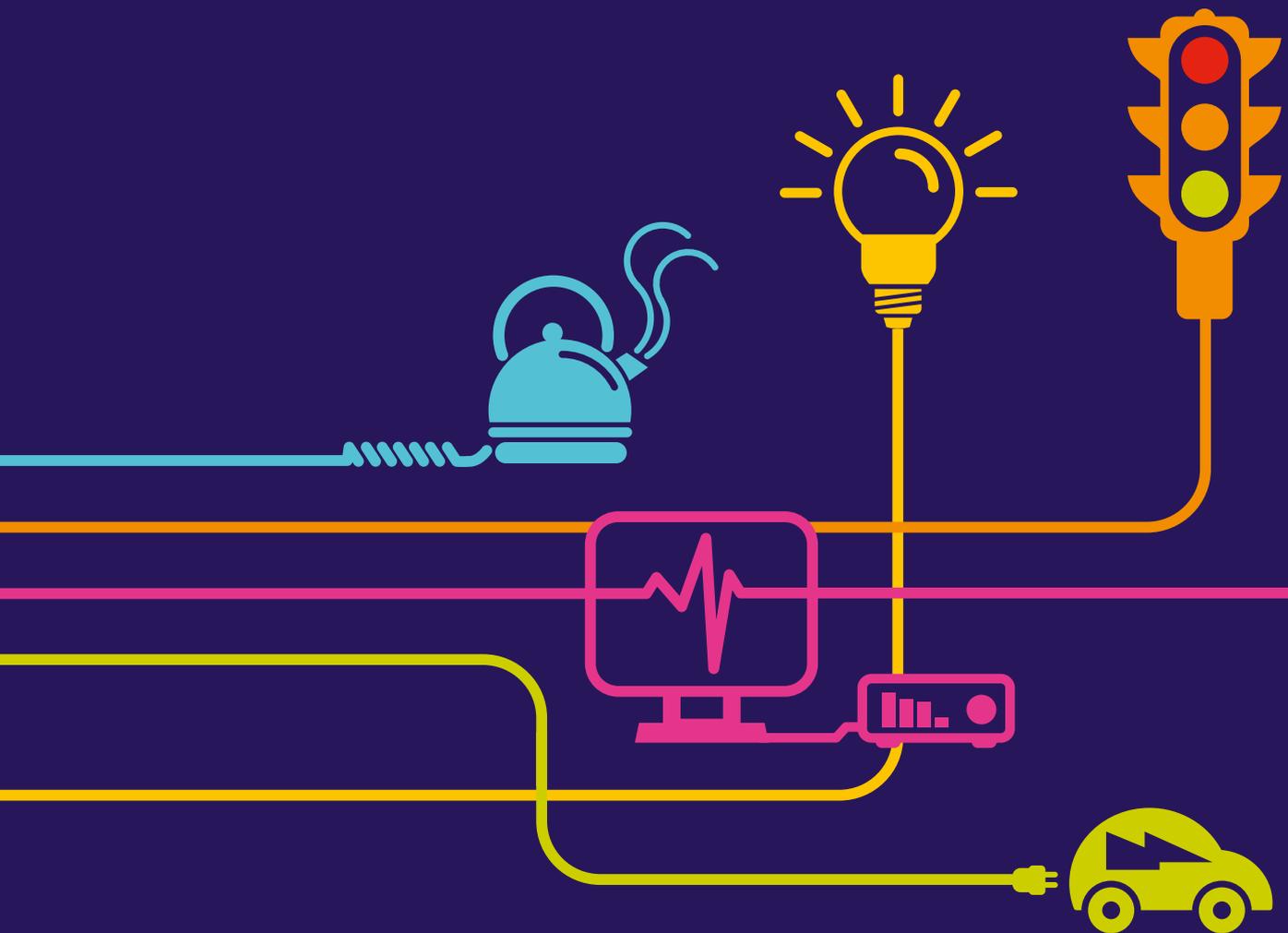


Applicants Response to points raised in 3rd Party Submissions at Deadline 3

National Grid (Richborough Connection Project) Order



Richborough Connection Project

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Applicants Response to points raised in 3rd Party Submissions at Deadline 3

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1. INTRODUCTION

1.1 Purpose and Structure of this document

- 1.1.1 Although not provided for in the examination timetable, this document provides the comments of the applicant, National Grid Electricity Transmission plc (National Grid) in response to Interested Parties submissions to the Planning Inspectorate (PINS) at Deadline 3 (4th August 2016). National Grid has submitted this document in the belief that it will clarify matters currently before the Examining Authority.
- 1.1.2 National Grid has chosen to respond to written submissions made by PILs at Deadlines 2 and 3 by letter directly to them in the first instance. These letters summarise National Grid's current position on the points raised and the issues will be the subject of further discussion and negotiation with PILs and their agents in the coming weeks.
- 1.1.3 National Grid has not provided comments on all Interested Party submissions. However, for the avoidance of doubt, where National Grid has chosen not to comment on matters raised by Interested Parties this is not an indication that National Grid agrees with the point or comment raised or opinion expressed.
- 1.1.4 Please note that National Grid's response to South East Water's submission is contained within **Doc 8.29**, submitted at Deadline 4.

2. APPLICANTS RESPONSE TO KENT COUNTY COUNCIL COMMENTS ON Q1.7.4

2.1 Introduction

- 2.1.1 The first point in Kent County Council's Deadline 3 submission letter (**REP3-040**) relates to the response made by National Grid to Q1.7.4 on the landscape assessments in the Connection Options Report (**Doc 7.7**), which they state are at variance with the Environmental Statement (ES) (**Doc 5.2**).
- 2.1.2 In response the comments made, National Grid has produced a briefing note (LA08) which was issued to KCC for comment on the 31st August. A copy of the draft briefing note is provided in **Appendix A** of this document.

3. APPLICANTS RESPONSE TO BROAD OAK PRESERVATION SOCIETY

3.1 Introduction

3.1.1 National Grid has reviewed the Broad Oak Preservation Society's submission document reference REP3-043 (Broad Oak Preservation Society - Written summary of the oral representations made at the Open Floor Hearing on 27 July 2016) and its response is detailed below.

Item 1

'One of the Applicant's experts referred to the adverse impact of the visual perception of the proposed OHL from Broad Oak as being "moderate", but there was no explanation given as to how this assessment had been arrived at. Given the proximity of the proposed new OHL to Broad Oak village, we cannot understand what it would take for the visual impact to be assessed as major or severe. We have not been able to find the Applicant's methodology in the myriad of documents which the Applicant has submitted.'

3.1.2 National Grid acknowledges Broad Oak Preservation Society's concerns in relation to visual impacts and welcomes the opportunity to explain the method and justify the assessment.

3.1.3 The basis on which visual impact is determined is not simply a matter of the distance between the receptor and the proposed development.

3.1.4 A wide range of factors are considered when assessing visual impact (effect) and the significance of those effects. Significance is derived from a combination of the sensitivity of a receptor (itself derived from the value of a view and a visual receptor's susceptibility to change) and the magnitude of effect experienced by that receptor.

3.1.5 The method adopted for visual impact assessment is set out in Visual Methodology **Doc 5.4.7A**. The method is based on Guidelines for Landscape and Visual Impact Assessment, 3rd edition (GLVIA3). This is the latest edition of the Landscape Institute's and the Institute of Environmental Management and Assessment's best practice guidance. The method which has been used was discussed and agreed with the local councils (**Doc 8.4.6** Statement of Common Ground between National Grid and the Councils, Table 4.1 Matters Agreed, SoCG ID 4.3.1).

3.1.6 The distance between a visual receptor and the proposed development is only one of the factors which influences the magnitude of effect (refer to paragraphs 7.3.14 to 7.3.20 in the Visual Methodology, **Doc 5.4.7A**). Other factors taken into consideration are:

- The scale of the change to the view, including the proportion of the view occupied by the proposed development, and whether there are any existing similar features in the view;
- The nature of the view in relation to any filtering or screening of a view by vegetation, landform or buildings;
- The presence of any background, such as landform or vegetation;
- The angle of the view, i.e. direct, oblique, looking up at or down to; and

- The duration of the proposed change; short, medium or long term.

- 3.1.7 The presence of existing overhead lines in the view influences the scale of the change to the view and is one of the factors taken into consideration in assessing the magnitude of effect. The presence of existing overhead lines in views to the west of Broad Oak tends to reduce the magnitude of effect, compared to views to the north of the village where no overhead lines are present. Where the existing 400kV overhead line (ZV Route) passes to the west of Broad Oak, the closest pylon is approximately 300m west of Shalloak Road, near Lynne Wood. There are other 400kV pylons at a distance of 580m west of Goose Farm, 495m west of Mayton Cottages (on Heel Lane) and 900m west of Nook Farm (on Mayton Lane). The existing 132kV overhead line (PKC Route) lies between Broad Oak and the 400kV overhead line.
- 3.1.8 The method describes magnitude of effect criteria in **Table 7A.3** in the Visual Methodology, **Doc 5.4.7A**. A moderate magnitude of effect arises when there is a partial alteration to the existing view and/or the introduction of prominent elements in the view. Typically this would be where a development would be seen in views for the long or medium term where a moderate proportion of the view is affected. A high magnitude of effect arises where there is a large alteration to the existing view and/or the introduction of elements considered totally uncharacteristic in the view. Typically this would be where a development would be seen in in close proximity with a large proportion of the view affected with little or no filtering or backgrounding and there would be a great scale of change from the present situation for the long or medium term.
- 3.1.9 The method also describes typical criteria associated with significance of effect in **Table 7A.4**. An effect of moderate significance is generally recorded where a moderate magnitude of effect is experienced by a receptor of high or medium sensitivity. For example where part of a development is visible in a view from a private property for the long or medium term, but where it does not comprise the whole view. An effect of major significance is generally recorded where a high magnitude of effect occurs to a high or medium sensitivity receptor, for example where an unobstructed view of development would represent a large part of the view from a recreational footpath where views are presently open and of high scenic quality.
- 3.1.10 The Environmental Statement (ES) concludes that moderate adverse visual effects would be experienced by visual receptors of high and medium sensitivity (residential properties on the north edge of Broad Oak and users of recreational footpaths within the Broad Oak valley) where a partial alteration of the view arises from the introduction of new infrastructure into the view in the medium and long term. To the west of Broad Oak, where overhead line infrastructure is already present the magnitude of effect is slightly reduced.
- 3.1.11 The visual effects reported in the Broad Oak area are described in the ES at Section 7.9 (specifically paragraphs 7.9.53 to 7.9.95 and in the summary Table 7.9 (**Doc 5.2**).

Item 2

'Much of the discussion at the ISH concerned the under-planting which would be permitted beneath the proposed new line and whether this would provide adequate screening for the new river corridor where SEW propose to divert the Sarre-Penn stream. The Applicant produced pretty diagrams showing mature trees with nicely

rounded crowns beneath the proposed OHL. Local experience suggests this is not how the land beneath power lines is managed in practice. From what can be seen around Canterbury the electricity distributors follow a “scorched earth” policy, as shown in the following photographs.

Figs. 1 & 2 show a 400kV line owned by the Applicant running north-west from Canterbury towards Cleve Hill. This line is the one which can be seen in the distance from Broad Oak, which terminates in the Canterbury North sub-station close to the point visited during the ASI on 25 July. The photographs were taken from a public footpath where the line passes through Clowes Wood near Chestfield, about 3 miles north of Canterbury. Clowes Wood is part of the historically important Blean Woods, which are in part ancient woodland. The woods comprise a mixture of broadleaf and evergreen trees, and are managed by the Forestry Commission. As can be seen nothing apart from grass is allowed to grow beneath the line.’

3.1.12 With regard to the final sentence of the 2nd paragraph of item 2 and the statement “As can be seen nothing apart from grass is allowed to grow beneath the line”, National Grid responds as follows:

- a) As Broad Oak Preservation Society correctly point out, the woodland at Clowes Wood shown in figures 1 and 2, is managed by the Forestry Commission. National Grid can confirm that an initial managed and controlled 5 year management programme was put in place by National Grid on behalf of the Forestry Commission to create a butterfly corridor under the overhead line route. National Grid’s five year programme ran until 2007, since when the Forestry Commission has managed the cutting and clearing of the wood beneath the line under its own management plan.
- b) National Grid works with individual landowners wherever possible and in the case of the planting beneath the proposed route, National Grid responded at Deadline 3 to the following points raised by South East Water (SEW) in the “Applicant’s Responses to South East Water Written Representation submitted for Deadline 2 (**Doc 8.19**), which it will work with SEW as the landowner to put in place and manage.

4.14 National Grid’s ‘Approach to Planting for Broad Oak Reservoir and the Richborough Connection project’ is set out in the Mott MacDonald report (Appendix F of Doc 8.2.1) at Appendix D. The potential species mix proposed, in combination with appropriate woodland management, would result in a connected and structurally diverse woodland habitat where the two projects interact and, rather than a “high canopy” woodland habitat alone, would result in greater dependant faunal and floral diversity; species biodiversity is directly linked to that of increased habitat complexity. The benefits of such structural diversity is a core tenet of ecology and is supported by many examples in available best practice guidance and research. National Grid’s proposal would meet National Policy Planning Framework (Section 11, paragraph 109) aims in respect of diversification and net gain, as well as ensuring no increase in fragmentation and the connectivity for the SSSI as required by Natural England.

4.15 A Natural England research paper looking specifically into the management of woodland for the benefit of bat species⁴, stresses the need

for a variety of ages and structures for bat foraging and roosting. In addition to the availability of older woodland habitat such as located in the Blean woodland complex in the vicinity of the proposed reservoir and the RCP, rivers, clearings and glades are essential foraging habitats in woods, as are staggered, south-facing exposed edges of the forest. Woodland areas with complex vegetation structure and abundant water are key areas for bats. The management and maintenance cycles of the proposed woodland mitigation planting underneath the overhead line would create this diversity of tree spacing, crown density, increased surface area of edge habitat and woodland floor light conditions and correspondingly, provide opportunity through a diverse range of microhabitats for small mammals, reptiles, breeding birds and a range of invertebrates. Thus this would meet SEW's requirement in relation to protection and enhancement of the SSSI.

4.16 *Selective coppicing would also maximise the potential for colonisation by other cited species from the West Blean and Thornden Woods SSSI, meeting Natural England's requirement to be effectively connected to this mitigation area, such as heath fritillary and breeding birds which would be able to use this as both a wildlife corridor and a functional foraging resource, rather than simply for commuting. Furthermore, this woodland type would also result in complete connectivity under the line which bats, along with other key species identified in the area such as dormice, would utilise. As stated in Section 7.5 of the SEW Stage 1b report, "Species such as bats and dormice have strong associations with linear habitats ranging in height from hedgerows to fully mature woodland notably commuting bats and dormice." Dormice, amongst other mobile species, do rely on linear habitats, and a "high canopy woodland" could provide habitat suitable for commuting, but it is not a habitat preference, and would not be optimal for territory establishment. In order to flourish, such species require a layered, complex habitat including suitable shrubs for foraging. Blackthorn, buckthorn, hawthorn, hazel and catkins (hazel and willow) in particular are key resources across the active season, all present in the proposed planting mix. Through the process of coppicing, the production of the flowering and fruiting bodies are earlier and more prolific than those non managed species such as "high canopy" trees. As well as the production of hazel nuts, coppiced hazel stools and their associated microhabitats are a favoured hibernation habitat.*

4. APPLICANTS RESPONSE TO NETHERGONG CAMPING

4.1 Introduction

4.1.1 At Deadline 3, Nethergong Camping made an additional submission, PINS ref AS-008 with regards to flooding, which stated;

“Following the open floor hearing and awaiting NG’s response to my concerns about potential flooding to our house, I have been studying the Flood Risk Assessment done by National Grid and note that Puddledock House, our house, is not listed as a potential receptor for flooding. This is probably because it wasn’t built at the time of the Risk Assessment. However, I believe it is a high risk receptor according to the plan on P117 of the assessment.”

National Grid’s Response

4.1.2 The interested party is correct; their house was not listed as a potential receptor in National Grid’s Flood Risk Assessment (FRA) because it had not yet been constructed. They are also correct that the house, as a residential property, would likely have been classified as a high risk receptor, much like the nearby Nethergong Farm¹ (also located on Nethergong Hill).

4.1.3 A number of receptors, of various land uses and vulnerability classifications, were identified in the FRA in the vicinity of Nethergong Hill, including Nethergong Campsite. The new dwelling (Puddledock House) is located within the boundary of the Nethergong Campsite receptor (Receptor number 14 in Figure 8d (p115) and ANNEX 13A.3 (p180) of the FRA (**Doc 5.4.13A**)). Location specific flood risk mitigation measures were identified at this location to ensure no increase in risk to any of the third party receptors along Nethergong Hill, as discussed in Section 6.3 of the FRA and indicated in Figure 9c. Irrespective of the specific land use (campsite, farmhouse, dwelling), the assessment and conclusions set out in the FRA for all of the locations along Nethergong Hill remain valid.

¹ Residential dwellings are classified as ‘More Vulnerable’ development according to the Planning Practice Guidance that accompanies the NPPF – Nethergong Campsite was already identified as a ‘More Vulnerable’ land use in ANNEX 13A.3 of the FRA.

Appendix A

National Grid Briefing Note in response to the
Deadline 3 Submission from Kent County
Council (NG Ref LA08)

Authors Anna Manthorpe/Nicola Hancock. Caroline Gettinby and Tom Popplewell

Date 30th August 2016

Kent County Council (KCC) 4th August 2016 response to Examining Authority (ExA) at Deadline 3 Comments on responses to ExA first written questions and responses where appropriate to Hearing Actions Points List published by ExA on 01 August 2016.

KCC's first point in their Deadline 3 letter relates to the response made by National Grid to Q1.7.4 landscape assessments in the Connection Options Report (**Doc 7.7**), which they state are at variance with the Environmental Statement (ES).

In the response letter KCC state that *"The County Council considers that the National Grid response does not accord with the landscape methodology explained in the COR. The COR is a 'Stage 3' document dealing with 'detailed routeing and siting' (paragraph 2.9, page 4) and consequently the methodology, whilst not as detailed as the ES, indicates that a more comprehensive and independent assessment of landscape character was carried out than is indicated in answer to Q1.7.4"*.

The response letter goes on to state that *"The COR methodology is set at Appendix 3. It states that, "Desk based studies have been supplemented by field assessment of both landscape character and assessment of existing features which shape the character of the landscape" (paragraph 3, page 239). It also states Paragraph 7 (page 240) explains how sensitivity and susceptibility to the particular development has been assessed: "The baseline conditions also consider landscape sensitivity, which considers the susceptibility to change of the landscape from the proposed development without suffering detrimental effects on its character. This can vary depending on the existing land use, pattern and scale of the landscape, visual enclosure or openness and the landscape's value. In accordance with paragraph 5.39 of GLVIA3 landscape sensitivity combines judgements of the landscape's susceptibility to change to the type of development proposed (i.e. the degree to which the landscape can accommodate the proposed change without suffering detrimental effects on its character), and the value attached to the landscape."*

Paragraph 6 of the response letter states that *"KCC contends that the COR methodology is sound. Consequently the lower sensitivities of landscape receptors reported in the ES (which are not agreed by the County Council) have yet to be adequately explained by National Grid"*.

National Grid's Response

The applicant acknowledges KCC's concerns in relation to the methodology of the COR and its soundness, and welcomes the opportunity to explain the method and justify the assessments in both the COR and ES.

Chapter 2 of the ES (**Doc 5.2**) at para 2.4.51 states *"The Preferred Connection Option and Route Corridor Study (Doc 7.6) included a commitment that further investigations would inform decisions on final pylon type and positions"*. In the applicant's answer to Q1.7.4 it was explained that the level of detail of assessment at the COR stage (**Doc 7.7**) is not as detailed as that of an ES. Further, the technical assessment for landscape (and visual effects) in the COR appraisal process does not assess a defined, fixed proposed development but considers options and variables for both pylon types and routes. Para 5.1 of the COR states *"The purpose of this report is to consider alternative alignments for an overhead line between Richborough and Canterbury within the preferred route corridor. It is also to consider the most appropriate pylon design (whether steel lattice or T-ylon) for different Sections of the proposed route and whether any use of underground cable technology is appropriate."*

The methodology provided at Appendix C of the COR (**Doc 7.7**) (not Appendix 3) is entitled 'Outline Environmental Methodologies' and is an outline method to reflect the level of detail of the COR. It is

acknowledged that at para 3 the method for Landscape states “*Desk based studies have been supplemented by field assessment of both landscape character and assessment of existing features which shape the character of the landscape.*” Field assessments were carried out prior to the production of the COR in May 2014 and the consideration of value, susceptibility and sensitivity of the landscape have been carried out in accordance with the methodology provided in the COR.

As the COR has not been undertaken for environmental impact assessment (EIA) purposes it is not required to establish whether the effects arising are, or are not significant. The emphasis on likely ‘significant effects’ in LVIA undertaken for the ES stresses the need for an approach that is proportional to the scale of the project that is being assessed and the nature of its likely effects. The same principle (focussing on a proportional approach) also applies to appraisals of landscape and visual impacts outside the formal requirements of EIA.

The written answer provided for question 1.7.4 sets out that a high landscape value was ascribed to Section C as part of the COR landscape appraisal and this was based on published landscape character assessment (*Canterbury City Council’s Landscape Character Biodiversity Appraisal of the Canterbury District (LCBA)*). Furthermore, with regards to landscape value of the Ash Level this was recorded as having a medium-high value in the COR (Para 10.21) as this was based on the published character assessments, not an independent assessment by the applicant. The method for the COR appraisal was based on GLVIA3 but does not provide a critique or interrogation of the published landscape character appraisals. The values ascribed in the COR in this instance are taken from published documentation. Field work was undertaken as part of the baseline landscape character assessment but generally this was to provide a descriptive commentary on landscape character and to consider if there were any notable anomalies between the landscape characters described in published assessments and that experienced in the field.

When considering the value of the landscapes for the ES, it is important that the assessment has in mind the range of potentially affected landscapes. Consideration has been given to potential effects on the Kent Downs Area of Outstanding Natural Beauty and that has been ascribed high value at a national scale. To make the assessment clear and useful to the decision-maker there needs to be a distinction between this landscape and others of value. That has required some descriptive change between the reports in the COR and the ES.

The judgements on the sensitivity of landscapes set out in the published character assessments are ‘generic’ and are not specific to any type of development. It is clear from GLVIA3 that in considering the sensitivity of a landscape, it is important to state and consider to what that landscape is sensitive. That is not undertaken in the published assessments and it is anticipated that they would tend towards overstatement of sensitivity so that it is clear, for example, that the assessor has considered them sensitive to extensive, tall and dense urban built form.

Table 6A.2 (**Doc 5.4.6A**) which supports the Landscape Assessment in the ES (**Doc 5.4.6A**) provides landscape sensitivity criteria which has attuned the ‘typical’ criteria for sensitivity based on the proposed development and it is why this differs from the COR table provided at paragraph 7. The ES Landscape Methodology (**Doc 5.4.6A**) provides further explanatory text at paragraph 6.4.8 (in consideration of paragraph 5.46 of GLVIA3) with regards to the complex relationships between the value of a landscape and that landscape’s susceptibility to change. Landscape value (including landscape quality) has been assessed as part of establishing the baseline environment for the landscape assessment both for the COR and ES. Table 6.9 Chapter 6 (**Doc 5.2**) (Landscape sensitivity of identified receptors) provides the value for all identified receptors including those with low sensitivity (landscape with a low susceptibility to change and which has a local value).

GLVIA3 requires that the ‘susceptibility to change’ of the landscape from the Proposed Development is assessed, and presented as part of the assessment of effects. The susceptibility to change of a landscape as defined by GLVIA3 refers to the ability of the landscape to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation. Judgments on landscape value and susceptibility to change are combined to determine landscape sensitivity are provided in the COR and ES. Landscape sensitivity and the judgement on the magnitude of effect on landscape are combined to determine the significance of the effect within the ES.

As provided in the written answer to Q1.7.4 the assessment undertaken for the ES **Chapter 6 (Doc 5.2)** was a more challenging and detailed assessment drawing upon further baseline field survey work and a refined route and pylon type proposed for each section of the route. The method was discussed and agreed with the local councils, (**Doc 8.4.6** SoCG between National Grid and the Councils, Table 4.1 Matters Agreed, SoCG ID 4.3.1). In the ES **Chapter 6 (Doc 5.2)** the findings of the published assessments were critiqued and reviewed further as a result of a Proposed Development following discussion and guidance from KCC's landscape officer (Councils' SoCG Table 4.1 SoCG ID 4.3.2). The Landscape Assessment **Chapter 6 (Doc 5.2)** draws conclusions on the value and evaluation of the landscape based on GLVIA3 and the ES landscape method (**Doc 5.4.6A**).

The applicant's response to Q1.7.4 addresses the value assessed for Area of High Landscape Values (AHLVs), Special Landscape Areas (SLAs) and the Ash Level in both the COR and ES. Table 6.9 Chapter 6 (**Doc 5.2.6**) (Landscape sensitivity of identified receptors) provides the value for these, identifying the AHLVs, SLAs and the Ash Levels as having local value. Para 6.2.7 (**Doc 5.4.6A**) states *"Highly valued landscapes are typically identified by national level designations such as National Parks and AONB. Landscapes of local value may be identified by designations in the local planning process such as Areas of Great Landscape Value and Special Landscape Areas although Planning Policy Statement 7 (replaced by the NPPF) advised against local designations and advocated a 'criteria-based' approach to landscape protection and enhancement."*

GLVIA 3 para 5.46 explains that there can be a complex relationship between the value attached to landscape receptors and their susceptibility to change which are especially important when considering change within or close to a designated landscape and provides the example *"an internationally, nationally or locally valued landscape does not automatically, or by definition, have a high susceptibility to all types of change."*

Chapter 6 of the ES (**Doc 5.2.6**) at Para 6.11.1 **Chapter 6** explains that *"The AHLV is not of County significance but is designated for its distinctive high quality landscape which is locally important. It has low sensitivity to the proposed 400kV overhead line due to the landscape being heavily influenced by built form, industry and the presence of existing overhead lines along with screening and backgrounding by development."* The answer provided at 1.7.4 explains that it is recognised that the AHLV and SLA are highly valued locally.

The applicant trusts that this further explanation is helpful to KCC and the ExA and reassures them that the assessment methods applied for the COR and ES are appropriate, proportionate to the stages of assessment and consistent with GLVIA3.

In its submission at Deadline 3 KCC also provided comments in response to Action 40 on the Concept Mitigation Plans, draft requirement 8 which were submitted at deadline 2. National Grid has replicated the Council's comments and added a response to these in the table below.

KCC Comment	National Grid response
<p>3.1 Species selection</p> <p>The use of standardised species mixes appears to be rather 'broad brush' in its approach and it is not clear how the replacement planting and seed mixtures relate to the plant assemblages that are removed. Whilst KCC understands that the applicant would like to avoid a complex planting plan for each plot, it would wish to see consideration of a greater range of species mixes to more fully reflect the different types of woodlands and hedgerows resulting from different soil and moisture regimes across the substantial length of the route. Reference to the National Vegetation Classification (NVC) of existing vegetation may be helpful in tailoring suitable species mixes more precisely across the scheme. A useful reference is <i>Woodland Creation for Wildlife: A Guide to Creating New Woodland for Wildlife in Kent and East Sussex</i>, David Blakesley, Aug 2006 (this is now out of print unfortunately but is available to purchase online). <i>English Woodland Grant Scheme, Operations Note 4, National Vegetation Classification (NVC) 2008</i> and <i>DMRB Volume 10 The Good Roads Guide</i> are also recommended. The use of species appropriate to the local environment will also reinforce landscape character. It would also be helpful if the standard descriptions could be explained in more detail, especially to emphasise the primary and/ or secondary purposes of the planting. For instance 'Wet Woodland' may have a primary ecological function and a secondary screening function. 'Standard Coppice' may aim to recreate existing woodland of high nature conservation value and the rationale behind this should be further explained.</p>	<p>The purpose of the Concept Mitigation Planting Plan (Doc 8.11) is to demonstrate that all mitigation planting that is described in the Environmental Statement can be secured and delivered. The detail of the planting would be secured by DCO Requirement 8, which ensures that a scheme for the planting of trees, groups of trees, woodlands and hedgerows ... has been submitted to and approved by the relevant planning authority, at which point variations in species mix for reasons of local suitability will be considered.</p> <p>The planting mixes include a range of species that have been recorded by the baseline tree and biodiversity surveys. In general, planting is conceived to either replace species on a like-for-like basis or to increase the diversity of species. It should be noted that planting as mitigation for the removal of trees addresses the removal of individual trees and tree groups as well as woodland. For this reason, NVC is less relevant than would be the case where replacement of woodland habitats was the primary objective because mitigation tree planting includes other objectives such as visual amenity, screening and protected species specific mitigation.</p> <p>The mitigation planting principles adopted make provision for a normal rate of tree failure within each feature over time and/or management by thinning. The diversity of species proposed will allow for those best suited to each location to respond favourably to growing conditions as opposed to reliance on a prescriptive system of specification. This approach will also simplify implementation of planting and the procurement of large volumes of nursery stock and thereby give greater certainty and consistency of outcome.</p> <p>In respect of the grassland mixes locally appropriate palettes have been suggested. In areas where temporary seeding would be undertaken and where a quick effect to ensure cover develops to maximise the mitigation function, a higher than normal seeding rate is proposed. The species suggested are regular member of the local grassland communities reflecting those identified during the phase 1 surveys, non-invasive and reasonably easy to establish. The mixes reflect the habitats that re being removed, or an enhanced version of them in order to bring specific</p>

KCC Comment	National Grid response
	<p>benefits required to offset assessed effects (as indeed the dormouse tree/scrub planting mix is intended to).</p> <p>In respect of both the LWS and the riparian seeding, these are suggested mixes only, and do include reference to locally appropriate NVC categories. The palettes are those as detailed in Doc 5.4.6D, and as stated therein, should be bespoke, and to be confirmed at the time of works. The detail of the planting would be secured by DCO Requirement 8, at which point variations in species mix for reasons of local suitability will be considered.</p> <p>It is not possible to state the ‘primary purpose’ of each planting mix. Mitigation is not construed according only to the proposed species mix. The mitigation objectives pursued by each instance of proposed planting may variously include arboricultural, landscape, biodiversity and heritage considerations but it is not possible to extricate these objectives since many overlap. In some cases, such as the ‘Dormouse Mix’, the reason for including the species mix is evident but that does not discount the function of such planting in terms of mitigation for other types of effects. For example, an instance of proposed planting required as arboricultural mitigation may be capable of being delivered with a range of different species, but the actual choice of those species may be influenced by the presence of dormice.</p>
<p>Mix A</p> <p>Standard Coppice</p> <p>Whilst the use of a coppiced mixture is welcomed, are agreements in place to ensure the active management of the woodland on a coppice rotation?</p> <p>KCC questions the rationale behind the use of Wych Elm in the light of Dutch Elm Disease (unless this relates to the use of potential disease resistant micropropagated material such as the experimental project led by The Conservation Foundation <i>The Great British Elm Experiment</i> which would be welcomed and would be worthy of additional long term monitoring).</p> <p>There is a large proportion of high forest tree species and consideration should be given to increasing the proportion of understorey species to avoid the need for extensive thinning. For instance refer to <i>HA 56/92: The Good Roads Guide: New Roads: Planting, Vegetation and Soils – 12.13 Planting and Thinning Grids</i>.</p> <p>A wide grid spacing for trees with random groups of understorey species (e.g.</p>	<p>The ‘Standard Coppice’ mix contains broadleaved species that are capable of management either by coppicing or as high canopy woodland. Within easements, National Grid will be responsible for maintaining clearances between vegetation and conductors. Species have been proposed to allow for this to be done by coppicing and National Grid is seeking rights to require such works to be undertaken in the locations identified. In areas of tree planting that are outside of operational easements, National Grid will be liable for the establishment and maintenance of new trees for a period of 5 years. After this period, the landowners would be responsible for ongoing tree management.</p> <p>Wych elm is an important native species. It remains widespread in the south of England, mostly in the form of remnant stumps with sucker growth and vigorous regeneration of small trees within hedgerow. Coppicing produces crops of young shoots with a smooth immature bark pattern, which is less attractive to <i>Scolytus scolytus</i> beetles and are therefore less likely to be affected by Dutch Elm Disease. Wych elm is therefore capable of forming a component of planting mixes where coppicing is the intended form of management. Woodland trees which are not coppiced</p>

KCC Comment	National Grid response
<p>groups of 10-20 of each species) may be a better approach than 'random allocation' especially in extensive areas of woodland. E.g. a 1:8 tree/ shrub mix on a 1.5m grid is recommended as low maintenance as this does not require early thinning.</p>	<p>typically sprout from the base following infection and ultimately form a natural 'coppice' stool as part of the woodland understorey. The provenance and variety of trees used would be determined at the detailed planting design stage and could include resistant clones (see Requirement 8 draft DCO (Doc 2.1(B))).</p> <p>The proportion of high forestry species reflects the simple coppice regime that is proposed, in which there would not be a high canopy and understorey structure. Comments relating to planting structure and thinning are noted and the broad concepts promoted are accepted as sound. However, there are no instances within the proposed development in which such principles can be applied meaningfully. This is because the size of planted areas are too small to accommodate such an approach, which is designed for larger blocks of planting. It would only be possible to establish the type of planting arrangement described in areas of woodland plantation that will not be coppiced (i.e. those that are not beneath the proposed line); and which will not be planted to replicate existing vegetation, such as orchard; and which are not narrow linear belt planting such as those along a road, in which such a system would leave gaps. Once such areas are discounted, the largest single area of tree planting proposed within the Order limit is at Group G40. Using the spacing and design type suggested by KCC, this area would comprise only 45 trees. It is not considered that any benefits to future management would be realised at this scale and a change in approach would therefore be unjustified. Furthermore, a more open planting structure could delay or obstruct the delivery of other objectives such as screening functions.</p>
<p>Mix B</p> <p>Standard Slow Growing Should 'Standard Slow Growing' be 'Standard Low Growing'?</p> <p>This appears as a rather random mixture of shrubs and smaller trees and does not reflect NVC principles reflecting different habitats.</p> <p>Yew, spindle and privet are only recommended on chalk soils. Spindle is not recommended adjacent to arable fields as it is the alternate host of the black bean aphid. Rowan is only found in very limited areas of Kent and is doubtfully native</p>	<p>Species mix B is conceived as being suitable for use beneath conductors where management by pruning is preferred to maintain vegetation beneath the line or where management may be unnecessary if smaller species are used. It is also used to replace removed scrub communities or outgrown hedgerow features that cannot be retained. There would be no particular benefit to changing the name of the species mix.</p> <p>Comments relating to species preferences are noted and would be addressed at the detailed planting design stage. Yew, spindle and privet are not restricted to chalk soils and are all capable of growing on other soil types.</p>
<p>Mix C - Dormouse Habitat</p> <p>A matrix layout for trees and understorey species may be a better approach than 'random allocation' especially in</p>	<p>Due note is made of the comments in respect of spindle and its position in any planting regime can be accounted for accordingly.</p> <p>The mix selected is locally appropriate, and one with a</p>

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<p>extensive areas. Spindle is not recommended adjacent to arable fields as it is the alternate host of the black bean aphid. Consideration should be given to adjusting the mixture to accord with soil types, for example to differentiate between neutral and chalk soils if necessary.</p>	<p>specific range of benefits to dormouse, providing seasonal foraging from spring through to autumn, which is of particular importance for dormouse. This mix has been included in the European Protected Species Licence application, which has already been issued with a Letter of No Impediment by Natural England. Any changes to the mix would be subject to an amended application and approval.</p> <p>With reference to a potential matrix layout, please refer to Mix A comments above. There is a limit to the structural complexity that can be delivered in the proposed mitigation planting areas because they are mostly relatively small. 'Random allocation' should not be interpreted as meaning 'diffuse' species distribution and clustering of species within planting areas can certainly be accommodated. This will be a function of detailed planting design and also of the interpretation of plans on site by a competent and experienced contractor.</p>
<p>Mix D – Wetland Mix</p> <p>This would be better titled 'Wet Woodland'. Consideration of the relevant NVC recommendations in <i>English Woodland Grant Scheme, Operations Note 4</i> and other recommended texts would be helpful</p>	<p>There would be no particular benefit to amending the name of this species mix. It describes tree planting only and to characterise this as woodland could be misleading. This mix is used in five instances (at G172, G177, G369, G414 and G416) none of which are currently woodland. With the exception of G416, all are small and therefore not capable of becoming woodland. G416 (0.23ha) is beneath the line and would therefore be coppiced so the range of supported species and ground flora may ultimately differ between this area and those subject to different management regimes elsewhere.</p>
<p>Mix E</p> <p>High Value Mix</p> <p>It is not clear what 'High Value' means in this context.</p> <p>Again it is recommended that the species mixture and layout is reviewed against the recommended guidance and tailored to the site environment.</p>	<p>The 'High Value' mix includes a greater diversity of species than other mixes, including some which are less common such as wild service tree. It also includes a proportion of trees that would be planted as larger specimens in order to deliver a greater immediate visual impact.</p> <p>Comments on detailed design are noted.</p>
<p>Mix F</p> <p>High Impact Mix (Screening)</p> <p><i>Natural England Technical Information Note TIN053 Guidance on dealing with the changing distribution of tree species</i> discusses <i>Quercus ilex</i> (Holly oak) and states that, 'Where it does not currently occur, or is present as only a few trees, it is probably best, if practical, to try to keep this species out'.</p> <p>It is recommended that the species mixture and layout is reviewed to achieve screening (random allocation may not be appropriate</p>	<p>Comments on the use of holm oak are noted. However, this species has a useful function for screening that is not easily replicated by other species in terms of year round screening, growth rate and stature. In consideration of the concerns over rapid proliferation of the species, species mix F is only proposed in two locations where screening is a priority. In one of these (G54), a maximum of 9 trees would be planted, of which no more than one would be a holm oak under the concept scheme. The only significant proposed planting of holm oak is to the south of Tile Lodge (G150). Screening is a priority at</p>

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<p>because large areas of lower growing hazel and elder may need to be more uniformly distributed between trees to give the necessary continuity of screening at high and low levels. Species should also be tailored to the local environment.</p>	<p>this location in order to mitigate visual and heritage effects.</p>
<p>Mix G</p> <p>Standard Hedge Yew is rarely found as a hedgerow species, even on chalk, and may not be appropriate adjoining pasture.</p> <p>Wych Elm – see comments on Mix A. Species should also be tailored to the local environment and consideration given to whether a random allocation is appropriate.</p>	<p>(Duplicate points already covered).</p>
<p>Mix H</p> <p>Hedgerow Trees Species should also be tailored to the local environment. Spacing should not be too uniform but should achieve a natural un planned look. KCC would suggest a spacing of 5-20m, averaging 10m (the indicative plans show trees too uniformly planted).</p> <p>Where trees are to be planted within existing hedgerows, unless they are within an existing significant gap, it may be difficult to excavate a suitable pit for an extra-heavy standard tree without damaging existing plants, and the new plants may be very vulnerable to drought from root competition. It would be helpful if National Grid could give some examples of how this operation has been carried out on similar schemes.</p>	<p>Tree locations shown on the concept plans are not prescriptive and remain subject to detailed planting design. The purpose of the plans is to demonstrate that the quantity and function of mitigation planting can be secured by National Grid within the Order limits. Comments relating to spacing are noted and are consistent with guidance set out in Doc 5.11, paragraph 3.38 and 3.39. This species mix is proposed in response to a necessary reduction in height of certain hedges and it is possible that such works will create small gaps that can be exploited for planting. A competent contractor will be required to interpret plans in consideration of constraints on the ground and to avoid planting where this will prejudice the continued function and growth of the parent hedge.</p> <p>Planting immediately adjacent to hedges may also be suitable in some cases. The reduction in hedgerow height and subsequent tree planting is proposed as an alternative to hedgerow removal and replacement, which would otherwise be necessary. It is therefore considered that some compromise on the specification of planting pits is justifiable in the context of increased hedgerow retention, maturity and habitat functions that is facilitated by National Grid's proposed approach.</p>
<p>Mix K - Wildflower Seeding (Reptiles)</p> <p>The seeding rate appears high for wild flower/ grass mix (normally it is around 4-6 g/m²). KCC would like to see a justification for the species selection and how this relates to the local environmental conditions.</p>	<p>In respect of long term grassland creation and management, the rates would normally be lower. However, this seeding would be part of a temporary and more extensive habitat creation works for reptiles that would be translocated as part of the proposed development. The seed mix has been selected to reflect more species rich grassland in the locality, and to be of high value for invertebrates and thus for reptiles moving into this area. The higher than normal sowing rate reflects the need for quick establishment given the temporary nature of the mitigation, to ensure</p>

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	the wildflowers “take” quickly (rather than build up over several years), the rate of flower and grass seed are higher. An annual review of this Habitat Management Plan will be undertaken in conjunction with the ecologist carrying out the reptile monitoring. Where appropriate, the ecologist will provide advice on ways in which the management regime may need to be amended.
<p>Mix L - Local Wildlife Site Grassland Reseeding</p> <p>As above.</p>	<p>Please see generic response above to 3.1.</p> <p>To ensure cover develops to maximise the mitigation function, a higher than normal seeding rate is proposed. The species suggested are regular member of the local grassland communities reflecting those identified during the phase 1 surveys (predominantly neutral, slightly damp species) and/or listed in the site citation. The mix selected reflects that present in the more diverse sections of the LWS grasslands.</p>
<p>Mix M - Riparian Strip Grassland Reseeding</p> <p>As above</p>	<p>Please see generic response above to 3.1.</p> <p>To ensure cover develops to maximise the mitigation function, a higher than normal seeding rate is proposed. The species suggested are regular member of the local grassland communities reflecting those identified during the phase 1 surveys, however a final bespoke mix would be detailed following monitoring of the effects of proposed works.</p>
<p>Mix N - Instant Hedging</p>	<p>Mix N is to maintain connectivity of vegetation used by commuting bats during the construction period. The hedges will be placed as shown in Document 8.11, Figure 11.1 during construction only and some may remain in troughs or planting bags, depending on the duration of works at that location. The species present in the hedging used will be partly dependent on availability but a range of native mixes are commercially grown. ‘Mixed native’ hedgerows as specified tend to include a substantial hawthorn component but the precise species composition is not critical to the delivery of mitigation in this case because the hedgerow would be temporary.</p>
<p>Mix Q - Dormouse Enrichment</p> <p>Whilst the species are appropriate as dormouse habitat, species should also be reviewed against the local environment and consideration given to appropriate grouping of species rather than a random allocation. Spindle is not recommended adjacent to arable fields as it is the alternate host of the black bean aphid.</p>	<p>See response to Mix C (Dormouse) above.</p>
<p>Figures – presentation</p> <p>Whilst the intention to differentiate categories of land within the Order Limits (such as</p>	<p>The Concept Mitigation Planting Plan (Doc 8.11) is not designed to illustrate construction elements. It is not</p>

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<p>access routes, undergrounding etc.) should be helpful, in reality this proves very difficult to read and the overlapping tones are particularly confusing.</p> <p>KCC would prefer to see the layout of pylon bases/arms, overhead conductors, underground cables and other permanent works outlined in a thin dark line on the plans. Pylons should be numbered.</p> <p>It would also be useful to have the house numbering and road names superimposed (e.g. from OS 1:1250/1:2500 mapping).</p> <p>The planting key would be clearer if it were divided into categories such as (a)proposed replacement planting, (b)vegetation removed and (c) existing vegetation to remain</p> <p>The descriptions are difficult to understand without reference to the text of the report, especially for the general public. For example ‘Hedgerow <i>removed (planting in situ)</i>’ might be better expressed as ‘Replacement <i>hedge planting</i>’.</p> <p>The text to each planting plot could usefully include the descriptions in Table 3.1 (expanded to consider above comments) rather than just the species mix alphabetical key. For example say ‘<i>Species Mix X: Coppice with standards on neutral soils</i>’.</p> <p>The report indicates that in many cases the replacement planting also mitigates ecological, landscape, visual and heritage impacts. It would be useful if the drawings could indicate the mitigating function of each plot (as is commonly done on strategic highway schemes). This would help to establish how adverse impacts are actually mitigated by the landscape proposals.</p>	<p>relevant to the interpretation of mitigation planting design to ascertain, for example, why an existing tree must be removed. Neither is it always possible to determine a single cause for tree removal and not all mitigation planting is in response to removal of existing vegetation or construction elements that are local to the planting. Construction elements are indicated only to give context. Furthermore the colouring of Figures 11.1 is designed to focus attention on proposed planting; existing vegetation that would remain is therefore also shown in grey to provide context to what could otherwise appear as isolated or unconnected areas of planting. Existing vegetation is clearly labelled in all keys.</p> <p>In the vast majority of instances, tree removal and tree planting are at the same location and this could therefore not be illustrated by adjusting the key. Tree removal (and management) is shown within Arboricultural Impact Assessment (Doc 5.4.3I, Figure 3I.2).</p> <p>The categories presented in the key of Figure 11.1 are driven by and to maintain consistency with the application documents (particularly the Arboricultural Impact Assessment), wherein a distinction is drawn between those removed features for which mitigation planting will be delivered at the same location and those for which this is prevented by the proposed development (i.e. <i>in-situ</i> and <i>ex-situ</i> planting). Changing this descriptor to the simpler suggested ‘<i>Replacement hedge planting</i>’ would lose an important distinction (i.e. whether a hedge currently exists at this location). There is a trade-off between accessibility and resolution of description and National Grid is satisfied that it is necessary to reflect the development and intention of the mitigation planting design, which can be fully understood with reference to supporting documents.</p> <p>It is not possible to subdivide mitigation planting by purpose because many instances of planting have multiple functions. For example the location of planting may be driven by one objective and the species mix by another. The development of the Concept Planting Scheme was iterative, beginning with the replacement of removed vegetation as close to the original location as possible with effects that remained unmitigated by this approach then addressed by the addition of further planting. The replacement of trees as described by the Arboricultural Impact Assessment was used as the starting point for mitigation design because Arboricultural Assessment contains a rudimentary assessment of the ecological, landscape, visual and heritage functions of trees as described in Doc 5.4.3I, Section 1.2 and tree</p>

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	replacement is therefore likely to form an important component of mitigation for other effects. This process is described in more detail in Doc 8.11, Section 2.