as accepted by Historic England and other stakeholders.

Theme: Assessment criteria

Sub-theme:

- 15.3.8 Comments were received on the criteria for value/significance provided in Table 19 of the draft EIA SMR. Comments included a query around the value ascribed to listed buildings and conservation areas and whether the tabulated approach would capture instances where groups of historic buildings need to be considered as a whole.

Response:

- 15.3.9 The comments about the value ascribed to Grade II listed buildings and conservation areas are noted and Table 19 and its context have been revised in the EIA SMR. The assessment methodology accounts for the capture of asset groups.

Theme: Assessment approach to indirect impacts

Sub-theme:

- 15.3.10 Clarifications were sought in regard to potential differences between the Phase 2b draft EIA SMR and the Phase One and Phase 2a EIA SMRs regarding indirect impacts.

Response:

- 15.3.11 Consultee opinions have been taken into account regarding the assessment of indirect impacts and this is reflected in the EIA SMR.

Theme: Assessment of impacts to setting and asset viability

Sub-theme

- 15.3.12 Consultees raised comments relating to the methodology for the assessment of impacts to setting. Comments included that too much reliance is being placed on inter-visibility in the definition of setting impacts, as impacts could extend beyond the Zone of Theoretical Visibility (ZTV) and that the study areas may be too small to fully understand all aspects of the historic landscape.

Response:

- 15.3.13 The assessment methodology proposed in the draft EIA SMR makes it clear that the assessment will not just use the ZTV and that best practice will also be applied.

Sub-theme:

- 15.3.14 Comments related to assessing potential impacts on the viability of heritage assets. Consultees noted that it is important that the assessment is fully integrated and links the historic environment assessment to other topics.

Response:

- 15.3.15 The EIA process will involve inter-discipline liaison to identify any associated indirect effects, including the viability of heritage assets.

Theme: Mitigation

Sub-theme:

- 15.3.16 Comments related to the treatment of heritage assets that will require demolition including whether any can be relocated, or how the materials from any assets that require demolition can be reused sensitively in new infrastructure.

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Response:

- 15.3.17 HS2 Ltd is undertaking a detailed assessment of the historic environment baseline conditions, including any heritage assets which may potentially require demolition. Mitigation proposals will be developed as part of the delivery of the Phase 2b Historic Environment Research and Delivery Strategy (HERDS).

16 Land quality

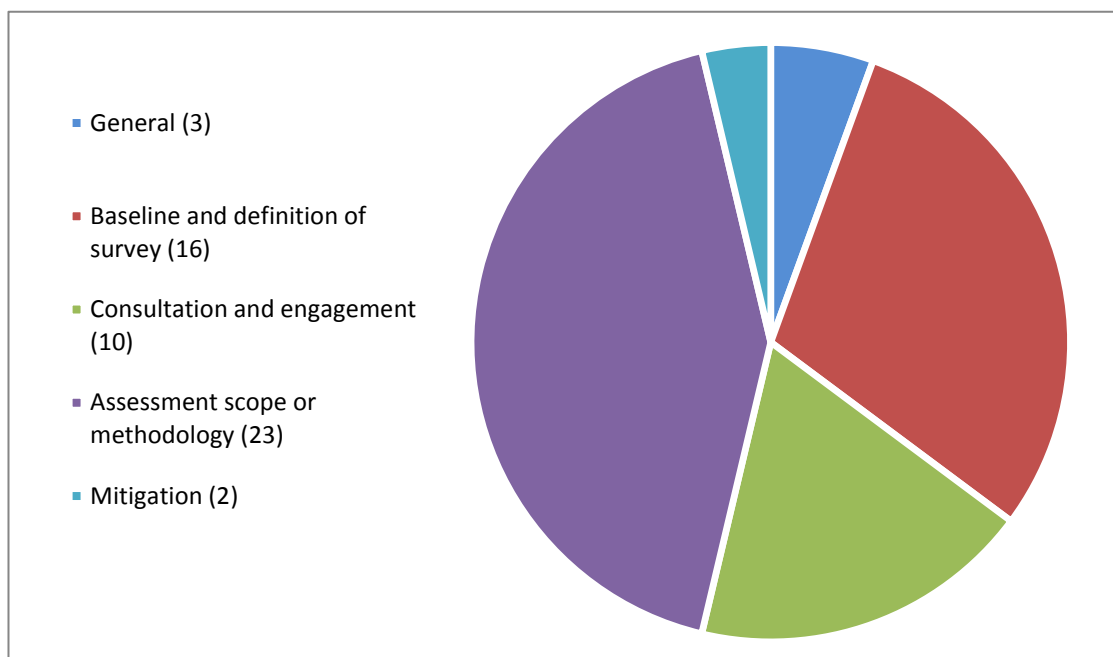
16.1 Introduction

16.1.1 This section sets out comments made by consultees in their response to section 14 (land quality) of the draft EIA SMR.

16.2 Consultee comments

16.2.1 A total of 54 comments were made in relation to the land quality topic as summarised in Figure 15.

Figure 15 - Comments by type – land quality



16.3 Consultee response themes

16.3.1 The main themes which have been identified from consultee responses in relation to this technical topic include:

- provision of local data and willingness to engage;
- coal mining (including legacy) and salt deposit issues;
- areas of significant scientific and cultural material;
- interface with agricultural issues; and
- public health.

Theme: Provision of local data and willingness to engage

Sub-theme:

16.3.2 Consultees commented that they agreed with the overall methodology, provided local level information and signposted where additional data could be sourced.

Comments indicated a willingness and desire to engage in the assessment as it develops.

Response:

- 16.3.3 The offer of local data and knowledge is welcomed by the assessment team. Engagement will be undertaken with stakeholders and the feedback used to inform the evolving assessment.

Theme: Coal mining (including legacy) and salt deposit issues

Sub-theme:

- 16.3.4 Consultees commented that along the Proposed Scheme there may be areas of land that have a special geological significance such as existing or proposed shallow, deep and opencast coal mining and salt caverns/brine washing areas. Where the route passes through such areas, it could encounter a range of mining legacy issues which will need to be investigated and (where appropriate) remediated to create a safe and stable development.

Response:

- 16.3.5 The project recognises that the Coal Measures geology and Triassic salt deposits present both a threat and an opportunity, in terms of managing the physical and chemical hazards arising from former and current workings, and valuing and optimising existing deposits as a resource.

Sub-theme:

- 16.3.6 Consultees commented on specific coal mining legacy issues including risks associated with mine gas, acid mine drainage, contamination in spoil heaps, combustion and other related matters. Similarly, comments were received which cover salt caverns and former brine extraction and processing areas, and the risks of contaminant migration from either the salt or the substances stored in the salt caverns.

Response:

- 16.3.7 Mine gas, acid mine drainage, contamination in spoil heaps and other coal infrastructure areas and combustion potential will be considered as part of the land quality assessment. Chemical risks associated with the salt deposits and the current storage uses of the salt caverns will also be assessed as explained in a number of Technical Notes⁹.

⁹ HS2 Phase 2b Crewe to Manchester and West Midlands to Leeds: Technical Note – Land quality - Introduction to land quality; HS2 Phase 2b Crewe to Manchester and West Midlands to Leeds: Technical Note - Land Quality - Detailed methodology for contaminated land assessment; HS2 Phase 2b Crewe to Manchester and West Midlands to Leeds: Technical Note – Land Quality – Mining, mineral and geological resources; HS2 Phase 2b Manchester to Crewe and West Midlands to Leeds: Technical Note – Land quality – Operational effects.

Sub-theme:

- 16.3.8 Further comments were made in relation to ensuring that coal and salt as resources are protected, particularly where present at shallow depth.

Response:

- 16.3.9 The EIA will consider the shallow coal and salt deposits as resources alongside other potential mineral resources such as sand and gravel and shale gas. Protection of the resource and avoidance of sterilisation will be assessed alongside ensuring that the Proposed Scheme can be constructed on or through a stable geological setting.

Sub-theme:

- 16.3.10 Comments were received regarding engineering, geotechnics and design. Consultees commented that the route, in places, is located within the defined Development High Risk Area (DHRA) which contains specific coal mining legacy risks, past coal mining activities and the presence of surface coal resources. Furthermore, the route also passes through areas of known salt extraction activities, with resulting caverns used for a variety of purposes. Settlement and instability are consequently key topics.

Response:

- 16.3.11 The land quality assessment will focus on interaction around historical and current chemicals and waste storage in salt caverns, and will not deal with settlement and instability. Physical risks associated with settlement and ground instability will be dealt with by the engineering and geotechnical teams. This is likely to take the form of appropriate risk assessments, together with the identification of any necessary mitigation measures.

Theme: Areas of significant scientific and cultural material

Sub-theme:

- 16.3.12 Consultees commented on the need to respond effectively to situations where significant scientific and cultural material may be in danger of being lost during the construction process, for example, a fossilised forest floor or horizons particularly rich in fossil plant or insect remains.

Response:

- 16.3.13 HS2 Ltd will consider the potential for access to the construction site by specialists during excavation works to record exposures of geological interest.

Theme: Interface with agricultural issues

Sub-theme:

- 16.3.14 Consultees questioned whether consideration has been made of clostridial diseases that may be present in excavated soils, which could then impact on farm practices. It was also noted that this would be pertinent for all soil borne diseases in arable and pasture.

Response:

- 16.3.15 The land quality study does consider localised pathogen sources such as Anthrax burial pits and Foot and Mouth burials/pyre sites. More common soil organisms such as Tetanus, E.coli and Streptococci are not considered under this study scope. The condition of agricultural land returned for the same use after temporary use in construction is relevant for consideration within the agriculture, forestry and soils section.

Theme: Public health

Sub-theme:

- 16.3.16 Consultees requested that public health impacts associated with ground and groundwater contamination and/or the migration of material off-site are assessed and the potential impact on nearby receptors and control and mitigation measures is outlined. Consultees also flagged the absence of consideration of drinking water supply via private wells.

Response:

- 16.3.17 This is a part of process and risk assessment which is built into the EIA methodology for land quality. Where drinking water is sourced from private wells, the assessment will consider this contaminant linkage as part of the risk assessment.

17 Landscape and visual

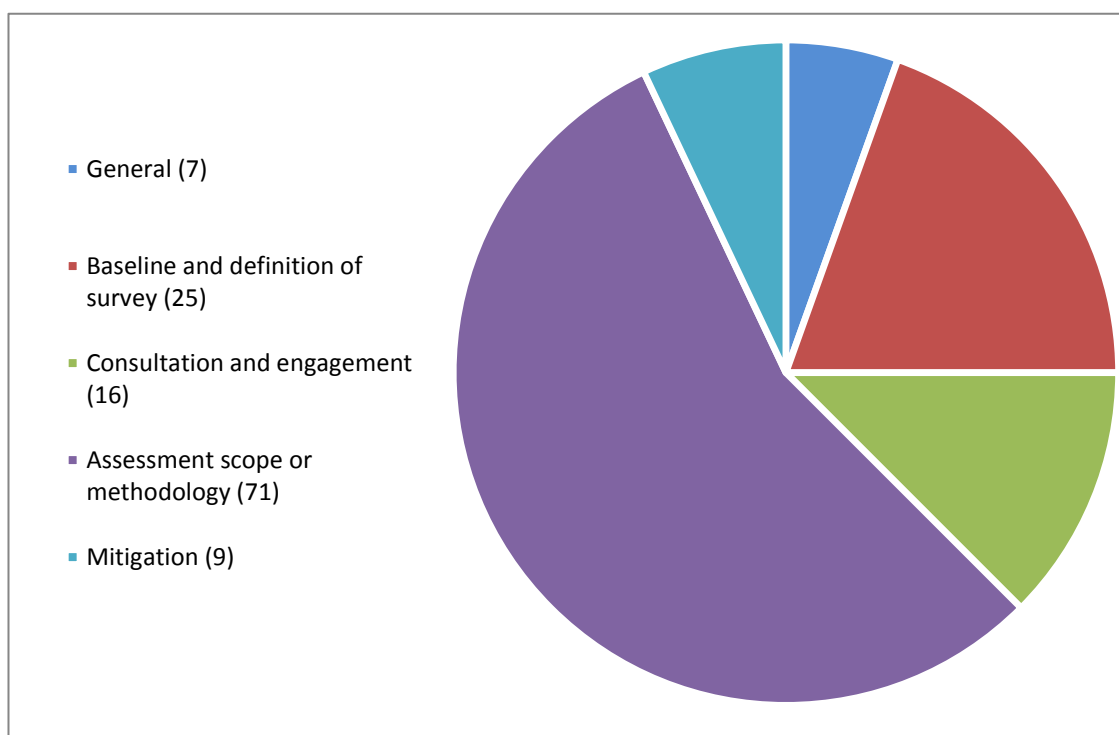
17.1 Introduction

17.1.1 This section sets out comments made by consultees in their response to Section 15 (landscape and visual) of the draft EIA SMR.

17.2 Consultee comments

17.2.1 A total of 128 comments were made in relation to the landscape and visual topic as summarised in Figure 16.

Figure 16 - Comments by type – landscape and visual



17.3 Consultee response themes

17.3.1 The main themes which have been identified from the comment types set out in Figure 16 include:

- overarching comments;
- landscape character areas;
- assessment approach; and
- mitigation.

Theme: Overarching comments

Sub-theme:

17.3.2 Consultees were supportive of many aspects of the methodology including the fact that the methodology will be consistent with the Guidelines for Landscape and Visual

assessment, 3rd edition¹⁰ and other relevant guidance and best practice. Consultees also welcomed the inclusion of 'ordinary' landscapes into the assessment, recognising that it is not just the special or designated places that have value.

Response:

- 17.3.3 This is noted and acceptance of the methodology is welcomed.

Theme: Landscape character areas

Sub-theme:

- 17.3.4 Consultees noted the intention to derive landscape character areas as part of the baseline. Consultees expressed the view that it should be made clear how the new landscape character areas relate to existing landscape character areas, drawn from existing landscape character assessments.

Response:

- 17.3.5 The definition of the baseline landscape character areas will be derived from published landscape character assessments, which will be referenced. Appropriate and justified sub-divisions will be made with reference to field survey and published datasets. The assessment teams will also utilise work undertaken by other assessment topics such as historic environment, in particular the use of Historic Landscape Characterisation (HLC) assessments, and ecology and biodiversity. Therefore, the process to be followed is iterative, using published landscape character area information as the basis and starting point to establish the baseline landscape character areas. Information relating to landscape character areas has been updated within Section 15 of the EIA SMR.

Theme: Assessment approach

Sub-theme:

- 17.3.6 Several consultees requested that the derivation of value is assessed as objectively as possible and that a broad evidence base is considered.

Response:

- 17.3.7 The derivation of value will be undertaken as objectively as possible with reference to a comprehensive and robust set of defined assessment criteria. Work will be carried out by Chartered Landscape Architects experienced in landscape and visual impact assessment. Survey and assessment work will be verified by at least two other Chartered Landscape Architects experienced in landscape and visual impact assessment to aid objectivity.

¹⁰ Landscape Institute and Institute of Environmental Management and Assessment (2013), *Guidelines for Landscape and Visual Impact Assessment*. 3rd Edition. Routledge. New York.

Sub-theme:

- 17.3.8 A number of consultees queried the ZTV and how it is set. Some comments indicated that quoted levels were not adequate and should not be established until both stakeholder consultation and appropriate modelling have taken place.

Response:

- 17.3.9 The methodology for preparing the ZTV was agreed for Phase One and refined for Phase 2a. The ZTV is an important tool for guiding the assessment of landscape and visual effects but does not restrict consideration of visibility from outside the ZTV, for example from elevated viewpoints. The ZTV methodology is also discussed with the competent authorities in stakeholder engagement meetings regarding viewpoints and definition of the landscape and visual study area. Section 15 of the EIA SMR has been amended to provide further clarity around the ZTV.

Sub-theme:

- 17.3.10 Consultees raised concerns regarding the timing of assessing impacts in the long-term, and did not feel that 15 and 60 years would be appropriate. Further to this a number of consultees raised the importance of assessing these impacts in both winter and summer months to ensure a holistic review.

Response:

- 17.3.11 Phase One and Phase 2a adopted the approach of assessing landscape and visual impacts at years 1, 15 and 60. However, the use of year 60 has been reviewed for Phase 2b in the context of comments received from consultees.
- 17.3.12 It has been decided to change the assessment year for visual impacts from year 60 to year 30 as the design and mitigation planting will have achieved its full design intention by year 30. Year 15 is used in the DMRB and will be retained as an assessment year as it provides an important intermediate stage for assessment of impacts in the context of maturing vegetation.
- 17.3.13 The assessment of visual effects during construction covers the situation in winter at peak activity. The assessment of operational visual effects covers the situation in the winter and summer of year 1 and in the summer of years 15 and 30. The assessment of landscape effects is undertaken for the construction phase and for the operational phase at years 1, 15 and 30. The landscape assessment does not consider seasonal variations e.g. winter/summer, since these do not affect character.

Theme: Mitigation

Sub-theme:

- 17.3.14 Consultees expressed the opinion that the draft EIA SMR should be more positive about mitigation planting and that planting should look to enhance the quality of the landscape to protect it from adverse effects on local habitat, character, appearance and setting.

Response:

- 17.3.15 This approach is being adopted in the landscape design of the Proposed Scheme, in line with the HS2 Design Vision¹¹, the HS2 Landscape Design Approach¹² and other technical standards and requirements. HS2 Ltd has designed the Proposed Scheme with the aim of avoiding or reducing landscape and visual impacts along the route. It is also aimed at ensuring that the design of all landscape mitigation is sympathetic to landscape character, context, and social setting. The landscape design will therefore include opportunities for landscape conservation and for creation of new landscapes through for example, land formation works, habitat and woodland creation. This approach will help focus on the outcome, not just the process.

Sub-theme:

- 17.3.16 Consultees were concerned that noise barriers may not be installed due to potential landscape impacts. They expressed the view that the visual impact of noise fences should not outweigh the benefit from the reduction in noise nuisance.

Response:

- 17.3.17 The landscape design will endeavour to integrate these structures in line with the objectives of the HS2 Landscape Design Approach – a design that balances and combines noise mitigation requirements with the landscape design requirements in order to fit and blend the railway as effectively as possible into the local context.

¹¹ HS2 Limited (2017), *HS2 Design Vision*. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/607020/HS2_Design_Vision_Booklet.pdf

¹² HS2 Limited (2016), *HS2 Landscape Design Approach*. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/550791/HS2_Landscape_Design_Approach_July_2016.pdf

18 Major accidents and disasters

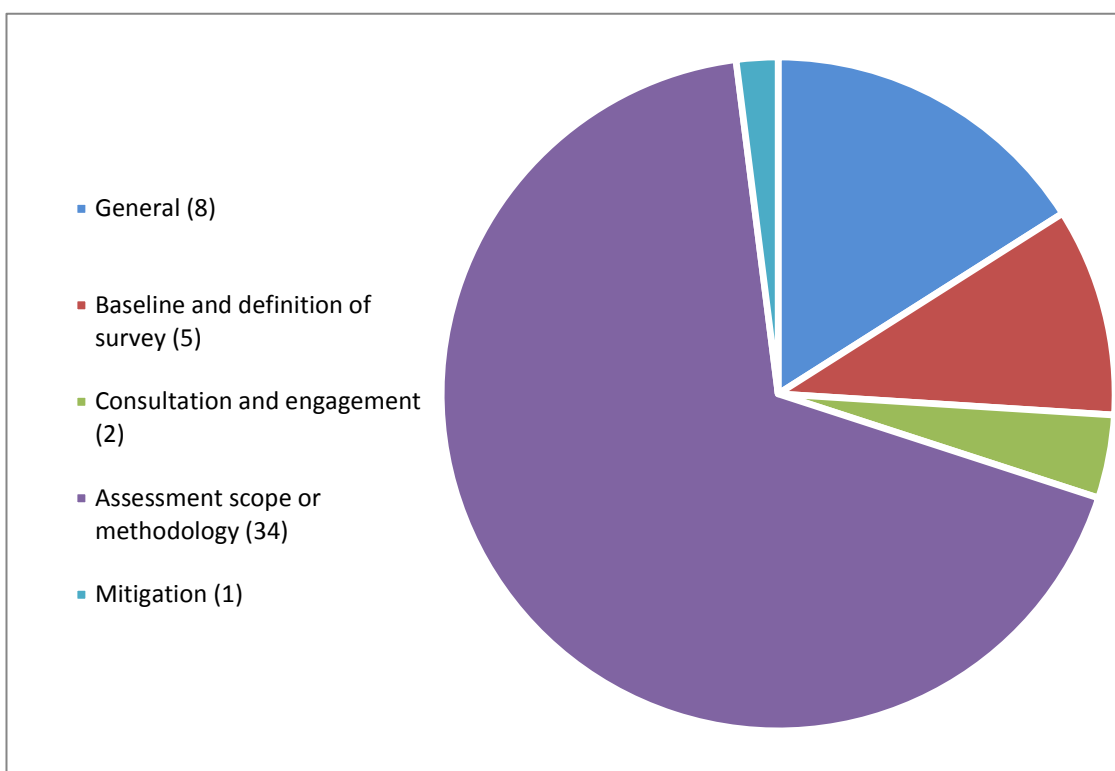
18.1 Introduction

18.1.1 This section sets out comments made by consultees in their response to Section 16 (major accidents and disasters) of the draft EIA SMR.

18.2 Consultee comments

18.2.1 A total of 50 comments were made in relation to major accidents and disasters as summarised in Figure 17.

Figure 17 - Comments by type – major accidents and disasters



18.3 Consultee response themes

18.3.1 The main themes which have been identified from the comment types set out in Figure 17 include:

- consideration of passengers;
- potential sources of accidents;
- ground instability; and
- Control of Major Accidents and Hazards (COMAH) and other hazardous sites.

Theme: Consideration of passengers

Sub-theme:

18.3.2 Consultees questioned why passengers were not covered by the assessment.

Response:

- 18.3.3 The protection of staff and passengers is at the core of the HS2 Corporate Health and Safety Strategy 'Safe at Heart' and is addressed through the implementation of this strategy.

Theme: Potential sources of accidents

Sub-theme:

- 18.3.4 Consultees identified a number of potential scenarios which they are concerned could lead to harm to members of the public, such as terrorism and train derailments.

Response:

- 18.3.5 The identification of potential hazards to be included in the assessment of major accidents and disasters will take note of issues raised by stakeholders. The assessment will consider risks to environmental receptors including members of the public who are in the vicinity of the Proposed Scheme during construction or operation, and therefore have the potential to be harmed. 'Population and human health' is recognised as an environmental receptor for the purpose of the EIA (see Section 12 of the draft EIA SMR).
- 18.3.6 A key factor underpinning the approach to the major accidents and disasters topic assessment is that the Common Safety Method – Risk Assessment (CSM-RA) must be accepted by the regulator before the Proposed Scheme can be granted a licence to be placed into service. The purpose of the EIA topic is not to reproduce this assessment, but to ensure that potential impacts to environmental receptors have been recognised and will be mitigated.

Theme: Ground instability

Sub-theme:

- 18.3.7 Consultees commented on the potential for ground instability along the route arising from a number of sources. These include the presence of legacy mining sites, areas underlain by soluble rock, sink-holes, storage in salt caverns, and risks associated with construction (and operations).

Response:

- 18.3.8 Ground instability and its potential to affect the safe operation of the Proposed Scheme is a recognised hazard. The major accidents and disasters topic will not itself assess this risk, but will explain where and how such risks will be considered in developing the Proposed Scheme and how identified risks are mitigated to be As Low As Reasonably Practical (ALARP).

Theme: COMAH and other adjacent hazardous sites

Sub-theme:

- 18.3.9 Consultees outlined their expectation that HS2 Ltd considers the relationship between the Proposed Scheme and neighbouring sites, including those regulated under the COMAH regulations and other licensed sites.

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Response:

- 18.3.10 Additional aspects arising from the potential interaction with COMAH sites (and other similarly significant sites) will be taken into account through the CSM-RA process and consultation where necessary.

19 Socio-economics

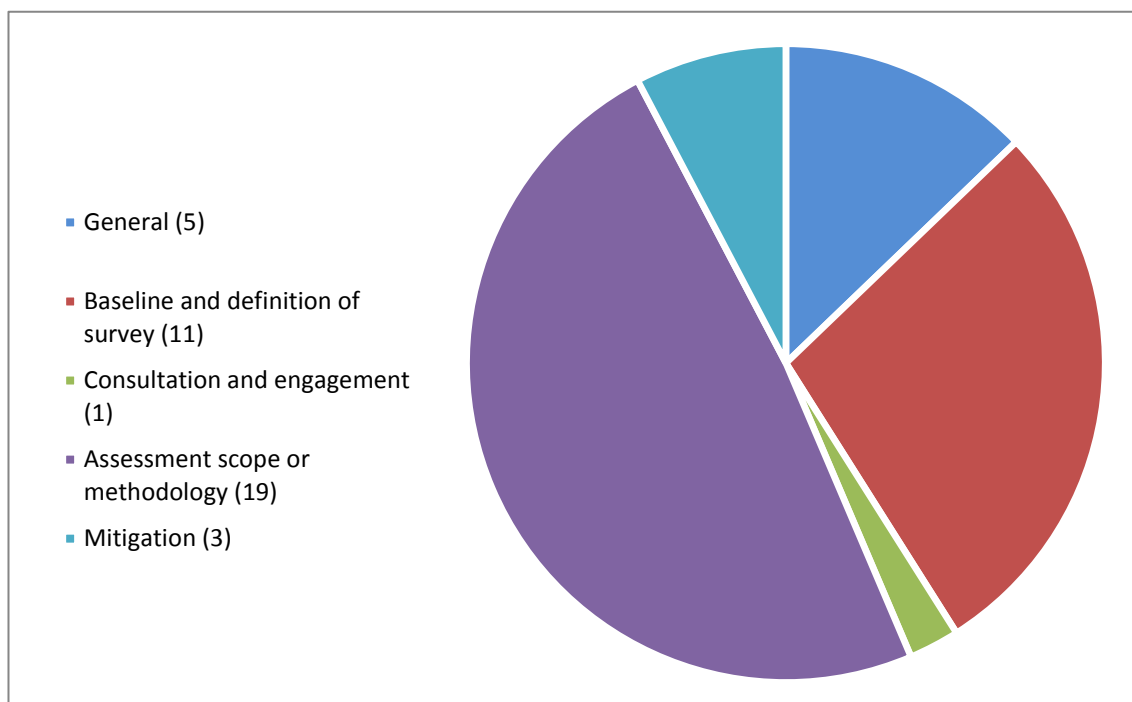
19.1 Introduction

19.1.1 This section sets out comments made by consultees in their response to Section 17 (socio-economics) of the draft EIA SMR.

19.2 Consultee comments

19.2.1 A total of 39 comments were made in relation to the socio-economics topic as summarised in Figure 18.

Figure 18 - Comments by type – socio-economics



19.3 Consultee response themes

19.3.1 The main themes which have been identified from the comment types set out in Figure 18 include:

- baseline data and data sources;
- scope of the assessment;
- methodology; and
- mitigation.

Theme: Baseline data and data sources

Sub-theme:

19.3.2 A number of consultees provided information and sources of data, pointing out that this should include both planned and committed economic development proposals,

strategic plans either existing or underway and plans for future commercial growth with employment or investment opportunities.

Response:

- 19.3.3 Planned and committed economic developments will be taken into account in the assessment, as identified in the draft EIA SMR.

Theme: Scope of the assessment

Sub-theme:

- 19.3.4 A number of consultees commented as to whether 'businesses' will include businesses run from people's homes, business aspects of heritage assets, and the tourism industry. In particular, consultees commented as to whether micro and small business interests would be included.

Response:

- 19.3.5 The scope of existing businesses and organisations includes businesses run from people's homes, those pertaining to heritage assets and the tourism industry, where they can be identified. Certain businesses will, however, be excluded from the assessment (such as businesses operating in the informal economy). More information is provided in the Technical Note: Socio-economics assessment.

Sub-theme:

- 19.3.6 Consultees suggested that, for waterways, the 250m standard spatial scope should be expanded to recognise that businesses supporting and supported by waterways may be directly impacted over a larger geographical scope.

Response:

- 19.3.7 The traffic and transport assessment will assess all areas impacted by the Proposed Scheme including waterways. Table 35 and Section 17.5 of the draft EIA SMR identifies that the impact of traffic disruption on businesses forms part of the scope of assessment. Indirect effects on businesses arising from potential trade diversion (including the isolation of businesses arising from canal closures) will be considered in the formal ES when significant residual traffic and transport effects are identified.

Sub-theme:

- 19.3.8 Consultees commented upon the impact of the Proposed Scheme on businesses and jobs, including impacts due to traffic disruption. Consultees also commented upon impacts to small businesses which use equity of their homes to fund their business expansion, should such equity decline as a result of the Proposed Scheme.

Response:

- 19.3.9 Table 35 and Section 17.5 of the draft EIA SMR identifies that the impact of traffic disruption on businesses forms part of the scope of assessment. Indirect effects on businesses arising from potential trade diversion (as a result of traffic disruption from HGVs and the isolation of businesses arising from road closures) will be considered in

the formal ES when significant residual traffic effects are identified. The impact of compensation is not unique to small businesses, as others will also be affected by the policy. Therefore, matters of compensation are not in scope of the socio-economic assessment in the EIA and are covered in the compensation policy.

Theme: Methodology

Sub-theme:

- 19.3.10 Comments were made on the impact magnitude criteria table, including a request to clarify in more detail how 'moderate' would be defined, noting that this would be perceived differently at a regional as opposed to a local scale.

Response:

- 19.3.11 The methodology allows for magnitude of effect to be moderated in relation to the scale under consideration, to allow for the fact that communities of low population can be more sensitive to impacts.

Theme: Mitigation

Sub-theme:

- 19.3.12 A number of consultees suggested that mitigation could include provision of advice to businesses about relocation or expansion and that carrying this out in collaboration with Local Enterprise Partnerships (LEP) and Government could help support broader Government industrial strategies.

Response:

- 19.3.13 HS2 Ltd will work with LEPs and local government during the EIA process where possible and appropriate. The policy for businesses that are directly affected by the Proposed Scheme will be set out in the HS2 Ltd Information Papers¹³.

Sub-theme:

- 19.3.14 Requests were also made by consultees that mitigation should be considered to protect and enhance assets in areas where tourism is particularly crucial to the economy.

Response:

- 19.3.15 Table 35 of the draft EIA SMR identifies that indirect effects on businesses and organisations' operations, including those which impact tourism such as cultural heritage and landscape impacts, form part of the scope. Indirect effects will be considered in the formal ES when significant effects are identified by the relevant disciplines and appropriate mitigation will be considered.

¹³ HS2 Limited (2018) *HS2 Phase One - Information Paper C7: Business Relocation*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701202/C7_Business_relocation_v2.o_.pdf

20 Sound, noise and vibration

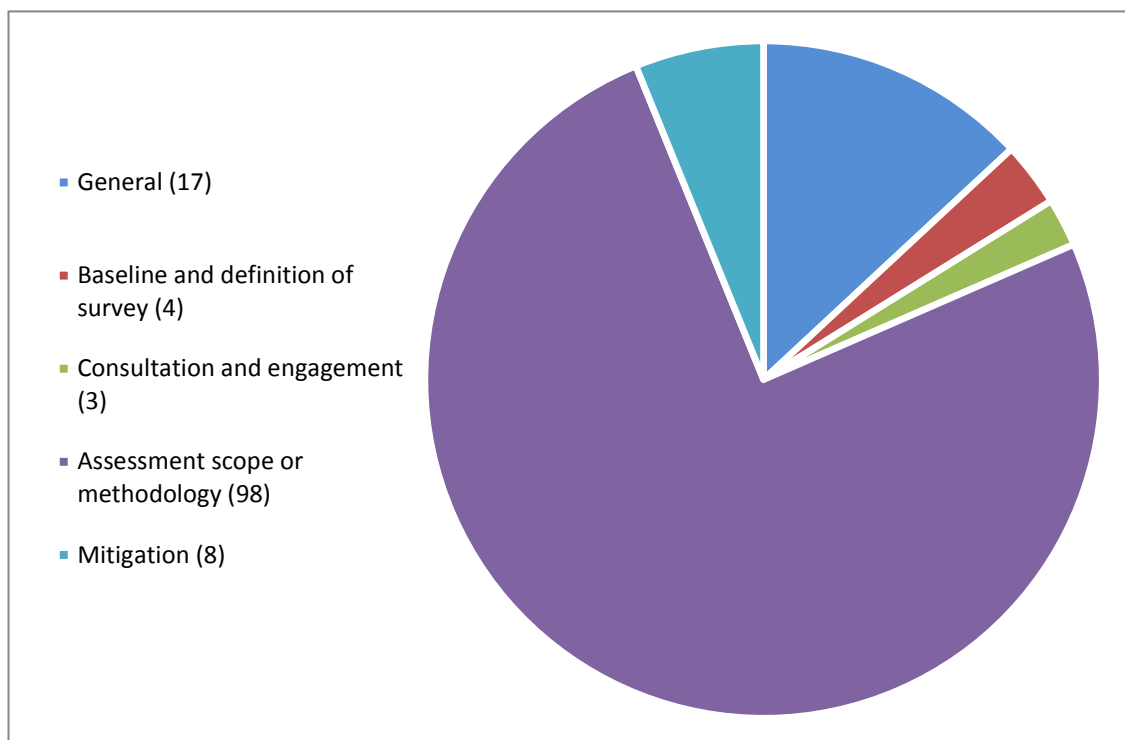
20.1 Introduction

20.1.1 This section sets out comments made by consultees in their response to Section 18 (sound, noise and vibration) of the draft EIA SMR.

20.2 Consultee comments

20.2.1 A total of 130 comments were made in relation to the sound, noise and vibration topic as summarised in Figure 19.

Figure 19 - Comments by type – sound, noise and vibration



20.3 Consultee response themes

20.3.1 The main themes which have been identified from the comment types set out in Figure 19 include:

- scope of the assessment;
- assessment criteria;
- assessment of receptors; and
- mitigation measures.

Theme: Scope of the assessment

Sub-theme:

- 20.3.2 Consultees commented that the assessment scope should be extended to include engineering and maintenance hubs so their impacts can also be mitigated.

Response:

- 20.3.3 Noise from such facilities falls within the scope as explained in Section 18.3.20 of the draft SMR. That is, permanent static equipment will be designed so that it will avoid significant effects and will reduce adverse noise effects as far as practicable. The effects are therefore considered unlikely to be significant.

Theme: Assessment criteria

Sub-theme:

- 20.3.4 Consultees questioned whether the correct criteria are being considered to adequately assess the impact of noise, particularly where impacts fall between the lowest observed adverse effect level (LOAEL) and the no observed effect level (NOEL).

Response:

- 20.3.5 HS2 Ltd policy on assessing and controlling the noise and vibration impacts, as outlined within the draft EIA SMR, represents its interpretation of the Government's Noise Policy Statement for England (NPSE). HS2 Ltd's setting of values for effect levels takes into account established practice, research results, guidance in national and international standards, guidance from national and international agencies and independent review by academic, industry and Government employees. The values were set out in the Phase One Information Paper E20 which has also been subjected to further independent scrutiny during parliamentary proceedings and will be detailed within draft route-wide assurances for the Proposed Scheme. Expert review was provided via the Acoustics Review Group, the findings of which have been published.

Theme: Assessment of receptors

Sub-theme:

- 20.3.6 Consultees commented upon levels of ground vibrations and their impacts on properties which are considered more at risk such as listed properties, cultural heritage sites or geological protected sites. It was noted that these should be included as sensitive receptors and should not be categorised as residential.

Response:

- 20.3.7 As stated in paragraph 18.2.12 of the draft EIA SMR with respect to building damage due to vibration, "a scheme designed, constructed and operated to current engineering standards for modern high-speed railway including the adoption of a CoCP will avoid any risk of damage to any building (including cosmetic damage)." Should any receptor be identified that is unusually sensitive to vibration it would be the subject of a site specific risk assessment leading to a risk management plan

agreed with those responsible for the site. That is to say they would be treated as described in Table 43 of the SMR.

Sub-theme:

- 20.3.8 Consultees sought further information on the approach to assessing sound, noise and vibration impacts on PRow and public spaces.

Response:

- 20.3.9 With respect to the effects of noise on outdoor recreational and leisure spaces and facilities including bridleways, footpaths, canal towpaths, sports grounds, racecourses, golf courses, show grounds and nature reserves, principally because of the transitory nature of their use, significant adverse noise effects on people, wildlife, horses and livestock are unlikely. Such facilities and spaces may benefit collaterally from measures provided to reduce impacts at dwellings and other noise sensitive receptors in the vicinity. This is explained in paragraph 18.3.14 and paragraph 18.3.15 of the draft EIA SMR. This approach has been subjected to further independent scrutiny during parliamentary proceedings for Phase One.

Theme: Mitigation measures

Sub-theme:

- 20.3.10 Various concerns were received regarding mitigation measures for local communities and properties along the route of the Proposed Scheme particularly with respect to moving trains. It was also queried whether an adequate proposal in terms of barriers and other mitigation factors was being proposed to reduce both noise and visual impacts.

Response:

- 20.3.11 In the main these comments relate to work that will form part of the sound, noise and vibration assessment and will be reported in the working draft ES and formal ES rather than the EIA SMR. The EIA SMR sets out how mitigation will be determined and the method and criteria to be used, not the mitigation itself.
- 20.3.12 Volume 1 (section 9) of the Phase One and Phase 2a ES sets out the approach to determining mitigation and the 'mitigation sustainability evaluation criteria' applied in preparing the ES. Delivery of all reasonably practicable measures to reduce noise impacts will be achieved via two routes: through the arrangements within the draft hybrid Bill for consenting the design, and from the assurances and undertakings entered into, which will form part of the Environmental Minimum Requirements (EMR).

21 Traffic and transport

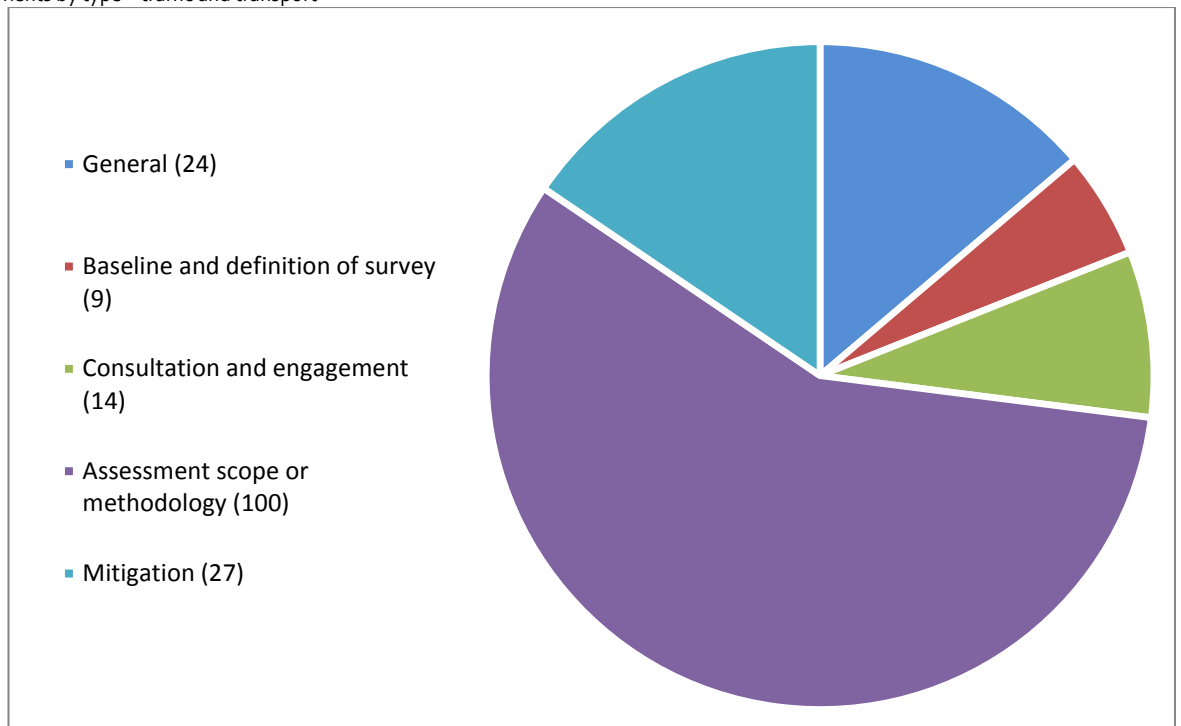
21.1 Introduction

21.1.1 This section sets out comments made by consultees in their response to Section 19 (traffic and transport) of the draft EIA SMR.

21.2 Consultee comments

21.2.1 A total of 174 comments were made in relation to the traffic and transport topic as summarised in Figure 20.

Figure 20 - Comments by type – traffic and transport



21.3 Consultee response themes

21.3.1 The main themes which have been identified from the comment types set out in Figure 20 include:

- baseline information;
- assessment methodology;
- assessing impacts to PRow;
- assessing impacts to waterways;
- assessing impacts to safety;
- mitigation of construction impacts and impacts to the road network and recreation; and
- general connectivity to modes of transport.

Theme: Baseline information

Sub-theme:

- 21.3.2 Consultees stated that the section outlining the proposed approach to baseline traffic modelling in the draft EIA SMR did not provide adequate detail on how this would be undertaken. It was also suggested that traffic models using updated traffic counts should be re-run during the 10-year construction period due to changes that may arise in this period.

Response:

- 21.3.3 The approach to baseline data and traffic modelling during construction will be discussed with local highway and transport authorities to ensure the assessment is appropriate in scope to the potential impact of the Proposed Scheme. The requirement for the EIA is to reflect the most reasonably likely scenario at the time of the assessment.

Theme: Assessment methodology

Sub-theme:

- 21.3.4 Comments were received regarding some of the criteria to be used as part of the assessment methodology. It was suggested that for the Strategic Road Network (SRN) the criteria should allow impacts of less than four weeks to be deemed significant and that mitigation may still need to be applied in these cases.

Response:

- 21.3.5 The draft EIA SMR for Phase 2b is consistent with Phase One and Phase 2a which included the four week threshold. However, it is acknowledged that the SRN is of strategic national importance and that consideration should be given to suitable mitigation measures if the short-term impacts of the Proposed Scheme are substantial.

Sub-theme:

- 21.3.6 Consultees suggested that haulage roads, and the whole road network, should be considered and not just the network local to the worksite.

Response:

- 21.3.7 All highways are within scope of the assessment and all temporary or permanent impacts will be assessed. Additionally, the draft CoCP sets out the approach to construction which will be adhered to through the construction process.

Theme: Assessing impacts to PRow

Sub-theme:

- 21.3.8 A number of consultees outlined their expectations for treatment of PRow, and outlined concerns with the methodology proposed to assess impacts to users of PRow. These included comments about the criteria to be used to ascertain the sensitivity of a PRow based on number of users, suggesting that the threshold should

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be reduced from 200 users and that the community links made by PRow may be more relevant than the number of users.

- 21.3.9 Suggestions were made regarding further consultation on PRow to understand their importance at a local level on a case by case basis. It was also suggested that other types of routes also require assessment in addition to formally designated PRow, such as permissive paths, open space access and unrecorded paths. Consultees also commented that use of PRow can change seasonally and there is therefore a need to factor this into baseline surveys along with how their use may change in the future.

Response:

- 21.3.10 HS2 Ltd will seek to avoid any temporary or permanent closure of a PRow or road and resulting impacts on users. Changes to PRow and other routes will be included in the assessment but not changes to unrecorded paths.

- 21.3.11 PRow will normally have a principal use as leisure or commute/journey to school. However, some PRow will be used for both purposes. PRow used for leisure purposes will be surveyed during summer school holiday weekends. PRow used for non-leisure purposes will be surveyed during weekdays outside school holidays. HS2 Ltd has consulted the local highway authorities regarding the location and timings of the PRow surveys. The aim of the surveys is to provide information on indicative level of use. It will be appropriate to survey some PRow during both periods, if demand patterns justify this.

Sub-theme:

- 21.3.12 Consultees were concerned about severance and isolation of communities, particularly in rural areas. The need to provide appropriate alternatives if PRow are closed was highlighted along with concerns that the assessment will be based on pedestrian use, rather than fully reflecting the issues associated with other users of PRow such as cyclists and equestrians and the smaller number of appropriate alternatives that may be available to them.

- 21.3.13 Consultees also suggested that the focus on 'time' in assessing impacts to PRow does not fully reflect the use of some PRow for recreational purposes.

Response:

- 21.3.14 HS2 Ltd will seek to provide a temporary or permanent alternative route in advance of a closure of a road or PRow, as necessary. If a temporary or permanent alternative route cannot be provided in advance of any road or PRow closure then this will be discussed with the relevant local highway authority and local groups and reported in the ES. Severance effects on cyclists and equestrians will be fully assessed through the ES and the Transport Assessment. The impact of the Proposed Scheme on public transport routes, access to PRow and rural road links will be assessed both during construction and operation and mitigation proposed as necessary.

Theme: Assessing impacts to waterways

Sub-theme:

- 21.3.15 Consultees suggested that waterway usage should be considered as part of baseline traffic surveys and consideration of waterway restoration schemes were said to be missing from the assessment methodology. Suggestions were made as to what an assessment of impacts to waterways should be included, what issues are important to be considered and provided some feedback on data sources.

Response:

- 21.3.16 Traffic and transport effects on waterways will be considered in the assessment. This has been clarified in the EIA SMR. This will include any major committed or known changes to waterways and canals. Waterway surveys will be undertaken including level of use, type of vessel (commercial, passenger or leisure) and passenger occupancy. Several other minor updates have been made to the EIA SMR to reflect information provided by consultees on data sources.

Theme: Assessing impacts to safety

Sub-theme:

- 21.3.17 Several consultees were concerned with safety, particularly to vulnerable groups such as school children, during construction. A number of consultees queried the criteria that are being proposed in relation to reviewing accident statistics that trigger the need to implement additional safety mitigation, and the criteria proposed relating to the threshold for significant effects on Vulnerable Road Users (VRU).
- 21.3.18 Comments were also made relating to the collation of accident data and suggestions were made about local investment that could help to allay some of these local safety concerns.

Response:

- 21.3.19 The draft EIA SMR criteria for assessment of accidents set out in section 19.6.31 are consistent with that undertaken for other major schemes such as Crossrail. The assessment methodology states that significant impacts will be defined for links and junctions that have experienced more than nine personal injury accidents in the last three-year period and which would also be subject to an increase of 30% or more in total traffic flow during construction.
- 21.3.20 HS2 Ltd will also seek to engage in dialogue with local highway authorities around road safety. HS2 Ltd will seek to understand if there are particular locations or accident hot spots which are close to the route of the Proposed Scheme or on an HS2 construction route and impacted by the Proposed Scheme. HS2 Ltd will seek to work with highway authorities to ensure that any potential impacts from HS2 construction works are mitigated as far as reasonably practicable. All permanent changes to the highway network will be subject to a safety audit.

Sub-theme:

- 21.3.21 It was requested that the draft EIA SMR include reference to emergency vehicle access and that the assessment include potential impacts on emergency response time. The importance of engagement with the emergency services was also highlighted.

Response:

- 21.3.22 The draft EIA SMR does not specifically identify emergency service routes as a receptor. The EIA will identify changes to access and journey times for all users, which includes all emergency vehicles. HS2 Ltd is committed to engaging and liaising with the emergency services throughout the development of the Proposed Scheme and this dialogue is ongoing.

Theme: Mitigation of construction impacts and impacts to the road network and recreation

Sub-theme:

- 21.3.23 There was a request by consultees for well programmed works that give local people appropriate advanced warning of any disruption to roads or waterways, and for the implementation of other general mitigation measures related to traffic management. Consultees suggested that local engagement will be important to identify appropriate local mitigation and it was welcomed that there will be environmental standards for construction vehicles that will need to be upheld.

Response:

- 21.3.24 As for Phase One and Phase 2a, a draft CoCP will be produced that sets out the approach to construction which will be adhered to through the construction process. Route-wide, local area and site-specific traffic management measures will be implemented during the construction of the project on or adjacent to public roads, bridleways, footpaths and other PRoW affected by the Proposed Scheme as necessary. Traffic management plans will be produced in consultation with local highway authorities which will include, as appropriate, operational controls and measures to ensure that the timely maintenance and condition of public roads, cycle ways and PRoW do not deteriorate due to use by the construction traffic, including monitoring arrangements with local highway authorities.

Sub-theme:

- 21.3.25 Several consultees suggested that HS2 Ltd should consider using existing rail freight networks or canals rather than the road network during construction of the Proposed Scheme.

Response:

- 21.3.26 HS2 Ltd will continue to explore the potential to use rail or other more sustainable modes to move materials, which would reduce the impacts of construction traffic on the local road network. This commitment will be set out in the draft CoCP.

Sub-theme:

- 21.3.27 Some consultees noted that they believe that HS2 Ltd should be actively seeking opportunities to improve PRow and other sustainable transport networks.
- 21.3.28 Consultees shared their expectations around impacts to recreational locations such as National Parks or recreational routes. The issue focussed on potential closures to routes and the need to have a fully accessible diversion available prior to works.

Response:

- 21.3.29 HS2 Ltd will be seeking to reduce and mitigate the impact on the PRow network and, where appropriate and proportionate, the impact of the Proposed Scheme may make improvements to access opportunities, for example through the upgrading of footpaths to bridleways, and through the creation of additional links and routes.
- 21.3.30 As part of the assessment process HS2 Ltd will work with highway authorities whose responsibilities are county wide. HS2 Ltd will seek to reduce the impacts of construction traffic on local communities and maintain public access, insofar as reasonably practicable. Engagement will also take place as required throughout the EIA process including with National Park authorities as appropriate.

Theme: General connectivity to modes of transport

Sub-theme:

- 21.3.31 It was suggested that HS2 Ltd consider the integration, links and connectivity between existing transport networks and the HS2 station. It was suggested that this should include impacts in terms of road traffic trip generation at the new and redeveloped stations.

Response:

- 21.3.32 HS2 Ltd will be developing plans for stations as part of the hybrid Bill preparation for the Proposed Scheme. During this period HS2 Ltd will work with stakeholders regarding the development of station schemes and their connectivity to the wider highways network.

22 Waste and material resources

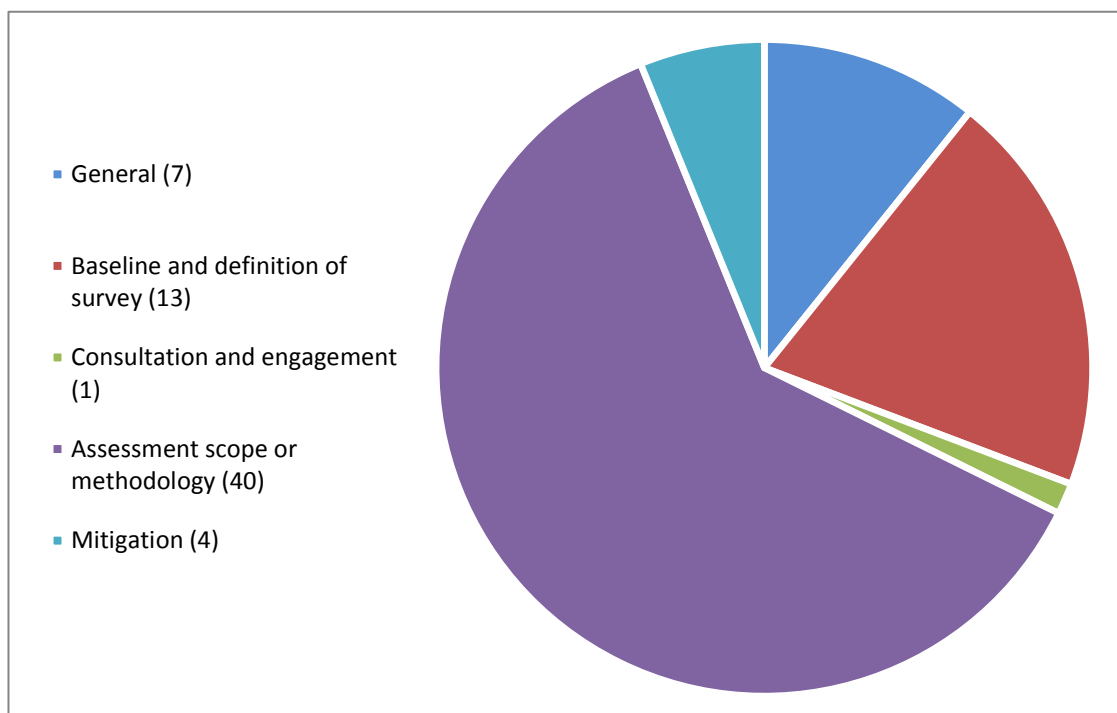
22.1 Introduction

22.1.1 This section sets out comments made by consultees in their response to Section 20 (waste and material resources) of the draft EIA SMR.

22.2 Consultee comments

22.2.1 A total of 65 comments were made in relation to the waste and material resources topic as summarised in Figure 21.

Figure 21 - Comments by type – waste and material resources



22.3 Consultee response themes

22.3.1 The main themes which have been identified from the comment types set out in Figure 21 include:

- baseline information;
- scope of the assessment;
- methodological approach to landfill related issues; and
- stockpiling and use of materials.

Theme: Baseline information

Sub-theme:

22.3.2 Consultees provided general information regarding local plans, strategies and policies that exist or will be developed in future, which they suggest will be relevant for the

assessment to consider. Consultees stated their willingness to engage further in considering allocated and safeguarded areas and also provided updates to data referred to in the draft EIA SMR.

Response:

- 22.3.3 The EIA will consider all relevant waste information for the administrative areas addressed for the Proposed Scheme. Baseline data are currently being gathered. Corrections and updates provided by the consultees have been incorporated and the baseline data will be reviewed to ensure its continued relevance prior to undertaking the EIA. If updated information is publically available in time for preparation of the formal ES, the data will be used accordingly and further engagement with relevant consultees undertaken as appropriate.

Theme: Scope of the assessment

Sub-theme:

- 22.3.4 Consultees noted the draft EIA SMR currently states that the extraction of minerals along the route of the Proposed Scheme is part of route engineering design and suggested that this should be part of the waste and material resources scope (although it was noted by consultees that associated local impacts of these are considered in other topic assessments).

Response:

- 22.3.5 Resource efficiency measures in construction will mitigate the route-wide impact of materials used during construction, on a route-wide basis. Measures will include an integrated earthworks design approach aimed at maximising reuse of excavated material, and a designing out waste approach to reduce the use of construction materials. Consideration of material resources in the EIA is limited to the beneficial reuse of excavated material arising from the construction of the Proposed Scheme.
- 22.3.6 Local impacts such as from sound, noise and vibration and traffic and transport will be addressed elsewhere in the EIA.

Theme: Methodological approach to landfill related issues

Sub-theme:

- 22.3.7 Comments were received around the calculations and criteria regarding landfill void space. This included noting that it is important to consider whether there will likely be a shortfall in the available void throughout the construction period and any historical trend in diminishing availability that should be considered as part of future projections. Offsite disposal to hazardous landfill was recommended to be a separate assessment, due to these facilities being limited.

Response:

- 22.3.8 Diminishing landfill void space is one of the key reasons why the EIA focusses on the impact of the Proposed Scheme on disposal facilities. The waste and material resources assessment primarily uses long-term landfill capacity trends in Environment Agency data as the source for projected available landfill capacity.

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- 22.3.9 The EIA will consider the impact on hazardous waste landfill separately from the impact on inert and non-hazardous landfill.

Sub-theme:

- 22.3.10 A comment was received that the criteria in Table 51 of the draft EIA SMR relating to inert landfill significance criteria may need to be lowered due to the lack of inert landfill capacity across the country.

Response:

- 22.3.11 It is not considered that landfill capacity is sufficiently different within Phase 2b to warrant the lowering of these thresholds. There is substantial benefit in keeping the criteria consistent, so that the impacts of Phase 2b can be compared against previous phases of HS2.

Sub-theme:

- 22.3.12 Several consultees commented on the fact that the Proposed Scheme will interact with operational and closed landfill sites, with the potential for release of/migration of contaminants and pollution.

Response:

- 22.3.13 This is within the waste and material resources scope in so far as the material generated through disturbance of operational and decommissioned landfill sites is likely to be physically and chemically unsuitable for re-use, and therefore likely to require off-site disposal to landfill. The environmental impacts of the disturbance of former landfill sites will be assessed in the land quality topic assessment.

Theme: Stockpiling and use of materials

Sub-theme:

- 22.3.14 Consultees commented that the assessment should include impacts related to temporary spoil heaps and provide more detail on borrow pits, such as their specific locations, with a request to include mineral planning authorities in any discussions around these.

Response:

- 22.3.15 The location of excavated material stockpiles and borrow pits will be identified and the associated environmental impacts will be assessed in the relevant topic assessments.

Sub-theme:

- 22.3.16 Consultees agreed with the principle of maximising the reuse of materials in the context of local plans and sustainable development. The use of unwanted materials from the Proposed Scheme to restore former colliery or mineral sites was suggested. Suggestions were also made that for a project of this scale, it is important to consider potential opportunities to contribute to wider environmental benefits, such as reusing material to improve sustainable transport routes.

Response:

- 22.3.17 Former mineral and colliery sites may be appropriate locations to place surplus materials, helping to achieve reclamation of those sites. The EIA considers the impact of the Proposed Scheme on existing landfill void space; creation of new sites for the recovery or disposal of excavated material will only be considered where off-site management would lead to unacceptable transport related impacts. Those former mineral and colliery sites that are operating as landfill sites currently will be included in the base data used for the EIA.
- 22.3.18 The draft EIA SMR notes that opportunities for beneficial reuse of excavated materials on-site will be maximised. The draft EIA SMR also notes that consultation will be used to identify further opportunities for reuse and recovery.

23 Water resources and flood risk

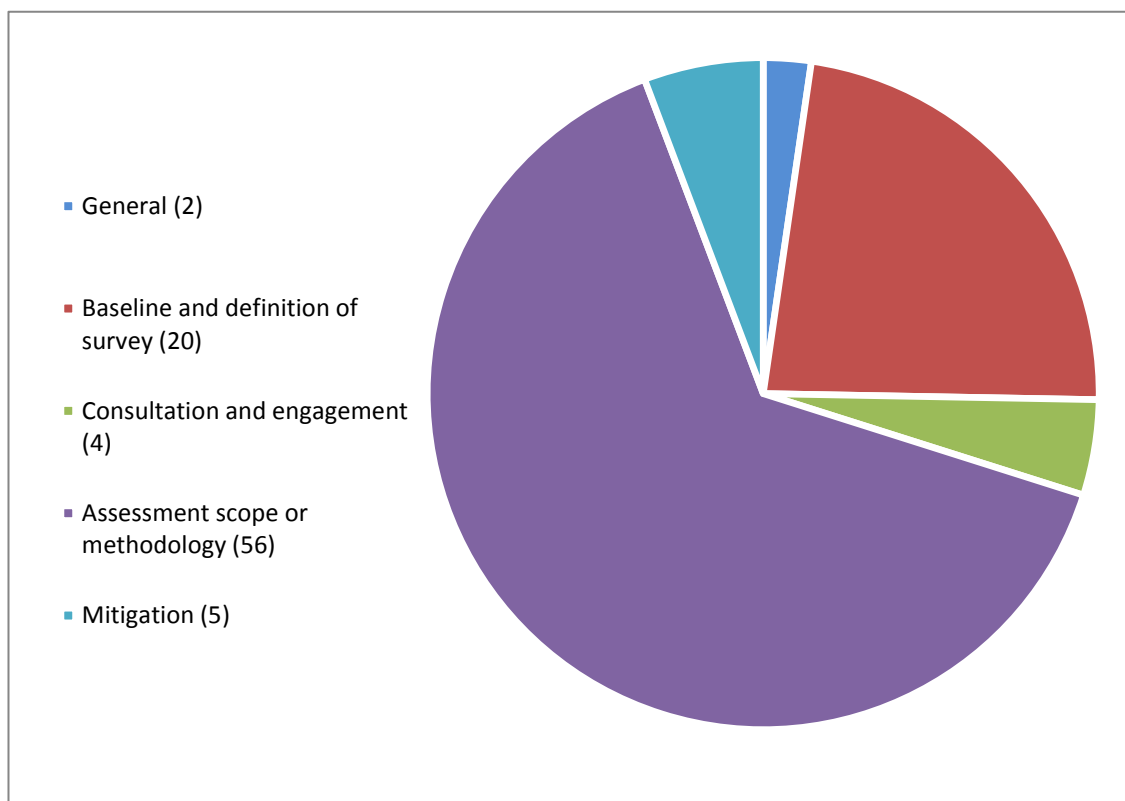
23.1 Introduction

23.1.1 This section sets out comments made by consultees in their response to Section 21 (water resources and flood risk) of the draft EIA SMR.

23.2 Consultee comments

23.2.1 In total 87 comments were made in relation to the water resources and flood risk topic as summarised in Figure 22.

Figure 22 - Comments by type – water resources and flood risk



23.3 Consultee response themes

23.3.1 The main themes which have been identified from the comment types set out in Figure 22 include:

- identification of local data;
- scope of the assessment;
- assessment methodology; and
- mitigation and monitoring.

Theme: Identification of local data

Sub-theme:

- 23.3.2 Consultees provided information on local receptors and identified wider data which may be used to inform the baseline for the assessment.

Response:

- 23.3.3 Observations on baseline and details of local receptors will be used to inform the assessment.

Theme: Scope of the assessment

Sub-theme:

- 23.3.4 Consultees identified that in some circumstances the spatial scope for the assessment may need to be expanded beyond that set out in the draft EIA SMR.

Response:

- 23.3.5 The draft EIA SMR highlights a range of circumstances in which the standard study area would be extended to ensure that issues associated with high value features that lie beyond the study limits will be covered. This includes features such as nationally or internationally protected habitats that are water dependent and canal systems that could be severed by the Proposed Scheme. Section 21 of the EIA SMR has been amended to clarify this.

Sub-theme:

- 23.3.6 Consultees identified the need for the assessment to consider all potential flood sources and mechanisms, including consideration of groundwater flooding susceptibility, natural drainage features and surface water pathways.

Response:

- 23.3.7 All sources and pathways will be considered. The EIA SMR has been amended to clarify this.

Sub-theme:

- 23.3.8 Several consultees raised concerns that the methodology has limited mention of ecology, low flow hydrology and/or fluvial geomorphology. A desire was expressed to see surface water - groundwater interactions considered, particularly where these are of relevance to sites of importance for nature conservation.

Response:

- 23.3.9 The methodology is designed to address the issues raised, but the EIA SMR has been amended to provide explicit reference to hydrological and geomorphological interactions. Consideration is also being given to how cross-topic issues of this nature will be reported in the formal ES and WFD compliance assessment.

Sub-theme:

- 23.3.10 Comments were received regarding the need to consider the interface of water resources and public/human health, in relation to water supplies and use for public amenity.

Response:

- 23.3.11 The water resources and flood risk topic experts will liaise closely with those assessing health-related issues. However, the issues related to impacts on public water supplies and/or changes in water quality within the wider water environment are considered to be adequately addressed by the methodology proposed. The methodology results in the highest value being attributed to public water supplies and all water bodies used for amenity purposes would be attributed a high or very high value.

Theme: Assessment methodology

Sub-theme:

- 23.3.12 Comments received comprised positive observations and/or expressions of general satisfaction with the proposed methodologies for assessing impacts on the water environment.

Response:

- 23.3.13 This is noted and acceptance of the approach is welcomed.

Sub-theme:

- 23.3.14 Consultees commented on the need to ensure the design ethos avoids damage by design, avoiding, as far as possible, impacts to local aquatic habitats and ecology. An example was to ensure that aquatic ecological assessments are undertaken during optimum survey periods so to obtain the most accurate survey data on which to base design decisions.

Response:

- 23.3.15 The methodology set out in the draft EIA SMR incorporates these suggestions.

Sub-theme:

- 23.3.16 In terms of climate change, comments supported the use of the February 2017 climate change guidance issued by the Environment Agency¹⁴ and recommended that peak river flow allowances are assessed per location due to variances in flood zones.

¹⁴ Environment Agency (2017), *Flood Risk Assessments: climate change allowances*. Available online at: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

Response:

- 23.3.17 A detailed methodology has been agreed with the Environment Agency that is fully aligned with the latest guidance. This will be published as a Technical Note accompanying the updated formal ES.

Theme: Mitigation and monitoring

Sub-theme:

- 23.3.18 Consultees highlighted that the hydrological impacts of the project will be felt long after construction is complete and therefore monitoring of mitigation will need to be undertaken with a long-term view.

Response:

- 23.3.19 Monitoring is proposed in line with procedures agreed with the Environment Agency, and will be informed by the assessment results. Monitoring may be pre-construction, during construction and post-construction depending on the nature of the effects identified. Where effects are predicted to potentially continue for some time after construction, monitoring would be designed accordingly.

24 Next steps

24.1 Updating the draft EIA SMR

24.1.1 The draft EIA SMR has been updated to reflect the consultation responses and the EIA SMR has been published as a supporting document to the working draft ES.

24.2 Informing the EIA

24.2.1 The EIA SMR is being used to undertake the EIA. The emerging assessment and proposed mitigation measures have been set out in the working draft ES.

24.2.2 Stakeholders and the public will have the opportunity to comment on the working draft ES and the formal ES.

24.2.3 Details of all consultations are available online at www.gov.uk/hs2.

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UK Government. Available online at: www.gov.uk/hs2

26 List of acronyms and initialisms

ALARP	as low as reasonably practical
ANGSt	accessible natural greenspace standard
AoS	appraisal of sustainability
AQMA	air quality management area(s)
CoCP	code of construction practice
CSM-RA	EU Regulation 402/2013 on the Common Safety Method on Risk Evaluation and Assessment (as amended by Regulation EU 2015/1136)
CSR	consultation summary report
DECC	Department of Energy and Climate Change
DHRA	development high risk area
EIA	environmental impact assessment
ELF-EMF	extremely low frequency electric and magnetic fields
EMC	electromagnetic compatibility
EMF	Electromagnetic field
EMI	electromagnetic interference
EMR	environmental minimum requirements
EPUK	Environmental Protection UK
EQIA	equalities impact assessment
ES	environmental statement
EU	European Union
GCN	great crested newt
GHG	Greenhouse gas
HERDS	Historic Environment Research and Delivery Strategy

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HGV	heavy goods vehicle(s)
HIA	health impact assessment
HLC	historic landscape characterisation
HRA	habitats regulations assessment
IAQM	Institute of Air Quality Management
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEMA	Institute of Environmental Management and Assessment
LEP	local enterprise partnership
LOAEL	lowest observable adverse effect level
NERC	National Environmental Research Council
NOEL	no observed effect level
NPR	Northern Powerhouse Rail
NPSE	Noise Policy Statement for England
PRoW	public right(s) of way
SAC	special area of conservation
SMR	scope and methodology report
SRN	strategic road network
SSSI	site(s) of special scientific interest
UK	United Kingdom
VRU	vulnerable road users
WFD	Water Framework Directive
ZTV	zone(s) of theoretical visibility

Annex A – List of consultees

The following table lists consultees who were invited to participate in the draft EIA SMR consultation. This includes statutory consultees, as well as non-statutory organisations.

Consultees were not limited to this list and responses received from other stakeholders have been taken into account, where relevant, as part of the draft EIA SMR consultation.

Action on Hearing Loss
Age UK
Ancient Monuments Society
Annesley Parish Council
Appleby Magna Parish Council
Arriva Plc
Ashby Canal Association
Ashby-de-la-Zouch Parish Council
Ashfield District Council
Association of Directors of Public Health
Association of Drainage Authorities
Association of Geotechnical and Geo-environmental Specialists
Aston cum Aughton Parish Council
Ault Hucknall Parish Council
Austhorpe (East and West) Parish Meeting
Austrey Parish Council
Barkston Ash Parish Council
Barlborough Parish Council
Barnburgh with Harlington Parish Council
Barnsley Biodiversity Trust
Barnsley Clinical Commissioning Group
Barnsley Metropolitan Borough Council
Barnsley, Dearne and Dove Canal Trust
Bat Conservation Trust
Battlefields Trust
Berks, Bucks & Oxon Wildlife Trust
Birmingham and Warwickshire Archaeological and Historical Society
Blackwell Parish Council
Bolsover District Council
Braithwell with Micklebring Parish Council
Bramley Parish Council
Breedon on the Hill Parish Council
British Association of Shooting and Conservation
British Drilling Association
British Geological Survey
British Horse Society

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British Chambers of Commerce
British Land
British Transport Police Authority
British Waterways Marinas Limited
Brodsworth Parish Council
Broxtowe Borough Council
Broxtowe Borough Council (Conservation Group)
Byways and Bridleways Trust
Campaign for Better Transport
Campaign to Protect Rural England
Canal & River Trust
Carr Vale Community Association
Central Association of Agricultural Valuers
Chartered Institute of Highways & Transportation
Cheshire Agricultural Society
Cheshire and Warrington Local Enterprise Partnership
Cheshire Brine
Cheshire East Council
Cheshire Fire Authority
Cheshire Gardens Trust
Cheshire Police Authority
Cheshire West & Chester Council
Chesterfield and District Civic Society
Chesterfield Borough Council
Chesterfield Canal Partnership
Chesterfield Community Energy PLC
Chilterns AONB
Christie NHS Foundation Trust
Church Buildings Council
Church Commissioners
Church Fenton Parish Council
Citizens Advice Manchester
City of Wakefield District Council
City of Wolverhampton Council
City of York Council
Civic Voice
Civil Aviation Authority
Clay Cross Parish Council
Clayton with Frickley Parish Council
Clowne Parish Council
Coal Authority
Coal Pro (The Confederation of UK Coal Producers)
Coleorton Parish Council

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Commercial Boat Operators Association
Committee on Climate Change
Community Forest - Forest of Mercia
Community Forest - Greenwood
Community Forest - Mersey
Community Forest - Red Rose
Community Forest - White Rose
Community Forest Partnership - South Yorkshire
Confederation of Forest Industries
Conisbrough Parks Parish Council
Council for British Archaeology
Country Land and Business Association
Country Landowners Association
Countryside Alliance Eastern Region (Leicestershire and Rutland, Nottinghamshire)
Countryside Alliance Midlands Region (Staffordshire and Warwickshire)
Countryside Alliance Northern Region (Yorkshire, Derbyshire, Greater Manchester and Cheshire)
Coventry and Warwickshire Local Enterprise Partnership
CPRE Cheshire
CPRE Derbyshire
CPRE East Midlands
CPRE Lancashire Branch
CPRE Leicestershire
CPRE North Yorkshire
CPRE North-West
CPRE Nottinghamshire
CPRE South Yorkshire
CPRE Warwickshire
CPRE West Yorkshire Branch
CPRE Yorkshire and the Humber
Crofton Parish Council
Crown Estate Commissioners
Culcheth and Croft Horse Riders and Bridleways Association
Curdworth Parish Council
Cycling UK
Denaby Parish Council
Department for Business, Energy and Industrial Strategy
Department for Communities and Local Government
Department for Culture, Media and Sport
Department for Environment, Food and Rural Affairs
Derby City Council
Derby Diocesan Board of Finance Limited
Derbyshire Community Housing Society Limited

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Derbyshire County Council
Derbyshire Wildlife Trust
Design Council
Diocese of Chester
Diocese of Leeds
Diocese of Manchester
Diocese of Sheffield
Disability Charities Consortium
Disability Resource Centre
Disability Rights UK
Disabled Persons Transport Advisory Committee
Doncaster Clinical Commissioning Group
Doncaster Metropolitan District Council
Dordon Parish Council
Dudley Metropolitan Borough Council
East Midlands Health Authority
East Riding of Yorkshire Council
Ecclesfield Conservation and Local History Group
Eckington Parish Council (Derbyshire)
English Heritage
Environment Agency
Equality and Diversity Forum
Equality and Human Rights Commission
Erewash Borough Council
Erewash Partnership
Erewash Ramblers
Felley Parish Council
Forestry Commission
Freight on Rail
Friends of Carlton Marsh and Rabbit Ings Nature Reserve
Friends of Haw Park Wood and Anglers Country Park
Friends of Marie Louise Gardens
Friends of Rabbit Ings
Friends of the Earth
Friends of the Earth Chesterfield & NE Derbyshire
Friends of the Earth East Midlands
Friends of Totton Fields
Garden History Society
Georgian Group
Glapwell Parish Council
Greasley Parish Council
Greater Birmingham and Solihull Local Enterprise Partnership
Greater Manchester Coalition of Disabled People

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Greater Manchester Combined Authority
Greater Manchester Local Enterprise Partnership
Greengauge21
Greenpeace
Greensqueeze (Erewash greenbelt)
Greenwood Community Forest Partnership
Hallam Land Management Ltd
Hardwick Clinical Commissioning Group
Harthill with Woodall Parish Council (Rotherham)
Harworth Estates
Harworth Estates Investments Limited
Harworth Group PLC
Havercroft with Cold Hiendley Parish Council
Hayhurst Foundation
Health and Safety Executive
Heath and Holmewood Parish Council
Hellaby Civil Parish
Hemsworth Town Council
Heritage Alliance
Hickleton Parish Council
High Melton Parish Council
Highways England
Hinckley and Bosworth District Council
Historic England
Historic Houses Association
Historic Stone Ltd
Hooten Pagnell Parish Council
Huddleston with Newthorpe Parish Council
Hull City Council
Inland Waterways Association
International Union of Railways
Joint Committee of National Amenity Societies
Kegworth Parish Council
Keuper Gas Storage Project
Killamarsh Parish Council
King Street Energy
Kingsbury Parish Council
Lancashire County Council
Land Trust
Laughton en le Morthen Parish Council
Lea Marston Parish Council
Leeds City Council
Leeds City Region LEP

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Leeds Civic Trust
Leeds North Clinical Commissioning Group
Leeds South and East Clinical Commissioning Group
Leicester City Council
Leicestershire Archaeological and Historical Society
Leicestershire County Council
Leigh Ornithological Society
LGBT Consortium
Lifeways
Lincolnshire County Council
Little Fenton Parish Council
Living Streets
Local Access Forum - Barnsley
Local Access Forum - Cheshire East
Local Access Forum - Cheshire West & Chester
Local Access Forum - Derby and Derbyshire
Local Access Forum - Doncaster
Local Access Forum - Leeds
Local Access Forum - Leicestershire
Local Access Forum - Manchester, Salford and Trafford
Local Access Forum - Nottinghamshire
Local Access Forum - Rotherham
Local Access Forum - Stockport
Local Access Forum - Wakefield
Local Access Forum - Wigan
Local Access Forum for North Yorkshire County Council
Local Access Forum for York
Local Flood Authorities
Local Government Association
Long Eaton Natural History Society
Long Whatton and Diseworth Parish Council
Lowton Business Park
Manchester Airport Group
Manchester City Council
Mansfield and Ashfield Clinical Commissioning Group
Marr Parish Council
Measham Parish Council
Mencap
Mexborough & District Heritage Society
Micklefield Parish Council
Mid Cheshire Health Trust
Midlands Connect
Minerals Planning Authority

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Ministry of Defence
Morton Parish Council
National Association of Areas of Outstanding National Beauty
National Association of Boat Owners
National Cycling Charity
National Farmers Union
National Federation of Bridleways Association
National Forest Company
National Grid Plc
National LGB&T Partnership
National Parks England (Formerly English National Park Authorities Association)
National Police Chiefs Council
National Trust
Natural England
North East Derbyshire Industrial Archaeology Society
Network Rail
Network Rail Infrastructure Limited
Newland-with-Woodhouse Parish Council
Newlife Foundation for Disabled Children
NHS England Midlands and East
NHS England North
NHS Staffs and Surround Clinical Commissioning Group
Normanton Town Council
North Crofton Co-operative Colliery
North Derbyshire Clinical Commissioning Group
North East Derbyshire District Council
North East Health Authority
North East Combined Transport Activists Roundtable
North Lincolnshire Council
North Staffordshire Bridleways Association
North Warwickshire Borough Council
North West Health Authority
North West Leicestershire District Council
North West Transport Activists Roundtable
North Yorkshire County Council
Nostell Estate
Nottingham City Council
Nottingham Express Transit
Nottingham Wildlife Trust
Nottinghamshire and Derbyshire Federation of Small Businesses
Nottinghamshire County Council
Nottinghamshire Wildlife Trust
Nuthall Parish Council

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Official Custodian for Charities
Office of Rail Regulators and Approved Operators
Old Bolsover Town Council
Open Spaces Society
Oulton and Woodlesford Neighbourhood Forum
Packington Parish Council
Peak District National Park Authority
Peaks and Northern Footpaths Society
Peel Ports
Penny Hill Windfarm
Pilsley Parish Council
Pinxton Parish Council
Polesworth Parish Council
Police Federation of England/Wales
Public Health England
Public Health England North West
Public Health England West Midlands
Rail Delivery Group
Rail Forum East Midlands
Rail Freight Group
Rail Future
Railway Heritage Trust
Ramblers
Ramblers Trafford Group
Ramblers West Riding Area
Ramblers Wetherby and District Group
Ratcliffe Coal Power Station
Ratcliffe on Soar Parish Council
Ravenfield Parish Council
RESCUE
Retford & Worksop (Chesterfield Canal) Boat Club Ltd
Ridware History Society
Risley Moss Action Group
Rochdale Borough Council
Rotherham Clinical Commissioning Group
Rotherham Metropolitan Borough Council
Royal Association for Deaf People
Royal Institute of Chartered Surveyors
Royal National Institute of Blind People
Royal Society for the Protection of Birds
RSPB Midlands
RSPB Northern England
Royal Society of Wildlife Trusts

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Royal Town Planning Institute
Rushcliffe Borough Council
Ryhill Parish Council
Sandiacre Parish Council
Sandwell Metropolitan Borough Council
SAVE Britain's Heritage
Saxton-cum-Scarthingwell & Lead Parish Council
Scarcliffe Parish Council
Scope
Scottish Association for Public Transport
Selby District Council
Severn Trent Water Limited
Sharlston Parish Council
Sheffield Area Geology Trust
Sheffield City Region LEP
Sheffield Metropolitan Borough Council
Sherburn in Elmet Parish Council
Shirland & Higham Parish Council
Shropshire Union Canal Society
Sir John Moore Foundation
Society for the Protection of Ancient Buildings
South Hiendley Parish Council
South Kirkby and Moorthorpe Town Council
South Normanton Parish Council
South Staffordshire Water
South Yorkshire Industrial History Society
South Yorkshire Local Nature Partnership
Sports England
Stafford Borough Council
Staffordshire Archaeological and Historical Society
Staffordshire County Council
Stanton by Dale Parish Council
Stapleford Parish Council
Staveley Town Council
Stockport Council
Stoke-on-Trent City Council
Stonewall
Sustrans
Sustrans East Midlands
Sutton cum Duckmanton Parish Council
Swillington Parish Council
Tameside Metropolitan Borough Council
Tame Valley Wetlands Landscape Partnership

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Tamworth Borough Council
TATA Europe
Taylor Business Park
Theatres Trust
The Equality Trust
The Joint Nature Conservation Committee
The Office of Rail Regulators and Approved Operators
The Trents Rivers Trust
The Yarlet Trust
Thoroton Society
Thrumpton Parish Council
Tibshelf Parish Council
Town and Country Planning Association
Towton Parish Council
Trafford Council
Trans Pennine Trail
Transport Focus
Transport for the North
Trent and Mersey Canal Society
Trowell Parish Council
Twentieth Century Society
Twycross Parish Council
UK Coal
UK Fire Service
Ulleskelf Parish Council
United Utilities Water
Universities UK
Vale of York Clinical Commissioning Group
Victorian Society
Wakefield Clinical Commissioning Group
Wakefield District Biodiversity Group
Wales Parish Council
Wallsall Council
Walton Neighbourhood Plan (part of Walton Parish)
Warmfield-cum-Heath Parish Council
Warrington Borough Council
Warwickshire County Council
Water Services Regulation Authority
West Midland Bird Club
West Midlands Combined Authority
West Midlands Health Authority
West Riding Area Countryside Committee Ramblers Association
West Yorkshire Archaeology Advisory Service

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West Yorkshire Combined Authority
Wigan Council
Wildlife Habitat Protection Trust
Wildlife Trust - Cheshire
Wildlife Trust - Derbyshire
Wildlife Trust - Lancashire, Manchester & North Merseyside
Wildlife Trust - Leicestershire and Rutland
Wildlife Trust - Nottinghamshire
Wildlife Trust - Sheffield and Rotherham
Wildlife Trust - Staffordshire
Wildlife Trust - Warwickshire
Wildlife Trust - Yorkshire
Winterset Parish Meeting
Woodland Trust
Working Families
Worthington Parish Council
Yorkshire & The Humber Health Authority
Yorkshire Farming and Wildlife Partnership
Yorkshire Flood & Coastal Committee
Yorkshire Water Services Limited

Annex B – List of consultation respondents

The following table lists those consultees who submitted responses to the draft EIA SMR. Individuals who submitted responses have not been detailed for data protection purposes.

Bramley Parish Council
Oulton & Woodlesford Neighbourhood Forum
Yorkshire Local Council Association - Wakefield Branch
Mexborough and District Heritage Society
Measham Parish Council
Via East Midlands Ltd
Cheshire East Local Access Forum
Doncaster Council -Built & Natural Environment
The Coal Authority
Peak and Northern Footpaths Society
Erewash ramblers
Sheffield and Rotherham Wildlife Trust
Public Health England
Mid Cheshire Against HS2
Ringway Parish Council
Twycross parish council
Peak District National Park Authority
West Yorkshire Archaeology Advisory Service
Sheffield Area Geology Trust
Leeds Local Access Forum
The Inland Waterways Association
Woodland Trust
The National Forest Company
Nottinghamshire County Council
Leicestershire & Rutland Wildlife Trust
Warwickshire County Council
Network Rail
Doncaster Metropolitan Borough Council - Formal Response
Chetwynd: The Toton and Chilwell Neighbourhood Forum
Canal & River Trust
RSPB
Barnsley Metropolitan Borough Council
Chesterfield Canal Trust
Sustrans
Rotherham Metropolitan Borough Council
Forestry Commission England
Nottinghamshire Campaign to Protect Rural England
Cheshire West and Chester Council
Warwickshire Wildlife Trust
Measham, Appleby, Packington & Austrey HS2 Action

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Leeds City Council
Cheshire East Council
City of Wakefield Metropolitan District Council
The National Trust
Trans Pennine Trail Partnership
Wakefield District Local Access Forum
Natural England
Nottinghamshire Area of the Ramblers Association
The Ramblers
Manchester City Council - Environmental Protection
Erewash Borough Council
Warrington Borough Council- Public Health
South Yorkshire Local Nature Partnership
CPRE Lancashire and Cheshire
Highways England
North Yorkshire County Council
Sheffield City Council
Environment Agency
Historic England
Yorkshire Wildlife Trust
MP: Craig Tracey
Derbyshire County Council
Nottinghamshire Wildlife Trust
TEM Property Group
Chesterfield Borough Council
Joint Rural Parishes
High Melton Parish Council
Packington HS2 Response Team
Longdon Parish Council
The Wildlife Trust for Lancashire, Manchester & North Merseyside
North East Derbyshire & Bolsover District Councils
Technical Group Crofton Against HS2
Wimboldsley Community Primary School
Peel Ports Ltd
Trafford Council
North West Leicestershire District Council - Environmental Health
National Farmers Union
The Wildlife Trusts (England)
North West Leicestershire District Council -Formal Response
Individuals (28)

Annex C – Response form

HS2 Phase 2B: Crewe to Manchester and West Midlands to Leeds



Draft Environmental Impact Assessment Scope and Methodology Report Consultation 2017 Response form

This consultation seeks your views on the Government's draft Environmental Impact Assessment (EIA) Scope and Methodology Report, which will inform the way the EIA is carried out.

This consultation will close on Friday 29 September 2017 at 23.45pm.

Please respond to us by one of the methods below:

Online:

<https://ipsos.uk/HS2Phase2bEIASMR>

By email

HS2EIASMRPhase2B@arup.com

By post

Freepost HS2 2B SMR CONSULTATION 2017

HS2 Phase 2B: Draft EIA Scope and Methodology Report Consultation 2017

To prepare for the deposit of a hybrid Bill in Parliament, the Government has commissioned consultants to undertake an EIA and prepare an EIA Report to meet the requirements of Parliamentary Standing Orders. This consultation seeks your views on the draft EIA Scope and Methodology Report for the Phase 2B: Crewe to Manchester and West Midlands to Leeds route, which will inform the way the EIA is carried out.

Please write your response clearly in black ink, within the boxes and, if applicable, attach additional evidence to the response form, clearly stating the question to which it refers.

Confidentiality and data protection

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act (DPA) 1998, and the Environmental Information Regulations 2004).

If you want information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals with, amongst other things, obligations of confidence.

In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, in itself, be regarded as binding on the Department for Transport or HS2 Limited.

The Department for Transport and HS2 Limited will process your personal data in accordance with the DPA 1998, and in the majority of circumstances, this will mean that your personal data will not be disclosed to third parties.

I wish my response to be treated as confidential.
Please write your reasons below.

PART ONE

Information about you

Please provide your name, address and full postcode in the box below. While these details are not compulsory, if you can provide your contact details, these may be used to inform you of the outcomes of the consultation. Please note that your response may be subject to publication or appear in the final report, unless you have requested confidentiality on this form.

Your contact details

First name
Surname
Address
Postcode
Email

Are you responding on behalf of an organisation or group?

Yes	No
-----	----

If yes, state the name of your organisation or group:

--

If you are providing a response on behalf of an organisation or group:

The name and details of the organisation or group may be subject to publication or appear in the final report.

What category of organisation or group are you representing?

Please tick one box that applies.

- Academic (includes universities and other academic institutions)
- Action group (includes rail and action groups specifically campaigning on the high speed rail network proposals)
- Business (local, regional, national or international)
- Elected representative (includes MPs, MEPs, and local councillors)
- Environment, heritage, amenity or community group (includes environmental groups, schools, church groups, residents' associations, recreation groups, rail user groups and other community interest organisations)
- Local government (includes county councils, district councils, parish and town councils and local partnerships)
- Other representative group (includes chambers of commerce, trade unions, political parties and professional bodies)
- Statutory agency
- Real estate, housing associations or property-related organisations
- Transport, infrastructure or utility organisation (includes transport bodies, transport providers, infrastructure providers and utility companies)
- Other
- Prefer not to say

Please tell us whom the organisation or group represents and, where applicable, how you assembled the views of members.

Please write in the box below

PART TWO

Consultation questions

To prepare for the deposit of a hybrid Bill in Parliament the Government has commissioned consultants to undertake an EIA and prepare an EIA Report to meet the requirements of Parliamentary Standing Orders. The draft EIA Scope and Methodology Report, will inform the way the EIA is carried out.

Do you have any comments on the draft EIA Scope and Methodology report?

Please provide as much detail as possible in the box below. Please indicate which section(s) of the SMR your comments relate to.

Please attach additional pages as required.

PART THREE

Submitting your response

Thank you for completing the response form. Please send it to the Freepost address below.

Freepost HS2 2B SMR CONSULTATION 2017

Please note: no additional address information is required and you do not need a stamp.

Or email your response to HS2EIASMRPhase2B@arup.com

The consultation closes on Friday 29 September 2017 at 23.45pm.
Please ensure you send your response by this date.

Please only use the response mechanisms described in this form when responding to this consultation. We cannot guarantee that responses sent to other addresses will be included in this consultation.

HS2 Phase 2B:

Crewe to Manchester and West Midlands to
Leeds

Draft Environmental Impact Assessment
Scope and Methodology Report
Consultation 2017

About you



As part of our commitment to considering diversity in the delivery of HS2 we want to understand who is responding to our consultations.

Information you give us will help us improve future engagement activities.

Please respond to us by one of the methods below:

By email

HS2EIASMRPhase2B@arup.com

By post

Freepost HS2 2B SMR CONSULTATION 2017

This consultation will close on Friday 29 September 2017 at 23.45pm.

Completing this form is voluntary and is not a requirement for your response to be accepted. The form will not be linked to the information you have provided in your response or your name and we won't share the information with anyone else. We will use this information to provide a summary of the types of people who responded to this consultation. This summary will not identify individuals who have provided information.

Please complete the information below and return this form with your response, either by email to HS2EIASMRPhase2B@arup.com or by post, using the Freepost address below.

FREEPOST HS2 2B SMR CONSULTATION 2017

Please note: no additional address information is required and you do not need a stamp.

Q1. How would you describe your national identity?

<input type="checkbox"/> British	<input type="checkbox"/> Scottish	<input type="checkbox"/> Prefer not to say
<input type="checkbox"/> English	<input type="checkbox"/> Welsh	
<input type="checkbox"/> Northern Irish	<input type="checkbox"/> Other (<i>pleasespecify</i>) _____	

Q2. How would you describe your ethnicity?

White

<input type="checkbox"/> English	<input type="checkbox"/> Welsh	<input type="checkbox"/> Scottish
<input type="checkbox"/> Northern Irish	<input type="checkbox"/> British Irish	<input type="checkbox"/> Gypsy or Irish Traveller
<input type="checkbox"/> Other White background (<i>please specify</i>) _____		
<input type="checkbox"/> Prefer not to say		

Mixed /multiple ethnic groups

<input type="checkbox"/> White and Black Caribbean	<input type="checkbox"/> White and Black African	<input type="checkbox"/> White and Asian
<input type="checkbox"/> Any other Mixed/multiple ethnic background (Please specify) _____		

Asian/Asian British

<input type="checkbox"/> Indian	<input type="checkbox"/> Pakistani	<input type="checkbox"/> Bangladeshi
<input type="checkbox"/> Chinese	<input type="checkbox"/> Any other Asian Background (Please specify) _____	

Black/African/Caribbean/Black British

African

Caribbean

Any other Black/African/Caribbean background (*please specify*) _____

Other ethnic background

Arab

Other ethnic background (Please specify)

Prefer not to say

Q3. Do you consider yourself to be a disabled person?

The Equality Act 2010 defines a disabled person as someone with a physical or mental impairment, which has a substantial and long-term adverse effect on the person's ability to carry out normal day-to-day activities.

Yes

No

Prefer not to say

Into which category or categories does your disability fall? (please tick as many as apply)

Hearing impairment

Manual dexterity

Mental ill health

Mobility

Speech impairment

Visual impairment

Learning difficulties (where a person learns in a different way i.e. someone who is dyslexic)

Prefer not to say

Other disability (*please specify*) _____

Q4. Which of the following describes how you think of yourself?

Male

Female

In another way

Prefer not to say

Q5. What is your religion or belief?

Buddhist

Christian

Hindu

Jewish

Muslim

Sikh

Other religion or belief (*please specify*)

No religion or belief _____

Q6. What is your sexual orientation?

- | | | |
|--|--|------------------------------------|
| <input type="checkbox"/> Bisexual | <input type="checkbox"/> Gay man | <input type="checkbox"/> Gay woman |
| <input type="checkbox"/> Heterosexual/straight | <input type="checkbox"/> Prefer not to say | |

Q7. Are you married or in a civil partnership?

- | | | |
|------------------------------|-----------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Prefer not to say |
|------------------------------|-----------------------------|--|

Q8. What is your age?

- | | | |
|--------------------------------|--------------------------------|--|
| <input type="checkbox"/> 16-24 | <input type="checkbox"/> 40-44 | <input type="checkbox"/> 60-64 |
| <input type="checkbox"/> 25-29 | <input type="checkbox"/> 45-49 | <input type="checkbox"/> 65+ |
| <input type="checkbox"/> 30-34 | <input type="checkbox"/> 50-54 | <input type="checkbox"/> Prefer not to say |
| <input type="checkbox"/> 35-39 | <input type="checkbox"/> 55-59 | |

Data Protection

All information supplied will be held by HS2 Ltd and will remain secure and confidential and will not be associated with other details provided in your response. The data will not be passed on to any third parties or used for marketing purposes in accordance with the Data Protection Act 1998.

HS2

www.hs2.org.uk

High Speed Two (HS2) Limited

Two Snowhill,

Snow Hill Queensway,

Birmingham B4 6GA

Freephone: 08081 434 434

Minicom: 08081 456 472

Email: HS2enquiries@hs2.org.uk