



NORTH WEST COAST CONNECTIONS

VOLUME 1 JOINT CONSULTATION RESPONSE EXECUTIVE SUMMARY

Final Submission

Prepared on behalf of the PPA Group Authorities

27th January 2017



Document control

Document:	VOLUME 1 JOINT CONSULTATION RESPONSE EXECUTIVE SUMMARY	
Project:	North West Coast Connections	
Client:	PPA Group Authorities	
Job Number:	A072895	
File Origin:	RevB	
Date:	21 December 2016	
Prepared by:	Checked by:	Approved By:
Peter Shannon	Graham Hale	Cumbria County Council
Description of revision: Internal Comments		
Revision:	RevD – Submission Draft	
Date:	6 January 2017	
Prepared by:	Checked by:	Approved By:
Peter Shannon	John Leggett	John Leggett
Description of revision: Final PPA Group Comments		
Revision:	RevF – Final Submission	
Date:	26 January 2017	
Prepared by:	Checked by:	Approved By:
Peter Shannon	Graham Hale	Graham Hale
Description of revision: Additional PPA Group Comments		



Contents

- 1.0 Introduction 1
- 2.0 Cross-Cutting Issues 3
 - 2.1 Consultation..... 3
 - 2.2 Lack of Information, Premature Assessment and Mitigation..... 3
 - 2.3 Cumulative Impact 5
 - 2.4 Optioneering Methodology 5
 - 2.5 Duddon Estuary..... 7
 - 2.6 Electricity North West Infrastructure and Energy Security 8
- 3.0 Landscape and Visual Impact..... 10
 - 3.1 Mitigation Methodology10
 - 3.2 Landscape Setting10
 - 3.3 Cumulative Impact12
 - 3.4 Landscape Assessment13
- 4.0 Socio Economic..... 14
 - 4.1 Skills and Supply Chain14
 - 4.2 Visitor Economy15
 - 4.3 Employment Land and Local Plan Allocations.....18
- 5.0 Tunnel Head Impacts at Roosecote and Middleton..... 20
 - 5.1 Impact Assessment20
 - 5.2 Workforce Accommodation20
 - 5.3 Traffic Impacts.....21
 - 5.4 Waste Management.....21
- 6.0 Transport and Connectivity 23
 - 6.1 Transport Strategy23



- 6.2 Impact Mitigation24
- 6.3 Transport Assessment.....27
- 7.0 Environment..... 29
 - 7.1 World Heritage Sites29
 - 7.2 Archaeology30
 - 7.3 Heritage Assets and Cultural Landscape.....30
 - 7.4 Ecology.....32
- 8.0 Consultation Conclusions and Next Steps 34



Chapter 1 - Introduction

1.0 Introduction

- 1.1.1 This document has been prepared in response to National Grid's consultation on the North West Coast Connections (NWCC) project, carried out between 28th October 2016 and 6th January 2017.
- 1.1.2 The NWCC project, whilst delivering substantial investment to the UK's electrical transmission system and supporting national energy security, will also have a significant impact on the local environment and communities of Cumbria and North Lancashire. This response has been prepared by WYG on behalf of all the local authorities (Allerdale Borough Council, Barrow Borough Council, Carlisle City Council, Copeland Borough Council, Cumbria County Council, Lake District National Park Authority, Lancashire County Council, Lancaster City Council and South Lakeland District Council), that will be impacted by the NWCC project. The local authorities work together through a Planning Performance Agreement (PPA) with National Grid and are collectively referred to as the PPA Group.
- 1.1.3 Whilst the PPA Group recognises the national benefits, there are substantive omissions in the NWCC project proposals and therefore there are concerns that the local impacts would not be appropriately mitigated. The local environmental, physical and human effects during construction and operation need to be carefully considered. The route passes through and impacts on areas that are important to communities and are areas of national, and international, landscape and ecological significance. Infrastructure improvements will be required to enable delivery of the NWCC project as well as enabling local workers and businesses to support and benefit from this development.
- 1.1.4 Investment in the local infrastructure is vital to ensure there is no detrimental impact to the social, economic and environmental fabric of the host communities and the infrastructure should be strengthened for current and future generations. In this way, the PPA Group expects that where mitigation is provided it can be planned in order to also deliver longer term legacy benefits for the local communities in recognition of having to accommodate a substantial piece of infrastructure in the national interest.
- 1.1.5 The PPA Group has provided detailed constructive comments during previous public consultations on the NWCC Strategic Options Report (2012), NWCC Route Corridor Studies (2014) and has provided informal ongoing feedback on methodology and project design. The PPA Group welcomes National Grid's commitment to meaningful engagement on project design including technology choices and the significant mitigation that is required.



Chapter 1 - Introduction

- 1.1.6 The Group is pleased the informal engagement undertaken thus far has resulted in substantial and much needed mitigation proposals, particularly in respect of undergrounding through the Lake District National Park (LDNP). However, the PPA Group are concerned that many of the issues previously raised have still not been addressed in National Grid's proposed route alignment.
- 1.1.7 Continued engagement with National Grid is required on the issues raised in the PPA Group's response to ensure the risks to the project are minimised through the Development Consent Order (DCO) process. The Group wants to continue to engage in positive dialogue to enable delivery of the NWCC project in a way that meets both national and local needs, and is consistent with legislation and government policy. The response is based on the level of detail available in the consultation materials and what the PPA Group understands of the NWCC project at a point in time. Therefore, the PPA Group reserve the right to revisit the assessments and conclusions drawn as the project develops.
- 1.1.8 This document establishes the key concerns from the review of the proposed design and the detail contained within the Preliminary Environmental Information (PEI) Report and consultation material. The PPA Group expects these issues to be addressed before the submission of the DCO application. This Executive Summary should be read in conjunction with the Volume 2 Joint Consultation Response – Final Submission prepared following detailed review of the consultation materials.



2.0 Cross-Cutting Issues

2.1.0 There are a number of issues identified by the PPA Group that are project-wide, relating to the consultation process, the lack of information on substantive topics and approach to mitigation assessment. These cross cutting issues are highlighted below and subsequent sections of this Executive Summary relate to the different topic areas.

2.1 Consultation

2.1.1 Significant concern is expressed by the PPA Group that there has not been sufficient time for stakeholders and communities to respond appropriately to the consultation, given the complexity and extent of the consultation documentation and the timing of the consultation over a recognised national festive holiday period. The time available has compromised the ability of the PPA Group to make a fully informed and considered response. Additionally, the PPA Group is concerned that these issues have also affected the involvement of other stakeholders and members of the community.

2.1.2 National Grid is only consulting on its preferred route and has failed to adequately consult on other route and technology options. In particular, there are alternative route options around the head of the Duddon Estuary that should have been consulted upon. There has also been significant community interest in the alternative options for the Duddon area and therefore the PPA Group is disappointed that the options have not received more prominence in consultation materials and a consolidated consideration in the PEI Report.

2.1.3 The PPA Group was not able to complete its full technical response within the consultation period and agreed with National Grid that this would be submitted by 27th January 2017.

2.2 Lack of Information, Premature Assessment and Mitigation

2.2.1 A common theme running through all of the PEI Report is that there has been a lack of sufficient detail to assess the potential effects and evaluate the proposed mitigation. At this stage, the PPA Group does not consider this acceptable. Furthermore, there is significant concern that in a number of topics such as ecology, it appears that incomplete information has been used to scope in or out various designated sites, habitats and species.

2.2.2 There are significant gaps as well as assumptions that have been made across a number of topic study areas. If this approach were to be carried through to the final Environmental Statement submitted with the DCO, it could be a serious risk to the project and lead to



Chapter 2 - Cross-Cutting Issues

incorrect assessments and the wrong conclusions on the likely effects of the development upon the local area. This is a major concern.

- 2.2.3 Furthermore, significant gaps in the PEI assessment and lack of detail of the impacts of the proposals have in many cases led to a failure to provide explanation of mitigation measures. This is a major cross cutting issue across the consultation topics, in particular transport, ecology, socio-economics, historic environment, landscape and relating to the tunnel heads. The gaps in information and lack of consultation on mitigation proposals are not consistent with national guidance.
- 2.2.4 The definition of 'Preliminary Environmental Information' in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 is the information "*which ... is reasonably required to assess the environmental effects of the development (and of any associated development)*". Part 1 of Schedule 4 expressly requires "*a description of the aspects of the environment likely to be significantly affected by the development*", and "*a description of the measures envisaged to prevent reduce and where possible offset any significant adverse effects on the environment*". Furthermore, the Planning Inspectorate's advice note 7, suggests that the PEI document should enable "*consultees (both specialist and non-specialist) to understand the likely environmental effects of the proposed development and [help] to inform their consultation responses on the proposed development.*"
- 2.2.5 In light of this guidance, the PPA Group believes there is insufficient information being provided regarding both certain impacts and mitigation measures in the PEI. Together with the absence of the relevant schedules to the draft DCO this means that the PPA Group is not able at this stage to properly understand the likely impacts of the proposed scheme or how those impacts can be mitigated.
- 2.2.6 There are also some key assessments that are required by legislation and/or policy/best practice which should have been undertaken to inform the NWCC project proposals, but which are absent from the consultation material, including:
- Habitats Regulation Assessment;
 - Historic Impact Assessment;
 - Health Impact Assessment; and
 - Transport Assessment.



Chapter 2 - Cross-Cutting Issues

2.2.7 The PPA Group has major concerns about the substance, evidence and level of detail provided within the consultation documentation. The PPA Group consider that as a result, communities and other stakeholders have not had a genuinely informed opportunity to comment on and help shape key aspects of the proposals, including mitigation measures prior to the submission of the DCO. As such, it is strongly suggested that National Grid should undertake a further consultation exercise so that the concerns expressed in the PPA Group consultation response can be adequately addressed.

2.3 Cumulative Impact

2.3.1 Although the PEI includes a chapter setting out the framework for the consideration of cumulative impact, the PPA Group is very concerned that there is consistently a lack of detail around cumulative assessment in each of the topic areas. It is noted that at this stage a full Cumulative Effects Assessment has not been undertaken. The PPA Group is greatly concerned regarding the lack of detail at this stage as this assessment is vital to designing the NWCC project and providing appropriate mitigation.

2.3.2 The cumulative effects are crucial to understand the overall impacts of the project especially when considering the NWCC project with existing infrastructure and alongside a number of other major projects that are proposed in Cumbria and North Lancashire. This is compounded by the already constrained transport infrastructure and significant areas of national, and international, landscape and ecological significance. In particular, the PPA Group is greatly concerned that consideration of the cumulative impacts of the NWCC project during construction and operation, together with the proposed Moorside project have not been adequately progressed, especially in relation to landscape and transport impacts. The PPA Group suggests that further consultation is required to adequately address this significant concern.

2.4 Optioneering Methodology

2.4.1 The PPA Group has previously raised concerns in relation to the Options Appraisal of Alternative Technologies (OAAT) methodology. The PPA Group maintains its position that the threshold of 'Particularly Significant' in National Grid's OAAT methodology has set an artificially high bar for the establishment of 'Focus Areas' for mitigation. It is only these 'Focus Areas' that are assessed for mitigation and other areas where 'significant' impacts are measured are not considered in this process. This does not allow for full assessment of



Chapter 2 - Cross-Cutting Issues

mitigation options, and is not consistent with the universally applied EIA Regulations approach of implementing mitigation for 'significant' impacts.

- 2.4.2 The OAAT methodology is not in accordance with current guidance set by the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment (Edition 3) (GLVIA3). There is concern that whilst 'significant' effects would be measured in the Environmental Statement, it is not clear as to why areas within the Draft Order Limits and beyond have not been considered for appropriate mitigation where there are significant effects. The approach is not robust and accountable. In light of the outstanding uncertainties within the methodology, which have the potential to introduce inaccuracies within the process, the PPA Group feels this methodology in its current form is flawed and requires revision to ensure mitigation in areas of 'significant' effect is adequately assessed.
- 2.4.3 The PPA Group has consistently asked for mitigation to be considered along the entire route of the project, and therefore is concerned and disappointed that by the PEI stage this has still not be undertaken. It is essential that an assessment of mitigation requirements for the entire route and ancillary proposals is undertaken as part of the Environmental Statement and ahead of the DCO submission. This is a requirement of the EIA Regulations and guidance.
- 2.4.4 In determining preferred options, cost incorrectly appears to have been the key factor in National Grid's decision making on many of the options and designs that are proposed for consultation. However, decisions on the requirement for measures such as alternative options or technologies should be determined by policy rather than cost, and this principle should be applied to the NWCC project.
- 2.4.5 The PPA Group is concerned about the basis for estimating costs of complex works, especially given the early stage of certain options and the absence of detail on environmental conditions and constraints, and how this has influenced the optioneering methodology and assessment process. Where cost is specified in the option reports, the explanation is limited and not transparent. This largely invalidates the comparison and evaluation of options and is not a valid factor in determining the most appropriate form of mitigation. The PPA Group is very concerned that despite the inconsistent and inadequate provision of costs across the set of options, National Grid has already indicated its conclusions on options for the Duddon by selecting the proposed pylon route, and has dismissed alternative options.



Chapter 2 - Cross-Cutting Issues

- 2.4.6 Furthermore, these views are reinforced by Ofgem’s concerns stated in North West Coast Connections – Consultation on the Project’s Initial Needs Case and Suitability for tendering (Ofgem 2016). Within this consultation document Ofgem question some of the costs of the alternative options and conclude that the decision between the proposed route and a potential option that avoids going round the head of the Duddon is finely balanced. Additionally, it is stated that if costs escalate then there is a real risk that another option would be better value for money for energy consumers.
- 2.4.7 The PPA Group acknowledges the NWCC project will help deliver a significant proportion of national energy requirements, and therefore is a significant benefit to the UK. However, the benefit comes at a significant cost and harm to local communities in terms of significant environmental and economic impacts of NWCC in Cumbria and North Lancashire. This must be considered when developing an appropriate final design and the extent of mitigation and compensation for the impacts of NWCC.

2.5 Duddon Estuary

- 2.5.1 The PPA Group has previously recommended that a tunnel beneath the Duddon Estuary is the only acceptable route in order to avoid major adverse impacts, particularly at the Foxfield Ridge, the Duddon Mosses SAC, plus the wider landscape setting of the Lake District National Park.
- 2.5.2 This would also avoid significant visual, landscape and community impacts of the proposals in the vicinity of Foxfield, The Green, Kirkby in Furness and Beckside and further south.
- 2.5.3 The PPA Group maintains that National Grid’s proposed over-head route is unacceptable given the major (and unmitigated) adverse impacts. After considering the proposed route and information presented by National Grid in the PEI Report, the PPA Group challenges the conclusions and strongly recommends that an alternative option that avoids going round the Duddon Estuary is essential.
- 2.5.4 The PPA Group support National Grid’s conclusion in the appraisal of the Duddon Tunnel option would have lower environmental impacts than using overhead line around the Duddon (paragraph 8.4.1 Volume 2.8.5). As is set out in paragraph 2.4.4 above, the case for the additional cost of all of the alternative options that avoids going round the Duddon Estuary has not been demonstrated. Therefore, the PPA Group challenges the conclusion that these costs will be significantly higher than the proposed route costs without such detailed costing evidence.



Chapter 2 - Cross-Cutting Issues

- 2.5.5 The proposal to leave further assessment of impacts at the head of the Duddon to the Environmental Statement is not helpful to reaching a suitable design. The PPA Group has raised this route section as being a key issue since the Route Corridor Studies Consultation (2014). It is essential that National Grid continue to work on finding a suitable and low impact route and technology choice for this section ahead of the Environmental Statement submission, as part of considering options for the head of the Duddon, Duddon Mosses SAC and estuary. The impacts on the LDNP setting affecting the enjoyment of the LDNP landscapes and special qualities are relevant and must be included in the impact assessment.
- 2.5.6 National Grid's appraisal of the Head of Duddon Alignment Options (Volume 2.8.6) fails to state that the landscapes affected by the development at the head of the Duddon are within the setting of the LDNP and within the Landscape of County Importance (Copeland), and therefore a 'valued landscape' in terms of national planning guidance. This is a major omission. Additionally, the design assumption that the options considered for the head for the Duddon should only include overhead line options is flawed and unjustified. The PPA Group has repeatedly asked for all potential options, including use of underground technology, to be considered in the LDNP and its setting – which includes the head of the Duddon. It is considered that this is another major omission in the optioneering approach in the PEI.
- 2.5.7 The PPA Group welcomes continued engagement by National Grid and the opportunity for collaboration. If another option can be developed that demonstrates that technological and environmental challenges can be addressed, the PPA Group recommends that this should be appropriately considered by National Grid, in consultation with all stakeholders.
- 2.5.8 Whilst we acknowledge that designing a route crossing the Duddon Estuary is challenging and may be costly, it is vital that the appropriate design and mitigation is provided. This will help to ensure that the significant impacts of the proposed NWCC project are properly addressed, thereby helping to de-risk the project through the DCO process and increase delivery certainty.

2.6 Electricity North West Infrastructure and Energy Security

- 2.6.1 The PPA Group is concerned that the current proposals for the new 400kV network and the associated changes to local Electricity North West (ENW) infrastructure do not adequately address issues of security of supply for specific communities and the provision of additional



Chapter 2 - Cross-Cutting Issues

capacity to meet the needs of new users and producers. This is a significant issue in many areas along the route and especially around Millom and Bootle. The situation has been further exacerbated by the recent decision by the developers of Haverigg Wind Farm to withdraw from their connection agreement with ENW. This removes the need for a substation in the area and the permanent need for the NWCC 132kV trident wood pole overhead line.

- 2.6.2 The PPA Group expect the final design of the NWCC to be revised when changes occur in other inter-related projects. In addressing these specific changes related to the Millom substation the PPA Group consider that the final design should include proposals which resolve these issues for specific communities along the route. The PPA Group would welcome the opportunity for further dialogue with National Grid regarding the design of NWCC project and associated ENW infrastructure, and how this can address capacity concerns.
- 2.6.3 Further opportunities for rationalisation of existing wirescapes need to be considered especially where there are significant cumulative impacts of proposed and existing pylons and other existing vertical infrastructure.



3.0 Landscape and Visual Impact

3.1.1 The PPA Group supports the proposed undergrounding through the LDNP in order to mitigate the potential for significant landscape impacts on a national asset. However, the PPA Group challenges the decision by National Grid to not mitigate landscape and visual impacts affecting specific sections of the proposed project through changes to the NWCC proposed route, design and technology choice. There is a lack of mitigation of landscape and visual impacts affecting protected landscapes, particularly the setting of the LDNP and Solway Coast Area of Outstanding Natural Beauty (AONB).

3.1 Mitigation Methodology

3.1.1 As highlighted in Section 2.4, the approach taken by National Grid fails to consider appropriate mitigation measures as part of the design process.

3.1.2 The approach taken relates to the OAAT which has been used to determine when significant impacts require consideration of mitigation. Despite prolonged discussion with the PPA Group in earlier stages of the project design over the flaws in this methodology, National Grid has continued to use this within the PEI. Serious concerns expressed previously do not appear to have been addressed, nor have they informed the design and mitigation process. This has resulted in a flawed selection of Areas of Likely Significant Effect and 'Focus Areas' for mitigation within the PEI.

3.1.3 It is considered that the basis for impact appraisal in the OAAT methodology falsely raises the bar for determining implementation of mitigation measures. As a result National Grid's proposals only implement mitigation measures when impacts are considered to be 'Particularly Significant'. The use of 'Particularly Significant' as a trigger for mitigation is inappropriate, and the PPA Group considers that it is essential that National Grid implement mitigation to reduce other significant impacts that are likely to result from the proposals.

3.2 Landscape Setting

3.2.1 National Grid has failed to conserve and enhance the special qualities of the LDNP and Solway Coast AONB in relation to their settings. There is particular concern with the approach taken in relation to:

- Tallentire to Aspatria (subsection B3);
- Aspatria to Wigton (subsection C1);



Chapter 3 - Landscape and Visual Impact

- Wigton to Harker (subsection C2);
- Seascale to Drigg across Wasdale to the High Fells (subsection D1 - D1 Moorside to Waberthwaite);
- The Whicham Valley (subsection E1 - Silecroft to Arnaby); and
- The Duddon estuary and mosses and Foxfield Ridge (subsection E2 - Arnaby to Lindal in Furness)

3.2.2 The PPA Group considers the assessment of impacts on receptors ('people') experiencing the National Park from within its setting to be flawed. The following statement in the PEI, Vol 2.8 Chapter 8 page 513, fails to recognise that visitors' understanding and enjoyment of the National Park includes their appreciation of its special qualities from within the setting;

*"This section provides a description of the landscape receptors that are consistent with the purposes of designation of the LDNP. **Receptors outside the LDNP are not considered by the appraisal, as effects upon these receptors would not affect the natural beauty, wildlife and cultural heritage of these areas or affect the understanding and enjoyment of the special qualities of those areas by the public (our emphasis)**"*

3.2.3 This assumption is based on flawed interpretation of national policy (National Policy Statement EN-1 paragraph 5.9.12) and guidance for designated landscapes. It is not consistent with the extensive precedent of previous planning cases or the approach to designated landscape protection taken by local planning authorities, National Grid and others, both along the project route and elsewhere in the UK.

3.2.4 National Grid has taken a selective approach to National Policy Statement EN-1 and the need to consider the landscape setting of protected areas. National Grid has interpreted impacts on the setting of the protected areas only where it affects receptors within the areas looking out beyond its boundary, and not impacts on receptors beyond the boundary looking into the protected areas. Additionally, the impacts on gateways to the protected areas that have important views into the protected area should also be considered. These all form part of the landscape setting both of the protected assets themselves, and of the NWCC Project and should therefore be assessed in relation to the full range of special qualities of the LDNP and Solway Coast AONB.

3.2.5 Many examples are available both within Cumbria and elsewhere in the UK where impacts on the setting to protected areas are normally considered for landscape and visual receptors both within the setting, as well as within the protected area.



Chapter 3 - Landscape and Visual Impact

- 3.2.6 National Grid's lack of regard to impacts on the setting of the designated landscapes and effective consideration of mitigation of these could put them at risk of failing to undertake their duties under Section 62 of the Environment Act 1995.
- 3.2.7 In addition to the issues relating to the setting of national landscape designations, it is also considered that insufficient evidence has been provided in any assessment of any potential sites of 'valued landscape' outside these designations, in the context of Para 109 of the National Planning Policy Framework.

3.3 Cumulative Impact

- 3.3.1 The National Grid proposals fail to mitigate substantial cumulative landscape and visual impacts arising from the use of pylons and overhead cables, substations, cable sealing end compounds/platforms, other associated structures and the 132kV trident pole line. The PPA Group is particularly concerned about this approach in relation to areas in sub-sections:
- Whicham Valley (subsection - E1 Silecroft to Arnaby); and
 - Duddon Estuary and Kirkby in Furness (subsection E2 - Arnaby to Lindal in Furness).
- 3.3.2 There is a lack of mitigation of cumulative impacts arising from adjacent existing 132kV lines, particularly:
- Near Carlisle, particularly Rockcliffe;
 - Around the substation East of Workington;
 - Following the 132kV corridor from Dearham to Carlisle;
 - East of Whitehaven;
 - Beckermeth; and
 - The Furness peninsula, particularly Ireleth and Dalton-in-Furness.
- 3.3.3 Additionally, the PPA Group also have a number of other local concerns regarding the cumulative impact of NWCC both alone and with existing vertical infrastructure in the area. These are detailed in committee reports, also submitted as part of the consultation response. Appropriate mitigation will also be required to address these local adverse impacts.
- 3.3.4 The cumulative impacts of the NWCC project at Moorside have not been adequately addressed. In particular, the new nuclear power station will result in substantial earthworks, structures and resulting elevated mounds. The cumulative impacts of the NWCC development and these substantial landscape features must be properly assessed and



Chapter 3 - Landscape and Visual Impact

appropriate mitigation will be required. As such the potential for undergrounding of overhead lines should be considered in order to mitigate the cumulative impact, particularly for the adjacent villages.

- 3.3.5 National Grid has failed to carry out a preliminary cumulative impact assessment and has not used the recently revised Cumulative Impact of Vertical Infrastructure (CIVI) tool. A failure to consider the cumulative impacts of a development at this stage could have resulted in the omission of significant impacts identified arising from the proposal and the need to consider alternative technology or routing as mitigation. The PPA Group therefore considers the assessment of cumulative impacts during construction and operation to be inadequate.

3.4 Landscape Assessment

- 3.4.1 The PEI does not adequately address all anticipated landscape and visual effects of the proposed development. The assessment is inconsistent and incomplete. There is a significant lack of information, visualisations and lack of narrative around judgements.
- 3.4.2 The landscape assessment is not consistent with national guidance (GLVIA3) and fails to fully consider the Lake District and Cumbria landscape character assessments in a consistent way. It fails to consider the flow of landscape character and relationship between each assessment throughout the route.
- 3.4.3 The PPA Group is concerned that the impacts of the proposal have been prejudged, and that the conclusions reached in the assessment are not based on a thorough understanding of the issues affecting the route. There is a distinct lack of the use of materials that would normally be used to understand the full range of impacts of all elements of the proposal. These include the limited number of viewpoints being assessed, insufficient photomontage and a lack of wireframes. The PPA Group considers that National Grid has failed to consider the full extent of the individual and sequential impacts on visual receptors (residents and visitors) travelling through the landscape and experiencing the linear development.



4.0 Socio Economic

4.1.0 As a nationally significant infrastructure project, NWCC will bring significant benefits to the UK, while also resulting in significant impacts on the local communities in Cumbria and North Lancashire. The PPA Group considers that there is an imbalance between the national benefits and the benefits to local communities. Currently there is more harm than benefits to local communities. There will inevitably be impacts on the local economy and on local communities, both negative and positive, and National Grid has a duty to ensure the adverse impacts are properly identified in the PEI and appropriately mitigated. The PPA Group do not consider that the current PEI Report provides sufficient detail to be able to assess the impacts and the associated mitigation measures. Where possible mitigation should be such that it delivers a lasting legacy benefit.

4.1 Skills and Supply Chain

4.1.1 The PPA Group is broadly supportive of the initial Employment and Skills Framework that has been included within the consultation material. However, the lack of detail around skills and supply chain initiatives and the specific interventions that will be delivered to meet the objectives in the initial Employment and Skills Framework, means that the PPA Group is not satisfied that the impacts will be appropriately mitigated.

4.1.2 The PPA Group consider that it is in the interests of National Grid and the local economy for the skills to be locally available and for the businesses to be equipped to become part of the supply chain. National Grid's commitment to secure 20% as a minimum of the workforce from the local labour is welcomed and there are aspirations for this to be higher. In achieving this target, it will be important that National Grid does not cause disruption to local economic activity through displacement of employment and ensures that existing businesses are not put at a disadvantage in terms of recruiting and retaining staff.

4.1.3 To address the potential negative effects of displacement, there will need to be a commitment from National Grid to invest in local skills development and supply chain capability development. Additionally, as part of the package of measures National Grid and their contractors should commit to target unemployed and economically inactive people in the area and the recruitment of apprentices to support local skills training and development in order to increase the size of the available labour force. These measures will help mitigate displacement impacts; however, they will require a funded programme of early, pre-construction intervention and support and a commitment from National Grid (and their



Chapter 4 - Socio Economic

contractors) to recruit from the pool of people that are supported.

4.1.4 The PPA Group is concerned that there is very limited detail on mitigation measures that will be required to address the impacts of the NWCC project, and therefore, few details of how the mitigation will be secured and monitored. It is important that National Grid make early intervention and investment in advance of the construction, commencing with the provision of;

- clear and early commitments to providing funding to support supply chain capability development programmes to enable local businesses to access procurement opportunities, working with the Local Enterprise Partnerships and other local partners, through the development and implementation of a supply chain strategy;
- a detailed skills action plan to ensure that there is investment in skills development in advance of construction in order to facilitate employment and training of local people;
- training programmes/facilities targeted at those that are currently locally unemployed or economically inactive;
- early commitments to capital investment in training facilities; and
- a clear procurement strategy with specific, measurable and enforceable targets that capture the local benefit for Cumbrian businesses.

4.2 Visitor Economy

4.2.1 The PPA Group challenges National Grid's baseline assessment that impacts of the proposals on the visitor economy of Cumbria will not be significant. Cumbria is the most popular destination for outdoor and rural visits in the UK, for both UK and foreign visitors. The Cumbria Tourism visitor survey 2015 identified that the physical scenery and landscape of the County is the key reason for UK and overseas visitors visiting the Lake District and Cumbria; the second key motivation to visit was the atmospheric characteristics of the area.

4.2.2 The project poses a significant risk to the visitor economy, which is particularly significant to Cumbria's economy. The 42.9m visitors that come to Cumbria each year generate £2.6bn of visitor and tourism spend and support 35,000 jobs (2015). In North Lancashire (Lancaster City Council area) the tourism economy is worth £416m alone (2014).

4.2.3 The PPA Group is concerned that the image/brand of Cumbria's landscape-based tourism offer may be damaged by the project, both during the substantial construction period and once completed. Therefore, the Group challenges the PEI conclusion that this risk is not significant. The lack of project-specific evidence to support this and the reliance on evidence



Chapter 4 - Socio Economic

from other projects and areas of the UK is also considered to be flawed. The PEI only considers physical impacts during construction and dismisses the long-term impact on visitors and the visitor economy once the project is in operation. This is a serious omission.

- 4.2.4 The impact of the closure of the Grasmere/Keswick A591 road in the Lake District following the December 2015 floods provides a stark demonstration of how a geographically specific impact can affect the whole of Cumbria's visitor image and visitor economy. The impacts were experienced across the County and were not restricted to businesses near to the closed road. The experience of the 2015 floods demonstrated that it was perceptions of Cumbria being closed for business that had the greatest impact. The potential impact of the NWCC project on perceptions of Cumbria being a construction site, or an area dominated by electricity infrastructure, should not therefore be under-estimated. The potential for adverse effects arising from the NWCC impact on the local visitor economy will therefore have to be managed and mitigated.
- 4.2.5 Furthermore, the PPA Group is concerned about National Grid's initial conclusions on the significance of the effect on visitor accommodation generated by the project workforce. The Group suggests that these are not valid as there is a failure to consider the full range of impacts NWCC could place on the future potential of the visitor economy, particularly in key areas identified as drivers of tourism growth where there will likely be concentrations of workers, e.g. undergrounding in the LDNP.
- 4.2.6 The sector is significantly expanding, with annual growth in 2015 of 7.1%. The continued attraction of the Frontiers of the Roman Empire World Heritage Site (WHS), the candidate English Lake District WHS and planned England Coast Path project are likely to increase visitor numbers, for whom the culture, landscape and access within it are key drivers for choosing Cumbria. The Government's nomination for WHS status (candidate English Lake District) is currently being assessed by ICOMOS (for UNESCO), who have expressed concern at the NWCC proposals and identified this project as a very significant risk to progressing the WHS proposals. The PPA Group considers it imperative to avoid landscape impacts that may jeopardise a favourable outcome.
- 4.2.7 Physical scenery and landscape of the area is the key reason for visiting both Cumbria and North Lancashire and more specifically the Lake District, Hadrian's Wall and Morecambe Bay area. Access to the countryside through varying modes is therefore key to people's enjoyment of these landscapes.
- 4.2.8 Transport provision within Cumbria is regularly raised as a key issue by visitor and tourism



Chapter 4 - Socio Economic

businesses. Congestion and poor connectivity between key visitor locations is cited as having a negative impact on visitor experience and businesses. The sector is reliant on an already stretched road and rail network in the County, with the key visitor access roads to the west coast being particularly constrained.

- 4.2.9 A recent survey identified traffic congestion as a concern for 1 in 5 tourism businesses. This is a key concern as road congestion, closures, and disruption to rail and the Public Rights of Way (PRoW) and cycle way network during construction has the potential to cause reputational damage. The PPA Group considers there is a significant risk that transport disruption (or the perception of) deters visitors during the construction period for the NWCC project. These impacts may be greatest within the LDNP, which combines the highest visitor numbers with constrained transport networks and NWCC proposals for cable undergrounding operations.
- 4.2.10 The PPA Group considers that the multi-modal transport strategy would reduce the potential congestion and disturbance impacts on visitors using the transport networks and PRoWs, including cycle ways, compared to the road-based strategy. As a consequence this would reduce impacts on the visitor economy from direct transport impacts, although not impacts on the visitor image/brand of the County.
- 4.2.11 The transport and visitor economy impact assessments within the PEI do not identify these impacts from the transport strategy, or consider the differing level of impact on the visitor economy when selecting the transport strategy. The assessment in the Environmental Statement must address such impacts.
- 4.2.12 It is also considered that the PEI fails to adequately assess the negative sequential and cumulative visual impacts on visitors travelling along the road network close to the NWCC proposals viewing the proposed pylons and infrastructure. This is of particular concern within the southern onshore route section which includes the National Park and Duddon Estuary.
- 4.2.13 The PEI fails to adequately consider and assess the risks and impacts to visitors' experiences and enjoyment of the varied landscapes of Cumbria from use of the PRoW network. In addition, the statutory purpose for National Parks, set out in the Environment Act 1995, includes promoting opportunities for the understanding and enjoyment of the special qualities of national parks by the public.
- 4.2.14 The focus of the PEI assessment has been on physical impacts from the construction stage of the NWCC project on the PRoW network. While this is generally welcomed, it fails to



Chapter 4 - Socio Economic

consider the long-term visitor experience impacts and the knock-on effects this may have on the visitor economy. In particular within the Lake District National Park, the construction impact of the underground technology and the longer term impacts of pylons and other related electricity infrastructure within its setting need to be properly considered.

4.2.15 Full and effective reinstatement of PRoW and cycle ways is essential and should be central to the proposed Access Management Plans. Restoration should seek to both restore and where possible improve access provision, with enhancement being part of the legacy of the project. Opportunities to achieve this should be considered as part of the Access Management Plan, for example, consideration of re-use of haul road material for access improvement as part of post construction reinstatement works.

4.2.16 Due to the lack of assessment outlined above there is a lack of appropriate mitigation for impacts to the visitor economy, particularly mitigation of;

- impacts on Cumbria's visitor image/brand;
- possible adverse impacts on the accommodation resulting from the concentration of construction workers;
- disruption to road and rail transport networks; and
- disruption to public access.

4.2.17 The PPA Group considers that appropriate mitigation, such as support for small and medium sized businesses in the visitor economy and marketing and promotional activities are required to counter the disruption caused during the construction period and the negative perception driven by the adverse impact of NWCC on the landscape which attracts visitors.

4.2.18 Mitigation should also address impacts affecting visitors' experience and access in North Lancashire and Cumbria's landscapes, such as the safe management of traffic on minor roads, and the impact of worker accommodation demand on holiday accommodation supply.

4.3 Employment Land and Local Plan Allocations

4.3.1 The proposals so far fail to support the development potential of a number of key strategic employment sites along the route including;

- Kingmoor Business Park (LEP Enterprise Zone);
- Lillyhall Industrial Estate;
- Port of Workington and adjacent employment land;
- West Lakes Science Park; and



Chapter 4 - Socio Economic

- Barrow Waterfront and Port of Barrow-in-Furness.
- 4.3.2 The PPA Group requires more detail to understand the programmes for construction, to be able to assess the impacts on the sites. There are opportunities for National Grid to use these strategic sites for construction hubs to support the logistics of delivering the NWCC project and the PPA Group wishes to see National Grid using these sites to help stimulate other economic activity.
- 4.3.3 More detail is required regarding sites to be used during the construction process for compounds and helicopter landing sites to ensure a full understanding of the short and long term impacts on local economic activity and transport infrastructure is acceptable, and that sites allocated for future development are protected. Where sites are in or adjoining, proposed and existing employment areas the PPA Group expect National Grid to justify the impacts of the land take and the acceptability of the development to the local plans and strategies for economic development, such as the construction compound proposed at Kingmoor Park.
- 4.3.4 National Grid needs to take account of allocations in Local Plans and it is clear that based on the current proposals line/pylon realignments will be required. The following allocations/development proposals will require further consideration:
- Emerging land allocations at Stainburn (1/WOR/050A/R and 1/WOR/053/R);
 - Emerging land allocations land at Homewood, Whitehaven (WE10);
 - Mirehouse and West Lakes Science Park;
 - Housing allocation site adjacent to Burlington Primary School, Kirkby-in-Furness; and
 - Land allocations around the Port of Barrow-in-Furness.
- 4.3.5 The LEP's Cumbria Infrastructure Plan has identified the need for new highway infrastructure to the east of Whitehaven in order to provide an alternative route to the A595 and thereby relieve congestion in Whitehaven. The proposed route is to be safeguarded and the NWCC project should not inhibit future delivery of the Whitehaven Eastern Relief Road.



5.0 Tunnel Head Impacts at Roosecote and Middleton

5.1.0 The proposed tunnel across Morecambe Bay represents a significant project in its own right, with a build programme of six years, 1.2m tonnes of spoil generated and requiring over 750 workers. As the proposals for the tunnel heads at Roosecote (Barrow) and Middleton (Heysham) are likely to result in a number of significant impacts, the PPA Group is concerned that the PEI does not contain sufficient detail to fully assess the nature and degree of the impacts on the local environment and communities.

5.1 Impact Assessment

5.1.1 Insufficient attention has been given to construction and operational design at the tunnel heads to ensure impacts can be sufficiently mitigated, particularly given that construction work may last up to six years. No meaningful mitigation is proposed to address noise, vibration, air quality, light, ecology or residential amenity impacts. The PEI does not provide the reassurance that the development can be constructed and operate without a significant impact on nearby communities, including a number of residential areas close to the Roosecote and Middleton substation. This concern regarding the lack of inadequate information is equally applicable to the temporary tunnel shafts at Roosebeck and Heysham (Penrod Way), as well as the design of the Islet in Morecambe Bay. Further information must be provided to properly consider the impact of the proposed development and to advise on the acceptability of the proposal.

5.1.2 Furthermore, the PPA Group challenges the methodology for classifying residential receptors (such as the residents living in houses at Mossgate, close to Middleton tunnel-head) as being of 'medium' sensitivity. Recommendations have previously been provided by the PPA Group stating that residential/school receptors should be classed as 'high' sensitivity for a range of impacts. This has not been accepted in the submitted assessments and impacts on all the predictions and outcomes. The outcome of the assessments therefore under-estimate the impacts and fail to apply mitigation which would otherwise be required.

5.2 Workforce Accommodation

5.2.1 The PPA Group is concerned that currently there is incomplete workforce planning and accommodation proposals at the tunnel-heads. During the construction of the project there is likely to be a concentration of workers at each of the tunnel heads sites in Barrow and Heysham. This is also a key concern in other areas where there will be a concentration of



Chapter 5 - Tunnel Head Impacts at Roosecote and Middleton

workers, such as the undergrounding in the LDNP. Given the number of directly employed workers required for the construction of the tunnel, and the other major projects in local areas, accommodation for workers is a significant concern.

- 5.2.2 The PPA Group note that the impact in the Barrow area is acknowledged and National Grid has committed to working with stakeholders to produce an Accommodation Plan to be submitted with the Environmental Statement and secured in the DCO. However, there are currently no details on the content of the Plan and the PEI Report does not indicate any collaboration with accommodation providers to overcome existing shortfalls and/or raise standards of suitable worker accommodation. Indeed the documentation highlights that workers will need to be transported in, yet also suggests that workers will be accommodated locally. This inconsistency must be addressed.
- 5.2.3 The PEI concludes that there is limited effect in the Heysham area given access to transport links and the wider catchment of workers. However, the PPA Group challenges this conclusion and recommends that an Accommodation Plan (together with a Travel Plan) is required that will include commitments from National Grid to support delivery of worker accommodation (including refurbishment of existing housing stock) so as to avoid adverse impacts on the existing housing market and visitor accommodation. It is also considered that this Accommodation Plan will need to cover the area of undergrounding in the LDNP.

5.3 Traffic Impacts

- 5.3.1 The level of construction materials and tunnel spoil generated will place extensive pressure on existing transport infrastructure. National Grid's conclusion that there are no traffic reasons to favour a multi-modal option for moving materials and workers to and from the construction sites is not acceptable. The PPA Group is greatly concerned about the impacts of NWCC on the infrastructure leading to the tunnel heads, especially when these are considered in relation to other developments in the areas. Therefore, it is strongly suggested that a multi-modal option is the only acceptable solution to alleviate traffic movements around the tunnel head locations. Section 6.1 provides further detail in this respect.

5.4 Waste Management

- 5.4.1 The PEI also has inadequate information provided on the storage, movement and final destination of tunnel spoil, and therefore no mitigation is proposed to address the substantial impact of the construction. A Waste Management Strategy is required to explain



Chapter 5 - Tunnel Head Impacts at Roosecote and Middleton

how the spoil will be removed and re-used. Where possible, National Grid should minimise the waste that cannot be recycled from the tunnel construction with the preference being for spoil to be re-used locally to deliver other improvements, for example, in the delivery of improved flood defences. Given the lack of detail on waste management and how the environmental impacts from the spoil will be mitigated, further consultation is recommended in advance of submission of the DCO application.



6.0 Transport and Connectivity

6.1.0 The PPA Group is very concerned that the PEI assessment has not identified detailed transport impacts and consequentially there is a failure to identify mitigation measures. The consultation material is considered to be inadequate given the importance of transport and infrastructure to facilitating delivery of this project. The lack of a draft Transport Assessment is a serious omission in the consultation material.

6.1 Transport Strategy

6.1.1 The PPA Group is concerned that at this key consultation stage National Grid have not provided sufficient information to enable the PPA Group to understand the impacts and the required mitigation. The provision of two options, multi-modal and road based are not underpinned by the detail of the impacts and therefore it does not give sufficient comfort that the significant transport and connectivity issues have been properly considered as a basis for the development of the project.

6.1.2 The PPA Group strongly disagrees with National Grid's assumptions of the impacts relating to the multi-modal and road based options and assertions for not favouring the multi-modal. It is acknowledged that the multi-modal option will require investment, but this should not be used as the main reason to dismiss the option, particularly as the cost of mitigating a road based strategy has not yet been determined. The assessments have not been done and the mitigation is unknown, but it is the view of the PPA Group that there will inevitably be a requirement for highway mitigation to be provided for such a complex project that will generate substantial HGV movements.

6.1.3 Subject to a full assessment of the impacts, the PPA Group strongly advocates the multi modal option as compared to a road based option as it is considered to:

- reduce additional traffic on the road (notably HGVs);
- reduce potential congestion, disruption, amenity and severance impacts upon local communities;
- reduce damage to highways, particularly local roads which are not designed to carry HGVs;
- minimise economic disruption associated with congestion and delays (especially to visitor economy);
- reduce accident risk and minimise safety concerns;



Chapter 6 - Transport and Connectivity

- reduce potential adverse impacts upon pedestrians, cyclists and PRoW;
- minimise pollution (noise, air, dust);
- be more sustainable (lower energy use, reduced carbon emissions); and
- deliver greater legacy benefit (e.g., improved facilities and capacity of rail and port).

6.2 Impact Mitigation

6.2.1 Whilst it acknowledged that National Grid has not completed a full technical assessment on both options, the information provided does identify that there will be significant impact on the highway network. There are known capacity constraints and safety issues along a number of roads, including the A590, A595, and A5092. This is confirmed in the Cumbria LEP's West of M6 Strategic Connectivity Study that was prepared in conjunction with Highways England. This is particularly true, for example, for Ulverston and Whitehaven (A595) where the road is already at capacity. A strategy for mitigating impacts at key 'pinch points' along the route needs to be undertaken and assessed, through liaison with the PPA Group and Highways England. The results of this will require further consultation in advance of the DCO submission, particularly as there may be a need for acquisition of third party land to achieve the mitigation. There will also need to be detailed consideration of the timing and phasing of mitigation improvements to ensure works are completed in advance of the main NWCC construction work commencing.

6.2.2 Infrastructure and capacity constraints are already a key barrier for economic growth within the County, affecting the manufacturing sector as well as the visitor economy. The local economy across Cumbria is constrained by an already stretched local and strategic road and rail network, as highlighted in the LEP's Cumbria Infrastructure Plan, and evidenced by the impacts of the December 2015 flood event. In consultation with Highways England, and in the absence of transport modelling and assessment, the following 'pinch-points' have been identified for the strategic and local road network, where it is known that that the highway network will not be able to accommodate the additional traffic arising from a road based strategy without appropriate mitigation:

- M6 Junction 44 and M6 Junction 40
- A66 / A595 (Fitz roundabout)
- A66 / A595 (Chapel Brow roundabout)
- A595 / A597 (Toll Bar Roundabout)
- A595 / B5036 / Low Moresby (Howgate Roundabout)



Chapter 6 - Transport and Connectivity

- A595 between Pelican Garage and Blackbeck Roundabout
- A590 / A595 Askham Rd (Elliscales Roundabout)
- A590 through Lindal-in-Furness
- A590 through Swarthmoor
- A590 through Ulverston
- A590 Park Road / Bank Lane
- A590 Park Road / Ormsgill
- A590 Walney Road - numerous junctions
- A590 Ironworks Road / Pheonix Road
- A5087 Hindpool Road / BAE Link Road
- A5087 Strand / Duke Street / Ramsden Street
- A5087 Roose Road / Risedale Road

6.2.3 The above is not an exhaustive list and the PPA Group considers that an assessment of the highway network will need to be carried out by National Grid across the study area to identify locations where mitigation will be required. There are also locations within the NWCC study area where there are existing safety concerns which could be exacerbated. This is particularly relevant where there are long stretches of single carriageway with limited passing places. The increased HGV movements will reduce link capacity and cause driver delay and lead to inappropriate over-taking with associated accident risks (especially in winter). These areas of accident risk include a number of locations along the A66, A595 and A590. There are also locations on the local road network that contain very narrow sections, severe gradient changes and bends, making the routes unsuitable for a high volume of HGV's, especially during winter periods or inclement weather. These include the A595 at Bootle, Whicham, and Duddon Bridge.

6.2.4 The additional volumes of traffic will cause an impact on local and strategic roads which will require mitigation. Unfortunately, given the lack of appropriate assessment by National Grid the full extent of mitigation is not known. This is unacceptable at this stage of consultation, because consultees need to be able to understand and to comment upon any mitigation proposals.

6.2.5 The PPA Group strongly advocates the use of the railway and ports to mitigate the impact on the highway network from the additional traffic created by the project (and acknowledges that a more detailed analysis is required including consideration of the



Chapter 6 - Transport and Connectivity

necessary improvements to the Cumbrian Coast Line railway and potentially the Furness Line). The PPA Group welcomes National Grid's engagement in the recently established Coastal Railway Programme Board. This Programme Board is seeking to find a collective solution to mitigate the cumulative impact of several major developments in Cumbria through utilisation of the railway as the most sustainable mode for construction traffic. The Board will work towards identifying and coordinating the delivery of a package of rail infrastructure improvements. Along with other developers, there will be a requirement for National Grid to fund rail infrastructure improvements. However, it is also noted that there will still be a need for additional highway improvements to mitigate the impact of the residual traffic movement from railway and ports to the construction sites. The use of Workington Port as part of a multi-modal strategy is supported, however, it is considered there would be a need for improvement to the infrastructure linking the Port to the wider transport network.

- 6.2.6 There are extensive PRowS and cycle routes along the route of the project which are of national significance. A large proportion of visitors and residents are drawn to these areas to enjoy recreational activities. They are a key element of Cumbria's visitor offer. The alignment of the proposals suggests that there is likely to be extensive disruption to cycle route and PRowS, particularly during the construction period. These impacts need to be appropriately addressed and appropriate mitigation put in place in consultation with local communities to avoid the disruption and severance of key routes to allow their continued use and enjoyment as a tourist asset during construction and operation of the project. This is particularly important to limit any adverse impact on the visitor economy, and also provides the opportunity for National Grid to mitigate any impacts by delivering a longer term legacy of an enhanced cycle route and PRow network.
- 6.2.7 The PPA Group has identified a number of detailed observations regarding individual access routes and site accesses which need to be addressed. These observations are set out in the full technical response and relate to numerous locations where there are concerns relating to: inadequate visibility; blind spots; road crests and risk of grounding; narrow carriageways and impacts on pedestrians and cyclists. To ensure effective delivery of the NWCC project, there will be a need for a team to manage and co-ordinate the substantial number of highway and PRow closures and changes that will be required. This team will need to be appropriately resourced by National Grid.



6.3 Transport Assessment

- 6.3.1 The traffic movement for the importing (and decommissioning) of materials for access and haul roads, construction materials, cables and waste needs to be properly modelled together with a cumulative assessment, including the impact of other major development proposals including; Moorside, ongoing Sellafield activities, West Cumbria Mining's proposals at Whitehaven, BAE Systems at Barrow and the United Utilities West Cumbria Water Supplies Project, on an already constrained infrastructure and within similar implementation periods. More detailed assessments of the impacts should be carried out using the available SATURN models for Barrow, West Cumbria and Heysham.
- 6.3.2 Furthermore, currently the PPA Group are concerned that information related to the traffic movements associated with the sourcing and movement of aggregates and construction material has not been provided. National Grid must agree the scope of the Transport Assessment with the relevant authorities and the modelling work to be undertaken to then be able to fully assess the mitigation improvements that will be required.
- 6.3.3 The impacts of traffic generated by the project should not be confined solely to capacity assessments. It is important to consider other issues, including resilience, the impacts on pedestrian and cycle movement, severance, safety and accidents, pollution, residential amenity, economic impact, etc. All these aspects impact adversely on host communities and should be minimised. It is also anticipated that there will be impacts on the condition of the highway as a result of the NWCC project, particularly local roads not designed for HGV use, and appropriate mitigation will need to be provided for repair and maintenance of the highway. As such, it is considered that the mitigation measures should be developed by National Grid, working with the PPA Group and should include conditions surveys of the highway network prior to the start of construction, monitoring during the construction period and on completion of works.
- 6.3.4 There will be a significant number of construction workers. The analysis of construction workers' trips assumes that they will be located in local accommodation, which is not supported by clear evidence and indeed contradicts evidence presented elsewhere (see PEI Section 17.3.17). A more detailed analysis is therefore required to fully understand the impacts of the movement of construction worker trips on local centres and the highway network, their accommodation needs and the capacity of local accommodation particularly Barrow and for the National Park underground section.



Chapter 6 - Transport and Connectivity

- 6.3.5 National Grid must consider the modelled impact of the project and necessary mitigation required to provide an informed transport assessment of the project. This should include appropriate Travel Plans to identify how construction workers will travel to construction sites.
- 6.3.6 There are significant elements of work in assessing the transport and connectivity impact of the proposal that have yet to be carried out and agreed with the local authorities. Key gaps include; the provision of a Transport Assessment, Travel Plans, a PRow Management Plan, an Abnormal Load Route Strategy and a Construction Transport Management Plan. Additionally, National Grid needs to work with the PPA Group and Highways England to agree and produce transport capacity assessments and modelling assessments, which include an assessment of the cumulative impact.
- 6.3.7 Consultation on these significant elements of work and proposed mitigation proposals must take place prior to the production of the Environmental Statement and DCO application submission.



7.0 Environment

7.1.0 The NWCC route passes through and impacts on areas that are important to communities and are also areas of national, and international, historic and ecological significance. There are a number of concerns related to the impact of the NWCC project on the many important heritage assets, and ecological sites and species for their own value and what that represents to communities and visitors to Cumbria. The following section provides a summary of the key issues, however, local and specific impacts on designations and important features/assets are detailed in committee reports and the detailed assessment set out in the technical response.

7.1 World Heritage Sites

7.1.1 The PPA Group is very concerned that key risks and impacts to WHS's are not adequately addressed. The NWCC project has the potential to have a substantial adverse impact on the Frontiers of the Roman Empire WHS and the candidate English Lake District WHS.

7.1.2 In particular, only one of the three themes of the Outstanding Universal Value (OUV) of the candidate English Lake District WHS have been considered. Specifically, the assessment of the impacts on the attributes of OUV has been confined to the first theme (physical attributes of the historic landscape) and has not assessed impact on the second and third themes of OUV (Artistic Inspiration and the early Conservation Movement).

7.1.3 Where a site is nominated for WHS listing, Government policy states that it must be treated as if that designation is in place, therefore for the purposes of the NWCC assessments, the elements for which the English Lake District is being nominated should be considered to be of international importance. The PPA Group are concerned that the NWCC project has been formally identified by ICOMOS, in its assessment for UNESCO as a very significant risk to potential designation of English Lake District as a WHS. Removal of this risk is critical and entirely within the control of National Grid.

7.1.4 The PPA Group considers that a comprehensive Heritage Impact Assessment is required, using the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties produced by the International Council on Monuments and Sites. The PPA Group has previously provided this guidance to National Grid. Without a demonstrably comprehensive Heritage Impact Assessment it is not possible at this stage to accept the assertion made by National Grid that NWCC project would have "*slight beneficial significance*" on the WHS.



Chapter 7 - Environment

7.1.5 The PEI does not recognise the significance and added value to designated and non-designated heritage assets and historic landscape character areas where they contribute to the Outstanding Universal Value of WHS status. This should be addressed in the development of the Environmental Statement and Heritage Impact Assessment. Furthermore there is an absence of assessment of non-designated assets within and just outside the proposed alignment which may be impacted on by the development. This is a significant concern given that the majority of the NWCC route runs parallel or through a WHS, with the Frontiers of the Roman Empire stretching in the north from Carlisle to Ravenglass and then over-lapping with the LDNP and its setting that extends from Drigg to the Duddon.

7.2 Archaeology

7.2.1 The consideration of non-designated archaeological assets in the PEI Report is currently flawed. Significant sources have not been consulted. There is an absence of the assessment of the physical impact of the development on all the non-designated archaeological assets that lie partially or wholly within the Draft Order Limit boundary. Additionally, there is also an absence of the assessment of non-designated archaeological assets that are recorded as being located just outside of the boundary of the Draft Order Limit but which may, in reality, be situated within the boundary. Additionally, the significance of the numerous prehistoric flint finds along the route is undervalued as the assessment fails to take in to account the potential of the finds to reflect buried prehistoric archaeological assets that are currently of unknown significance.

7.2.2 Given the route passes along a substantial portion of The Frontiers of the Roman Empire WHS, there are numerous Roman Scheduled Monuments. A thorough and extensive archaeological investigation and interpretation programme must be completed in advance of construction works, with the opportunity for National Grid to generate some positive engagement in the Roman heritage of Cumbria.

7.3 Heritage Assets and Cultural Landscape

7.3.1 There is generally a lack of data and articulation of effects on heritage assets provided within the PEI. The PPA Group also concludes that there is inadequate evidence and assessment of impacts to the historic environment and archaeology related to underground construction methods for cabling in the LDNP. It is very important that the final application identifies the full range of archaeological and heritage features, assesses likely impacts and proposes adequate mitigation – including avoidance through detailed route alignment,



Chapter 7 - Environment

effective find recording, and where appropriate, an archaeological fund for educational activities.

7.3.2 The PPA Group are also concerned that there is a lack of Statements of Significance and clear assessments of the value of heritage assets. Statements of Significance need to be proportionate to both the level of significance and the degree of effect that will result from the development. This particularly applies to listed buildings/monuments.

7.3.3 As with the landscape topic the PPA Group is significantly concerned about the lack of visualisations for heritage assets and a lack of cross references to the landscape and visual chapters. The PEI notes the value of these materials but fails to include any sort of accompanying view analysis or supporting graphical/photomontage with regard to any of the designated heritage assets identified. There is no indication of whether these will be provided in the Environmental Statement; therefore, the PPA Group has significant concerns regarding the potential impact of the proposals on heritage assets. This is a significant omission from the PEI.

7.3.4 There are numerous conservation areas and listed buildings along the NWCC route and National Grid must ensure appropriate mitigation where the setting and character of a listed building or conservation area is affected by the development. The following are examples of the most significant and high value heritage assets that must be protected and enhanced:

- Ravenglass Conservation Area – including the Roman Fort and various listed buildings within the village;
- Muncaster Castle and Gardens; and
- Hayton Conservation Area, including one Grade I (Hayton Castle) and six Grade II listed buildings;

7.3.5 Other key clusters of heritage assets along the route also need to be appropriately mitigated, such as:

- Beckermeth Conservation Area – including two Grade II listed buildings;
- Broughton in Furness Conservation Area, including 20 Grade II and one Grade II* Listed buildings;
- Curwen Park;
- Ireleth Conservation Area, including four Grade II Listed Buildings;
- Millom Conservation Area, including four Grade II listed buildings; and
- Westnewton Conservation Area, including five Grade II Listed buildings.



Chapter 7 - Environment

- 7.3.6 Given the significance of the cultural and heritage offer to the local community and visitor economy, it will be important to ensure there is a programme in place that enhances these heritage assets in order to mitigate any negative impact.

7.4 Ecology

- 7.4.1 The PPA Group is concerned that there is a failure to provide a framework for assessing impacts on internationally important wildlife sites and species. There has been a lack of progress on the emerging framework for the statutory Habitat Regulation Assessment, which is a key risk that could lead to significant delays to the acceptance of the DCO if not addressed.
- 7.4.2 Review of the PEI suggests that there is unreliable assessment of ecological impacts due to incomplete surveys and dubious methodology. Many of the ecology assessments have been based on incomplete survey data which will need updating when surveys have been finalised. This is a major issue as conclusions have been drawn prematurely in the absence of full information.
- 7.4.3 Furthermore, the PPA Group is concerned that there is unreliable scoping in/out of ecological impacts based on incomplete surveys and data. It appears that incomplete information has been used to scope in or out various designated sites, habitats and species. The PPA Group does not feel that this can provide a robust assessment until all the information has been considered, and by scoping out features prior to obtaining all the data may result in these features being ignored prior to the final Environmental Statement.
- 7.4.4 There is inadequate evidence for assessment of protected species impacts in the PEI. The PPA Group is concerned that a clear rationale behind the selection of specific study areas for additional protected species survey and more detailed habitat (and National Vegetation Classification) survey is not provided, other than an overview of methodology used.
- 7.4.5 The importance and lack of complete existing survey data on non-designated priority habitats is an issue that has been consistently raised over a long period by the PPA Group. It is considered that non-designated, wider countryside priority habitats have not been effectively assessed and protected. In developing the final NWCC design the principle should be to avoid priority habitats through design mitigation.
- 7.4.6 Overall there is a failure to consider effective mitigation for biodiversity (habitat and species) by –



Chapter 7 - Environment

- Avoidance through design mitigation – including options to avoid the head of the Duddon
- Construction design
- Compensation for loss and disturbance

7.4.7 These mitigation measures relate to both the development of the over head line and to areas of undergrounding such as the route through the LNDP where there is potential for adverse impact on ecological features.

7.4.8 The assessment of the current proposals in relation to the management of risk to biodiversity from non-native invasive species is inadequate. In view of the large geographic extent of the linear project, it is vital that non-native invasive species are dealt with extreme care due to the risk of spread over a wide area posing potential significant risks to biodiversity.



8.0 Consultation Conclusions and Next Steps

- 8.1.1 This Executive Summary draws together at a high level the findings of the full technical response prepared on behalf of the PPA Group and should be read alongside the detailed assessment set out in the technical response itself.
- 8.1.2 It will be clear from this summary, that while the PPA Group supports the objectives of the NWCC project, it has significant concerns about National Grid's approach to the project as currently described in the PEI and to the current consultation exercise. These concerns need to be urgently addressed.
- 8.1.3 Without detracting from the range of comments in this summary and in the detailed technical response, headline issues in specific topic areas can be summarised as follows:

Cross Cutting Issues

- Fundamentally, the PEI is lacking evidence and information. This limits the ability of stakeholders to fully understand, assess and comment on potential impacts of the project. This concern relates to a number of topics and locations set out in this summary and in the PPA Group's detailed response. Furthermore, the significant gaps in the PEI and lack of detailed consideration of the impacts results in a failure to provide explanation of mitigation measures. This is the major cross cutting issue across the consultation topics and is most concerning regarding transport, socio economic, ecology, historic environment, landscape and the tunnel heads.

Landscape and Visual Impact

- Inadequate and incomplete landscape and visual impact assessment which is inconsistent with national policy, guidance and best practice, and which has resulted an incomplete understanding of the impacts of the proposal;
- Failure to consider the impact of the proposal on receptors outside the LDNP as required by National Policy EN1;
- An artificially high threshold has been adopted to determine when significant impacts require mitigation, resulting in a flawed selection of Areas of Likely Significant Effect and 'Focus Areas' for mitigation;



Chapter 8 - Consultation Conclusions and Next Steps

- Failure to adequately consider or mitigate landscape and visual impacts arising cumulatively from other existing and proposed infrastructure, including vertical infrastructure;

Socio-Economic

- Inadequate detail regarding skills and supply chain initiatives required to deliver the objectives in the initial Employment and Skills Framework and thereby mitigate the impacts of the project;
- The PPA Group draw National Grid's attention in particular to the need for early, pre-construction intervention and investment in order to deliver on the objectives of the Employment and Skills Framework;
- Inadequate assessment and understanding of the Cumbrian visitor economy and the risks to that economy from both the construction and operational phases of the NWCC project leading to an inadequate mitigation strategy. In this context, the PPA Group members are particularly concerned at the inappropriate reliance on non-project specific evidence;
- Inadequate information about the construction programme and activities so as to facilitate an understanding of the potential impacts on strategic employment sites and on local plan designations;

Tunnel Head Impacts at Roosecote and Middleton

- Inadequate information regarding the construction and operational phases of the tunnel heads so as to enable a proper understanding of the potential impacts. The PPA Group have particular concerns regarding impact on local communities, worker accommodation, traffic impacts and waste management;
- Inadequate consideration of appropriate mitigation measures;

Transport and Connectivity

- Inadequate information: the PPA Group is particularly concerned at the lack of a comprehensive Transport Assessment for the two proposed transport strategies which would allow for an informed consideration of their respective merits. Given the importance of the transport network to the visitor economy and the existing constraints within that network, the PPA Group considers that such an assessment should be carried



Chapter 8 - Consultation Conclusions and Next Steps

out and consulted on, before the application for the DCO is submitted. The scope of the assessment and the necessary modelling work should be agreed in advance with the relevant local authorities;

- Inadequate mitigation: a direct result of the absent Transport Assessment is that it is not possible to assess the scope of mitigation required to make the project acceptable. The PPA Group consider that mitigation measures including the relevant travel plans and transport strategies should be drawn up in consultation with the affected local communities and should be designed with a view towards legacy benefits;
- The Transport Assessment should take into account the cumulative transport impacts of the NWCC project and of other major projects taking place within the same construction window;

Environment and Heritage

- The NWCC project has the potential to have significant adverse impacts on the Frontiers of the Roman Empire WHS and on the candidate English Lake District WHS. The assessment for the candidate English Lake District WHS in the PEI is inadequate in that it inappropriately focuses on only one of the three themes of Outstanding Universal Value for this site. ICOMOS has identified NWCC as a very significant risk to potential designation of English Lake District as a WHS. Removal of this risk is critical and entirely within the control of National Grid. Further information is required, including a formal Heritage Impact Assessment;
- The project will also impact on a range of other designated and non-designated assets including heritage, cultural and archaeological assets. The information in the PEI on the impact of the project on such assets is inadequate and fails to recognise the contribution of such assets to the visitor economy and the Outstanding Universal Value of the existing and proposed World Heritage Sites. Such impacts should be addressed in a formal Heritage Impact Assessment;

Ecology

- Survey data and information on the likely significant ecological impacts is incomplete and the assessment in the PEI of likely significant impacts is potentially unreliable. No framework for assessing impacts on internationally important wildlife sites and species or for the Habitats Regulation Assessment has been agreed. As a result, the PPA Group are unable to fully understand and comment on the ecological impacts of the proposal



Chapter 8 - Consultation Conclusions and Next Steps

and the mitigation strategy appears to be inadequate. Further work is required before the assessment of ecological impacts and the proposed mitigation measures can be regarded as adequate.

- 8.1.4 The lack of information especially related to mitigation measures is such that the PPA Group challenges the level of consultation based on the substance, evidence and level of detail provided.
- 8.1.5 As already explained in correspondence with National Grid and with particular regard to the length and complexity of the materials contained within the PEI and the overlap between the consultation period and national holidays, the PPA Group also considers that the consultation period has been too short to allow for a fully considered response, particularly from local communities.
- 8.1.6 The PPA Group therefore strongly recommends that National Grid should undertake a further consultation exercise, addressing the issues identified within the PPA Group's full technical response to ensure that the significant issues can be adequately addressed and suitable s42 consultation can be undertaken.