

Cambois Connection Onshore Scheme
Environmental Statement Volume 3
Chapter 7: Landscape and Visual Amenity





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Kerrie Craig	K Grania_	27/10/2023	
Prepared by:	SLR Consulting Ltd.		
Prepared for:	SSE Renewables		
Checked by:	Kate Elliott		
Accepted by:	Kate Elliott		
Approved by:	Kerrie Craig		

Basis of Report

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Acronyms

Acronym	Description
aOD	above Ordnance Datum
BNG	Biodiversity Net Gain
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
DEFRA	Department for Environment Food and Rural Affairs
DTM	Digital Terrain Modelling
EA	Environment Agency
ECP	King Charles III England Coastal Path
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
GLVIA3	Guidelines for Landscape and Visual Impact Assessment (3 rd edition)
GIS	Geographic information Systems
HDD	Horizontal Directional Drilling
HVDC	High Voltage Direct Current
HVAC	High Voltage Alternating Current
IEMA	Institute for Environmental Assessment and Management
Km	Kilometre
LCA	Landscape Character Area
LI	Landscape Institute
LVIA	Landscape and Visual Impact Assessment
m	Metre
MDS	Maximum Design Scenario
MLWS	Mean Low Water Springs
NCA	National Character Area
NCC	Northumberland County Council



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Acronym	Description
NCR	National Cycle Route
NCN	National Cycle Network
NE	Natural England
NERC	Natural Environment and Rural Communities Act 2006
NPPF	National Policy Planning Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NTS	Non Technical Summary
OS	Ordnance Survey
PDE	Project Design Envelope
PRoW	Public Right of Way
ZTV	Zone of Theoretical Visibility



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7. Landscape and Visual Amenity

7.1. Introduction

- 1. This Chapter presents the assessment of the likely significant effects (as per the "Environmental Impact Assessment (EIA) Regulations"1) on the environment arising from the Cambois Connection Onshore Scheme ('the Onshore Scheme') landscape and visual amenity. Specifically, this Chapter considers the likely significant effects of the Onshore Scheme landward of MLWS during the construction, operational and maintenance, and decommissioning phases.
- 2. This assessment is informed by the following technical Chapters:
 - Volume 2, Chapter 8: Archaeology and Cultural Heritage; and
 - Volume 2, Chapter 9: Terrestrial Ecology and Ornithology.
- 3. This Chapter summarises information contained within the following Chapters:
 - · Volume 2, Chapter 3: EIA Methodology;
 - Volume 2, Chapter 5: Project Description; and
 - Volume 2, Chapter 4: Site Selection and Consideration of Alternatives.
- 4. The Landscape and Visual Impact Assessment (LVIA) is supported by plans, graphics and visual representations within Volume 4. LVIA figures include Zone of Theoretical Visibility (ZTV) maps; reference photography; and, visual representations, including baseline panorama views and photomontages.
- 5. This Chapter should be read in conjunction with the following Appendices:
 - Volume 3, Technical Appendix 7.1: Illustrative Viewpoints; and
 - Volume 3, Technical Appendix 7.2: Woodland Retention Plan.

7.2. Purpose of this Chapter

- This Chapter:
 - Presents the existing environmental baseline established from desk studies, site-specific surveys and feedback obtained during technical engagement with stakeholders;
 - Identifies any assumptions and limitations encountered in compiling the environmental information;
 - Presents the potential environmental impacts on landscape and visual amenity arising from the Onshore Scheme, and reaches a conclusion on the likely significant effects on landscape and visual amenity based on the information gathered and the analysis and assessments undertaken; and
 - Highlights any necessary monitoring and/or mitigation measures recommended to prevent, minimise, reduce or offset the likely significant adverse environmental effects of the Onshore Scheme on landscape and visual amenity.

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¹ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended).



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7.3. Study Area

- 7. The Onshore Scheme is located at Cambois, Blyth, south of the River Wansbeck and north of the River Blyth and encompasses around 188 ha of land.
- The red line boundary for this area (hereafter referred to as 'the Site') along with is shown on Figure 8. 1.2 and the Indicative Zones of Infrastructure are shown on Figure 5.1 (Volume 4).
- The initial step in the LVIA is the establishment of the Study Area for the assessment. The LVIA Study Area for the Onshore Scheme extends to define a limit beyond which professional judgement considers it would be unlikely for significant effects to arise. This judgement is based on knowledge of similar projects, an understanding of the character of the local landscape and scale of the construction, operational and maintenance, and decommissioning phases of the Onshore Scheme.
- 10. The LVIA Study Area is defined as a 1 km buffer from the Landfall/HVDC Zone and HVAC Zone. The LVIA Study Area for the Onshore Onshore Converter Station is defined as a 3 km radius around the Onshore Converter Station Zone. Together, these form the LVIA Study Area for the Onshore Scheme, shown on Figure 7.1 (Volume 4 (ES Figures).
- 11. The LVIA Study Area is not intended to provide a boundary beyond which the Onshore Scheme would not be seen, but rather to define the area within which likely significant landscape or visual effects could arise.

7.3.1. Intertidal Area

- 12. The LVIA Study Area and the Site boundary, down to Mean Low Water Springs (MLWS) includes the intertidal area at Cambois beach. The offshore topic of Seascape, Landscape and Visual Impact Assessment (SLVIA), including effects on the intertidal area, was scoped out from further assessment in the EIA in the Scoping Report for the Marine Scheme (BBWFL, 2022) on the basis that, once installed, the offshore export cable associated with the Marine Scheme will be on or under the seabed with no infrastructure protruding above the surface of the sea meaning that even when directly adjacent to it, the subsea cable would not be visible.
- 13. In addition, there would be no physical disturbance of the beach or intertidal area is predicted as a result of either the Onshore Scheme nor Marine Scheme and therefore there would be no physical landscape effect on the intertidal area.
- 14. However, there is potential for temporary impacts in the intertidal area and construction works associated with the Landfall, along the Cambois coastline associated with marine traffic (i.e., vessels and support craft) as well as other specialist vessels and operations associated with the landfall installation, including a potential jack-up barge. The intertidal area has therefore been assessed within this Chapter of the Onshore Scheme Environmental Statement (ES) and is specific to Onshore Scheme landscape and visual receptors i.e, Marine Scheme receptors scoped out.
- 15. The intertidal area (Mean Low Water Spring (MLWS) to Mean High Water Spring (MHWS)) throughout the LVIA study area includes the beaches east of Cambois. The intertidal area at the proposed landfall incorporates the Cambois North Beach.
- The seascape character areas include the intertidal area. The likely significant effects of the Onshore Scheme on these seascape character areas (whilst not a direct physical effect on the intertidal area itself) are considered within this LVIA Chapter.



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7.4. Policy and Legislative Context

- 17. Policy and legislation are set out in detail in Volume 2, Chapter 2: Policy and Legislative Context. A summary of the policy and legislative provisions relevant to landscape and visual amenity are provided in Table 7.1.
- 18. The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, updated September 2023) is the primary source of national planning guidance in England. Sections relevant to this aspect of the ES are summarised below in Table 7.1.
- 19. Further guidance on the assessment of LVIA is set out within the overarching Department for Energy and Climate Change (DECC) (2011) National Policy Statement (NPS) for Energy (EN-1), NPS for Renewable Energy Infrastructure (EN-3) and NPS for Network Electricity Networks Infrastructure (EN-5) summarised in Table 7.1..
- 20. The NPSs are currently being revised and draft versions were published for consultation in 2021 and revised drafts published by the Department for Energy Security & Net Zero (DESNZ) in 2023. In addition to the current NPS, the revised draft NPSs have therefore also been reviewed in Table 7.1 to determine the emerging expectations and changes from previous iterations of the NPSs. This includes the DESNZ (2023) Draft Overarching NPS EN-1, Draft NPS EN-3 and Draft NPS EN-5. Draft policies are included in the table where they differ from the extant policy.
- 21. There is no specific legislation which applies to the Onshore Scheme from the perspective of this LVIA topic.
- 22. Local planning policy relevant to landscape and visual amenity is set out in Table 7.2.



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Table 7.1 Summary of national planning policy relevant to landscape and visual amenity

Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report
National Statement for I (NPS EN-1) ^{2,3}	PolicyThe National Policy Statement (NPS) (UK Government, 2011) outlines the objectives for the Energydevelopment of Nationally Significant Infrastructure Projects (NSIPs) within England at Wales. The NPS forms a key part of the wider national planning policy framework which taken under consideration during the appraisal process of a planning application. NSIPs at defined in Part 3 of the Planning Act 2008. BBWF itself does not comprise a NSIP as it located in Scottish Waters, and therefore does not require development consent under the Planning Act 2008. Similarly, the Onshore Scheme is not an NSIP and does not form part of a NSIP. Therefore, the Onshore Scheme does not require development consent under the Planning Act 2008 and does not fall to the Planning Inspectorate to consider. The same applies to the Marine Scheme.	is re is ne art er
NPS EN-3 National I Statement for Renev Energy Infrastructure	vable landscape and visual amenity, and in the design of the project to mitigate impacts such as noise	The mitigation of landscape and visual effects through good design are considered within the LVIA. See section 7.10. The evolution of the design is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.

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² Whilst it is acknowledged that the Onshore Scheme does not comprise or form part of an NSIP (please see Volume 2, Chapter 2: Policy and Legislative Context), NPSs are however a statement of government intention relating, in this case, to renewable energy projects, therefore can be taken into consideration during the preparation of the Onshore Scheme ES. 3 A suite of draft revised Energy NPSs were published and consulted on by the UK Government in March 2023, and consultation closed on 23rd June. The consultation responses will be subject to consideration and the draft revised NPSs may now be revised before the NPSs are formally adopted. There is currently no date for the next stage of the review process and therefore this ES presents the extant adopted NPSs which have been considered during the preparation of this ES. It is however noted by the Applicant that the new draft NPSs state that they may be material considerations in other applications which are not considered under the Planning Act (2008), this includes the Marine Scheme. Further detail on the consideration of the draft NPSs in this ES is provided in Volume 2. Chapter 2 Policy and Legislation.

⁴ This matter was discussed with both MS-LOT and the MMO during pre-application discussions in August 2022. As requested by the MMO, the Applicant provided clarity regarding the relevance of the Planning Act 2008, and the fact that the Cambois Connection is not an NSIP.



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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report
	'Owing to the complex nature of offshore wind farm development, many of the details of a proposed scheme may be unknown to the applicant at the time of the application to the IPC, possibly including [] cable type and cable route; and exact locations of offshore and/or Converter Stations. Where some details have not been included in the application to the IPC, the applicant should explain which elements of the scheme have yet to be finalised, and the reasons. Therefore, some flexibility may be required in the consent. Where this is sought and the precise details are not known, then the applicant should assess the effects the project could have (as set out in EN-1 paragraph 4.2.8) to ensure that the project as it may be constructed has been properly assessed (the Rochdale Envelope). In this way the maximum adverse case scenario will be assessed and the IPC should allow for this uncertainty in its consideration of the application and consent', EN-3 Paragraph 2.6.42 and 2.6.43.	that have been defined to ensure that the worst-case landscape and visual effects are assessed.
NPS EN-5 National Policy Statement for Electricity Networks Infrastructure	'New substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts', EN-5 Paragraph 2.11.5.	Once installed, during its operational phase, the proposed onshore export cables (HVDC and HVAC) will be underground. The LVIA has considered the effects of the Onshore Export Cable and Onshore Converter Station in section 7.11 and 7.13.
	'Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure', EN-5 Paragraph 2.11.5.	Reconfiguration of the existing electricity network infrastructure is considered, where relevant, in section 7.11 and 7.13.
NPS EN-1 (Revised Draft) (Mar 2023)	'The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object - be it a building or other type of infrastructure - including fitness for purpose and sustainability, is equally important. Applying 'good design' to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area. Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies,	The evolution of the design is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description. The mitigation of landscape and visual effects through good design are considered within the LVIA. See section7.10.



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Relevant Policy

Summary of Relevant Policy Framework

cants should

Given the benefits of 'good design' in mitigating the adverse impacts of a project, applicants should consider how 'good design' can be applied to a project during the early stages of the project lifecycle.' EN-1 Revised Draft (2023) Paragraphs 4.6.1 – 4.6.4

'Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process.

Applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.' EN-1 Revised Draft (2023) Paragraphs 4.6.6 – 4.6.7

[...] the Secretary of State should be satisfied that the applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.

In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process', EN-1 Revised Draft (2023) Paragraphs 4.6.11 – 4.6.12

'The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects (see Section 4.2). Several guides have been produced to assist in addressing landscape issues'.

The Landscape Institute and Institute of Environmental Management and Assessment: Guidelines for Landscape and Visual Impact Assessment (2013, 3rd edition); Landscape and Seascape Character Assessments – see https://www.gov.uk/guidance/landscape-and-seascape-character-assessments

Revised Draft (2023) Paragraph 5.10.15

'Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England [...] has landscape or waterscape assessment,

Cumulative landscape and visual impacts are considered in section 7.16.

The value of the landscape is considered in section 7.12



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	these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development', Revised Draft (2023) Paragraph 5.10.11	
	'The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives', EN-1 Revised Draft (2023) Paragraph 5.10.29	As described in Chapter 5: Project Description (Volume 2, Onshore EIAR) the refinement of the Onshore Scheme has been carefully considered alongside the potential for landscape and visual effects and mitigation. See also section 7.10.
	'The scale of energy projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project', EN-1 Revised Draft (2023) Paragraph 5.10.34	
	'In reaching a judgment, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable'. EN-1 Revised Draft (2023) Paragraph 5.10.35	
	'The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation'. EN-1 Revised Draft (2023) Paragraph 5.10.36	
	'The Secretary of State should consider whether requirements to the consent are needed requiring the incorporation of particular design details that are in keeping with the statutory and technical requirements for landscape and visual impacts.' EN-1 Revised Draft (2023) Paragraph 5.10.37	_
National Planning Policy Framework (NPPF) (2023)	Section 11: Making effective use of land. Paragraph 125 of the NPPF states: 'Area-based character assessments, design guides and codes and masterplans can be used to help ensure that land is used efficiently while also creating beautiful and sustainable places'.	The LVIA includes consideration of local landscape to character assessments in section 7.7. Landscape effects are assessed in section 7.11 of this Chapter.
NPPF (2023)	Section 12: Achieving well-designed places. Paragraph 130 states: 'Planning policies and decisions should ensure that developments: (a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development; (b) are visually attractive as a result of good architecture, layout and appropriate and effective	The mitigation of landscape and visual effects is considered within the LVIA. See section7.10. The evolution of the design is set out in Volume 2, Chapter 6Chapter 4: Site Selection and Consideration of
	landscaping; (c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);	Alternatives and Volume 2, Chapter 5: Project Description.



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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report
	(d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;	
	(e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and	
	(f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users 49; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.	
	Section 15: Conserving and enhancing the natural environment. Paragraph 174 states: 'Planning policies and decisions should contribute to and enhance the natural and local environment by: (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);	The mitigation of landscape and visual effects is considered within the LVIA. See section7.10. The evolution of the design is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.
	(b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;	
	© maintaining the character of the undeveloped coast, while improving public access to it where appropriate;	
	(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;	
	€ preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and	
	(f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate	



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Table 7.2 Summary of local planning policy relevant to landscape and visual amenity

Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report			
Northumberland County Co	lorthumberland County Council – Northumberland Local Plan 2016-2036 (Adopted March 2022)				
Policy STP 3: Principles of sustainable development (Strategic Policy)	It is stated on page 52 that: 'In applying the presumption in favour of sustainable development in Northumberland, and to deliver against economic, social and environmental objectives development proposals will be expected to adhere to the following principles where appropriate: i) Demonstrate high quality sustainable design which is accessible to all, and which respects and enhances the local distinctiveness of the natural, historic and built environment, helps promote a sense of place, reduces the need for energy, and facilitates flexible and adaptable buildings and environments; o) Anticipated impacts, including those from climate change, on the historic and natural environment, including landscapeshould be avoided by locating development elsewhere, adequately mitigated, or as a last resort, adequately compensated for'.	The mitigation of landscape and visual effects is considered within the LVIA. See section7.10. The evolution of the Onshore Scheme is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.			
Policy STP4: Climate change mitigation and adaption (Strategic Policy)	It is stated on page 54 that: 'Development proposals should mitigate climate change and contribute to meeting nationally binding targets to reduce greenhouse gas emissions. When determining planning applications, support will be given to development proposals that help mitigate climate change and consideration will be given to how proposals: e) Incorporate multi-functional green infrastructure, which can provide carbon storage and provide environments that encourage walking and cycling; f) Protect and enhance habitats that provide important carbon sinks, including peat habitats and woodland'. It is also stated on page 54 that: 'Development proposals should support adaptation to climate change, be resilient to climate change, and not make neighbouring areas more susceptible to the negative impacts of climate change. When determining planning applications support will be given to development proposals that help provide future resilience to climate change and consideration will be given to how proposals: [] e) Incorporate, where feasible, multi-functional green infrastructure, which can help species adapt to climate change through preventing fragmentation or isolation of habitats, reduce the heating of the urban environment, and manage flooding'.	The mitigation of landscape and visual effects is considered within the LVIA. See section 7.10. T The evolution of the design of the Onshore Scheme is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.			
Policy STP 6: Green infrastructure (Strategic Policy)	It is stated on page 61 that: 'Development proposals should where relevant, and in a proportionate way, seek to protect, improve and extend Northumberland's green infrastructure, and integrate with the network. When determining planning applications, consideration will be given to how development proposals: a) Protect and enhance strategic and/or local green infrastructure assets, provide high quality links between existing assets including links with green infrastructure networks in adjacent authority	The mitigation of landscape and visual effects is considered within the LVIA. See section7.10.			



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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report
	areas and/or provide additional uses for multi-functionality; e) Create a sense of place by fully integrating high quality, green infrastructure into the plan or proposal design to reflect locally distinctive character having regard to rural and urban character, open space, connective corridors and links with the wider countryside; f) Integrate green infrastructure with sustainable drainage and the management of flood risk; g) Consider the management and maintenance of new and existing green infrastructure throughout and beyond the plan period, including opportunities for community-led management'.	
Policy QOP 1: Design principles (Strategic Policy)	It is stated on page 151 that: '1. In determining planning applications, design will be assessed against the following design principles, where relevant, having regard to the Northumberland Design Guide. Development proposals should: a) Make a positive contribution to local character and distinctiveness and contribute to a positive relationship between built and natural features, including landform and topography; b) Create or contribute to a strong sense of place and integrate the built form of the development with the site overall, and the wider local area, having particular regard to: i. Building heights; ii. The form, scale and massing, prevailing around the site; iii. The framework of routes and spaces connecting locally and more widely; iv. The pattern of any neighbouring or local regular plot and building widths and where appropriate, follow existing building lines; v. the need to provide active frontages to the public realm; and vi. distinctive local architectural styles, detailing and materials;; [] d) Respect and enhance the natural, developed and historic environment, including heritage, environmental and ecological assets, and any significant views or landscape setting; i) Not cause unacceptable harm to the amenity of existing and future occupiers of the site and its surroundings; j. Incorporate, where possible, green infrastructure and opportunities to support wildlife, while minimising impact on biodiversity and contributing to environmental net gains []	The mitigation of landscape and visual effects is considered within the LVIA. See section7.10. The evolution of the design is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.
Policy QOP 2: Good design and amenity	It is stated on page 154 that: '1. Development will be required to provide a high standard or amenity for existing and future users of the development itself and not cause unacceptable harm to the amenity of those living in, working in or visiting the local area.	Impacts on visual receptors are assessed in section 7.13. Section 7.16 of the LVIA reports potential cumulative impacts.



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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report	
	Development proposals will need to ensure that the following criteria are met where applicable, taking into account any relevant cumulative effects and possible mitigation measures: a. The physical presence and design of the development preserves the character of the area and does not have a visually obtrusive or overbearing impact on neighbouring uses, while outlook from habitable areas of the development is not oppressive and the best outcomes for outlook are achieved wherever possible;	The mitigation of landscape and visual effects through good design is considered within the LVIA. See section7.10. The evolution of the Onshore Scheme is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.	
	b. Trees, other green and blue infrastructure and soft landscaping of amenity value are retained where appropriate and are introduced or replaced where they would enhance amenity of the development []'		
Policy QOP 4: Landscaping	It is stated on page 157 that:	The mitigation of landscape and visual effects is considered	
and trees	'1. Where relevant, new development will be expected to incorporate well-designed landscaping and respond appropriately to any existing landscape features.	within the LVIA. See section7.10. The evolution of the design is set out Volume 2, Chapter 4:	
	2. Development proposals should ensure that:	Site Selection and Consideration of Alternatives and Volume	
	a. Landscaping design is of a high quality, in accordance with the principles set out in Policy QOP 1;	2, Chapter 5: Project Description.	
	b. Existing features which contribute towards the character of the area, or amenity, are retained wherever possible and sympathetically incorporated into the overall design of the scheme;		
	c. Any hard or soft landscaping is appropriate, functional and well-integrated into the design of the development;		
	d. Trees, and other spaces and features that provide green and blue infrastructure, are preserved, enhanced and introduced into the landscaping scheme wherever possible;		
	e. There is no loss of existing trees which are valuable in terms of amenity, biodiversity or the landscape, except where this would be unavoidable and:		
	i. considerations in favour of the development would outweigh any harm resulting from the loss of trees; an		
	ii. the loss can be adequately mitigated through measures such as replacement planting where possible; and		
	f. Planting schemes are compatible and appropriate to the site and its use; species that may damage other vegetation or wildlife should be avoided.		



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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the EIA Report
	3. Development resulting in the loss or deterioration of ancient woodland and ancient or veteran trees will not be permitted unless wholly exceptional reasons exist to justify any loss or deterioration and a suitable compensatory strategy has been proposed.	
Policy QOP 6: Delivering well-designed places	It is stated on page 161 that: '1. Proposals are expected to meet the local design expectations set out in design policies within the Plan, having regard to the Northumberland Design Guide, and any other adopted design guidance.	The evolution of the design is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description.
	Proposals are expected to respond to any character assessments that form part of or support the Plan'.	How the design has evolved in relation to landscape and visual impacts is included in section 7.10of this LVIA.
Policy ENV 1: Approaches to assessing the impact of development on the natural, historic and built environmen (Strategic Policy)	It is stated on page 191 that: '1. The character and/or significance of Northumberland's distinctive and valued natural, historic and built environments, will be conserved, protected and enhanced by:	There are no national or local-level landscape planning designations within the study area and therefore no significant effects on these landscape receptors or their settings.
	a. Giving appropriate weight to the statutory purposes and special qualities of the hierarchy of international, national and local designated and non-designated nature and historic conservation assets or sites and their settings, and, in particular, giving great weight to:	The evolution of the Onshore Scheme is set out Volume 2, Chapter 4: Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description. How the design has evolved in relation to landscape and visual impacts is
	Conserving and enhancing the Areas of Outstanding Natural Beauty, in accordance with olicies ENV 5 and ENV 6, and Northumberland National Park; and	included in section 7.10 of this LVIA. At the time of writing, March 2023, the NCC Northumberlan
	ii. The conservation of designated heritage assets, with the impact of proposed development on their significance being assessed in accordance with Policy ENV 7.	Design Guide SPD was not published and only the structure was available as consultation draft.
	b. Protecting Northumberland's most important landscapes and applying a character- based approach to, as appropriate, manage, protect or plan landscape across the whole County.	
	2. In applying part (a) above, recognising that:	
	a. Assets or sites with a lower designation or non-designated, can still be irreplaceable, may be nationally important and/or have qualitative attributes that warrant giving these the appropriate protection in-situ; and	
	b. Development and associated activity outwith designations can have indirect impacts on the designated assets or sites;	
	3. An ecosystem approach will be taken that demonstrates an understanding of the significance and sensitivity of the natural resource. This should result in a neutral impact on, or net benefit for those ecosystems and the ecosystem services that they provide'.	



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Summary of Relevant Policy Framework

Policy ENV 3: Landscape

It is stated on page 198 that: 'The contribution of the landscape to Northumberland's environment, economy and communities will be recognised in assessing development proposals, as follows:

- a. Proposals affecting the character of the landscape will be expected to conserve and enhance important elements of that character; in such cases, design and access statements should refer, as appropriate, to Northumberland Landscape Character Assessment and other relevant studies, guidance or management plans;
- b. Great weight will be given to the conservation and enhancement of the special qualities informed the LVIA baseline, set out in section 7.7. The and the statutory purposes of the Northumberland National Park, the North Pennines Area assessment of effects on landscape receptors is set out in of Outstanding Natural Beauty and the Northumberland Coast Area of Outstanding Natural section 7.11. The evolution of the Onshore Scheme is set out Volume 2, Chapter 4 Site Selection and Consideration of
- c. Within those parts of the North Northumberland Heritage Coast, which are not part of the Northumberland Coast AONB, consideration will be given to the special character of the area and the importance of its conservation;
- d. Where applicable, the contribution of the Northumberland landscape to the understanding and enjoyment of heritage assets will be taken into account;
- e. In assessing development proposals in relation to landscape character:
- i. It will be considered whether sufficient regard has been had to the guiding principles and other relevant guidelines set out in the Northumberland Landscape Character Assessment:
- ii. A Landscape and Visual Impact Assessment (LVIA) will be required where the development is considered likely to have a significant impact on the surrounding landscape, townscape or seascape character of the site and/or visual amenity and/or the special qualities of an AONB;
- iii. The impact on the setting and surroundings of the County's historic towns and villages will be assessed, ensuring that new development on the edge of settlements does not harm the landscape character of the settlement edge and, where possible that it has a net positive impact:
- iv. Regard will be had to the Historic Landscape Characterisation;
- v. The potential impact that small scale development can have on the landscape in sensitive rural settings will be assessed; and
- vi. Any net negative cumulative impacts of development on landscape character will be assessed.

How and Where Considered in the EIA Report

The Onshore Scheme is not located within, or in close proximity to, any national or local-level landscape planning designations.

The landscape and visual effects resulting from the Onshore Scheme during construction and operation are assessed in the LVIA in section 7.11 and section 7.13.

The Northumberland Landscape Character Assessment has informed the LVIA baseline, set out in section 7.7. The assessment of effects on landscape receptors is set out in section 7.11. The evolution of the Onshore Scheme is set out Volume 2, Chapter 4 – Site Selection and Consideration of Alternatives and Volume 2, Chapter 5 – Project Description. How the Onshore Scheme has evolved in relation to landscape and visual impacts is included in section 7.10 of this LVIA.

Volume 2, Chapter 8: Archaeology and Cultural Heritage should be referred to for impacts on heritage assets.



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	f. Where it is considered that landscape character may be adversely affected, or aspects of this character that warrant protection would be degraded as a result of a proposed	
	development, the weight given to the harm caused will be in accordance with the	
	importance of the designation, taking account of (b) and (c) above and/or the assessed	
	key landscape qualities.'	



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7.5. **Consultation and Technical Engagement**

23. A summary of the key issues raised during consultation and technical engagement activities undertaken to date, specific to LVIA, is presented in Table 7.3 below, together with how these issues have been considered in the production of this Chapter. Further detail is presented within Chapter 3 of the ES.



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Table 7.3 Summary of key consultation and technical engagement undertaken for the Onshore Scheme relevant to LVIA

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter				
Relevant cons	elevant consultation and engagement undertaken to date						
Consultation o	n Onshore Scheme: Sco	oping Opinion					
12 December 2022	Natural England (NE): Environmental Impact Assessment Scoping consultation (Regulation 15 (4) of the Town and Country Planning EIA Regulations 2017): Scoping Opinion for the Cambois Connection Onshore Scheme (Ref: 414123)	Cumulative and in-combination effects The ES should fully consider the implications of the whole development proposal. This should include an assessment of all supporting infrastructure. An impact assessment should identify, describe, and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment (subject to available information): a. existing completed projects; b. approved but uncompleted projects; c. ongoing activities; d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and e. plans and projects which are reasonably foreseeable, i.e., projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects. Landscape and Visual Amenity The environmental assessment should refer to the relevant National Character Areas. Character area profiles set out descriptions of each landscape area and statements of environmental opportunity. The ES should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing, and understanding the ability of	Site Selection and Consideration of Alternatives and Volume 2, Chapter 5: Project Description. How the Onshore Scheme has evolved in relation to landscape and visual impacts is included in section 7.10 of this LVIA.				



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Date Consultee and Type of Issue(s) Raised Consultation

Response to Issue Raised and/or Where Considered in this Chapter

any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character.

A landscape and visual impact assessment should also be carried out for the Onshore Scheme and surrounding area. Natural England recommends use of the methodology set out in Guidelines for Landscape and Visual Impact Assessment 2013 ((3rd edition) produced by the Landscape Institute and the Institute of Environmental Assessment and Management. For National Parks and AONBs, we advise that the assessment also includes effects on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the landscape and related characteristics which underpin the natural beauty of the area and its designation status.

The assessment should also include the cumulative effect of the development with other relevant existing proposed developments in the area. This should include an assessment of the impacts of other proposals currently at scoping stage.

To ensure high quality development that responds to and enhances local landscape character and distinctiveness, the siting and design of the Onshore Scheme should reflect local characteristics and, wherever possible, use local materials. Account should be taken of local design policies, design codes and guides as well as guidance in the National Design Guide and National Model Design Code. The ES should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure. It should also set out detail of layout alternatives, where appropriate, with a justification of the selected option in terms of landscape impact and benefit.

Connecting People with nature

The ES should consider potential impacts on access land, common land, public rights of way and, where appropriate, the England Coast Path and coastal access routes and coastal margin in the vicinity of the development, in line with NPPF paragraph 100. It should assess the scope to mitigate for any adverse impacts. Rights of Way Improvement Plans (ROWIP) can be used to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.



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Date Consultee and Type of Issue(s) Raised Response to Issue Raised and/or Where Considered in this Chapter Consultation Measures to help people to better access the countryside for guiet enjoyment and opportunities to connect with nature should be considered. Such measures could include reinstating existing footpaths or the creation of new footpaths, cycleways, and bridleways. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Access to nature within the development site should also be considered, including the role that natural links have in connecting habitats and providing potential pathways for movements of species. Relevant aspects of local authority green infrastructure strategies should be incorporated where appropriate. 04 January Northumberland County The response from NCC duplicates that received from NE, with the exception The response from NCC duplicates that received from NE, Council (NCC): Scoping of issue(s) raised on cumulative and in-combination effects and 'Connecting 2023 and so the responses in row above apply equally to the NCC Opinion for the People with Nature', and so the responses in row above apply equally to the Scoping Opinion comment. Cambois Connection NCC Scoping Opinion comment Onshore Scheme (Ref: 22/04118/SCOPE) 02 June 2023 Northumberland County NCC confirmed that the 5 no. proposed viewpoints were acceptable. The An additional viewpoint has been included at the North Beach Council: LVIA Viewpoint Council requested an additional viewpoint from the dunes at Cambois. car park, to the east of Cambois. Visual impacts are assessed Consultation (via email) from representative viewpoints in section 7.13.



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7.6. Methodology to Inform Baseline

24. Baseline data collection has been undertaken to obtain current information for the Study Area described in section 7.3 (mapped in Volume 4, Figure 7.1 of the Onshore ES).

7.6.1. Desktop Study

25. Information on landscape and visual amenity within the LVIA Study Area was collected through a detailed desktop review of existing studies and datasets. These are summarised in Table 7.4 below.

Table 7.4 Summary of key desktop studies & datasets

Title	Source [all accessed September 2023]	Year	Author
Google Earth Pro Aerial Mapping	N/A	Various	Google Earth Pro
National Cycle Network (NCN) GIS dataset	https://data-sustrans- uk.opendata.arcgis.com/		Sustrans
NCC Landscape Character Assessment	https://www.northumberland.gov.uk/Planning/Reports.aspx	2010	Land Use Consultant, on behalf of NCC
NE National Character Areas	https://www.gov.uk/government/publicatio ns/national-character-area-profiles-data- for-local-decision-making/national- character-area-profiles	2014	NE
NE Open Data for Country Parks, Open Access Land / Registered Common Land, and Heritage Coasts	https://naturalengland- defra.opendata.arcgis.com/	Various	NE
Northumberland County Council Local Plan 2016-2034	Northumberland County Council: https://www.northumberland.gov.uk/Plann ing/Planning-policy/Policies.aspx	2022	NCC
Northumberland County Council online map of Public Rights of Way (ProW)	https://northumberland.maps.arcgis.com/apps/	2023	
Ordnance Survey (OS) 1:25,000 and 1:50,000 scale mapping	SSER	2023	OS
OS Terrain 5 Digital Terrain Model (DTM)	SSER	2023	OS
OS Open Data for settlements, roads, railways, and public rights of way; and National Trails.	https://beta.ordnancesurvey.co.uk/produc ts	2023	OS

7.6.2. Guidance

- 26. In demonstrating adherence to industry good practice, this LVIA has been undertaken in accordance with the following relevant standards and guidance:
 - Landscape Institute and Institute of Environmental Management and Assessment (2013). 'Guidelines for Landscape and Visual Impact Assessment': Third Edition (GLVIA3);
 - Landscape Institute (2021). Technical Guidance Note 02/21: 'Assessing Landscape Value Outside National Designations';
 - Natural England (2014). 'An Approach to Landscape Character Assessment';
 - Planning Inspectorate (2018). Advice Note Nine: 'Rochdale Envelope';



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- Planning Inspectorate (2019). Advice Note Seventeen: 'Cumulative Effects Assessment' Relevant to Nationally Significant Infrastructure Projects' – Version 2;
- NatureScot (2021). 'Assessing the Cumulative Impact of Onshore Wind Energy Developments';
 and
- Landscape Institute (2019). 'Visual Representation of Development Proposals'.
- 27. Although some of this guidance is from publications by bodies located in other UK nations it is commonly drawn on for work carried out in England where no equivalent guidance exists.

7.6.3. Site-specific Surveys

- 28. The LVIA undertaken as part of the preparation of the ES has been informed by desk-based studies and fieldwork survey, as discussed with consultees. Interactions have been identified between the Onshore Scheme and landscape and visual receptors, to predict likely significant effects and measures proposed to mitigate them.
- 29. For these receptors, primary data acquisition has been undertaken through a series of fieldwork surveys. These surveys have included verification of the likely Zone of Theoretical Visibility (ZTV) of the Onshore Converter Station from landscape character areas (LCAs), micro-siting of representative viewpoint locations, panoramic baseline photography, and visual assessment survey from representative viewpoint locations.
- 30. Baseline photography and fieldwork survey was undertaken in April and May 2023, as described in Table 7.5. Locations visited included representative viewpoints agreed with NCC (as described in Table 7.3) and the wider LVIA Study Area.
- 31. It has not been possible to visit every part of the LVIA Study Area when undertaking field surveys and therefore some aspects of the assessment are based on desktop study and professional experience. For example, parts of the LVIA Study Area comprises agricultural land that has restricted public access. In addition, sites under construction and /or vacant land parcels are not readily accessible by members of the public. It is considered that public roads and footpaths across the LVIA Study Area have provided sufficient coverage to form the basis of a robust assessment throughout the LVIA Chapter. However, where feasible, limitations have been minimised through the timing of surveys when visibility is sufficient to accurately represent the Onshore Scheme in visualisations.
- 32. A summary of the surveys undertaken to inform the LVIA assessment of effects are outlined in Table 7.5. below.



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Table 7.5 Summary of site-specific survey data

Title	Extent of Survey	Overview of Survey	Survey Contractor	Date	Reference to Further Information
Preliminary LVIA fieldwork visit	LVIA Study Area	A preliminary visit to the Onshore Scheme site was undertaken by a Chartered Landscape Architect. The visit was conducted to inform consultation with NCC, and to feed into the iterative design development undertaken throughout the EIA process.		11 th April 2023	N/A
LVIA fieldwork and Viewpoint Photography	LVIA Study Area	LVIA fieldwork and viewpoint photography was undertaken by a Chartered Landscape Architect. The survey captured baseline photography from each of the representative viewpoint locations, as well as detailed survey of landscape and visual receptors within the Study Area.	OPEN	18 th May 2023	N/A

7.7. **Baseline Environment**

7.7.1. Overview of Baseline Environment

- 33. This section identifies aspects of the landscape and visual resource that may be significantly affected by the Onshore Scheme and provides a description of the existing landscape and visual conditions in the area that may be affected (landscape and visual baseline). The baseline, when reviewed alongside the description of the Onshore Scheme provided in Volume 2, Chapter 5: Project Description, forms the basis for the identification and description of landscape and visual effects.
- 34. The baseline provides a 'description of the relevant aspects of the current state of the environment (baseline scenario) as required by Schedule 4 paragraph 3 of the EIA Regulations (2017). The 'relevant aspects' for landscape and visual amenity are considered to be those that have the potential to undergo change as a result of the Onshore Scheme, either through direct physical impacts, or indirect impacts from visibility / views of the Onshore Scheme.
- 35. In line with GLVIA3 (2013), the baseline therefore 'establishes the area in which the development may be visible', in order to define the relevant aspects of the current landscape and visual environment of the LVIA Study Area.
- 36. The baseline description of the landscape and visual resource that may be affected is primarily determined by the physical footprint of the Onshore Scheme and its MDS. The baseline also describes current pressures that may cause change in the landscape in the future, and which need to be considered cumulatively with the Onshore Scheme, in particular drawing on information regarding other developments that are not yet present in the landscape but are in the planning process.
- 37. A preliminary assessment has identified those landscape and visual receptors that may experience likely significant effects, which require to be assessed in full (see section 7.12 and 7.13)



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38. This section provides an overview of the landscape and visual baseline. A detailed baseline description is provided separately within the assessment of significance section for each landscape or visual receptor that may be significantly affected by the Onshore Scheme.

7.7.2. Landscape Baseline Overview

7.7.2.1. SITE CONTEXT

- 39. The Onshore Scheme is located within the administrative boundary of Northumberland County Council (NCC), shown on Figure 7.1 (Volume 4).
- 40. The landform context to the east of the A189 is broadly level and low-lying, at around 10 m AOD, rising slightly to the north at the River Wansbeck at around 15 m AOD, and falling away gently to the east to approximately 5 m AOD at Cambois. Low dunes and cliffs define the coastal edge at Cambois (North) Beach, at the North Sea coast. To the west of the A189, landform is more undulating, between approximately 15 m and 20 m AOD, with notable variations at and a localised high point to the southeast of West Sleekburn at approximately 37 m AOD. West of the A1147, variations in the undulating landform become slightly more pronounced, within a localised high point at Bedlington Station to the south-west of the Study Area at 55 m AOD. The valleys of the River Wansbeck and River Blyth (at its confluence with the Sleek Burn) lie to the north and south, respectively. The River Wansbeck valley is the more incised of the two, with landform further to the north rising to a generally level plateau at around 20 m to 25 m AOD. The River Blyth valley opens to the east of the A189 at the confluence with the Sleek Burn, although to the west of the road it becomes narrower and more incised. Landform to the south of the River Blyth is generally level to slightly undulating, between approximately 10 m to 20 m AOD.
- 41. The land-use context within the Study Area is shown on aerial mapping in Figure 7.2 (Volume 4). The proposed Onshore Converter Station site occupies four arable fields, divided by a small number of species-poor defunct hedgerows which have become overgrown with ruderal species. The proposed Onshore Converter Station site is enclosed by belts of immature plantation woodland, and mixed woodland, to the north, south, and west. Overhead pylon lines run broadly north-west to south-east across the southern part of the Site.
- 42. Land use to the east of the A189 is heavily influenced by vacant brownfield land, cleared from former industrial land-uses, and existing large commercial buildings and energy transmission infrastructure. To the east of the Onshore Converter Station site, the existing North Sea Link (NSL) converter station comprises a series of large, interconnected rectangular buildings, the tallest of which has its roof level at approximately 34 m AOD. Further east is an extensive tract of vacant land previously occupied by the Coal Stocking Yard for the Blyth Power Station, which at the time of writing and survey (May/June 2023) has planning consent for the development a battery manufacturing plant with ancillary offices, together with associated development and infrastructure works. This vacant land is now largely cleared. Aside from some areas of hard standing, it is enclosed to the south by woodland shelterbelts and to the east by pulverised fuel ash (PFA) mounds approximately 12 m and 24 m in height AOD, which are vegetated with patches of scrub, woodland, and grassland. The former site of the Blyth Power Station is situated to the south of the vacant Coal Stocking Yard site, south of Brock Lane, which at the time of writing and site survey (May/June 2023) was under construction for the development of an Advanced Manufacturing Technology Facility (AMTF). Immediately to the south of the AMTF site is the existing 275 kV National Grid substation building.
- 43. The coastline to the east of the LVIA Study Area is a broad arcing bay, from Blyth in the south to Newbiggin-by-the-sea in the north. At its southernmost point, the coastline is rocky, changing to a wide



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stretch of sandy beach further north (Cambois North Beach) to Spittal Point. Out to sea, Blyth Wind Farm is situated approximately 0.8 km offshore.

- 44. To the north of the River Blyth are pockets of settlement at East Sleekburn. The linear, fragmented settlement of Cambois runs parallel to the coastal edge to the east and north-east. Blyth and Ashington are the largest settlements within the LVIA Study Area, to the south of the River Blyth and north of the River Wansbeck, respectively. Bedlington, Bomarsund, West Sleekburn and Stakeford lie to the west of the A189, at a range between approximately 0.8 km and 3 km. Elsewhere, scattered individual, or small clusters, of properties are located on the minor road network between larger settlement. At the time of writing (August 2023) there is an application for 48 houses at Springville, to the west of East Sleekburn.
- 45. Other notable built form within the LVIA Study Area includes the industrial units at Fergusons Business Park (east and west), and sewage works adjacent to the A189. The A189 is a busy, dualled road which links Newcastle to Ashington. The road is a notable linear feature in the landscape, generally at grade or on slight embankment, and enclosed in sections by woodland and roadside vegetation. There are a number of industrial buildings of varying scale to the north of Blyth and situated around the port facilities. At North Blyth are the three distinctive red Alcon silos and a single onshore wind turbine. West of the A189 are large industrial buildings at the Aggregate Industries Concrete site, West Sleekburn Industrial Estate, and Suez Recycling Facility. A number of overhead power lines and towers span the landscape, from the north, west, and south-west, to the substation north of the River Blyth.

7.7.2.2. LANDSCAPE CHARACTER

- 46. The English landscape is classified at the national level by NE's National Character Areas (NCAs). GLVIA3, paragraph 5.14, notes that such broad-scale assessments can be helpful in setting the landscape context but are too generalised on their own to be appropriate as a basis for LVIA. The Onshore Scheme is situated wholly within the following NCA:
 - NCA 13 South East Northumberland Coastal Plain
- 47. The 'Key characteristics' of NCA 13 relevant to the LVIA Study Area are:
 - 'A wide, low-lying coastal plain with widespread urban and industrial development, extending north from the urban edge of Newcastle across the coastal plain, with mining towns and villages merging into rural landscape towards the north. Sweeping sandy beaches and rocky headlands remain within largely developed coast, along with mudflats and salt marshes in river estuaries.
 - Large, open arable fields, served by large-scale farmsteads, are interspersed with pastures on the poorer reclaimed soils. Fields are bounded by post-and-wire fences or by low and gappy hedges.
 - Major rivers (Blyth, Coquet and Wansbeck) meandering across the landscape from west to east, often flowing through steeply incised wooded river valleys.
 - [...] an extensive urban fringe effect near settlements where pit villages have often merged'.
- 48. Although helpful to an understanding of the broad landscape context and professional judgement used in the assessment, because the NCAs are a national level of characterisation, they are not considered sufficient in detail to determine the likely significant effects of any individual Onshore Scheme within the landscape. This assessment therefore proceeds on the basis of further, more detailed, landscape character assessments that have been carried out at the County level, described below. This accords with GLVIA3 and the advice from NE and NCC contained in the Scoping Opinion.



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- 49. Nested at the county level is the NCC (2010) Northumberland Landscape Character Assessment (NLCA) which, although dated, remains the current and most fine-grain classification of the landscape within the Study Area. The NLCA therefore forms the basis of the landscape character baseline for the Study Area, however, further industrial features are now present in the local area since the NCLA was undertaken, which are described below.
- 50. The NLCA separates the landscape into broad Landscape Character Types (LCTs) which are 'groups of landscapes within broadly similar combinations of geology, landform, vegetation, land use, and settlement patterns' and Landscape Character Areas (LCAs', which are 'geographically discrete examples of a particular LCT [...[...which] share the same elements as the landscape character type, but also have their own individual character and identity.' The LCTs and LCAs that lie within the LVIA Study Area are shown in Volume 4, Figure 7.3.
- 51. The Onshore Scheme is located within the following combination of LCTs/LCAs (Figure 7.3, Volume 4, ES Figures):
 - LCT 41: Developed Coast LCA 41a: Blyth and Wansbeck Estuaries;
 - LCT 42: Urban and Urban Fringe LCA 42a: Ashington, Blyth and Cramlington;
- 52. Because LCAs represent the most detailed, geographically discrete units of landscape classification they are considered appropriate as a basis for the assessment of likely significant effects. Each LCT within the LVIA Study Area has only one constituent LCA.
- 53. LCA 41a forms the coastal edge of Blyth and adjacent settlements and the NLCA notes that it is closely related to LCA 42a.
- 54. In broad terms, the NLCA describes LCA41a as:
 - [...] the most developed section of Northumberland's coastline and is dominated by the large-scale industrial developments around Blyth Harbour, including highly visible silos and wind turbines. Formerly a major coal port, the harbour now has significant areas of derelict and 'brownfield' land'
- 55. In terms of visual characteristics, the description notes 'Industrial elements are present in all views from this area, the most visually significant being the [...] silos at Blyth Harbour, and the wind turbines located on the quay and offshore.' Other prominent built form includes the existing NSL converter station, and substation to the north of Blyth Harbour. Not identified in the 2010 NCLA, is the underconstruction advanced manufacturing and technology facility to the north of Blyth Harbour, which when complete will add to the variety of large-scale industrial built forms within the LCA. Settlement, by contrast, is relatively small-scale in the context of built features within this LCA. Cambois and East Sleekburn comprise small parcels of suburban townscape scattered along the coastal edge to the east, and along the River Blyth to the south.
- 56. In broad terms, the NLCA describes LCA 42a: Ashington, Blyth and Cramlington as:
 - [...] generally flat land, with some gentle summits, slopes eastwards to the coast [...] The landscape is cut through by the valleys of the Rivers Wansbeck and Blyth. In places, the natural landform has been modified, and is often obscured by development. Most of the area is built up, but pockets of fragmented farmland remain, mostly arable. Fields are a range of shapes and sizes, having been modified by surrounding land uses, but are generally large and rectilinear. Field boundaries often comprise gappy or outgrown hedges, with post and wire fences replacing hedges entirely in places. Tree cover includes coniferous plantations and deciduous woodlands, both often sited on reclaimed or restored land [...] Settlement forms the bulk of this character area. The main settlements of Ashington, Blyth and Cramlington comprise a range of ages and styles of



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development [...] Urban fringe land uses include retail parks and industrial estates. There are areas of derelict land associated with former workings or industrial buildings.'

57. Regarding visual characteristics, the description notes 'Views are generally limited by the density of built development, although elevated locations allow occasional long views north-west [...] pylons are often features in the view. Although the towns are generally well-kept, much of the urban fringe areas are degraded'. Also not identified in the NLCA is the influence of the large-scale Aggregate Industries site to the west of the A189, which is conspicuous in open views from the eastern edge of Bedlington and the surrounding landscape.

7.7.2.3. SEASCAPE CHARACTER

- 58. In England, seascape character principally applies to coastal and marine areas seaward of the high water mark. Seascape, like landscape is about the relationship between people and place and the part it plays in forming the setting to our everyday lives. Seascape results from the way that the different components of the environment both natural and cultural interact and are understood and experienced by people. Seascape is defined by Natural England in its position statement on All Landscapes Matter (2010) as: 'An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors'. A summary of what constitutes seascape is presented in 'An Approach to Seascape Character Assessment' (Natural England, 2012).
- 59. A definition of seascape is also set out in NPS EN3 (2.6.203):

'Where necessary, assessment of the seascape should include an assessment of three principal considerations on the likely effect of offshore wind farms on the coast:

- Limit of visual perception from the coast;
- Individual characteristics of the coast which affect its capacity to absorb a development; and
- How people perceive and interact with the seascape.'
- 60. In 2015, the MMO commissioned desk-based seascape assessments for the south-east, north-east and north-west marine plan areas. This project developed MMO's desk-based seascape assessments for the south-east, north-east, north-west, and south-west marine plan areas formulated in 2015/16 to undertake stakeholder verification through a series of workshops were held in 2018 to provide the opportunity for key stakeholders to input into the process. Following consultation, this study has produced a combined national seascape character map for all England's inshore and offshore areas, comprising a spatial framework of individual MCAs which 'flow across' marine plan area and administrative boundaries. The MCAs represent strategic patterns and variations in character across the national marine area.
- 61. The boundaries drawn for the MCAs represent broad transitions (rather than immediate or abrupt changes) in character from MCA to MCA, tending to reflect natural breaks or the clustering of characteristics and/or features.
- 62. The baseline description of the seascape of the Study Area is informed by the MMO (2018) 1134: 'Seascape Character Assessment for the North East Inshore and Offshore Marine Plan Areas', which covers the seascape of the LVIA study area, within UK Waters.
- 63. The intertidal area and inshore seascape of the Study Area is located entirely within MCA 22: Tyne, Tees and Wear Estuaries and Coastal Waters (see Volume 4 Figure 7.3). This broad MCA extends from Saltburn-by-the-Sea in North Yorkshire in the south, to Newbiggin Point in Northumberland to the north.



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> 64. In respect of impacts on seascape character arising from the Marine Scheme, during installation of the subsea cable and Landfall, there would be a temporary introduction of limited marine traffic (i.e., vessels and support craft) as well as other specialist vessels and operations, including a potential jack-up barge. These installation activities would be perceived in the context of an open seascape, where vessels of various sizes are a baseline feature of the character and views. Such temporary, short duration impacts are not considered likely to give rise to significant effects on seascape character and are therefore impacts on these receptors are scoped out of further assessment in this LVIA.

7.7.2.4. LANDSCAPE PLANNING DESIGNATIONS

- 65. A landscape planning designation is an area of landscape identified as being of importance at international, national, or local level, either defined by statute or identified in development plans or other documents. These landscapes are designated in relation to their special qualities or features which warrant special consideration through the planning system.
- 66. There are no landscape planning designations within the Study Area. Consequently, there will be no effects on landscape planning designations or on their unique setting as a result of the introduction of the Onshore Scheme.

7.7.3. Visual Baseline Overview

67. Principal visual receptors are the people located within settlements, as well as users of roads, railways, recreational routes, and visitors to attractions within the Study Area. The locations of principal visual receptors identified as part of this LVIA are shown in Figure 7.4 (Volume 4), and with the Onshore Onshore Converter Station screened ZTV in Figure 7.8 (Volume 4), and are as described below.

7.7.3.1. **SETTLEMENT**

- 68. The settlement pattern is generally nucleated around major roads and centres of industry within the Study Area, with small, dispersed settlement found in pockets around the coast and rural hinterland.
- 69. The closest settlement to the Onshore Scheme is the village of East Sleekburn, to the north of the River Blyth. The settlement is situated on the shallow valley side to the north of the Sleekburn. To the north is a block of woodland which encloses much of the settlement, which ranges between approximately 5 m to 100 m in depth, restricting visibility to the north. A cluster of properties is situated to the west of Brock Lane, to the south of an area of open grassland which has a more open aspect to the north. Typically, properties within the village are inward looking, onto the network of local roads.
- 70. Approximately 500 m to the east of East Sleekburn is a dispersed pocket of suburban housing off Harbour View road. This cluster of houses is enclosed by relatively dense woodland to the east and west, and by further woodland and low scrub vegetation to the north. An area of amenity grassland provides a slightly more open aspect to the north.
- 71. The largely linear settlement of Cambois is situated further east and north-east, close to the coast. The settlement is fragmented into two distinct pockets of housing; the first is along Unity Terrace; the second is to the north at Wembley Gardens. At Unity Terrace the settlement is situated on relatively level, low-lying ground, with views contained by high PFA mounds to the west and by railway embankment and dunes to the east. Further north, at Wembley Gardens, the settlement is situated on slightly higher ground, which falls away to the north and north-east. Properties on the southern edge of Wembley Terrace and to the west of Wembley Gardens have slightly elevated, open views across the landscape to the south.



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72. Blyth town is situated to the south of the River Blyth. The settlement core is found in close proximity to the historic harbour to the east. The majority of the suburban part of the settlement lies to the south of modern large-scale industrial buildings and their associated land uses which now occupy the harbourside on the south banks of the river or are screened by high embankment.

- 73. West of the A189, in the south-west sector of the Study Area, are parts of the suburban edge of Bedlington which lie between the Sleek Burn to the north and River Blyth to the south. Part of the settlement extends to the east of the A1147, from which there are open views across gently undulating farmland to the north, with more distant visibility contained by vegetation along the Sleek Burn and the A189, and by rising landform and vegetation in the wider landscape to the north.
- 74. Stakeford lies to the south of the River Wansbeck, which separates the village from Ashington to the north. The eastern parts of Stakeford, along the A1147 and West Sleekburn, lie within the northwestern sector of the LVIA Study Area. The small linear settlement of Bomarsund is situated along the A1147 just to the south of Stakeford. Views to the south-east and east from these settlements are generally restricted by a combination of vegetation and rising landform across the landscape to the west of the A189, and by woodland planting alongside the road itself.
- 75. In the northern sector of the Study Area is the town of Ashington. The settlement lies to the north of the River Wansbeck and is bordered to the east by the A189. At the southernmost edge of the settlement, small pockets of suburban housing and large retail development occupy land to the south of Newbiggin Road and the River Wansbeck. On the upper valley sides of the River Wansbeck, there are some isolated locations from which open, elevated views are gained to the south. However, from many locations, visibility is restricted by intervening landform and vegetation within the well-wooded river valley, by adjacent built form, and particularly by intervening vegetation in the wider landscape to the south of the river.
- 76. The Sandy Bay caravan park site occupies an elevated position, north of the mouth of the River Wansbeck and overlooking the North Sea to the east. Caravans on the southern edge of the site overlook the river and have long views across the coastal edge to the south, with more distant visibility inland to the south-west is restricted by vegetation and landform to the south of the river.

7.7.3.2. **ROADS**

- 77. The location of the Onshore Scheme on a parcel of land separated by the River Wansbeck to the north and River Blyth to the south results in a sparse network of roads within approximately 1 km.
- 78. The A189 is the primary vehicular route within the LVIA Study Area. The A189 is a busy, dualled road which links Newcastle to Ashington. The road is a notable linear feature in the landscape, generally at grade or on slight embankment, and is enclosed in sections by woodland and roadside vegetation to the east and west, affording fleeting sections of open visibility, but more generally intermittent views of the surrounding landscape.
- 79. A single minor road provides access to Cambois, North Blyth, and the coast, passing to the north of the River Blyth and south of the River Wansbeck.
- 80. To the west of the Study Area, the A1147, A1068, A196, A193, B1334, and B1329 provide vehicular access through and between the urban areas of Ashington, Stakeford, Bedlington and Blyth. There are also multiple minor roads occurring across the LVIA Study Area providing access to these settlements and industrial and commercial land.

7.7.3.3. **RAILWAYS**

81. Freight railway sidings extend eastwards from West Sleekburn, via Cambois to North Blyth.



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82. To the west of the A189 is the railway line which will become part of the proposed Northumberland Line passenger rail service between Ashington and Newcastle Central Station. At the time of writing the first passenger journeys are scheduled to begin towards the end of 2023⁵.

7.7.3.4. RECREATIONAL ROUTES AND LOCAL VISITOR ATTRACTIONS

- 83. National Cycle Route 1 (NCR 1) passes through the LVIA Study Area from Ashington in the north, to Blyth in the south. Within approximately 1 km of the Onshore Scheme, the route follows the minor road around the coast to Cambois and East Sleekburn. To the north and south, the route follows onroad and off-road sections, west of the A189 and to the south of the River Blyth.
- 84. The King Charles III England Coast Path (ECP) enters the Study Area from Newbiggin-by-the-Sea in the north. It follows the coastal margin to the River Wansbeck, where it cuts slightly inland to cross a pedestrian bridge to the west of the A189, before heading back towards the coast at Cambois. The path follows the coastline until it passes south of Cambois, where it heads west, inland, along Harbour View road to East Sleekburn. To the south of East Sleekburn the route follows the margins of the River Blyth before crossing the A189 road bridge to Blyth. The route then follows the harbour edge to the south of the River Blyth, occasionally diverting inland behind the coastal edge.
- 85. There are two Country Parks within the Study Area. The Wansbeck Riverside Park, also a Local Nature Reserve, lies to south of Ashington, covering the river channel and bank sides of the River Wansbeck to the west of the A189 inland as far as Sheepwash. Bedlington Country Park occupies the north side of the River Blyth and is also a Local Nature Reserve.
- 86. Between the River Wansbeck in the north and River Blyth in the south, there is a long, narrow beach backed by rocks and grassy dunes. There are two public car parks to the north of Cambois, and one at North Blyth, which are popular for visitors to the beach.

7.7.3.5. REPRESENTATIVE VIEWPOINTS

- 87. The representative viewpoints identified for inclusion in the detailed assessment process have been selected to reflect the variety of landscape character types and receptor types as well as view directions and distance that may be significantly affected, primarily by the Onshore Scheme. The representative viewpoints also assist in defining the likely extent of significant visual effects associated with the Onshore Scheme from principle visual receptors located throughout the Study Area.
- 88. Six viewpoints for the LVIA have been selected through consultation and agreement with NCC. The precise viewpoint locations have been finalised based on site survey and potential visibility of the Onshore Scheme. Representative viewpoints for assessment are identified in Table 7.6, below, and mapped in Volume 4, Figure 7.5 and Figure 7.6.

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⁵ https://www.northumberlandline.uk/background [Accessed March 2023].



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Table 7.6 Representative Viewpoints

ID	Name	Grid Reference		Receptor Type / LCT / Designation
		Easting	Northing	
1	Spring Ville / Brock Lane, East Sleekburn	428778	583550	Settlement, future occupiers of 'The Pastures', users of NCR 1, and users of the local road network. LCA 42a: Ashington, Blyth and Cramlington
2	Northfield / Waterfield Road, near East Sleekburn	429797	583576	Settlement. Users of PRoW NCC Ref 600/062. LCA 41a: Blyth and Wansbeck Estuaries
3	Brock Lane / England Coast Path / NCR 1	429411	583494	Users of the England Coast Path / NCR 1, and users of the local road network. LCA 41a: Blyth and Wansbeck Estuaries
4	Wembley Gardens, Cambois	429791	584755	Settlement, users of NCR 1, and users of the local road network. LCA 41a: Blyth and Wansbeck Estuaries
5	A189, southbound	429264	584795	Users of the A189. LCA 41a: Blyth and Wansbeck Estuaries
6	Cambois, south of beach car park	430528	584189	Users of the ECP and visitors to the beach. LCA 41a: Blyth and Wansbeck Estuaries

7.7.4. Future Baseline Scenario

- 89. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 Schedule 4 paragraph 3, require that a 'description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge' is included within this ES.
- 90. In order to assess the Onshore Scheme against a realistic baseline scenario, i.e., what the baseline conditions are likely to be once the Onshore Scheme is operational, a description of the likely future baseline conditions is provided within this section.
- 91. Within the Converter Station Zone, it is expected that arable agriculture would continue as the principal land use, with areas of woodland and hedgerows expected to continue to grow to maturity and remain extant under existing management regimes.
- 92. The main driver of future change within the landscape and visual resource is climate change. Aspects that may cause change are likely to take two forms; measures to mitigate against the adverse effects of climate change and measures put in place to try and limit the future effects of it.
- 93. The need for increased flood defence measures is likely to be a driver for change in relation to the coastline and water courses as well as potential changes to other land use practices.



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- 94. Net Zero carbon emission targets are likely to see an increase in renewable energy development, which is likely to include further onshore and offshore wind farm development, tidal and wave power projects, and solar development. There is a small onshore wind turbine at Blyth Docks, and the Blyth Offshore Demonstrator wind farm is located approximately 0.8 km off the coast, east of the LVIA Study Area. It is expected that additional applications for Blyth 2 Floating Offshore Windfarm renewable energy development in this area will be forthcoming in the future. This may result in a need for further grid infrastructure development to connect with the national grid and consumers.
- 95. There are extensive tracts of vacant former industrial land currently located within wider Onshore Scheme and LVIA Study Area. The land to the east of the existing NSL converter station has planning permission for battery manufacturing plant with ancillary offices, together with associated development and infrastructure works. However, at the time of writing (August 2023) it is currently unknown whether an amended or reduced scheme will be proposed. The planning permission would lapse in July 2024 if not implemented. The former site of the Blyth Power Station is situated to the south of the vacant Coal Stocking Yard Site, south of Brock Lane, which at the time of site survey (May 2023) was under construction for the development of an Advanced Manufacturing Technology Facility (AMTF). Even if the planned battery manufacturing facility does not proceed, the area is allocated as a 'Strategic Employment Area' under Policy ECN 2 of the (2022) adopted Northumberland Local Plan, within which employment and industrial uses will be prioritised.
- 96. At the time of writing construction of a site for 48 houses at Springville, west of East Sleekburn, is underway. It is likely that there would be an incremental expansion of settlements within the LVIA study area in response to population changes and the need to meet future housing needs.
- 97. Increased walking, cycling and public transport infrastructure may result in changes within urban and rural areas to accommodate this with the aim of reducing vehicular travel and providing increased amenity resources.
- 98. Following the United Kingdom's exit from the European Union new policies are being drawn up to replace the Common Agricultural Policy. This may result in different agricultural practices being subsidised so that land-uses and land management practices that can reduce or offset carbon emissions become more prevalent. These may include increased tree cover; hedgerow planting and areas being left un-grazed. There may also be increases in food production in the UK in order to reduce our need to import, which may also change farming infrastructure and practices.
- 99. The recent change in how people work, i.e., increased at home working rather than travelling to offices, is likely to continue and may result in changes to town centres where there is a focus on commercial property. Such changes may also put more development pressure on rural communities.
- 100. In summary, whilst it is acknowledged that there is anticipated to be some change in the future baseline, the LVIA has described and outlined these anticipated changes but is not able to assess these on the basis of the available environmental information and scientific knowledge due to the uncertainty surrounding the nature, type, and timing of changes to the baseline.

7.7.5. Data Assumptions and Limitations

- 101. While there are some limitations related to this Chapter, these are not considered to affect the identification or assessment of likely significant effects for landscape and visual receptors.
- 102. As stated previously, it is not possible to visit every part of the Study Area when undertaking field surveys and therefore some aspects of the assessment are based on desktop study and professional experience.



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- 103. A degree of flexibility has to be maintained to allow future iterations during the detailed design process, however sufficient information regarding the design parameters for the Onshore Scheme is also needed in order to inform the EIA and in particular the LVIA.
- 104. In accordance with the assessment approach to the 'Rochdale Envelope' set out in in Volume 2, Chapter 5: Project Description of this ES, the impact assessment for LVIA has been undertaken based on a realistic worst-case scenario of predicted impacts. Therefore, the LVIA considers the 'Maximum Design Scenario' (MDS), three-dimensional (3D) Volume and height parameters proposed for the Onshore Converter Station, and Onshore Export and Grid Cable parameters, as set out in the Project Design Envelope (PDE) and reported in section 7.8, in order to ensure the worst-case scenario is represented in the visualisations and assessed in this Chapter.
- 105. The preparation of ZTVs, wireline visualisations and photomontages as assessment tools incorporates certain limitations, including the accuracy of digital terrain modelling (DTM). These limitations are described in section 7.7.5. The use of detailed terrain models such as OS Terrain 5 DTM, production of visualisations and photomontages to recognised standards and field survey assessment of potential impacts aids in minimising these limitations.
- 106. Any bare ground landform levels shown in the visualisations have been modelled from OS Terrain 5 DTM data. The height of existing trees to be retained shown in Viewpoint 2 (Figure 7.11, EIA Volume 4, ES Figures) by a green dotted line and used in the preparation of the Onshore Converter Station MDS Screened ZTV shown on Figure 7.6 (EIA Volume 4, ES Figures) have been based on Environment Agency 2022 1m Lidar DSM data. The NSL converter station was modelled as a 3D building in SketchUP based on planning application elevation drawings. The proposed finished floor levels were also extracted from these drawings. The 3D model was georeferenced to the correct location using OS 1:25,000 scale mapping. Tree removal and retention areas were created using OS Open Map Local Woodland layers, converted in 3D blocks using average tree heights extracted from Environment Agency 2022 1m Lidar DSM data.
- 107. The 'MDS Onshore Converter Station Envelope' has been represented by a wireframe within the visualisations. However, for the purposes of assessment, the LVIA has judged the attributable effects of the Onshore Converter Station within the Converter Station Zone as being a neutral 'Merlin' grey colour. Consideration of the colour and finish of the Onshore Converter Station should form a component of the detailed design process, when a finalised layout option is confirmed, and be informed by any locally appropriate building vernacular.
- 108. The preparation of the supporting visualisations has adopted a finished ground level for the Onshore Converter Station platform of 15.2 m AOD, as detailed in Chapter 5: Project Description. The MDS for the Onshore Converter Station is based on a building height of 30 m above finished floor level; and therefore, the maximum envelope height is 45.2 m AOD. These dimensions have been extruded from the Indicative Onshore Converter Station Platform shown on the LVIA figure 7.1 to LVIA figure 7.9 to create the 3D envelope that is the 'MDS Onshore Converter Station Envelope'.
- 109. As described in full in section 7.9, there are limitations with regards projects included in the cumulative assessment, particularly those at Scoping stage, in terms of the degree to which they are well-defined or of sufficient detail to the point that they can be assessed, and how likely the projects are to be taken forward as currently defined. As such, cumulative projects at Scoping stage are scoped out of the CEA.



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7.8. Key Parameters for Assessment

7.8.1. Maximum Design Scenario

- 110. The MDS summarised here has been selected as having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the details provided in Volume 2, Chapter 5: Project Description of this ES. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the PDE (e.g., different infrastructure layout), to that assessed here, be taken forward in the final design scheme.
- 111. Given that the maximum design scenario is based on the design option (or combination of options) that represents the greatest potential for change, confidence can be held that development of any alternative options within the design parameters will give rise to no worse effects than assessed in this impact assessment. Table 7.7 presents the maximum design scenario for potential impacts on landscape and visual amenity during construction, operation and maintenance and decommissioning.
- 112. There are some design details related to the Onshore Scheme that are still to be finalised due to further ground investigations required, ongoing engineering design work and the procurement of cable and converter station suppliers. These details will inform the final specification. The Site boundary has been chosen to allow flexibility to accommodate these design details which will be subject to future application(s) for approval of Reserved Matters.

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Table 7.7 Maximum design scenario specific to Landscape and Visual Amenity

Potential Impact	Maximum Design Scenario	Justification	
Construction			
Landfall Landscape and visual effects	 Trenchless technology (e.g., HDD) at Cambois North Beach and trenchless technology beneath the intertidal zone to the Transition Joint Bays which will be located above MHWS north of Selbourne Terrace, Cambois. Up to four transition joint bays (one per cable), approximately 25 m x 6 m. The final location of the Transition Joint Bays will be determined post consent but will be influenced by the angle of trajectory, existing offshore infrastructure, maximum length of the trenchless technology (such as HDD) and distance of the trenchless technology exit pit locations offshore. 	The MDS includes the maximum area of the landfall construction compound(s), material storage, and associated plant required for construction activities. This comprises the maximum area of potential land disturbance and visible construction activity.	
Landfall construction compound	 Up to six construction compounds with a total area of 15,000 m² 	The MDS includes the maximum number and associated area of construction compounds, reflecting the largest area of potential land disturbance and visible construction activities.	
Onshore HVDC Cable Corridor Landscape and visual effects	 The Onshore HVDC cable corridor has a maximum width of approximately 110 m. This maximum corridor width includes up to four trenches (each containing one high voltage cable and one fibre cable) 	The MDS includes the maximum parameters of the Onshor HVDC Cable corridor representing the greatest area of potential disturbance and visible construction activities.	
	 Two access tracks up to 12 m wide. 		
	 Landscape features such as woodland, hedgerows and agricultural grassland may be removed within the Site except as indicated in Technical Appendix 7.2 (Volume 3). 		
Onshore HVDC Cable Corridor construction compounds Landscape and visual effects	 Up to eight construction compounds with a total area of 37,800 m². Up to 16 joint bays (four per cable), approximately 16 m x 6 m. Up to seven material storage areas, with a total area of 28,800 m². Landscape features such as woodland, hedgerows and agricultural grassland may be removed within the Site except as indicated in Technical Appendix 7.2. 	The MDS includes the maximum number and associated area of construction compounds, reflecting the largest area of potential land disturbance and visible construction activities.	
Onshore Converter Station construction activities Landscape and visual effects	 Up to two Onshore Converter Station construction compounds, with an area of 20,400 m² and up to two material storage areas with an area of 8,400 m². Earthworks will be required in the formation of the Onshore Converter Station platform, construction compounds, access tracks, and for SuDS. 	The MDS includes the maximum dimensions of construction compounds, material storage and the greatest number, area and associated plant required for trenchless technology compounds comprising the maximum area of potential land disturbance and visible construction activities.	



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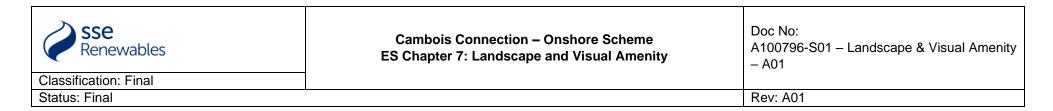
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Potential Impact	Maximum Design Scenario	Justification	
	 Construction of spread foundations to support small structures; 		
	 Construction of hardstanding areas i.e., pavements and car parking; 		
	 Construction of foundations to support the high loads of the transformers, reactors and other HV electrical plant; 		
	 Construction of a finished platform through completion of earthworks operations to provide a level substation footprint. The exact depth and Volume of cut and fill soil which is associated with the flat platform will be determined following more detailed investigations. Depending on the topography this may require the construction of retaining structures; 		
	 Construction of utilities and services; 		
	 Construction of permanent drainage (SuDS pond); 		
	 Construction of permanent access roads to the Onshore Converter Station and SuDS pond; 		
	 Construction of substation infrastructure including switchgear buildings; 		
	 Landscaping and restoration of land adjacent the substation; 		
	 Construction of surface water and foul water drainage provision; and 		
	 Construction of temporary fencing, site floodlights and security measures. 		
	 Landscape features such as woodland, hedgerows and agricultural grassland may be removed within the Site except as indicated in Technical Appendix 7.2. 		
Onshore HVAC Cable corridor Landscape and visual effects	 The Onshore HVAC Cable corridor has a maximum width of approximately 125 m, which could be up to a maximum of 200 m at HDD locations. 	The MDS includes the maximum parameters of the Onshore HVDC Cable corridor representing the greatest area of	
·	 This maximum corridor width includes up to four trenches. 	potential disturbance and visible construction activities.	
	Three access tracks up to 12 m wide		
	 Landscape features such as woodland, hedgerows and agricultural grassland may be removed within the Site except as indicated in Technical Appendix 7.2 (Volume 3). 		
Onshore HVAC Cable corridor	Up to eight construction compounds with a total area of 37,800 m².	The MDS includes the maximum number and associated are	
construction compounds	 Up to 24 joint bays (two per cable), approximately 16 m x 6 m. 	of construction compounds, reflecting the largest area of potential land disturbance and visible construction activities.	
Landscape and visual effects	 Up to six material storage areas, with a total area of 28 780 m² 		

• Up to six material storage areas, with a total area of 28,780 m².



Potential Impact	Maximum Design Scenario	Justification
	 Landscape features such as woodland, hedgerows and agricultural grassland may be removed within the Site except as indicated in Technical Appendix 7.2 (Volume 3). 	
Construction period	 The construction period is 60 months. During this period there may be occasions where 24 hour working for 7 days a week is required for trenchless technology construction activities at specific location along the cable corridor. See Volume 2, Chapter 5: Project Description. 	The MDS considers the greatest extent of construction activity, reflecting the maximum duration of likely significant effects. However, construction of sections of the Onshore Export Cable would be shorter than the maximum duration of the construction phase.
Construction lighting	 Temporary flood lighting for working hours during winter months and for construction compound security. 24-hour lighting also required for trenchless technology construction activities. 	Construction lighting required with the lights of construction traffic adding to lighting levels.
Operation and Maintenance		
Onshore Export Cable (HVDC and HVAC) Landscape and visual effects	 Comms boxes / link boxes are required along the Onshore Export Cable, at the locations of the Transition Joint Bays. They would be constructed underground with manhole covers being the only visible above ground infrastructure. 	The MDS includes the maximum amount of visible above ground cable infrastructure.
Converter Station Landscape and visual effects	 Due to the proximity of the site to the coast, most of the electrical infrastructure will be housed within the series of interconnected buildings to prevent exposure to saline air, although depending on final design there will be a requirement for equipment to be housed externally (outdoors). Equipment which may be placed outdoor includes typically: AC and DC switch yard equipment and associated ancillary / auxiliary equipment; Transformers; Cooling Equipment; and Enclosures for transformers for environmental protection. Onshore Converter Station maximum platform size of 300 m x 300 m. 	The LVIA Chapter has considered a maximum building height (30 m) applied to the platform level (15.2 m) across the Onshore Converter Station Platform. This area presents a three-dimensional maximum design scenario, ensuring the LVIA is considering the maximum likely significant effects of the Converter Station.
	Platform level 15.2 m Above Ordnance Datum (aOD).	
	Onshore Converter Station maximum dimensions 290 m x 275 m.	
	 Maximum building height of 30m above the platform level (15.2 m aOD); overall height 45.2 m AOD. 	
	 There will be a requirement to install electrical equipment on the roof of the buildings such as a lightning conductor. This is not included in the maximum building height which relates specifically to the maximum roof height of the building mass, which is the primary source of visual impacts. 	



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Maximum Design Scenario

Justification

- Cladding will be used and with colour and design selected as part of detailed design.
- Security fences and gates are to be constructed and maintained around the complete Onshore Converter Station site. It is anticipated that the fence will be up to 3m high.
- 24-hour lighting is required. Where practicable, glare and the spread of upward light will be minimised to reduce sky glow and minimise visual intrusion within the open landscape. The entrance and walkways for access and egress and emergency exits will need illuminating for safety reasons.
- Landscape features such as woodland, hedgerows and agricultural grassland may have been removed within the Site except as indicated in Technical Appendix 7.2 (Volume 3) and may not have been reinstated in the same locations due to constraints.

Decommissioning

Onshore Export Cable and Converter Station Landscape and visual effects

- At the end of the operational lifetime of the Onshore Scheme, the operator will develop and agree a solution for the onward handling of the onshore infrastructure with the regulator. This decision will be based on the advice from the regulator at the Decommissioning arrangements will be detailed in a time and informed by the prevailing environmental regulatory requirements at that time, and relevant industry practice.
- Decommissioning of the Onshore Converter Station would involve the main components being dismantled and removed for recycling or disposal in accordance with the relevant waste disposal regulations.
- Decommissioning of underground cables would involve disconnection from operational cable, with options for leaving redundant cable in-situ or removal. Removal would involve similar activities to construction.
- The approach to decommissioning will align with regulatory guidance, requirements, and industry practices at the time of decommissioning and will be agreed with the relevant stakeholder and regulatory bodies.
- A decommissioning plan and supporting decommissioning environmental management plan will be prepared prior to commencement of decommissioning and will be subject to its own environmental assessment.

The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time. decommissioning plan, which will be drawn up and agreed with the relevant consenting body / stakeholder prior to decommissioning.

For the purposes of the worst-case scenario, it is anticipated that the impacts will be comparable to or less than those identified for the construction phase.



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7.8.2. Impact Scoping Table

113. Following receipt of the Scoping Opinion from NCC (Reference 22/04118/SCOPE, 4th January 2023) and NE (Reference 414123, 12th December 2022), the list likely impacts scoped in / out of the LVIA, together with a justification, is presented in Table 7.8.

Table 7.8 Impact Scoping Table

Potential Impact	ScopedScopedJustification In Out		
Construction Phase	iii Out		
Impacts on physical landscape features during installation of Landfall and the Onshore Export Cable	√	There is the potential for impacts resulting from the removal of physical landscape features within the Landfall/HVDC Zone and HVAC Zone, and the introduction of temporary construction compounds, haul roads, plant, materials, spoil heaps, excavation and land restoration associated with the installation of the HVDC and HVAC cable routes.	
Impacts on physical landscape features during construction of the Converter Station	✓	There is the potential for impacts resulting from the removal of physical landscape features within the Converter Station Zone, and the introduction of temporary construction compounds, access roads, plant, materials, spoil heaps, excavation and earthworks associated with the construction of the Converter Station.	
Impacts on landscape character during installation of Landfall and the Onshore Export Cable	✓	There is the potential for impacts on landscape character during the installation of Landfall and the HVDC and HVAC cable routes, resulting from the presence of temporary construction compounds, haul roads, plant, materials, spoil heaps, excavation, and land restoration, are considered as part of the LVIA.	
Impacts on landscape character during construction of the Converter Station	✓	There is the potential for impacts on landscape character during the Converter Station, resulting from the presence of temporary construction compounds, access road, plant, materials, spoil heaps, excavation, earthworks, and gradual emergence of built form.	
Impacts on views and visual amenity during installation of the Landfall and Onshore Export Cable	√	There is the potential for impacts on views and visual amenity resulting from the presence of temporary construction compounds, haul roads, plant, materials, spoil heaps, excavation and land restoration associated with the installation of Landfall and the HVDC and HVAC cable routes.	
Impacts on views and visual amenity during construction of the Converter Station	√	There is the potential for impacts on views and visual amenity resulting from the presence of temporary construction compounds, access roads, plant, materials, spoil heaps, excavation and land restoration associated with the construction activity of the Landfall, HVDC/HVAC cable routes and Converter Station.	
Night-time landscape and visual impacts during construction	✓	It is considered that night-time impacts during installation and construction would be limited owing to the short duration of the works and context of the existing industrial and urban influences on the landscape of the Study Area.	
Operation and Maintena	nce Phase		
Permanent loss of landscape features and changes to landscape character during the operation and maintenance phase of the Onshore Export Cable	√	During the operation and maintenance phase, the HVDC and HVAC cable route trenches will be reinstated. Ground cover will be recovering fully within the first growing season. Reinstatement of lost shrub species and hedgerows would help to mitigate the loss of these physical landscape features during installation, taking approximately 3-5 years for low hedgerows to establish and approximately 5 to 10 years for taller hedgerows to grow to their original height. Restrictions to planting over cable easements will, however, prevent hedgerow trees, individual trees, and/or woodland trees from being replanted within the HVDC and HVAC cables routes, although they may be replanted elsewhere within the Site.	
Permanent change to views and visual amenity during the operation and	✓	Once operational, the visible evidence of the HVDC and HVAC cable routes would be minimal, with only restored land and manhole covers at Joint Bays. Residual effects associated with vegetation loss and the	



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Potential Impact			ScopedJustification		
maintananaa nhaaa af tha	In	Out	mitigation through replanting have been considered in the		
maintenance phase of the Onshore Export Cable			mitigation through replanting have been considered in the assessment of effects on the physical landscape during the installation phase.		
Permanent loss of landscape features and changes to landscape character during the operation and maintenance phase of the Converter Station	✓		There is potential for significant effects on landscape features and character as a result of the introduction of the Converter Station.		
Permanent change to views and visual amenity during the operation and maintenance phase of the Converter Station	√		There is potential for significant effects on views and visual amenity as experienced by people, as a result of the introduction of the Converter Station.		
Night-time landscape and visual impacts		√	The final design of the lighting for the Onshore Converter Station will be completed as part of the detailed design; therefore, at this stage the full details will not be known. While there would be lighting associated with Onshore Converter Station during the operation and maintenance phase, it would be appreciated within a context that includes lighting within settlement nearby, and in the adjacent NSL converter station, and at other nearby industrial sites and prominent built form. Based on the MDS in Table 7.7, it is considered that the Onshore Converter Station would not give rise to any likely significant effects on visual receptors.		
Residential visual amenity		✓	The potential for impacts on views and visual amenity on residential receptors at the Landfall, HVDC/HVAC cable routes, and Onshore Converter Station would not be overbearing or overwhelming as a result of distance, and scale of change (and in some cases the duration of the changes) arising from these elements of the Onshore Scheme.		
Decommissioning phase	е				
Impacts on landscape and visual receptors resulting from the decommissioning phase of the Landfall Onshore Export Cable and Converter Station			Decommissioning of the HVDC / HVAC cable routes and Landfall would have a lesser effect than during installation, as the ducts would be left in situ underground, while only the cables would be removed, such that the trenches would not be re-opened and therefore significant landscape and visual impacts are unlikely to occur. For the purposes of the worst-case scenario, it is anticipated that the impacts resulting from the decommissioning of the Onshore Converter Station will be comparable to or less than those identified for the construction phase. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time. Decommissioning arrangements will be detailed in a Decommissioning Plan, which will be drawn up and agreed with the relevant consenting body/stakeholder prior to decommissioning.		

7.9. Methodology for Assessment of Effects

7.9.1. Overview

- 114. The LVIA has been undertaken in accordance with the Landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) and other best practice guidance.
- 115. The LVIA is undertaken using the following steps:



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- The features of the Onshore Scheme that may result in landscape and visual effects are described:
- The overall scope of the assessment is defined, including the Study Area and range of possible landscape and visual effects;
- The landscape baseline is established using landscape character assessment and the ZTV maps, to identify landscape receptors that may be affected and their key characteristics and value;
- The visual baseline is established by identifying the extent of possible visibility, identifying the people who may be affected, identifying visual receptors and selecting viewpoints;
- A preliminary assessment is undertaken of landscape and visual receptors to identify which landscape and visual receptors are unlikely to be significantly affected and those that are more likely to be significantly affected, which require to be assessed in more detail;
- Interactions are identified between the Onshore Scheme and landscape and visual receptors, to predict likely significant effects arising and measures are proposed to mitigate likely significant effects:
- An assessment of the susceptibility of landscape and visual receptors to specific change and the value attached to landscape receptors and views is undertaken, combining these judgements to assess the sensitivity of the landscape and visual receptor to the Onshore Scheme;
- An assessment of the size/scale of landscape effect, the degree to which landscape elements
 are altered and the extent to which the effects change the key characteristics of the landscape
 is undertaken, combining these judgements to assess the magnitude of change on the
 landscape receptor;
- An assessment of the size/ scale of visual effect, the extent to which the change would affect views, whether this is unique or representative of a wider area, and the position of the Onshore Scheme in relation to the principal orientation of the view and activity of the receptor. These judgements are combined to assess the magnitude of change on the visual receptor; and
- The assessments of sensitivity to change and magnitude of change are combined to assess the likely significance of landscape and visual effects.
- 116. GLVIA3 sets out an approach to the assessment of magnitude of change in which three separate considerations are combined within the magnitude of change rating. These are the size or scale of the impact, its geographical extent and its duration and reversibility. Notably GLVIA3 is not a prescriptive methodology but guidance. The guidance suggests that this approach is to be applied in respect of both landscape and visual receptors. It is considered that the process of combining all three considerations in one rating can distort the aim of identifying likely significant effects of development. For example, a high magnitude of change, based on size or scale, may be reduced to a lower rating if it occurred in a localised geographical area and for a short duration. This might mean that a likely significant effect would be overlooked if effects are diluted down due to their limited geographical extents and/ or duration or reversibility.
- 117. As advocated by GLVIA3 the assessment has used professional judgement in defining the methodology for the LVIA. Page 21 of GLVIA3 states, 'Professional judgement is a very important part of LVIA [...] Professional judgements must be based on both training and experience and in general suitably qualified and experienced landscape professionals should carry out Landscape and Visual Impact Assessments. Even with qualified and Experienced professionals there can be differences in the judgements made. This may result from using different approaches or different criteria, or from variation in judgements based on the same criteria'. In this LVIA, the consideration of the size or scale of the impact, its geographical extent and its duration and reversibility has been undertaken separately, by basing the magnitude of change on size or scale to determine where significant and not significant effects occur, and then describing the geographical extents of these effects and their duration and



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reversibility separately. Duration and reversibility are stated separately in relation to the assessed effects (i.e., as short / medium / long-term and temporary / permanent) and are considered as part of drawing conclusions about likely significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.

- 118. The assessment methodology utilises six scales of magnitude of change high, medium-high, medium, medium-low, low and negligible / none; which are preferred to the 'maximum of five categories' suggested in GLVIA3 as a means of clearly defining and summarising magnitude of change judgements.
- 119. The LVIA therefore departs from the methodology set out Chapter 3: EIA Methodology (Volume 2 of the Onshore EIA Report).

7.9.2. Impact Assessment Criteria – Landscape Effects

7.9.2.1. SENSITIVITY OF LANDSCAPE RECEPTOR

120. The sensitivity of a landscape character receptor is a combination of the judgements made about the value associated with that receptor and the susceptibility of the receptor to the Onshore Scheme.

7.9.2.1.1. VALUE OF THE LANDSCAPE RECEPTOR

- 121. The value of a landscape character receptor is a reflection of the value that society attaches to that landscape. The assessment of the landscape value is classified as high, medium-high, medium, medium-low or low and the basis for this assessment is made clear using evidence and professional judgement, based on the following range of factors.
 - Landscape designations A receptor that lies within the boundary of a recognised landscape related planning designation is of increased value, depending on the proportion of the receptor within it, and the level of importance of the designation, which may be international, national, regional, or local. The absence of designations does not however preclude value, as an undesignated landscape character receptor may be valued as a resource in the local or immediate environment.
 - Landscape quality The quality of a landscape character receptor is a reflection of its attributes, such as scenic quality, sense of place, rarity and representativeness and the extent to which its valued attributes have remained intact. A landscape with consistent, intact, well-defined and distinctive attributes is considered to be of higher quality and, in turn, higher value, than a landscape where the introduction of elements has detracted from its character.
 - Landscape experience The experiential qualities that can be evoked by a landscape receptor can add to its value and relates to a number of factors including:
 - the perceptual responses it evokes;
 - the cultural associations that may exist in literature or history, or the iconic status of the landscape in its own right;
 - the recreational value of the landscape; and
 - the contribution of other values relating to the nature conservation or archaeology of the area.



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7.9.2.1.2. LANDSCAPE SUSCEPTIBILITY TO CHANGE

- 122. The susceptibility of a landscape character receptor to change is a reflection of its ability to accommodate the changes that would occur as a result of the addition of the Onshore Scheme. Some landscape receptors are better able to accommodate change as a result of the development than others due to certain characteristics that are indicative of capacity to accommodate change. These characteristics may or may not also be special landscape qualities that underpin designated landscapes.
- 123. The assessment of the susceptibility of the landscape receptor to change is classified as high, medium-high, medium, medium-low or low and the basis for this assessment has been made clear using evidence and professional judgement. The following indicators of landscape susceptibility are considered in the context of the development proposed:
 - Overall strength and robustness: Collectively the overall characteristics and qualities of a particular landscape result in a strong and robust landscape that is capable of reasonably accommodating the influence of the Onshore Scheme without undue adverse effects on the special landscape qualities (in the case of a designated landscape) or the key characteristics.
 - Landscape scale and topography: The scale and topography are large enough to physically accommodate the influence of the Onshore Scheme. Topographical features such as more complex, distinctive or small-scale coastal landforms are likely to be more susceptible than simple, broad and homogenous coastal landforms.
 - Openness and enclosure: Openness in the landscape may increase susceptibility to change
 because it can result in wider visibility, however an open landscape may also be larger scale
 and simple, which would decrease susceptibility. Conversely, enclosed landscapes can offer
 more screening potential, limiting visibility to a smaller area, however they may also be smaller
 scale and more complex which would increase susceptibility.
 - **Skyline**: Prominent and distinctive skylines and horizons with important landmark features that are identified in the landscape character assessment, are generally considered to be more susceptible to development in comparison to broad, simple skylines which lack landmark features or contain other infrastructure features.
 - Relationship with other development and landmarks: Contemporary landscapes where there are existing similar developments or other forms of development (industry, mineral extraction, masts, urban fringe / large settlement, major transport routes) that already have a characterising influence result in a lower susceptibility to development in comparison to areas characterised by limited development or smaller scale, historic development and landmarks.
 - Perceptual qualities: Notable landscapes that are acknowledged to be particularly scenic, wild
 or tranquil are generally considered to be more susceptible to development in comparison to
 ordinary, cultivated or farmed / developed landscapes where perceptions of 'wildness' and
 tranquillity are less tangible. Landscapes which are either remote or appear natural may vary in
 their susceptibility to development.
 - Landscape context and association: the extent to which the Onshore Scheme would influence the character of landscape receptors across the Study Area relates to the associations that exist between the landscape receptor within which the Onshore Scheme is located and the landscape receptor from which the Onshore Scheme is experienced. In some situations, this association is strong, where the landscapes are directly related, and in other situations weak, where the landscape association is weak. The context and visual connection to areas of adjacent landscape character or designations has a bearing on the susceptibility to development.



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7.9.2.2. LANDSCAPE SENSITIVITY RATING

124. An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The evaluation of landscape sensitivity has been applied for each landscape receptor – High, Medium-High, Medium, Medium-Low and Low – by combining individual assessments of the value of the receptor and its susceptibility to change.

7.9.2.3. LANDSCAPE MAGNITUDE OF CHANGE

125. The magnitude of change affecting landscape receptors is an expression of the scale of the change that would result from the Onshore Scheme and is dependent on a number of variables regarding the size or scale of the change and the geographical extent over which the change would be experienced.

7.9.2.4. SIZE OR SCALE OF CHANGE

- 126. This criterion relates to the size or scale of change to the landscape that would arise as a result of the Onshore Scheme, based on the following factors.
 - Landscape elements: The degree to which the pattern of elements that makes up the landscape character is altered by the Onshore Scheme, by removal or addition of elements in the landscape. The magnitude of change will generally be higher if the features that make up the landscape character are extensively removed or altered, and/or if many new elements are added to the landscape.
 - Landscape characteristics: The extent to which the effect of the Onshore Scheme changes, physically or perceptually, the key characteristics of the landscape that may be important to its distinctive character. This may include, for example, the scale of the landform, its relative simplicity or irregularity, the nature of the landscape context, the grain or orientation of the landscape, the degree to which the receptor is influenced by external features and the juxtaposition of the Onshore Scheme in relation to these key characteristics. If the Onshore Scheme is located in a landscape receptor that is already affected by other similar development, this may reduce the magnitude of change, particularly if there is a high level of integration and the developments form a unified and cohesive feature in the landscape.
 - Landscape designation: In the case of designated landscapes, the degree of change is
 considered in light of the effects on the special landscape qualities which underpin the
 designation and the effect on the integrity of the designation. All landscapes change over time
 and much of that change is managed or planned. Often landscapes will have management
 objectives for 'protection' or 'accommodation' of development. The scale of change may be
 localised, or occurring over parts of an area, or more widespread affecting whole landscape
 receptors and their overall integrity.
 - **Distance**: The size and scale of change is also strongly influenced by the proximity of the Onshore Scheme to the receptor. Distance may be an influential factor to the extent that over a long range the scale of the influence on landscape receptors may be small or very limited. Conversely, landscapes closest to the development are likely to be most affected. Where the development is located within a 'host' landscape character area this would be directly affected whilst adjacent areas of landscape character would be indirectly affected.
 - Amount and nature of change: The amount of the Onshore Scheme that is seen by a receptor
 from a given location. Generally, the greater the amount of the Onshore Scheme that can be
 seen, the higher the scale of change. Generally, the magnitude of change is likely to be lower
 where the Onshore Schemeis largely perceived to be at a distance, rather than 'within' the
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7.9.2.5. GEOGRAPHICAL EXTENT

- 127. The geographic extent over which the landscape impacts are experienced is also assessed, which is distinct from the size or scale of impact. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of change and therefore the geographical extents of the significant and non-significant effects.
- 128. The extent of the effects will vary depending on the specific nature of the Onshore Scheme and is principally assessed through analysis of the extent of perceived changes to the landscape character through visibility of the Onshore Scheme.

7.9.2.6. **DURATION AND REVERSIBILITY**

- 129. The duration and reversibility of landscape effects is based on the period over which the Onshore Scheme is likely to exist (during construction and operation). It is anticipated that the Onshore Converter Station would remain for 35 years after the commencement of operation. Consequently, effects related to the Onshore Converter Station operational phase are considered long term and temporary.
- 130. Long-term, medium-term, and short-term landscape effects are defined as follows:
 - long-term more than 10 years;
 - medium-term 5 to 10 years; and
 - short-term 0 to 5 years.

7.9.2.7. LANDSCAPE MAGNITUDE OF CHANGE RATING

131. The 'magnitude' or 'degree of change' resulting from the Onshore Scheme is described as High, High-Medium, Medium-Low, Low or Negligible. In assessing magnitude of change, the assessment focuses on the size or scale of change, the geographical extent, duration, and reversibility are stated separately in relation to the assessed effects.

7.9.2.8. EVALUATING LANDSCAPE EFFECTS AND SIGNIFICANCE

- 132. The level of landscape effect is evaluated primarily through the combination of landscape sensitivity and magnitude of change. Once the level of effect has been assessed, a judgement is then made as to whether the level of effect is 'significant' or 'not significant'. This process is assisted by the matrix in Table 7.9 which is used to guide the assessment. Geographical extent and duration and reversibility are considered relevant in drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.
- 133. Further information is also provided about the nature of the effects (whether these would be direct / indirect; temporary / permanent / reversible; beneficial / neutral / adverse or cumulative).
- 134. A significant effect occurs where the combination of the variables results in the Onshore Scheme having a defining effect on the landscape receptor, or where changes of a lower magnitude affect a landscape receptor that is of particularly high sensitivity. A major loss or irreversible effect over an extensive area or landscape character, affecting landscape elements, characteristics and/or perceptual aspects that are key to a nationally valued landscape are likely to be significant, particularly if they are of long duration/permanent and irreversible.



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135. A non-significant effect would occur where the effect of the Onshore Scheme is not defining, and the landscape character of the receptor continues to be characterised principally by its baseline characteristics. Equally a small-scale change experienced by a receptor of high sensitivity may not significantly affect the special landscape quality or integrity of a designation. Reversible effects, on elements, characteristics and character that are of small-scale or geographical extent or affecting lower value receptors, are unlikely to be significant.

7.9.3. Impact Assessment Criteria - Visual

136. Visual effects are concerned wholly with the effect of the Onshore Scheme on views, and the general visual amenity. Visual Effects are defined by the Landscape Institute in GLVIA 3, paragraphs 6.1 as follows:

'An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity. The concern [...] is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the context and character of views.'

- 137. Visual effects are identified for different receptors (people) who would experience the view at their place of residence, within their community, during recreational activities, at work, or when travelling through the area. The visual effects may include the following:
 - Visual effect: a change to an existing static view, sequential views, or wider visual amenity as a
 result of development or the loss of particular landscape elements or features already present in
 the view; or
 - Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.
- 138. The level of visual effect (and whether this is significant) is determined through consideration of the sensitivity of the visual receptor and their view and the magnitude of change that would be brought about by the Onshore Scheme.

7.9.3.1. ZONE OF THEORETICAL VISIBILITY (ZTV)

139. Plans mapping the ZTV are used to analyse the extent of theoretical visibility of the Onshore Converter Station. The ZTVs provide a starting point in the assessment process and tend towards giving the greatest calculation of the theoretical visibility. ZTV production to assist the LVIA, including limitations, is described in section 7.7.5 of this Chapter.

7.9.3.2. VIEWPOINT ANALYSIS

- 140. Viewpoint analysis is used to assist the assessment and is conducted from selected viewpoints within the Study Area. The purpose of this is to assess both the level of visual effect for particular receptors and to help guide the design process and focus of the assessment. A range of viewpoints is examined in detail and analysed to determine whether a significant visual effect would occur.
- 141. The assessment involves visiting the viewpoint location and viewing visualisations prepared for each viewpoint location. Field survey is generally conducted in periods of fine weather with good visibility and considers seasonal changes such as reduced leaf cover or hedgerow maintenance. The viewpoint analysis is used to assist in the assessment of effects on visual receptor locations as well as landscape character effects reported in the LVIA.



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7.9.3.3. **EVALUATING VISUAL SENSITIVITY TO CHANGE**

142. In accordance with paragraphs 6.31-6.37 of GLVIA3, the sensitivity of visual receptors is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change likely to result from the Onshore Scheme on the view and visual amenity.

7.9.3.4. VALUE OF VIEW

- 143. The value of a view or series of views reflects the recognition and the importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s). The value of a view has been classified as high, medium-high, medium, medium-low or low and the basis for this assessment has been made clear using evidence and professional judgement, based on the following criteria.
 - Formal recognition The value of views can be formally recognised through their identification on OS or tourist maps as formal viewpoints, sign-posted and with facilities provided to add to the enjoyment of the viewpoint such as parking, seating and interpretation boards. Specific views may be afforded protection in local planning policy and recognised as valued views. Specific views can also be cited as being of importance in relation to landscape or heritage planning designations, for example the value of a view has been increased if it presents an important vista from a designed landscape or lies within or overlooks a designated area, which implies a greater value to the visible landscape.
 - Informal recognition -Views that are well-known at a local level and/or have particular scenic qualities can have an increased value, even if there is no formal recognition or designation. Views or viewpoints are sometimes informally recognised through references in art or literature, and this can also add to their value. A viewpoint that is visited or appreciated by a large number of people will generally have greater importance than one gained by very few people.

7.9.3.5. VISUAL SUSCEPTIBILITY TO CHANGE

- 144. Susceptibility relates to the nature of the viewer experiencing the view and how susceptible they are to the likely significant effects of the Onshore Scheme. A judgement to determine the level of susceptibility therefore relates to the nature of the viewer and their experience from that particular viewpoint or series of viewpoints, classified as high, medium-high, medium, medium-low, or low and based on the following criteria:
 - Nature of the viewer The nature of the viewer is defined by the occupation or activity of the viewer at the viewpoint or series of viewpoints. The most common groups of viewers considered in the visual assessment include residents, motorists, and people taking part in recreational activity or working. Viewers, whose attention is focused on the landscape, or with static longterm views, are likely to have a higher susceptibility. Viewers travelling in cars or on trains will tend to have a lower susceptibility as their view is transient and moving. The least sensitive viewers are usually people at their place of work as they are generally less susceptible to changes in views.
 - Experience of the viewer The experience of the visual receptor relates to the extent to which the viewer's attention or interest may be focused on the view and the visual amenity they experience at a particular location. The susceptibility of the viewer to change arising from the Onshore Scheme may be influenced by the viewer's attention or interest in the view, which may be focused in a particular direction, from a static or transitory position, over a long or short duration, and with high or low clarity. For example, if the principal outlook from a settlement is aligned directly towards the Onshore Scheme, the experience of the visual receptor is altered more notably than if the experience relates to a glimpsed view seen at an oblique angle from a



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car travelling at high speed. The visual amenity experienced by the viewer varies depending on the presence and relationship of visible elements, features or patterns experienced in the view and the degree to which the landscape in the view may accommodate the influence of the Onshore Scheme.

7.9.3.6. VISUAL SENSITIVITY RATING

145. An overall level of sensitivity is applied for each visual receptor or view – High, Medium-High, Medium, Medium-Low or Low by combining individual assessments of the value of the view and the susceptibility of the visual receptor to change. Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, is assessed in terms of their sensitivity.

7.9.3.7. VISUAL MAGNITUDE OF CHANGE

146. The visual magnitude of change is an expression of the scale of the change that will result from the Onshore Scheme and is dependent on a number of variables regarding the size or scale of the change and the geographical extent over which the change would be experienced. A separate assessment is also made of the duration and reversibility of visual effects.

7.9.3.8. SIZE OR SCALE OF CHANGE

- 147. An assessment is made regarding the size or scale of change in the view that is likely to be experienced as a result of the Onshore Scheme, based on the following criteria:
 - **Distance**: the distance between the visual receptor/viewpoint and the Onshore Scheme. Generally, the greater the distance, the lower the magnitude of change, as the Onshore Scheme will constitute a smaller scale component of the view.
 - **Size**: the amount and size of the Onshore Scheme that is seen. Visibility may range from small or partial visibility of the Onshore Scheme to wider visibility of the onshore elements. Generally, the larger and greater number of elements of the Onshore Scheme that appear in the view, the higher the magnitude of change. This is also related to the degree to which the Onshore Scheme may be wholly or partly screened by landform, vegetation (seasonal) and / or built form. Conversely, open views are likely to reveal more of the Onshore Scheme, particularly where this is a key characteristic of the landscape context.
 - **Scale**: the scale of the change in the view, with respect to the loss or addition of features in the view and changes in its composition. The scale of the Onshore Scheme may appear larger or smaller relative to the scale of the receiving landscape.
 - Field of view: the vertical / horizontal field of view (FoV) and the proportion of the view that is affected by the Onshore Scheme. Generally, the more of the proportion of a view that is affected, the higher the magnitude of change. If the Onshore Scheme extends across the whole of the open part of the outlook, the magnitude of change is higher as the full view has been affected. Conversely, if the Onshore Scheme covers just a narrow part of an open, expansive and wide view, the magnitude of change is likely to be reduced as it will not affect the whole open part of the outlook. This can in part be described objectively by reference to the horizontal / vertical FoV affected, relative to the extent and proportion of the available view.
 - Contrast: the character and context within which the Onshore Scheme are seen and the degree of contrast or integration of any new features with existing landscape elements, in terms of scale, form, mass, line, height, colour, luminance and motion. Developments which contrast or appear incongruous in terms of colour, scale and form are likely to be more visible and have a higher magnitude of change.



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- Consistency of image: the consistency of image of the Onshore Scheme in relation to other
 developments. The magnitude of change of Onshore Scheme is likely to be lower if its layout
 design is broadly similar to other developments in the landscape, in terms of its scale, form and
 general appearance. New development is more likely to appear as logical components of the
 landscape with a strong rationale for their location.
- **Skyline / background**: Whether the Onshore Scheme would be viewed against the skyline or a background landscape may affect the level of contrast and magnitude. If the Onshore Scheme adds to an already developed skyline, the magnitude of change would tend to be lower.
- Number: generally, the greater the number of separate elements of the Onshore Scheme seen simultaneously or sequentially, the higher the magnitude of change. Further impacts could also occur in the case of separate developments and their spatial relationship to each other would affect the magnitude of change. For example, development that appears as an extension to an existing development would tend to result in a lower magnitude of change than a separate, new development.
- Nature of visibility: the nature of visibility is a further factor for consideration. The Onshore Scheme may be subject to various phases of development change and the manner in which the Onshore Scheme may be viewed could be intermittent or continuous and/or vary seasonally, due to periodic management or leaf fall.

7.9.3.9. GEOGRAPHICAL EXTENT

- 148. The geographic extent over which the visual impacts are experienced is also assessed, which is distinct from the size or scale of impact. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of change and therefore the geographical extents of the significant and non-significant effects.
- 149. The extent of the effects will vary depending on the specific nature of the Onshore Scheme and is principally assessed through ZTV, field survey and viewpoint analysis of the extent of visibility likely to be experienced by visual receptors.

7.9.3.10. DURATION AND REVERSIBILITY

- 150. The duration and reversibility of visual effects are based on the period over which the Onshore Scheme is likely to exist. During construction and operation, the Onshore Converter Station would remain for 35 years after the commencement of operation and that decommissioning operations will take 18-24 months to complete. Consequently, effects related to the Onshore Converter Station operational phase are considered long-term and temporary.
- 151. Long-term, medium-term and short-term visual effects are defined as follows:
 - long-term more than 10 years;
 - medium-term 5 to 10 years; and
 - short-term 0 to 5 years.

7.9.3.11. VISUAL MAGNITUDE OF CHANGE RATING

152. The 'magnitude' or 'degree of change' resulting from the Onshore Scheme is described as High, High-Medium, Medium, Medium-Low, Low and Negligible. In assessing the magnitude of change the assessment focuses on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e., as short / medium / long-



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term and temporary / permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement.

7.9.3.12. EVALUATING VISUAL EFFECTS AND SIGNIFICANCE

- 153. The level of visual effect is evaluated through the combination of visual sensitivity and magnitude of change. Once the level of effect has been assessed, a judgement is then made (using professional judgement) as to whether the level of effect is 'significant' or 'not significant'. This process is assisted by the matrix in Table 7.9 which is used to guide the assessment. Geographical extent and duration and reversibility are considered as part of drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant. Further information is also provided about the nature of the effects (whether these would be direct / indirect; temporary / permanent / reversible; beneficial / neutral / adverse or cumulative).
- 154. A significant effect is more likely to occur where the Onshore Scheme would have a defining effect on the view or visual amenity or where changes affect a visual receptor that is of high sensitivity.
- 155. A non-significant effect is more likely to occur where the Onshore Scheme would have a non-defining effect on the view or visual amenity or where changes affect a visual receptor that is of low sensitivity.

7.9.4. Impact Assessment Criteria – Cumulative Landscape / Visual

156. NatureScot's (NS) guidance, 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2021) is widely used across the UK to inform the specific assessment of the cumulative landscape and visual effects of different types of development. Whilst the focus of the NS guidance relates to wind farm development, both GLVIA3 and NS guidance provides the basis for the methodology for the cumulative LVIA and so it is relevant to this LVIA.

7.9.4.1. APPROACH TO CUMULATIVE EFFECTS

- 157. The Cumulative Effects Assessment (CEA) considers the impact associated with the Onshore Scheme together with other relevant plans, projects and activities. Cumulative effects are therefore the combined effect of the Onshore Scheme in combination with the effects from a number of different cumulative developments, on the same receptor or resource. Please see Volume 2, Chapter 3: EIA Methodology of the ES for detail on CEA methodology.
- 158. GLVIA3 (Landscape Institute and IEMA, 2013, p120) defines cumulative landscape and visual effects as those that 'result from additional changes to the landscape and visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future'.
- 159. The cumulative developments selected as relevant to the CEA presented within this Chapter are based upon the results of a screening exercise (see Chapter 3: EIA Methodology). Each cumulative development has been considered on a case-by-case basis for screening in or out of this Chapter's assessment based upon data confidence, effect-receptor pathways and the spatial / temporal scales involved.
- 160. Other cumulative developments that have the potential for cumulative effects in combination with the Onshore Scheme are typically considered to be those developments that are found within the Study Area. Beyond the Study Area cumulative effects are limited by distance and a lack of intervisibility with other cumulative developments.



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- 161. Adjacent developments may complement one another, or may be discordant with one another, and it is the increased or reduced level of significance of effects which arises as a result of this change that is assessed. Where this occurs, the magnitude of change varies according to cumulative effect factors such as its consistency of image and degree of contrast or integration with the onshore elements of the Onshore Scheme, as well as other 'non-cumulative' factors, such as its distance, lateral spread, and amount of visibility.
- 162. NatureScot (NS) guidance, 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (NatureScot 2021) is widely used across the UK to inform the specific assessment of the cumulative effects of windfarms. Both GLVIA3 and NS guidance provide the basis for the methodology for the CEA undertaken in the LVIA. NS guidance highlights that:
 - 'The purpose of a Cumulative Landscape and Visual Impact Assessment (CLVIA) is to describe, visually represent and assess the ways in which a proposed wind farm would have additional impacts when considered with other consented or proposed wind farms. It should identify the significant cumulative impacts arising from the proposed wind farm. The assessment should be proportionate to the likely impacts and all CLVIA should accord with the guidelines within GLVIA3. The emphasis should be on the production of relevant and useful information, highlighting why the proposals assessed have been included and why others have been excluded, rather than the provision of a large Volume of information' (NatureScot 2021, p8);
 - 'Cumulative impacts can change either the physical fabric of character of the landscape, or any special values attached to it' (NatureScot 2021, p7); and
 - 'Cumulative impacts on visual amenity can be caused by 'combined visibility' and/or 'sequential impacts'. (NatureScot 2021, p7).
 - GLVIA3, p120 also highlights that 'the focus of the cumulative assessment will be on the additional effect of the project in conjunction with other developments of the same type (as for example, in the case of wind farms)'.
- 163. In line with NS guidance and GLVIA3, cumulative effects are assessed in this LVIA as the additional changes caused by the Onshore Scheme in conjunction with other similar developments (not the totality of the cumulative effect). The CEA assesses the cumulative effect of the Onshore Scheme with other cumulative developments against the baseline, with the assessment of significance apportioning the amount of the effect that is attributable to the Onshore Scheme. It is the increased or reduced level of significance of effects which arises because of this change that is assessed in the CEA, such as through design discordance or proliferation of multiple developments affecting characteristics or new geographic areas, and ultimately if character changes occur because of multiple developments becoming a prevailing characteristic of the landscape / seascape or view.
- 164. In accordance with NS guidance and GLVIA3 (para 7.13), existing cumulative developments are included in the LVIA baseline and described as part of the baseline conditions, including the extent to which these have altered character and views, and affected sensitivity to development. These developments have an existing influence on the baseline landscape and visual environment.
- 165. A further assessment of the additional cumulative landscape, and visual effects of the Onshore Scheme with other potential future cumulative developments is undertaken in this CEA. In undertaking this CEA for the Onshore Scheme, it is important to bear in mind that other cumulative developments under consideration will have differing potential for proceeding to an operational stage and hence a differing potential to ultimately contribute to a cumulative impact alongside the Onshore Scheme. Therefore, a tiered approach has been adopted. This provides a framework for placing relative weight upon the potential for each cumulative developments to be included in the CEA to ultimately be realised, based upon the current stage of maturity and certainty in the projects' parameters.



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166. The cumulative developments selected as relevant to the CEA presented within this Chapter are based upon the results of a screening exercise and the development of a 'long list' of cumulative developments relevant to the Onshore Scheme (see Volume 3, Appendix 3.2). Each development has been considered on a case-by-case basis for screening in or out of this Chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.

7.9.4.2. CUMULATIVE SENSITIVITY OF LANDSCAPE AND VISUAL RECEPTORS

167. In evaluating cumulative sensitivity, the value component of the assessments of sensitivity would not change, however, in an evolving development context, the susceptibility of a landscape and visual receptor to the introduction of the Onshore Scheme may increase or decrease. This is based on the criteria contained in the landscape and visual susceptibility criteria sections of this methodology.

7.9.4.3. CUMULATIVE MAGNITUDE OF CHANGE

- 168. The cumulative magnitude of change is an expression of the degree to which landscape character receptors and visual receptors / views would be changed by the addition of the Onshore Scheme to other relevant developments that are already operational, consented or at application stage. Where required, scoping stage developments may exceptionally be included. The cumulative magnitude of change is assessed according to a number of criteria, described as follows:
 - The location of the Onshore Scheme in relation to other relevant developments. If the Onshore Scheme is seen in a part of the view or setting to a landscape receptor that is not affected by other development, this would generally increase the cumulative magnitude of change as it would extend influence into an area that is currently unaffected by development. Conversely, if the Onshore Scheme is seen in the context of other sites, the cumulative magnitude of change may be lower as development is not being extended to otherwise undeveloped parts of the outlook or setting. This is particularly true where the scale and layout of the Onshore Scheme is similar to that of the other sites as where there is a high level of integration and cohesion with an existing site the various developments may appear as a single site.
 - The extent of the developed skyline. If the Onshore Scheme would add notably to the developed skyline in a view, the cumulative magnitude of change would tend to be higher as skyline development can have a particular influence on both views and landscape receptors.
 - The number and scale of developments seen simultaneously or sequentially. Generally, the greater the number of clearly separate developments that are visible, the higher the cumulative magnitude of change would be. The addition of the Onshore Scheme to a view or landscape where a number of smaller developments are apparent would usually have a higher cumulative magnitude of change than one or two large developments as this can lead to the impression of a less co-ordinated or strategic approach.
 - The scale comparison between developments. If the Onshore Scheme is of a similar scale to
 other visible developments, particularly those seen in closest proximity to it, the cumulative
 magnitude of change would generally be lower as it would have more integration with the other
 sites and would be less apparent as an addition to the cumulative situation.
 - The consistency of image of the Onshore Scheme in relation to other developments. The
 cumulative magnitude of change of the Onshore Scheme is likely to be lower if its height,
 arrangement and layout design are broadly similar to other developments in the landscape, as
 they are more likely to appear as relatively simple and logical components of the landscape.
 - The context in which the developments are seen. If developments are seen in a similar landscape context, the cumulative magnitude of change is likely to be lower due to visual integration and cohesion between the sites. If developments are seen in a variety of different landscape settings, this can lead to a perception that development is unplanned and



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uncoordinated, affecting a wide range of landscape characters and blurring the distinction between them; and

The magnitude of change of the Onshore Scheme as assessed in the main assessment. The
lower this is assessed to be, the lower the cumulative magnitude of change is likely to be.
 Where the Onshore Scheme itself is assessed to have a negligible magnitude of change on a
view or receptor there would not be a cumulative effect as the contribution of the Onshore
Scheme would equate to the 'no change' situation.

7.9.4.4. EVALUATION OF SIGNIFICANCE

- 169. The matrix in Table 7.9 is used as a guide to help inform the threshold of significance when combining sensitivity and magnitude to assess significance. On this basis likely significant effects are assessed as negligible, minor, moderate-minor, moderate, moderate-major and major. In those instances where the magnitude has been assessed as 'no change', the level of effect is recorded as 'no effect'.
- 170. For the purposes of this assessment, any effects with a significance level of major and moderate-major have been assessed as significant dark shaded boxed in Table 7.9). Moderate levels of effect have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of change factors evaluated. These assessments are explained as part of the assessment, where they occur. Significance can therefore occur at a range of levels depending on the magnitude and sensitivity, however in all cases, a significant effect is considered more likely to occur where the Onshore Scheme would have a defining effect on the landscape /seascape character or view. Definitions are not provided for the individual categories of significance shown in the matrix and the reader should refer to the detailed definitions provided for the factors that combine to inform sensitivity and magnitude.
- 171. Effects assessed as being either **moderate-minor**, **minor** or **negligible** level are assessed as not-significant (white shaded boxes in Table 7.9).
- 172. In line with the emphasis placed in GLVIA3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor.



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Table 7.9 Matrix used for the assessment of the significance of the effect

		Magnitude of Impact					
		Negligible	Low	Medium-low	Medium	Medium-high	High
tor	Low	Negligible	Negligible	Minor	Minor	Moderate- Minor	Moderate
Receptor	Medium- Low	Negligible	Minor	Minor	Moderate- Minor	Moderate	Moderate
ō	Medium	Minor	Minor	Moderate- Minor	Moderate	Moderate	Moderate- Major
Sensitivity	Medium- high	Minor	Moderate- Minor	Moderate	Moderate	Moderate- Major	Major
Sel	High	Minor	Moderate- Minor	Moderate	Moderate- Major	Major	Major

7.10. Measures Adopted as Part of the Onshore Scheme

- 173. As part of the project design process, a number of measures have been proposed to reduce the potential for impacts on landscape and visual amenity (see Table 7.10). These include measures which have been incorporated as part of the Onshore Scheme's design (referred to as 'designed in measures') and measures which will be implemented regardless of the impact assessment (referred to as 'tertiary mitigation'). As there is a commitment to implementing these measures, they are considered inherently part of the design of the Onshore Scheme and have therefore been considered in the assessment presented in section 7.11 below (i.e., the determination of magnitude and therefore significance assumes implementation of these measures). These measures are considered standard industry practice for this type of development.
- 174. Primary mitigation proposals for the Onshore Scheme have involved the sensitive siting and design of the Onshore Converter Station, during the site selection process, to avoid or reduce likely significant effects, please refer to Volume 2, Chapter 4: Site Selection and Consideration of Alternatives.
- 175. The close proximity of existing industrial development and land uses, combined with existing electricity generation and distribution sites, provide a context of electrical infrastructure within the immediate setting of the Onshore Scheme.
- 176. Whilst there is a localised intensification of such electrical developments, this reflects a critical need to be in close proximity to the high-voltage distribution network. Coastal access to this distribution network can be limited and the availability of such infrastructure in this location indicates that electricity generation and distribution is an existing characteristic of the area.
- 177. It is also considered, in this instance, to be beneficial to locate such developments within an existing partially industrialised context of electricity generation and distribution - that includes the NSL Converter Station and the National Grid Substation - when compared to possible alternatives that could spread such developments more widely across the landscape and visual resource.

7.10.1. Construction Mitigation

178. Mitigation opportunities during the construction process would principally relate to potential restrictions or conditions imposed to avoid disturbance or damage to the baseline landscape and visual resource,



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where reasonably practicable. Such measures would be identified via a Construction Environmental Management Plan (CEMP).

179. Relevant measures will include a commitment to reduce visual effects during the construction phase by minimising the visual intrusion from artificial lighting, where feasible. These measures will be included in the CEMP during the detailed design stages.

7.10.2. Additional Mitigation

- 180. In addition to the mitigation proposals detailed above, the following additional landscape and visual mitigation measures will be developed as part of the detailed design process which will be subject to future application(s) for approval of Reserved Matters
 - Finalised layout, design, and materials specification for the proposed Onshore Converter Station:
 - Detailed consideration of the colour and finish of the proposed Onshore Converter Station buildings; and
 - Post-consent, the development of the landscape mitigation proposals in combination with the CEMP would seek to stipulate measures to avoid, reduce or offset environmental effects of the construction works, including those related to landscape and visual amenity.

7.10.2.1.1. LANDFALL AND ONSHORE EXPORT CABLE

- 181. The precise location of the cable trenches at Landfall and within the Onshore Cable corridor, within the HVAC Zone and HVDC Zone will not be finalised until subsequent detailed design stages.
- 182. Taking this into account, the following principles are considered an appropriate landscape and visual mitigation strategy for the Landfall and Onshore Cable corridor:
 - As far as reasonably practicable, reduce hedgerow and tree loss along the onshore cable corridor through careful siting of the works areas;
 - Protection of trees and hedgerows during the construction phase where practicable;
 - Reinstatement or replacement of removed trees (where practicable) within the Onshore Scheme, aside from in locations where they would lie over cables;
 - Reinstatement or replacement of removed hedgerows (where reasonably practicable);
 - Restoration of all temporary construction, material storage and laydown areas to reinstate ground cover and return to previous land-use, where practical; and
 - During the detailed design process, the specification and design of permanent security fencing at Landfall Transition Joint Bays should be consistent with the coastal and agricultural setting, where practicable, to reduce effects upon visual amenity in this location.

7.10.2.1.2. ONSHORE CONVERTER STATION

- 183. As above, the location and micro-siting of the proposed Onshore Converter Station within the Converter Station Zone will not be finalised until subsequent detailed design stages.
- 184. The following key principles are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station:
 - Proposed native species woodland planting, where practicable, to assist in mitigating visual
 effects and aid in visually integrating the Onshore Converter Station, as far as practicable,
 within inland views from surrounding areas;



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- Understorey of native species woodland to be sown with a locally appropriate meadow wildflower mix or species rich grassland, with a grass free area around woodland plants for establishment:
- Proposed native species hedgerows or scrub vegetation planting in areas not constrained by operational requirements for the Onshore Cables, in conjunction with proposed woodland planting, to increase habitat connectivity and diversity;
- Proposed areas of locally appropriate species rich grassland and wet meadow habitat sown / planted around SUDS ponds, where practicable, to enhance biodiversity;
- Colour and finish of Onshore Converter Station buildings specified during the detailed design process should be consistent with the vernacular of large-scale industrial buildings within the local context; and
- Restoration of all temporary construction, material storage and laydown areas to reinstate ground cover and return to previous land-use, where practical.
- Landscape mitigation proposals would be developed in consultation with key stakeholders, including NCC, and landowners.

Table 7.10 Measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation)

Mitigation Measure	Form (Designed In Measures or Tertiary)	Justification
The Onshore Export Cable will be underground, rather than on overhead lines. The transition joint bays and the jointing bays will be accessed via manhole covers once installed.	Designed In	To ensure that the Onshore Scheme is integrated into the landscape and to reduce visual impacts on visual receptors.
The Applicant has committed to retain certain areas of woodland within the Site (Technical Appendix 7.2, Volume 4).	Designed in	To ensure the Onshore Scheme is integrated into the landscape and to reduce landscape and visual impacts on receptors.
Design of the Onshore Converter Station built form, including use of appropriate materials, colours, and finished for the facades, roofs, boundary features, and lighting.	developed post-consent,	To ensure that the Onshore Scheme is integrated into the landscape and to reduce landscape and visual impacts on receptors.
Landscape and Ecological Mitigation Plan	Additional mitigation to be developed post-consent, Not considered in the assessment of landscape and visual impacts.	To ensure that the landscape within the Onshore Scheme is reinstated successfully and, where feasible, to assist in reducing likely landscape and visual impacts on receptors.

7.11. Assessment of Likely Significant Effects

- 185. The approach to the assessment of impacts follows the methodology in section 7.9.
- 186. Because the LVIA is based on the assessment of the effects on individual landscape and visual receptors, this Chapter of the ES varies from the format of other Chapters. The LVIA identifies the baseline and sensitivity for each receptor, then an assessment of the magnitude of change and the significance of the effect is presented for both the construction stage and the operation and maintenance stage of the Onshore Scheme. Likely significant effects during the decommissioning phase are discussed in section 7.14.



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187. The same approach is followed for the assessment of cumulative effects and their significance, described in section 7.16.

7.12. Assessment of Potential Landscape Impacts

- 188. The potential impacts arising from the construction / installation, operation and maintenance and decommissioning phases of the Onshore Scheme are listed in Table 7.7 along with the maximum design scenario against which each impact has been assessed.
- 189. An assessment of the likely significance of the effects of the Onshore Scheme on landscape receptors caused by each identified impact is given below.
- 190. The assessment of landscape impacts has taken a precautionary approach. The assessment is based on the MDS set out in section 7.8.1. The final route of the Onshore Export Cable and siting of the Onshore Converter Station will be finalised at the detailed design stage. which will be subject to future application(s) for approval of Reserved Matters.
- 191. This assessment therefore assumes a worst-case scenario based on the Zones of Infrastructure shown in Figure 5.1 (Volume 4). In actuality, the footprint will be smaller than the maximum envelope represented in the MDS Onshore Converter Station Platform, with the area being sufficient to allow the buildings to be located anywhere within that identified area, should this be required by constraints and design requirements. Similarly, the cable corridor is assumed as a maximum of 200 m in width within the HVAC Zone and 110 m width within the Landfall and HVDC Zone, through the detailed design process it may be possible to reduce the area required. Further, through the detailed design process the route of the cable corridor will be designed considering technical and economic factors, which are likely to mean the HVDC and HVAC corridors will take a relatively direct route to create the required links rather than it potentially impacting all of the woodland areas identified. Therefore, regarding likely physical landscape impacts, the installation of the Onshore Export Cable and Grid Cables and construction of the Onshore Converter Station is likely to result in lower levels of loss of landscape features than the worst-case scenario for assessment.
- 192. In respect of landscape character, the worst case considers that mitigation through avoidance of landscape features would not be possible, aside from certain areas of woodland for which there is a commitment to retention (Technical Appendix 7.2, Volume 4). For the reasons above, the detailed design process will seek to reduce impacts on features and elements that contribute to perceived landscape character through avoidance, where feasible. A landscape and ecological management plan will provide detail of the proposed reinstatement of landscape features within the Onshore Scheme which will form part of future application(s) for approval of Reserved Matters.
- 193. Whilst the final routeing and siting of infrastructure for the Onshore Scheme is unknown there cannot be certainty over the location and quantum of secondary landscape mitigation. The worst-case for assessment is, therefore, that such measures are not possible. However, in reality, as discussed above, and in Section 7.10, through the detailed design process it is likely to be possible to identify areas within the Onshore Scheme where landscape planting is feasible and typical measures including planting of woodland and trees, and re-planting of hedgerows over the Onshore Export Cable and Grid Cables could be achieved, which, over time, could assist in reducing effects on physical landscape losses and effects on perceived landscape character. This information will form part of future application(s) for approval of Reserved Matters.



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7.12.1. Physical Landscape Preliminary Assessment

- 194. The construction of the Onshore Converter Station, and the HVDC and HVAC cables would result in physical landscape effects on woodland, hedgerows, agricultural land and grassland. Such impacts are likely to occur within the Indicative Zones of Infrastructure as shown on Figure 5.1 (Volume 4). Disturbance of some woodland areas in the Onshore Scheme has been avoided through the retention of certain areas of woodland as part of the designed in mitigation, as shown in Technical Appendix 7.2 (Volume 3).
- 195. Subsequently, for the purpose of assessment, the physical landscape elements with the potential to experience significant effects as a result of the construction of the Onshore Scheme have been separated into three categories:
 - Woodland;
 - · Hedgerows; and
 - · Agricultural land and grassland.

7.12.2. Physical Landscape Detailed Assessment

WOODLAND

7.12.2.1. BASELINE

196. Woodland is a feature of the landscape of the Study Area and within the Site, shown on Figure 7.2 (Volume 4) and in Technical Appendix 7.2 (Volume 3). The height, extent, and condition of woodland varies throughout; the majority comprises lowland mixed deciduous woodland, while there are also some areas of mixed woodland and pockets of coniferous plantation. Much of the woodland is immature. Woodland contributes to landscape character as well as providing strategic screening of large-scale built form within views and successfully compartmentalising the landscape. Based on OS Open Map Local Woodland data there 284 ha of existing woodland within the Study Area with 36 ha of this located within the Site.

7.12.2.2. SENSITIVITY OF THE RECEPTOR

- 197. Woodland is of importance to the character of the local landscape, especially in this location due to its role in providing separation between the various different land uses. All trees, but particularly more mature trees are also important to the need to reduce carbon emissions, which increases their value.
- 198. Re-establishment of woodland would generally take a long period of time to achieve, which heightens its overall susceptibility. Though restrictions to planting within cable easements will prevent woodland from being replanted over the HVDC and HVAC cable routes, it may be replanted elsewhere within the Site
- 199. The receptor is deemed to be of medium-high value and is considered to have Medium-high susceptibility. The sensitivity of the receptor is therefore, considered to be Medium-High.

7.12.2.3. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

200. Details of the MDS are set out in section 7.8.1. Woodland will not be affected within the wider Study Area but may be affected within the Site. Within the Site, it has been determined that certain areas of woodland will be retained as shown on Technical Appendix 7.2 (Volume 3). This equates to 11 ha. Aside from these areas the remaining woodland within the Site and shown on the figure as 'Woodland'



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at Risk of Removal' may be removed in order to accommodate the Onshore Scheme. This equates to 25 ha which is removed in the MDS.

- 201. However, there are two matters of note in relation to this. First, the cable corridor is a maximum of 200 m in width within the HVAC Zone and 110 m width within the Landfall and HVDC Zone. Second, the route of the cable corridor will be designed considering technical and economic factors, which are likely to mean the HVDC and HVAC corridors will take a relatively direct route to create the required links. Therefore, the installation of the HVDC and HVAC cables is considered unlikely to require the removal all of the remaining 'at risk' woodland within the Site.
- 202. For the woodland area annotated as Area 18 in Technical Appendix 7.2 (Volume 3) it has been determined by the Applicant that the woodland to the south of the NSL converter station can be retained. In addition, not all of the woodland located between the houses and the NSL converter station would require to be removed. A nominal 40m wide buffer could be retained within this area to provide visual separation. For the purpose of the LVIA MDS, this parcel of retained woodland has been assumed to be located adjacent to the NSL converter station as this represents the 'worst-case' in views from the housing area to the east as represented by Viewpoint 2: Northfield / Waterfield Road, near East Sleekburn.
- 203. During construction, the assessment scenario for this landscape receptor considers that mitigation through avoidance of landscape features would not be possible, aside from areas of woodland for which there is a commitment to retain. Therefore, it is assumed that all 'Woodland at Risk of Removal' would be removed.
- 204. Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation).

7.12.2.4. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 205. Areas of woodland may only be affected within the Site. The Applicant has sought to reduce the amount of woodland removal through avoidance. Areas have been identified as 'Woodland to be Retained', as shown in Technical Appendix 7.2. (Volume 3). This equates to 11 ha of the 36 ha total woodland within the Site. This ensures that some of the compartmentalisation that is a component of the landscape is retained, particularly in relation to the A189, East Sleekburn and the NSL converter station.
- 206. Aside from these areas the remaining woodland within the Site identified as 'Woodland at Risk of Removal' may be removed in order to accommodate the Onshore Scheme. This equates to 25 ha. During the installation phase, the impact of the HVDC and HVAC cables would result in the loss of woodland within the extent of the working corridor; a maximum of 200 m in width within the HVAC Zone and 110 m width within the Landfall and HVDC Zone. Taking into consideration the assessment scenario, the installation of the Onshore Export Cable is therefore considered unlikely to require the removal all of the 'Woodland at Risk of Removal' within the Site, however the MDS has assessed that all of this woodland would be removed.
- 207. Some of the areas identified as 'Woodland at Risk of Removal' have a function in compartmentalising the landscape and screening views. This function would therefore be lost to a degree with more widespread visibility being available across the area within the Site and wider area as a result. A knock-on effect of this is that existing large-scale development, as well as the Onshore Scheme would become more visible from nearby visual receptors.
- 208. The total area of the 'Woodland at Risk of Removal' is 25 ha, which equates to 36 % of the total woodland within the Site and 9 % of the total woodland within the Study Area.



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209. It is predicted that the impact will affect the receptor directly. Within the extents described above, and as a component of the wider landscape character, the magnitude of change is considered to be Medium-Low.

7.12.2.5. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

210. Overall, the magnitude of the impact within the local area is deemed to be Medium-low, and the sensitivity of the receptor is considered to be Medium-high. The effect will, therefore, be of moderate adverse significance, which is significant. Effects would be long term, and only entirely reversible following decommissioning.

7.12.2.6. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 211. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 212. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of this cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact within the geographic extent described above is deemed to be Medium-low, and the sensitivity of the receptor is considered to be Medium-high. The effect will, therefore, be of **moderate adverse significance**, which is significant. Effects would be long term, and only reversible following decommissioning.
- 213. However, the detailed design process will seek to further reduce landscape and visual effects through avoidance of woodland areas, where practicable, and new woodland planting within unconstrained areas, yet to be determined. Over time, these measures have the potential to assist in reducing the level of effect. These measures will be set out in a Landscape and Ecological Mitigation Plan. which will form part of future application(s) for approval of Reserved Matters.

HEDGEROWS

7.12.2.7. BASELINE

- 214. Hedgerows are a feature of the small pockets of agricultural landscape within the Site, shown on Figure 7.2 (Volume 4).
- 215. Overall, there are approximately 1976 m2 of hedgerow within the Site, across the Landfall / HVDC Zone, HVAC Zone and within the Converter Station Zone.
- 216. Hedgerows border many of the fields throughout the Site. Scattered single hedgerows are found throughout the Site alongside roads, within the former coal stocking yard site (Landfall/ HVDC Zone) and in the urban environment. No hedgerows within the Site show signs of recent management.
- 217. Hedgerows found within the Converter Station Zone are species poor, double planted with frequent gaps to the west and north and unmanaged, planted amongst neutral grasslands and bounded by coniferous woodland and scrub.
- 218. Hedgerows found in the HVAC Zone are similar to those in Converter Station Zone but with more mature trees present. Mostly double planted with less gaps. Hedgerows in this area are associated with ephemeral ditches, mostly dry.



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219. Hedgerows are therefore not a widespread feature within the Site but are part of very localised characteristics.

7.12.2.8. SENSITIVITY OF THE RECEPTOR

- 220. Hedgerows form a component of the rural and historic landscape character. Overall, value is considered to be medium-high as a component of local landscape character, which is much more prevalent within the western and south-western part of the Study Area than in the vicinity of the Site. The sections of hedgerow lost to installation works would be reinstated post construction and as this can be achieved with relative ease, with good practice during planting and maintenance and management periods, which reduces their overall susceptibility to the HVDC and HVAC corridor installation. Susceptibility for hedgerows is considered to be medium-low.
- 221. The receptor is deemed to be of medium-high value and is considered to have medium-low susceptibility. The sensitivity of the receptor is therefore, considered to be Medium.

7.12.2.9. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 222. Details of the MDS are set out in section 7.8.1.
- 223. During construction, the assessment scenario for this landscape receptor considers that mitigation through avoidance of landscape features would not be possible.
- 224. It is therefore assumed that hedgerows within the maximum 200 m cable corridor width within the HVAC Zone and 110 m cable corridor width within the Landfall / HVDC Zone would be removed.
- 225. Taking a precautionary approach the MDS assumes that all hedgerows within the Converter Station Zone would be removed.
- 226. However, as above, the route of the HVDC and HVAC cable corridor will be designed considering technical and economic factors which are likely to mean the Onshore Export Cable and Grid Cables will take a relatively direct route to create the required links. Therefore, the installation of the Onshore Export Cable and Grid Cables is considered unlikely to require the removal all of the remaining 'vulnerable' hedgerows within the Site. Further, where feasible, hedgerows will be reinstated after the installation / construction phase is completed.
- 227. Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation).

7.12.2.10. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 228. During the installation phase, the impact of the Onshore Export and Grid Cables could result in the loss hedgerows within the MDS of the HVDC and HVAC cable corridors. Taking into consideration the assessment scenario, the installation of the HVDC and HVAC cables is considered unlikely to require the removal all of the remaining 'vulnerable' hedgerows within the Site.. Where hedgerows are removed during the construction of the HVDC and HVAC cables they will be reinstated.
- 229. During construction, within the extent of the Converter Station Zone, there would be permanent removal of approximately a small number of single scattered hedgerows and priority hedgerows within the Landfall / HVDC Zone. There is the potential that some priority hedgerows will be temporarily lost in the HVAC Zone. The MDS assumes that all hedgerows within the Onshore Converter Station Zone, including priority hedgerows, would be removed during the operational life of the Onshore Scheme.



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230. It is predicted that the impact will affect the receptor directly. Within the extents described above and as a component of the wider landscape character, the magnitude is considered to be Low.

7.12.2.11. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

231. Overall, the magnitude of the impact is deemed to be Low, and the sensitivity of the receptor is considered to be Medium. The effect will, therefore, be of **minor adverse significance**, which is **not significant**. Effects of the hedgerow removals within the Converter Station Zone would be long term, and only reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the reinstated hedgerows re-establish.

7.12.2.12. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 232. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 233. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of this cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact within the geographic extent described above is deemed to be Low, and the sensitivity of the receptor is considered to be Medium. The effect will, therefore, be of **minor adverse significance**, which is **not significant**. Effects of the hedgerow removals within the Converter Station Zone would be long term, and only reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the reinstated hedgerows re-establish.
- 234. However, the detailed design process will seek to further reduce landscape and visual effects through avoidance of hedgerows, where practicable, and new reinstatement of hedgerow planting across the Onshore Export Cable and within the Converter Station Zone. These measures will be set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

AGRICULTURAL LAND AND GRASSLAND

7.12.2.13. BASELINE

- 235. Overall, there is approximately 48.43 ha of neutral grassland and 6.13 ha of modified grassland within the Site.
- 236. Neutral grassland is common across the Site, most areas were historically agricultural fields and influenced by previous management practices. There are pockets of neutral grassland which contribute to an agricultural character within the Converter Station Zone and HVAC Zone, as shown in Figure 7.2 (Volume 4). The scale of field parcels varies and follows a broadly rectilinear pattern.
- 237. Modified grassland is common in linear arrangement along roadside edges and in small areas in urban environments, these areas are subject to regular management via mowing. Other areas of modified grassland occur in a football field and a park located within the south-east of the Site (Landfall/HVDC zone) and around school grounds towards the east of the Site. Both areas are regularly managed by mowing. Two smaller areas of modified grassland are located in the HVAC Zone and the east of the Landfall/HVDC Zone, these are used for grazing by horses and sheep.
- 238. Onshore Converter Station The changing appearance of grassland and the activities associated with different management regimes are therefore a characteristic of these localised parts of the landscape



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within the Site, and is a more predominant characteristic of the wider Study Area, particularly to the west and south-west of the A189.

SENSITIVITY OF THE RECEPTOR 7.12.2.14.

- 239. Whilst it is more widespread within the Study Area, agricultural land is a relatively uncommon feature within the Site. The historic pattern of the remaining fields to the east of the A189 within parts of the Converter Station Zone is largely intact. This agricultural land forms the setting to the east of East Sleekburn and the River Blyth and provides relief to the wider industrial and settled landscape context. On balance, the value of agricultural land within the Site is considered to be medium.
- 240. Agricultural land and grassland are easily reinstated and undergo inherent seasonal disruption as a result of crop cultivation. However, agricultural land is relatively scarce as a landscape element within the Site and will be susceptible to permanent removal although it is less susceptible to the temporary removal and reinstatement as part of the Onshore Export Cable works. On balance, susceptibility is considered to be Medium.
- 241. The receptor is deemed to be of medium value and is considered to have medium susceptibility. The sensitivity of the receptor is therefore, considered to be Medium.

RECEPTOR WORST-CASE ASSESSMENT SCENARIO 7.12.2.15.

- 242. Details of the MDS are set out in section 7.8.1.
- 243. During construction, the assessment scenario for this landscape receptor considers that mitigation through avoidance of landscape features would not be possible.
- 244. It is therefore assumed that any areas of agricultural land and grassland within the maximum 200 m cable corridor width within the HVAC Zone and within the maximum 110 m cable corridor width of the Landfall / HVDC Zone would be removed. As above, the route will be designed considering technical and economic factors which are likely to mean the Onshore Export Cable will take a relatively direct route to create the required links. Therefore, the installation of the Onshore Export Cable is considered unlikely to require the removal all of the remaining agricultural land and / or grassland within the Site. The surface treatment / vegetation will be reinstated within the cable corridor and would be returned to agricultural land following construction.
- 245. The MDS assumes that agricultural land and grassland within the Onshore Converter Station Zone would be removed during construction.
- 246. Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation).

7.12.2.16. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 247. During the construction phase, the impact of the HVDC and HVAC cables would result in the temporary loss of areas of agricultural land or grassland within a maximum of 200 m cable corridor width within the HVAC Zone and 110 m cable corridor width within the Landfall / HVDC Zone. Taking into consideration the assessment scenario, the installation of the HVDC and HVAC cables is considered unlikely to require the removal all of the agricultural land or grassland within the Site.
- 248. During construction, within the extent of the Onshore Converter Station Zone, there would be permanent removal of agricultural land.



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249. It is predicted that the impact will affect the receptor directly. Within the limited extent of agricultural land described above and as a component of the wider landscape character, the magnitude is considered to be Medium-Low.

7.12.2.17. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

250. Overall, the magnitude of the impact within the geographic extent described above is deemed to be Medium-Low, and the sensitivity of the receptor is considered to be Medium. The effect will, therefore, be of moderate-minor adverse significance, which is not significant. Effects of the removals within the Onshore Converter Station Zone would be long term, and only reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the agricultural land or grassland is reinstated.

7.12.2.18. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 251. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 252. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of this cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact within the geographic extent described above and in the context of the wider study area is deemed to be Medium-Low, and the sensitivity of the receptor is considered to be Medium. The effect will, therefore, be of moderate-minor adverse significance, which is not significant. Effects of the agricultural land removals within the Converter Station Zone would be long term, and only reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the agricultural land is reinstated.
- 253. The detailed design process will seek to further reduce landscape effects through the reinstatement of grassland within the Onshore Scheme, with locally appropriate species-rich mixes where feasible and with input from suitably qualified ecologists to enhance biodiversity and habitat provision where appropriate.

7.12.3. Landscape Character Preliminary Assessment

- 254. Landscape character receptors within the Study Area (including LCTs and LCAs) (see Figure 7.3, Volume 4) are assessed to identify those likely to be affected by the Onshore Scheme.
- 255. Table 7.11 identifies which landscape character receptors are within the Study Area and have the potential to experience significant effects as a result of the introduction of the Onshore Scheme, and therefore require to be assessed in detail.

Table 7.11 Preliminary assessment of landscape character receptors

Landscape Receptor	Comment	
Status – potential for significant effects and include	ed in detailed assessment	
LCA 41a: Blyth and Wansbeck Estuaries	The Onshore Converter Station is located partly within this LCA.	
LCA 42a: Ashington, Blyth and Cramlington	The Onshore Converter Station is located partly within this LCA.	



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- 256. Regarding potential impacts on landscape character receptors as a result of the construction of the HVDC and HVAC cables, the activities considered for the MDS (section 7.8.1) would introduce uncharacteristic features into the landscape which would have slightly apparent influence on the landscape and views, for example signage, temporary fences, stockpiles, and temporary construction compounds. However, the introduction of vehicle movements, spoil heaps, management of hedgerows, and changes to ground cover would be perceived in the context of influence from similar characteristics in LCA 41a and LCA 42a. The worst-case scenario for the length of time for construction of the Landfall and HVDC and HVAC cables is up to 18 months. The duration of the change would therefore be short-term and temporary.
- 257. As the proposed HVDC and HVAC cables are to be buried underground there would be little or no character effects once operational. Whilst some permanent vegetation removal would occur within the HVDC and HVAC cable corridors, during operation the effects will be limited owing to their localised extents, which within the broader context of the LCAs will not redefine landscape character.
- 258. The precise location of the cable trenches at Landfall and within the HVAC and HVDC cable corridor, within the HVAC Zone and HVDC Zone will not be finalised until subsequent detailed design stages. It is likely that all the landscape and habitats would be reinstated back to their original condition, where feasible, with the exception of woodland / scrub where it would lie over the cables. Section 7.10.2.1.1 describes the principles which are considered to be an appropriate mitigation strategy for the Landfall and HVAC and HVDC cable corridors.
- 259. It is considered that whilst the installation of the HVDC and HVAC cables will have some effect on the LCAs in which they are situated, the landscape character is only likely to experience low level of change and / or effects experienced over limited geographic extents.
- 260. As a result, it is considered that the installation of the HVDC and HVAC cables will not become a prevailing or defining element or characteristic within the context of the baseline and are, therefore, not assessed any further in the assessment of effects on landscape character. It is considered that there would be no likely significant effects on landscape character arising from the installation at Landfall and the HVAC and HVDC cable corridors.
- 261. The landscape character detailed assessment therefore focuses on the effect of the Onshore Converter Station.
- 7.12.4. Landscape Character Detailed Assessment

LANDSCAPE CHARACTER AREA 41A: BLYTH AND WANSBECK ESTUARIES

7.12.4.1. BASELINE

262. The NLCA describes the 'Key Characteristics' of the LCA 41a as follows:

- 'Intensively developed landscape, comprising a coastal urban edge.
- River mouths with mudflats or modified to form harbours.
- Large-scale industrial structures and former industrial sites.
- Fragmented farmland amongst urban development.'
- 263. The LCA41a characterisation notes that the chief land uses are urban and industrial, although arable farming and scrub woodland appear around the River Wansbeck, River Blyth, and Sleek Burn.



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- 264. The 'Key Qualities' of LCA41a have been identified in the NLCA. The Key Qualities are aspects of the landscape which are considered vulnerable to forces for change. They are also used in the NLCA to inform the future vision and management of the landscape. The Key Qualities of LCA41a are described as:
 - 'Open coastal views from rocky headlands and man-made piers and harbours.
 - Dynamic seascape environment.
 - Traditional seaside resort of Newbiggin-by-the-Sea.
 - Industrial and architectural heritage, particularly around Blyth Harbour.
 - Ecological interest in the rocky foreshore and estuaries.'
- 265. Relevant 'Forces for change' currently observed in the landscape include the 'Redevelopment and renewal of coastal and post-industrial settlements, with potential for major new industrial, commercial or residential developments on existing brownfield sites.'
- 266. This is a highly varied LCA, which covers the natural landscapes of the River Wansbeck and River Blyth, the coastal edge and low-lying coastal strip, rocky offshore islets, and an intensively developed coastal hinterland which is dominated by large industrial structures and extensive tracts of vacant land across former industrial sites, with scattered settlement.
- 267. Natural processes and features along the coast, and within the river valleys, enhance a sense of place, although views of onshore and offshore wind turbines, industrial structures, and urban features are ever-present and may be considered to detract from the landscape and scenic quality of the coast. Scrubby woodland is noted as a feature along the Sleek Burn and River Blyth. Fragmented areas of farmland are found around the periphery of this landscape, to the north near the River Wansbeck, and to the west near the A189. These areas of farmland are often on level ground enclosed by shelterbelt woodland and therefore contribute relatively little to the character of the wider landscape within LCA 41a.
- 268. Across the inshore landscape, there are large tracts of open, vacant land, comprising areas of cleared ground and hard standing, enclosed by security fences, generally overlain by scrub woodland and self-seeded vegetation, which is not maintained.
- 269. There are extensive views out to sea from the coastal edge to the east of LCA 41a. Within the central portion of the LCA, east of the A189, the generally level to slightly undulating landscape allows for wide ranging visibility. However, views are contained by urban built form and woodland to the north and east of East Sleekburn. To the east of the former coal stocking yard, two PFA mounds screen views inland from Cambois and parts of the coastal edge. To the south, open views are possible across the wide, shallow valley of the River Blyth to the east of East Sleekburn and north of Blyth, although intervening built features and vegetation mean such views are intermittent. To the north of the River Wansbeck there are elevated, open locations along the coast with wide views out to sea and inland, although in closer proximity to the river landform and vegetation combine to restrict visibility inland. Parts of LCA 41a to the west of the A189 have a weak visual relationship with the landscape to the east of the road, mainly as a result of screening by roadside vegetation and embankments.
- 270. Large-scale, modern, industrial features are the most dominant built form across the LCA, notably the NSL converter station and substations at the former Blyth Power Station site, silos at Blyth Harbour, and extensive industrial 'sheds' to the south of the River Blyth. The emerging industrial development for the manufacturing of subsea cables at Land North of Blyth Power Station Substation is under construction (Figure 7.9, Volume 4). In this context, pockets of residential built form appear small scale and contribute less to a sense of place. Collectively, these components of the landscape detract from scenic quality within this part of the LCA, with fragmented and low-quality landscape and prominent built features the defining characteristics of the landscape. Small pockets of remnant farmland provide some relief from the prevailing built influences and developed characteristics within the landscape.



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7.12.4.2. SENSITIVITY OF THE RECEPTOR

- 271. There are no landscape planning designations covering this LCA which would otherwise denote a special scenic value. Considering the baseline characteristics of this LCA, overall, the value of LCA 41a is considered to be Low.
- 272. The eastern part of the Onshore Converter Station Zone would only occupy a localised part on the edge of the much wider LCA within the inland coastal hinterland. It would occupy some of the few remaining areas of open farmland within this LCA, which are deemed to have higher susceptibility to change. However, the perceived character is fragmented through its varied uses and areas of brownfield land, is strongly influenced by large-scale structures, transport links and electrical infrastructure features, ever-present in views, and moderate susceptibility to the proposed change. The relatively large-scale receiving landscape would also moderate the susceptibility of LCA 41a to the proposed change. On balance, susceptibility is considered to be medium.
- 273. The receptor is deemed to be of low value, and medium susceptibility. The sensitivity of the receptor is therefore, considered to be Medium-Low.

7.12.4.3. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 274. Details of the MDS are set out in section 7.8.1.
- 275. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation).
- 276. During construction, the assessment scenario for this landscape receptor considers that mitigation through avoidance of landscape features would not be possible, aside from areas of woodland for which there is a commitment to retention (Technical Appendix 7.2, Volume 3). Some of these areas of woodland are located within LCA 41a.

7.12.4.4. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 277. The Onshore Converter Station Zone is located partly within this LCA 41a and therefore directly alters the features and patterns that contribute to the landscape character within the Converter Station Zone. Physical impacts on landscape features are described separately in section 7.12.1.
- 278. Impacts to perceived character would occur during construction as a result of the removal of woodland trees, hedgerows and agricultural land, introduction of construction activities and features and the gradual emergence of built form with industrial character. As described in the baseline, the character within the Converter Station Zone comprises some of the few remaining areas of open farmland within this LCA. Because of the loss of these features, and introduction of construction activities and features that would become the prevailing influence, the magnitude of impact would be high within the geographic extent of the Converter Station Zone and up to approximately 0.5 km to the north, and to the east of East Sleekburn, where the presence of construction activity and emerging Onshore Converter Station would be most apparent, although characteristic in the receiving landscape described in the baseline.
- 279. In parts of the LCA beyond this localised area, to the west of the A189, the magnitude of change would be Medium. This is as a result of increasing distance, the more limited visibility as a result of the screening effect of vegetation, and that the change to the landscape and views would occur within the context of the man-made influence noted in the baseline. The magnitude of impact would reduce rapidly with distance.



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280. It is predicted that the impact will affect the receptor both directly and indirectly. The magnitude of impacts is considered to be High within the Converter Station Zone and a very localised area within up to approximately 0.5 km. Impacts would be Medium or lower across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance.

7.12.4.1. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 281. The screened ZTV (Figure 7.7, Volume 4,) shows widespread visibility across this LCA within the Study Area.
- 282. Within the geographic extent of the Converter Station Zone, impacts on the perceived landscape character would arise as a result of the presence of the operational Converter Station. Up to approximately 0.5 km to the north, and to the east of East Sleekburn, the Onshore Converter Station would have a readily apparent influence and would contrast with the pattern of small pockets of fragmented farmland around settlement close to East Sleekburn; although the change would be moderated as a result of the influence the nearby existing NSL converter station, overhead pylon lines, and National Grid Substation, which impart the characteristics of large-scale electrical infrastructure within this part of the LCA.
- 283. As shown in Viewpoint 3 (Figure 7.12, Volume 4), and Viewpoint 4 (Figure 7.13, Volume 4), and Illustrative Viewpoint B (Technical Appendix 7.1, Volume 3) beyond this approximate distance, the MDS Onshore Converter Station envelope would be appreciated in a context of baseline influence from other prominent large-scale industrial and commercial buildings in the wider landscape, including the Ferguson Business Park to the north, and to the south around the banks of the River Blyth and Port of Blyth.
- 284. It is predicted that the impact will affect the receptor both directly and indirectly. The magnitude of impacts is considered to be Medium-High within a localised area up to approximately 0.5 km. Impacts would be Medium-Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance.

7.12.4.2. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

285. Overall, the sensitivity of the receptor is considered to be Medium-Low, and the magnitude of impact is deemed to be High up to approximately 0.5 km. The effect within this localised extent would, therefore, be of **moderate adverse significance**, which is **significant**. The magnitude of impact across the LCA within the remaining extent described above would be Medium, and the effect would be of **moderate-minor adverse significance**, which is **not significant**. Effects would be short term, and reversible in part.

7.12.4.3. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 286. Embedded mitigation and good-practice construction / installation phase mitigation practices are set out in section 7.10 and Table 7.10.
- 287. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of impact is deemed to be high up to approximately 0.5 km. The effect within this localised extent would, therefore, be of **moderate** adverse significance, which is significant. The magnitude of impact across the LCA within the



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remaining extent described above would be medium, and the effect would be of **moderate-minor adverse significance**, which is **not significant**. Effects would be short term, and reversible in part.

288. The detailed design process will seek to further reduce landscape and visual effects. In respect of landscape character, it may be possible to identify areas within the Onshore Scheme where landscape planting is feasible and typical measures including planting of woodland and trees, and re-planting of hedgerows over the HVDC and HVAC cables could be achieved, which over time could assist in reducing effects on physical landscape losses and effects on perceived landscape character. These measures will be set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.12.4.4. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

289. Overall, the sensitivity of the receptor is considered to be Medium-Low, and the magnitude of impact is deemed to be Medium-High up to approximately 0.5 km. The effect within this localised extent would, therefore, be of **moderate adverse significance**, which is **not significant**. Whilst the operational Onshore Converter Station will result in a readily apparent change, adding built form to the landscape, it would do so in a location in very close proximity to the NSL Converter Station and therefore have comparable influence in terms of its scale and appearance. The retention of certain woodland areas (see Technical Appendix 7.2, Volume 3) would help to varying degrees to assimilate the proposed Onshore Converter Station into the local landscape. In view of this and applying professional judgement, it is considered that the moderate adverse level of effect would not reach the threshold of significance in this instance. The magnitude of impact across the LCA within the remaining extent described above would be Medium-Low, and the effect would be of **minor adverse significance**, which is **not significant**. Effects would be long term, and reversible.

7.12.4.5. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 290. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of this cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of impact is deemed to be Medium-High up to approximately 0.5 km. The effect within this localised extent would, therefore, be of **moderate adverse significance**, and for the reasons given above is **not significant** The magnitude of impact across the LCA within the remaining extent described above would be Medium-Low, and the effect would be of **minor adverse significance**, which is not significant. Effects would be long term, and reversible.
- 291. The detailed design process will seek to further reduce landscape and visual effects.

LANDSCAPE CHARACTER AREA 42A URBAN FRINGE, ASHINGTON, BLYTH AND CRAMLINGTON

7.12.4.6. BASELINE

292. The NLCA describes the Key Characteristics of LCA 42a as follows:

- 'Large built-up areas including former mining towns.
- Large-scale industrial and commercial land uses.
- Significant human features, including dual carriageways, railways, pylons, and chimneys.
- Residential areas of a range of ages.'
- 293. The 'Key Qualities' of LCA 42a are described as:



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- 'Historic cores of settlements.
- Fragmented farmland serves as accessible open space.
- Industrial heritage in the form of mining towns and former industrial sites.
- Wooded river valleys dissect this landscape providing an important resource.'
- 294. Relevant 'Forces for change' observed in the landscape include the 'Redevelopment and renewal of coastal and post-industrial settlements, with potential for major new industrial, commercial or residential developments on existing brownfield sites.'
- 295. This is an extensive LCA, which covers the inland landscape within the Study Area, to the west of LCA 41a. Settlement at Blyth, Bedlington, Stakeford, and Ashington influence large parts of this LCA within the LVIA Study Area. Within the Study Area, parts of Blyth, Bedlington, Stakeford, and Ashington are typically post-war 20th century suburban housing stock, with no distinctive character. To the south of Ashington, large modern commercial buildings and industry are the prevailing built forms, to the north of the River Wansbeck and west of the A189.
- 296. Separating these settlements are level to gently undulating areas of farmland. Agricultural land use is mixed with some areas of pastoral grazing, but primarily arable crops. Field amalgamation has taken place, and existing boundaries are a mixture of hedgerows in varying condition and post-and-wire fencing, which together creates the impression of a slightly degraded, medium to large-scale, and relatively open landscape beyond the settlements. Amid the farmland, the West Sleekburn Industrial Estate, and large-scale structures at the Suez recycling facility and Aggregate Industries concrete site add to the fragmentation of the farmland and perception of a large-scale landscape.
- 297. Further fragmentation of the landscape is perceived as a result of the A189, A1147, and railway lines which cut through LCA 42a.
- 298. Within urban areas, views are typically contained by adjacent built form. Parts of Bedlington to the east of the A1147 adjoin open farmland and consequently have a more open aspect. Typically, however, woodland shelterbelt planting is found along the edges of settlement and major roads, such as the A1147 and A189, with further screening woodland surrounding the West Sleekburn industrial estate, Suez recycling facility, and Aggregate Industries concrete site, which compartmentalises views across the landscape. Riparian vegetation within the shallow valley of the River Blyth further contains views across the agricultural landscape.
- 299. Overall, much of LCA 42a to the west of the A189 is typical of many urban-edge landscapes, having a fragmented character and slightly degraded condition of agricultural land particularly on the urban-rural edge.

7.12.4.7. SENSITIVITY OF THE RECEPTOR

- 300. There are no landscape planning designations covering this LCA which would otherwise denote a special scenic value. Considering the baseline characteristics of this LCA, overall, the value of LCA 42a is considered to be Low.
- 301. The western part of the Converter Station Zone would only occupy a localised part on the edge of the much wider LCA. It is situated within an isolated pocket of open farmland to the east of the A189. Within LCA 42a farmland is not an uncommon feature; however, susceptibility is heightened because of the contribution it makes to the perceived character of the adjacent LCA 41a at this transitional point in the landscape.
- 302. Perceived character is fragmented through its varied uses, influence of urban development, and prominent built form including the A189, Aggregate Industries Site, West Sleekburn industrial estate and Suez recycling facility, which moderate susceptibility to the proposed change. The relatively large-



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scale receiving landscape would also moderate the susceptibility of LCA 42a to the proposed change. On balance, susceptibility is considered to be medium-low.

303. The receptor is deemed to be of low value, and medium-low susceptibility. The sensitivity of the receptor is therefore, considered to be Medium-Low.

7.12.4.8. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 304. Details of the MDS are set out in section 7.8.1
- 305. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation).
- 306. During construction, the assessment scenario for this landscape receptor considers that mitigation through avoidance of landscape features would not be possible, aside from areas of woodland for which there is a commitment to retention (Technical Appendix 7.2, Volume 3), some of which lie within LCA 42a.

7.12.4.9. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 307. The Onshore Converter Station is located partially within this LCA 42a and therefore directly alters the features and patterns that contribute to the landscape character within the Converter Station Zone. Physical impacts on landscape features are described separately in section 7.12.1. All other effects on this LCA relate to the visibility and influence on views of the Onshore Converter Station construction.
- 308. Direct impacts would occur during construction as a result of the removal of woodland trees, hedgerows and agricultural land, introduction of construction activities and features and the gradual change to an industrial type of land use and character. These features would become the prevailing influences within the Converter Station Zone. Also considering the loss of open farmland and rural features within the Converter Station Zone, the impacts on perceived character are considered to result in a high magnitude within the small geographic extent of the Converter Station Zone and its immediate environs within LCA 42a to the east of the A189 (see Figure 7.3, Volume 4).
- 309. All other effects on perceived character relate to the visibility and influence on views of the Onshore Converter Station construction. Owing to the screening effect of the A189 and roadside vegetation, the small extent of LCA 42a to the east of the A189 offers limited contribution to the wider part of this landscape to the west and south of the LVIA Study Area, as seen in Illustrative Viewpoint C and Illustrative Viewpoint D (Technical Appendix 7.1, Volume 4). Therefore, the magnitude of impact on the wider landscape would be low at most, where taller elements of construction may have slight influence on the perceived character.
- 310. It is predicted that the impact will affect the receptor both directly and indirectly. The magnitude of impacts is considered to be High within the Converter Station Zone and its immediate environs to the east of the A189. Impacts would be Low across the wider LCA.

7.12.4.10. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 311. The screened ZTV (Figure 7.7, Volume 4) shows relatively widespread visibility across this LCA within the LVIA Study Area.
- 312. Within the geographic extent of the Converter Station Zone and its immediate environs, impacts on the perceived landscape character would arise as a result of the presence of the operational Converter Station. The Onshore Converter Station would have a readily apparent influence and would contrast



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with the pattern of small pockets of fragmented farmland around settlement close to East Sleekburn; although the change would be moderated as a result of the existing influence the nearby existing NSL converter station, overhead pylon lines, and National Grid Substation.

- 313. As shown in Viewpoint 1 (Figure 7.10, Volume 4), and Illustrative Viewpoint B (Technical Appendix 7.1, Volume 3) beyond this approximate distance, the influence of the MDS Onshore Converter Station envelope would be contained by retained woodland (Technical Appendix 7.2, Volume 3) and appreciated in a context of baseline influence from other prominent large-scale industrial and commercial or agricultural buildings in the wider landscape.
- 314. It is predicted that the impact will affect the receptor both directly and indirectly. The magnitude of impacts is considered to be Medium-High within the Converter Station Zone and immediate environs. Impacts would be Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south and would reduce quickly with distance beyond this extent.

7.12.4.11. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

315. Overall, the sensitivity of the receptor is considered to be Medium-Low, and the magnitude of impact is deemed to be High within the Converter Station Zone and immediate environs. The effect within this localised extent would, therefore, be of **moderate adverse significance**, which is **significant**. The magnitude of impact across the LCA within the remaining extent described above would be Low, and the effect would be of **minor adverse significance**, which is **not significant**. Effects would be short term, and reversible in part.

7.12.4.12. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 316. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 317. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of impact is deemed to be High within the Converter Station Zone and immediate environs. The effect within this localised extent would, therefore, be of **moderate adverse significance**, which is **significant**. The magnitude of impact across the LCA within the remaining extent described above would be Low, and the effect would be of **minor adverse significance**, which is **not significant**. Effects would be short term, and reversible in part.
- 318. The detailed design process will seek to further reduce landscape and visual effects. In respect of landscape character, it may be possible to identify areas within the Onshore Scheme where landscape planting is feasible and typical measures including planting of woodland and trees, and re-planting of hedgerows over the HVDC and HVAC cables could be achieved, which over time could assist in reducing effects on physical landscape losses and effects on perceived landscape character. These measures will be set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.12.4.13. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

319. Overall, the sensitivity of the receptor is considered to be Medium-Low, and the magnitude of impact is deemed to be Medium-High within the Converter Station Zone and immediate environs. The effect within this localised extent would, therefore, be of **moderate adverse significance**, though **not**



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> significant. Whilst the operational Onshore Converter Station will result in a readily apparent change, adding built form to the landscape, it would do so in a location in very close proximity to the NSL converter station and therefore have comparable influence in terms of its scale and appearance. The retention of certain woodland areas (see Technical Appendix 7.2, Volume 3) would help to varying degrees to assimilate the proposed Onshore Converter Station into the local landscape. Applying professional judgement, it is considered that the moderate adverse significance would not be in the threshold of being significant. The magnitude of impact across the LCA within the remaining extent described above would be Low, and the effect would be of minor adverse significance, which is not significant. Effects would be long term, and reversible.

SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON 7.12.4.14. AND MAINTENANCE

- 320. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of the proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of impact is deemed to be Medium-High within the Converter Station Zone and immediate environs. The effect within this localised extent would, therefore, be of moderate adverse significance, though not significant for the reasons stated above. The magnitude of impact across the LCA within the remaining extent described above would be Low, and the effect would be of minor adverse significance, which is not significant. Effects would be long term, and reversible.
- 321. The detailed design process will seek to further reduce landscape and visual effects.

7.13. Assessment of Potential Visual Impacts

- 322. The potential impacts arising from the construction, operational and maintenance phases of the Onshore Scheme are listed in Table 7.7 along with the MDS against which each impact has been assessed.
- 323. An assessment of the likely significance of the effects of the Onshore Scheme on visual receptors caused by each identified impact is given below.
- 324. The assessment is based on the MDS set out in section 7.8.1. The final route of the Onshore Export Cable and siting of the Onshore Converter Station will be finalised at the detailed design stage. which will be subject to future application(s) for approval of Reserved Matters.
- 325. This assessment therefore assumes a realistic worst-case scenario based on the Zones of Infrastructure shown in Figure 5.1 (Volume 4). In actuality, the footprint will be smaller than the maximum envelope represented in the MDS Onshore Converter Station Platform. Similarly, the cable corridor is assumed as a maximum of 200 m in width within the HVAC Zone and 110 m width within the Landfall and HVDC Zone. However, through the detailed design process the route of the cable corridor will be designed considering technical and economic factors, which are likely to mean the HVDC and HVAC corridors will take a relatively direct route to create the required links. In respect of visual impacts, as described for landscape impacts, whilst the final routeing and siting of infrastructure is unknown there cannot be certainty over the location and quantum of secondary landscape mitigation. The worst-case for assessment is, therefore, that such measures are not possible. In relation to the visual impacts, the MDS for assessment assumes that, where there is no commitment to retain woodland this would be removed, and it may not be possible to replace it in-situ due to the HVDC and HVAC cables as these cannot be planted over with woodland / trees. This introduces the potential for views of the Onshore Scheme and / or cumulative developments to be 'opened up'. The



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Onshore Scheme detailed design stage will seek to mitigate such impacts through avoiding removal of key woodland areas, where practicable. Not all of the woodland that has the potential for removal would be removed therefore the LVIA has taken a precautionary approach to the visual impacts its removal may result in.

326. However, in reality, as discussed in section 7.10, through the detailed design process it may be possible to identify areas within the Onshore Scheme where landscape planting is feasible and typical measures including planting of woodland and trees, and re-planting of hedgerows over the Onshore Export Cable could be achieved, which, over time, could assist in reducing visual effects on receptors at a given location.

7.13.1. Visual Impacts Preliminary Assessment of Construction – Landfall and HVDC/HVAC Cables

- 327. Principal visual receptors and viewpoints within the Study Area are assessed to determine those likely to be influenced during installation by the Onshore Converter Station Landfall and HVDC/HVAC cables. These are identified on Figure 7.4 Principal Visual Receptors and Figure 7.8 Onshore Converter Station MDS Screened ZTV and Principal Visual Receptors (Volume 4).
- 328. As described in section 7.8, the visual effects of the Landfall and HVDC/HVAC cables would largely relate to the construction phase. The visual presence of open-cut trenching, trenchless technology (e.g., HDD) within construction compounds, material storage areas and temporary access tracks have the potential to impact visual receptors in the Study Area.
- 329. The preliminary assessment of visual effects predicted to arise as a result of the Landfall and HVDC/HVAC cables identifies receptors considered to have the potential to experience significant effects during the construction phase. Table 7.12 below, identifies such receptors and determines those for inclusion in the detailed assessment process.

Table 7.12 Preliminary assessment of visual receptors – landfall and HVDC/HVAC cables (construction phase)

Visual Receptor	Comment	
Status – Potential for significant effects and included in detailed assessment.		
Users of the England Coast Path and NCR 1, and minor road network	Potential for significant visual effects on sections of these routes at the coastal margin near Cambois, and near East Sleekburn during construction. Included in the detailed assessment from Viewpoint 1 (Figure 7.10, EIA Volume 4, ES Figures), Viewpoint 3 (Figure 7.12, Volume 4) and Viewpoint 6 (Figure 7.15, Volume 4).	
Settlement at Cambois, Wembley Gardens	Potential visibility of the closest sections of the Onshore Export Cable construction would be limited to a small number of properties to the south of Wembley Gardens / South View and Wembley Terrace. Largely, these views are from rear elevations of properties, which have a uniformly south-east aspect. Large sections of the construction of the HVDC/HVAC cables would be distant and partially screened by intervening landform and vegetation. However, there may be short sections visible at relatively close proximity. Assessed in detail by Viewpoint 4 (Figure 7.13, Volume 4).	
Cambois settlement	Potential for significant visual effects experienced by people within settlement at Cambois who are likely to be at very close proximity to construction. Included in the detailed assessment from Viewpoint 6 (Figure 7.15, Volume 4) and informed by Illustrative Viewpoint A: Cambois, north of Selbourne Terrace (Technical Appendix 7.1, Volume 3).	



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Visual Receptor	Comment	
Settlement at East Sleekburn, north of Harbour View road	Potential for significant visual effects experienced by people within settlement in close proximity to the HVDC/HVAC cable construction. Assessed in detail from Viewpoint 2 (Figure 7.11, Volume 4).	
Users of PRoW NCC Ref 600/059, between Unity Terrace and Harbour View road and users of PRoW NCC Ref 600/062 and 054, between Harbour View road and Wembley Gardens	There would potentially be close proximity views of the HVDC and HVAC cable construction from these short public footpaths. Considered further in the detailed assessment process. Assessed in detail from Viewpoint 2 (Figure 7.11, Volume 4).	
	ner in preliminary assessment but found to have no likely significant effects dessment and not included in detailed assessment	
Settlement at East Sleekburn	Potential visibility of the HVDC/HVAC cable construction at close range from a small number of properties to the east of Firefly Drive and Brunel Way, East Sleekburn. The construction of the HVDC/HVAC cables would be seen at relatively close range and may require woodland removal. Considering the largely temporary, short-term, and reversible nature of the change it is not considered to result in likely significant effects.	
Other PRoW (within the Study Area	Attributable visual effects on the wider network of PRoW are not considered to result in likely significant effects. From routes to the west of the A189, with distance, and considering the screening effect of intervening vegetation in the landscape and roadside planting, there would be very little if any visibility of the Landfall or HVDC/HVAC cable construction. Informed by Illustrative Viewpoint A: Cambois, north of Selbourne Terrace and Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, Volume 3).	
Other sections of the England Coast Path within the Study Area	Attributable visual effects on other sections of the England Coast Path are not considered to result in likely significant effects. From routes to the west of the A189, with distance, and considering the screening effect of intervening vegetation in the landscape and roadside planting, there would be very little if any visibility of the Landfall or HVDC/HVAC cable construction. Informed by Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, Volume 3).	
Users of the minor road network across the wider Study Area	Potential visibility of the closest sections of the Onshore Export Cable Route construction from the minor road network to the west of the A189 would be limited by raised sections of that road and its associated roadside planting. From sections of Brock Lane / Wembley Gardens, and locations to the north of Blyth, visibility would be screened to varying degrees by intervening landform, vegetation and / or built form within the landscape. Where there is more open visibility, the construction of Landfall and/or the HVDC/HVAC cables would be relatively distant and experienced in fleeting views. Considering the temporary, short-term and reversible nature of construction activity it is considered that there would be no likely significant effects. Informed by Illustrative Viewpoint C: East of Bedlington, field gate and Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3).	
Users of the A189	Potential visibility would be restricted by roadside vegetation. Where visible, it is judged that construction activities, would be viewed for very short durations, generally oblique to the direction of travel. Considering the temporary, short-term, and reversible nature of construction activity it is considered that there would be no likely significant effects	



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Visual Receptor	Comment
Other settlement within the LVIA Study Area	Attributable visual effects on people within settlements across the wider Study Area are not considered to result in likely significant effects. With distance and considering the screening effect of intervening vegetation in the landscape and roadside planting, there would be very little if any visibility of the Landfall or HVDC/HVAC cables construction.

7.13.2. Visual Impacts Preliminary Assessment of Construction and Operation and Maintenance – Converter Station

330. Potential construction and operational and maintenance visual effects as a result of the Onshore Converter Station are assessed and reported together. Accordingly, the preliminary assessment in Table 7.13, below, considers these phases of the Onshore Scheme together, identifies receptors considered to have the potential to experience significant visual effects, and determines those for inclusion in the detailed assessment process.

Table 7.13 Preliminary assessment of visual receptors – Onshore Converter Station (construction phase and operation and maintenance phase)

Visual Receptor	Comment		
Status – potential for significant effects and included in detailed assessment			
Settlement at East Sleekburn, near Spring Ville, Brock Lane	Potential for significant effects on views from properties to the west of Brock Lane, a close range to the Converter Station Zone. Assessed in detail by Viewpoint 1 (Figur 7.10, Volume 4, ES).		
Settlement at East Sleekburn, north of Harbour View road	Potential for significant effects on views from this group of properties to the north of Harbour View road, at close range to the Onshore Converter Station site. Assessed in detail by Viewpoint 2 (Figure 7.11, EIA Volume 4, ES Figures).		
Users of the England Coast Path / NCR 1 / Visitors to the coastal margin	Potential for significant effects on views from a section of these recreational routes at close range to the Converter Station, Assessed in detail by Viewpoint 1 (Figure 7.10, Volume 4), Viewpoint 3 (Figure 7.12, Volume 4) and Viewpoint 6 (Figure 7.15, Volume 4) which was requested by NCC. Informed by Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, Volume 3).		
Settlement at Cambois, near Wembley Gardens	Potential for significant effects limited to a small number of properties to the south of Wembley Gardens / South View and Wembley Terrace. Largely, these views are from rear elevations of properties, which have a uniformly south-east aspect. Assessed in detail by Viewpoint 4 (Figure 7.13, Volume 4).		
Users of the local minor road network east of the A189	Potential for significant effects on views from limited sections the local minor road network at close range to the Converter Station. Assessed in detail by Viewpoint 3 (Figure 7.12, Volume 4).		
Users of the A189	Potential for significant effects on views from limited sections the A189 in close proximity to the Converter Station, up to approximately 1 km. Assessed in detail by Viewpoint 5 (Volume 4 (Figure 7.14, Volume 4).		
Users of PRoW NCC Ref 600/062 and 054, between Harbour View road and Wembley Gardens	Potential for significant effects on views from limited sections this PRoW in close proximity to the Converter Station. Considered in detailed assessment by Viewpoint 2 (Figure 7.11, Volume 4).		



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Vieus	Receptor	Commer

Status – considered further in preliminary assessment but found to have no likely significant effects following preliminary assessment and not included in detailed assessment

Settlement at Cambois, west of Unity Terrace

Potential visibility from this part of the settlement would be restricted by PFA mounds and railway embankment, and some vegetation in the landscape and views, to the west. If visible, it is likely that only taller elements of construction or upper parts of the operational MDS Onshore Converter Station envelope would be seen, amid views to the west which include taller elements of industrial built features. Informed by Illustrative Viewpoint A: Cambois, north of Selbourne Terrace (Technical Appendix 7.1, Volume 3). It is concluded that there are no likely significant effects on this receptor.

Settlement at Bedlington

Visibility of the construction and /or operation of the Onshore Converter Station would be screened to varying degrees by roadside vegetation lining the A189. The primary orientation of properties varies, with the majority of properties facing inwards to the surrounding network of minor access roads serving the settlement, and therefore it is largely from the rear elevations of a small number of properties on the eastern edge of Bedlington that there would potentially have more open views of construction and / or operation of the Converter Station. In similar views from the edge of the settlement, the Aggregate Industries site and raised sections of the A189 provide a context of large scale, built form seen amid the predominantly farmed landscape to the east and north of the settlement. Consequently, construction or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint C: East of Bedlington, field gate (Technical Appendix 7.1, Volume 3).

Settlement at Blyth

Potential visibility of the construction and/or operation of the Onshore Converter Station experienced by people within settlement at Blyth would be limited by the variety of industrial built forms, and associated landscape planting, which enclose the settlement to the north, along the southern banks of the River Blyth. Even where there may be theoretical visibility it would be distant, at a minimum range of approximately 1.9km, and would be seen in the context of a variety of large-scale industrial built forms seen across views to the north, including those at North Blyth port, NSL converter station, National Grid substation, and overhead pylon lines. Taking these factors into account, the construction or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, Volume 3).

Settlement at Ashington

Potential visibility of the construction and/or operation of the Onshore Converter Station experienced by people within settlement at Ashington would be limited by intervening landform and vegetation within the well-wooded River Wansbeck valley, by adjacent built form within the settlement, and particularly by intervening vegetation in the wider landscape to the south of the river. Even where there may be theoretical visibility it would be distant, at a minimum range of approximately 1.8 km, and would be seen in the context of a variety of large-scale industrial built forms seen across views to the south-east, including the NSL converter station, and overhead pylon lines. Taking these factors into account, the construction or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3).

Settlement at Stakeford / West Sleekburn / Bomarsund Potential visibility of the construction and/or operation of the Onshore Converter Station experienced by people within settlement at Stakeford, West Sleekburn, and Bomarsund would be limited by a combination of intervening undulating landform, built form, and/or vegetation within the wider landscape. Even where there may be theoretical visibility of the Onshore Converter Station MDS from West Sleekburn, Stakeford, or Bomarsund, it would be distant, at a minimum range of approximately 1.3 km, 1.8 km, and 1.5 km (respectively) and would be seen in the context of a



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	variety of large-scale industrial built forms seen in views from the settlement edges, including the West Sleekburn Industrial Estate, and large-scale structures at the Suez recycling facility and Aggregate Industries site. Taking these factors into account, the construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3).	
Cluster of properties at High Brockland Farm	The primary orientation of dwellings in this cluster is to the north and east, with the proposed Converter Station Zone situated to the south-west. Additionally, potential visibility is restricted by intervening farm buildings, raised sections of the A189, and by vegetation in the wider landscape. As a result, it is considered actual visibility would be limited and lacking the potential to result in significant effects. Informed by Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3). It is concluded that there are no likely significant effects on this receptor.	
Sandy Bay Holiday Park	Potential visibility of construction and/or operation of the Onshore Converter Station would be limited by intervening landform and vegetation within the well-wooded River Wansbeck valley, by adjacent built form within the holiday park, and particularly by intervening vegetation in the wider landscape to the south of the river. Even where there may theoretical visibility of construction and / or operation of the Onshore Converter Station it would be distant, at a minimum range of approximately 1.6 km, and would be seen in the context of a variety of large-scale industrial built forms seen across views to the south-east, including the NSL converter station, and overhead pylon lines. Taking these factors into account, the construction and/or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location.	
Users of PRoW NCC Ref 600/059, between Unity Terrace and Harbour View road	Potential visibility of construction and/or operation of the Onshore Converter Station would only be possible from a very short section of this PRoW as it crosses an elevated railway overbridge to the west of Cambois. Actual visibility is likely to be minimal as a result of the screening effect of the PFA mounds which enclose the route to the west. Taking these factors into account, the construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint A: Cambois, north of Selbourne Terrace (Technical Appendix 7.1, Volume 3).	
Users of PRoW NCC Ref 600/057 and 055, east of Sleekburn Grange Farm and 600/107/108, north of Blyth	Potential visibility of construction and / or operation of the Onshore Converter Station experienced by users of these PRoW would be limited by a combination of intervening landform, built form, and / or vegetation within the wider landscape. Even where there may be theoretical visibility it would be distant and would be seen in the context of a variety of large-scale industrial built forms including the existing NSL converter station and National Grid Substation north of the River Blyth. Taking these factors into account, the construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors in this location. Informed by Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, Volume 3).	



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Users of other PRoW in the wider landscape

There is the potential for visibility of construction and/or operation of the Onshore Converter Station from PRoW in the wider landscape, to the south of the River Blyth, north of the River Wansbeck, and west of the A189. However, visibility would be limited by a combination of intervening landform, built form, and / or vegetation. Even where there may be theoretical visibility it would be distant and would be seen in the context of a variety of large-scale industrial built forms which include the existing NSL converter station, National Grid Substation north of the River Blyth, West Sleekburn Industrial Estate, a Suez recycling facility, and Aggregate Industries site. Taking these factors into account, construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon people using these routes. Informed by Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn (Technical Appendix 7.1, EIA Volume 3) and Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3).

Visitors to the Wansbeck Riverside Park Country Park and Local Nature Reserve and visitors to the Bedlington Park Country Park and Ha'penny Woods Local Nature Reserve Potential visibility of construction and/or operation of the Onshore Converter Station experienced by visitors to these local publicly accessible attractions would be limited by a combination of intervening landform, built form, and / or vegetation within the wider landscape. Even where there may theoretical visibility it would be distant and would be seen in the context of a variety of built forms including nearby settlement, and more distant large scale industrial forms such as the existing NSL converter station and National Grid Substation north of the River Blyth. Taking these factors into account, construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects upon receptors at these locations.

Users of the A1147, A196, and A193, 'B' roads and the local minor road network beyond 1 km Visibility of construction and/or operation of the Onshore Converter Station from these routes would be screened to varying degrees by intervening landscape elements (hedgerows, woodland, trees) and / or settlement, which would combine to limit visibility. Even where there may theoretical visibility it would be distant and would be seen in the context of a variety of built forms including nearby settlement, and more distant large scale industrial forms existing NSL converter station, National Grid Substation north of the River Blyth, West Sleekburn Industrial Estate, a Suez recycling facility, and Aggregate Industries site. Taking these factors into account, construction and / or operation of the Onshore Converter Station is not predicted to result in significant visual effects. Illustrative Viewpoint C: East of Bedlington, field gate, and Illustrative Viewpoint D: Brock Lane, near High Brockland Farm (Technical Appendix 7.1, Volume 3).

7.13.3. Summary of Visual Effects Preliminary Assessment

- 331. The preliminary visual assessment has identified visual receptors for inclusion in the detailed assessment process on the basis of likely significant effects of the proposed Onshore Converter Station and HVDC/HVAC cables. These are represented by viewpoints as follows:
 - Viewpoint 1: Spring Ville / Brock Lane, East Sleekburn Onshore Converter Station (construction and operation / maintenance);
 - Viewpoint 2: Northfield / Waterfield Road, near East Sleekburn Onshore Export Cable (construction) and Onshore Converter Station (construction and operation / maintenance);
 - Viewpoint 3: Brock Lane / England Coast Path / NCR 1 Onshore Export Cable (construction) and Onshore Converter Station (construction and operation / maintenance);
 - Viewpoint 4: Wembley Gardens, Cambois Onshore Export Cable (construction) and Onshore Converter Station (construction and operation / maintenance);
 - **Viewpoint 5: A189, southbound** Onshore Converter Station (construction and operation / maintenance);



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- Viewpoint 6: Cambois, south of beach car park Onshore Export Cable (construction) and Onshore Converter Station (construction and operation / maintenance);
- Illustrative Viewpoint A: Cambois, north of Selbourne Terrace;
- Illustrative Viewpoint B: England Coast Path, PRoW, south of Sleek Burn;
- Illustrative Viewpoint C: East of Bedlington, field gate; and
- Illustrative Viewpoint D: Brock Lane, near High Brockland Farm, west of A189.

Visual Effects Detailed Assessment 7.13.4.

VIEWPOINT 1: SPRING VILLE / BROCK LANE, EAST SLEEKBURN

7.13.4.1. **BASELINE**

- 332. This viewpoint is located to the north of properties at Spring Ville / Brock Lane, to the west of East Sleekburn. The majority of the village to the east of Brock Lane is enclosed by dense woodland to the north, which varies in depth between approximately 60 m and 130 m and provides very heavily screened views towards the existing NSL converter station and land to the north of Brock Lane, even during winter months. This viewpoint is representative of the limited open views gained from the urban edge to the north-west of the settlement of East Sleekburn.
- 333. This viewpoint looks north from a gap between field boundary vegetation to the north of Spring Ville. In the foreground of the view is a single field parcel. At the time of writing (August 2023), construction work for a new residential development 'The Pastures' is recorded on Google Streetview. The predicted change based on the application documents is that the view will change to one defined by an urban residential character, which would reduce perceived value compared to the baseline photograph as an open countryside setting to properties at Spring Villa / Brock Lane. Woodland planting contains the field parcel to the north and west, which screens more distant views. Overhead lines span the view to the north, seen above the vegetation in the view.
- 334. Dense woodland planting screens views further east. There is a small gap in woodland planting at the junction of Brock Lane to the north, through which high hedgerow and coniferous woodland within the proposed Converter Station Zone is visible.
- 335. To the south, the orientation of properties varies, however their primary aspects generally face onto the surrounding roads and therefore to the east on Brock Lane, and south-west to south-east facing for properties on South View. Allotments gardens separate properties on South View from the field parcel visible in the foreground to the north.

7.13.4.2. SENSITIVITY OF THE RECEPTOR

- 336. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. Overall, value is considered to be medium.
- 337. The susceptibility of residents, including the future occupiers of 'The Pastures', here is medium-high. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting. The primary aspect of most existing properties faces away from this view. It is likely that the views from 'The Pastures' would be screened as a result of their closer proximity to woodland to the north, or by adjacent built form within the development. Nonetheless, there is the potential that views from internal and external spaces have the potential to be impacted by the proposed Converter Station. In this instance, susceptibility is moderated by the intervening housing, which is now under construction.



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338. This viewpoint is also representative of users of the NCR 1. Cyclists are likely to be focused on their surroundings where views are available. However, views of the Onshore Scheme would be transient and would not be experienced across the entirety of the route. Furthermore, NCR passes through varied landscapes, along the coast, through urban areas, and in close proximity to industrial landscapes around the River Blyth and Port of Blyth, which take in a range of views and influences (see Illustrative Viewpoint B, Technical Appendix 7.1, Volume 3), including residential and industrial built form and activity. Close range, open views towards the Onshore Converter Station and/or HVDC/HVAC cable corridor would be gained from approximately 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east (close to Viewpoint 3, Figure 7.12, Volume 4, ES Figures).

- 339. Drivers are less likely to be focused on their surroundings where views are available. Views from vehicles are transient and the speed limit at this location is 30 mph, and the duration of views fleeting. Close range, open views towards the Onshore Scheme would be gained from approximately 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street in the east.
- 340. The view is deemed to be of Medium value, and both existing residential receptors and future occupiers of 'The Pastures', are considered to have a medium-high susceptibility. The sensitivity of these receptors is therefore, considered to be Medium-High.
- 341. Users of the NCR 1 at this location are considered to have edium susceptibility. The sensitivity of these receptors is therefore, considered to be Medium.
- 342. The susceptibility of users of the local road network is considered to be Llow. The sensitivity of these receptors is therefore, considered to be Medium-Low.

7.13.4.3. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 343. Details of the MDS are set out in section 7.8.1.
- 344. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation). At this location, mitigation in the view includes a commitment to the retention of woodland to the south and east of Brock Lane (Technical Appendix 7.2, Volume 4).
- 345. There is the potential for construction activities associated with the HVDC/HVAC cables to be visible from this location, within the Converter Station Zone. It is assumed that construction activities would take place concurrently over 18 months.
- 346. During construction, the assessment scenario for this viewpoint considers that construction activity would occur at the closest point to this location within the Converter Station Zone, approximately 0.2 km to the north of the viewpoint location.
- 347. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest possible location within the Converter Station Zone, approximately 0.2 km to the north of the viewpoint location. It considers that proposed built form would extend up to the boundary of the Converter Station Zone.
- 348. The assessment scenario for this receptor assumes that the permanent access road would be sited in the most visible location, to the north of Brock Lane and consequently there would be an open view corridor into the Converter Station Zone.
- 349. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions and uncertainties relating to planting within the Converter Station Zone.



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7.13.4.4. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 350. Potential impacts would occur during the construction phase.
- 351. Visibility of construction activities associated with the HVDC/HVAC cable would be possible from properties and their curtilage at Spring Ville, to the west of Brock Lane. Construction activity would be visible to the north of this location, seen at close proximity, at a range of approximately 0.2 km.
- 352. Key changes to views likely to take place would include localised vegetation removal to the north of Brock Lane to facilitate the permanent access. The horizontal extent of low level construction activity visible would, however, be reduced as a result of a commitment to retain vegetation to the south of Brock Lane, moderating the magnitude of impact.
- 353. Receptors would experience visibility of construction activity on a rolling programme, including the formation of the haul roads, open cut trenching, and activities within construction compounds.
- 354. From this viewpoint, construction activities associated with the Onshore Converter Station would be visible in combination with the construction of the HVDC/HVAC cable. The resulting intensification of effects is considered in this assessment.
- 355. Ground-based construction activity, and the formation of the Onshore Converter Station platform, would also be visible through the resulting view corridor created to the north of Brock Lane. Taller elements involved in the Onshore Converter Station construction such as the use of cranes and piling plant would appear within the Converter Station Zone, seen above the intervening retained treelines. Further east, the height and depth of intervening woodland will have a greater screening effect, reducing visibility of more distant construction elements.
- 356. Construction activity would introduce elements that are prominent, though not totally uncharacteristic to the view when considering the construction of the housing site in the foreground, which is assumed would be complete. It is likely that the new housing will partially obscure the views of the Onshore Scheme from this viewpoint and the nearby residential receptors within 'The Pastures'.
- 357. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Medium-High.
- 358. Regarding views from the minor road (Brock Lane and Harbour View) and NCR 1, visibility of construction activity would be gained travelling northbound on Brock Lane from East Sleekburn, in direct views along the direction of travel, for approximately 0.2 km to the junction north of this viewpoint. Close range visibility of construction activity would also be gained for approximately 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. These views may be more exposed to the construction of the HVDC/HVAC cable and the Onshore Converter Station due to scrub and woodland removal to the north of Brock Lane. However, the context of northerly views from Brock Lane as it passes south of the NSL converter station includes large scale industrial development. The magnitude of change is also considered to be Medium-High.

7.13.4.5. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 359. As shown in the visualisation (Figure 7.10, Volume 4), the MDS Onshore Converter Station envelope would be visible to the north of this viewpoint, seen at close proximity.
- 360. Considering the emerging residential development, visibility from this location is likely to be largely screened by intervening built form. However, there are likely to be some open views from parts of the urban edge of East Sleekburn from the minor road and NCR 1.



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- 361. Retained woodland to the south of Brock Lane would screen much of the lower parts of the MDS Onshore Converter Station envelope, aside from within the view corridor created by the permanent access road, which is assumed to be sited opposite the junction of Brock Lane.
- 362. The upper portion of the MDS Onshore Converter Station envelope would be visible above the intervening woodland and would occupy a large horizontal extent of the view, although the height and depth of intervening woodland will have a greater screening effect, reducing visibility of more distant parts of the Onshore Converter Station MDS.
- 363. Overall, the MDS Onshore Converter Station envelope would be a readily apparent influence, introducing large-scale built form with an industrial character. However, in the context of the emerging residential built form this would not be entirely uncharacteristic to the existing view and may be largely screened by it.
- 364. It is predicted that the impact will affect the views of receptors directly at this location which is representative of views from the residential area and NCR 1 along Brock Lane to the south of the junction. The magnitude of change is considered to be Medium.
- 365. In terms of the views from the minor road (Brock Lane and Harbour View) and NCR 1 for approximately 1 km of the route from the Brock Lane junction at East Sleekburn to Taranis Street to the east these receptors may be more exposed to the operation of the Onshore Converter Station due to woodland removal to the north of Brock Lane. However, the context of northerly views from this route includes large scale industrial development. The magnitude of change is also considered to be Medium.

7.13.4.6. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

- 366. Overall, the magnitude of the impact is deemed to be Medium-High.
- 367. The sensitivity of people in the settlement (including future occupiers of 'The Pastures') is considered to be Medium-High. The effect will, therefore, be of moderate-major adverse significance, which is significant.
- 368. The effect on Medium sensitivity users of NCR 1 will, therefore, be of moderate adverse significance, which is significant. The geographic extent of this effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 369. The effect on Medium-Low sensitivity road users will, therefore, be of moderate adverse significance, which is not significant. On balance, owing to the speed of travel and occupation of drivers, view of construction activity would be of shorter duration and lesser influence on visual amenity. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 370. Effects would be short term, and temporary.

7.13.4.7. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

371. Embedded mitigation and good-practice construction phase mitigation practices are set out in Table 7.10.



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372. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of residential receptors is considered to be Medium-High. The effect will, therefore, be of moderate-major adverse significance, which is significant.

- 373. The effect on users of NCR 1 will, therefore, be of **moderate adverse significance**, which is **significant**. The geographic extent of the effect would occur across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 374. The effect on road users will, therefore, be of **moderate adverse significance**, which is **not significant**. On balance, owing to the speed of travel and occupation of drivers, view of construction activity would be of shorter duration and lesser influence on visual amenity. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 375. Effects would be short term, and temporary.
- 376. The detailed design process will seek to further reduce landscape and visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.13.4.8. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

- 377. Overall, the magnitude of the impact is deemed to be Medium.
- 378. The sensitivity of people in the settlement (including future occupiers of 'The Pastures') is considered to be Medium-High. The effect will, therefore, be **moderate adverse significance**, which is **significant**. Effects would be long term, and reversible.
- 379. The effect on medium sensitivity users of NCR 1 will, therefore, be of **moderate adverse significance**, though **not significant**. On balance, transient nature of views from the cycle route, and context of the NSL converter station across a similar section of NCR 1, the visibility of the operational Onshore Converter Station across a relatively short section of NCR 1 would moderate the effect. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of this effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 380. The effect on Medium-Low sensitivity road users will, therefore, be of **moderate-minor adverse significance**, which is **not significant**. The geographic extent of this effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 381. Effects would be long term, and reversible.



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7.13.4.9. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 382. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium.
- 383. The sensitivity of people in the settlement (including future occupiers of 'The Pastures') is considered to be Medium-High. The effect will, therefore, be of **moderate adverse significance**, which is **significant**.
- 384. The effect on Medium sensitivity users of NCR 1 will, therefore, be of **moderate adverse significance** though **not significant**. On balance, transient nature of views from the cycle route, and context of the NSL converter station across a similar section of NCR 1, the visibility of the operational Onshore Converter Station across a relatively short section of NCR 1 would moderate the effect. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of this effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 385. The effect on Medium-Low sensitivity road users will, therefore, be of **moderate-minor adverse significance**, which is not significant. The geographic extent of this effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
- 386. Effects would be long term, and reversible.
- 387. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

VIEWPOINT 2: NORTHFIELD / WATERFIELD ROAD, NEAR EAST SLEEKBURN

7.13.4.10. BASELINE

- 388. This viewpoint is located near to a cluster of properties to the east of East Sleekburn. The properties are situated approximately 0.5 km to the north-east of the village, north of Brock Lane / Harbour View road. The location of the viewpoint is adjacent to an area of open amenity grassland to the north of Northfield. It is representative of this small cluster of properties.
- 389. The view west looks across areas of level, open amenity grassland and includes post-war, 20th century suburban housing stock, which has no notable architectural distinctiveness. The orientation of properties varies; however, their primary aspects generally face onto the surrounding roads. Mature woodland provides the backdrop to the settlement in this portion of the view. The woodland screens the majority of the existing NSL converter station, aside from the upper portion of one building, which is visible above slightly lower-growing vegetation to the north-west. The white gable end and plant structures on the roof are seen above the treeline.
- 390. To the north, the view looks across an area of unmanaged grassland and scrub to another line of trees which wraps around the group of properties to the east, which provides an open setting to the settlement. The treeline to the north of the viewpoint screens land within the former Coal Stocking



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Yard. Overhead pylon lines and towers span this portion of the view, from the north-west through to the south-east.

391. Views to the south are partially restricted by the intervening houses in the fore to mid-ground of the view. The National Grid substation to the north of the River Blyth is visible along the line of Waterfield Road. Overhead power lines and pylons also span this portion of the view, broadly from the west to east, seen beyond and above the intervening houses.

7.13.4.11. SENSITIVITY OF THE RECEPTOR

- 392. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. The woodland to the west and open amenity grassland to the north is likely to be valued as an open countryside view and setting to this group of properties. Existing large-scale electrical infrastructure is a component of the view from this settlement in most directions, and at a range of distances, which moderates the scenic value. Overall, value is considered to be medium.
- 393. The susceptibility of residents is medium-high. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting. The primary aspect of properties varies but tends to overlook adjacent roads. There is the potential that views from internal and external spaces have the potential to be impacted by the proposed Onshore Converter Station and HVDC/HVAC cables at relatively close proximity. The baseline view has a relatively simple composition, and urban-edge character.
- 394. Users of the PRoW that runs to the west of the viewpoint and between Harbour View Road and Wembley Gardens are of medium susceptibility. Whilst they may use the route to access areas of countryside they are also transient and in this location, where the route also runs through urban and industrial areas their expectations are not of an undeveloped landscape.
- 395. The view is deemed to be of medium value, and the receptors in the settlement are considered to have medium-high susceptibility. Their sensitivity is therefore, considered to be Medium-High. The susceptibility of the users of the PRoW is Medium. Their sensitivity is therefore considered to be Medium.

7.13.4.12. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 396. Details of the MDS are set out in section 7.8.1.
- 397. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation). At this location, mitigation includes a commitment to the retention of a nominal 40 m width belt of existing woodland to the west of this group of properties (Technical Appendix 7.2, Volume 4). At this stage, it is not possible to define the exact location of retained woodland, so the 'worst-case' assumption is that woodland closest to properties would be removed and that woodland nearest the NSL converter station would be retained. A belt of existing woodland would be retained to the east of the group of properties.
- 398. During construction, the assessment scenario for this viewpoint considers that construction activity and placement of construction compounds would occur at the closest point to this location, immediately north and west of the viewpoint location within the Landfall/HVDC Zone and HVAC Zone, and to the west within the Converter Station Zone.



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399. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest potential location within the Converter Station Zone approximately 0.6 km to the west of the viewpoint location.

400. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions to woodland planting within the Converter Station Zone and HVDC/HVAC cable corridors.

7.13.4.13. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 401. Potential impacts would occur during construction of the HVDC/HVAC cables.
- 402. Visibility of activities associated with the HVDC/HVAC construction would be possible from nearby properties and their curtilage. Visibility of construction activities within the Landfall/HVDC Zone would be visible to the north of the settlement. Construction activity within a section of the HVAC Zone would potentially be visible to the west and south of the settlement. Intervisibility of construction activities within the Landfall/HVDC and HVAC Zones is likely to be possible from locations such as this viewpoint, along the alignment of streets in-between intervening built form within the settlement.
- 403. Under the worst case scenario for this assessment, receptors would experience unrestricted visibility of construction activity immediately to the north of this location, to the west of properties at Sandfield Road, and to the south of Brock Lane / Harbour View Road, seen at very close proximity. Construction would occur on a rolling programme, including the formation of the haul roads, open cut trenching, and activity within construction compounds.
- 404. The MDS considers that vegetation removal would occur across the maximum width of 110 m within the Landfall and HVDC Zone. As a consequence, it is likely that the removal of scrub and woodland to the north would result in more open views to the north towards land within the former coal stocking yard, and potentially to distant settlement and built form further north, and to parts of the A189 to the north. Viewpoint 4 (Figure 7.13, Volume 4) is helpful to illustrate this context.
- 405. To the west, it is assumed that woodland closest to the settlement would be removed across the maximum of width of 200 m within the HVAC Zone leaving a nominal 40 m belt of existing woodland adjacent to the existing NSL converter station. Even with the retention of this vegetation, the construction of the Onshore Export Cable will open up views to the existing NSL converter station to the west of this viewpoint as shown in the visualisation (Figure 7.11, Volume 4).
- 406. Construction activity would therefore be visible across a large horizontal extent. A commitment to retain vegetation to the east of this group of properties would, however, screen construction activities further east and therefore slightly moderate the magnitude of impact.
- 407. From this viewpoint, construction activities associated with the Onshore Converter Station would be visible in combination with the construction of the HVDC/HVAC cables. The resulting intensification of effects is considered in this assessment.
- 408. Construction within the Converter Station Zone is likely to be seen across a large horizontal extent, in views west through to the north-west, where vegetation removal along the HVDC/HVAC cable corridor would result in more open visibility. To the west, the intervening built form of the existing NSL converter station, together with the commitment to retain some woodland adjacent to the existing structures, would screen some ground-based construction activities.
- 409. Taller elements involved in construction and the gradual emergence of the Onshore Converter Station built form are likely to be visible across the extent of the Converter Station Zone above and to the north of the existing NSL converter station.



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410. Construction activity would introduce elements that are prominent and substantially uncharacteristic to the existing view, at close range.

- 411. It is predicted that the impact will affect the views of receptors directly at this location and from along approximately 1.25 km of the PRoW between North Field and to where it runs alongside Fergusons Business Park to the north.
- 412. The magnitude of impact is considered to be High.

7.13.4.14. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 413. As shown in the visualisation (Figure 7.11, Volume 4), the MDS Onshore Converter Station envelope would be visible to the north-west of this viewpoint, seen at relatively close proximity over a distance of approximately 0.6 km.
- 414. The MDS Onshore Converter Station envelope would occupy a large horizontal extent of the view, from the west through to the north-west.
- 415. As a result of vegetation removal during construction, there would be relatively open visibility to the west of this viewpoint. The intervening built form of the NSL converter station would be seen at closer proximity, where previously it was largely screened. As shown in the visualisation the upper parts of the MDS Onshore Converter Station envelope, and its northernmost extent, are likely to be openly visible, with varying degrees of screening provided by intervening built form.
- 416. There would be a major alteration to the baseline view. The MDS Onshore Converter Station envelope would be a readily apparent influence in views to the west of the settlement, though not uncharacteristic in this portion of the view which also includes other large-scale electricity infrastructure in the form of the existing NSL converter station and overhead pylon lines.
- 417. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude of change is considered to be High during the operation and maintenance phase.

7.13.4.15. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

418. Overall, the magnitude of the impact is deemed to be High, and the sensitivity of the receptors in the settlement is considered to be Medium-High and people using the PRoW are of Medium sensitivity. The effect on people at this location on the edge of the settlement, would therefore, be of **major** adverse significance, which is significant. The effect on users of the PRoW between North Field and the edge of the Fergusons Business Park would be of **moderate-major adverse significance**, which is significant. Effects would be short term, and reversible.

7.13.4.16. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 419. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 420. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be High, and the sensitivity of the receptors is considered to be Medium-High and Medium on people at this location on the edge of the settlement and on users of the PRoW respectively. The effects will, therefore, be of major and moderate-major adverse significance, which is significant. Effects would be short term, and reversible.



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421. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.13.4.17. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

422. Overall, the magnitude of the impact is deemed to be High, and the sensitivity of the receptors in the settlement is considered to be Medium-High and people using the PRoW are of Medium sensitivity. The effect on people at this location on the edge of the settlement, would therefore, be of **major adverse significance**, which is **significant**. The effect on users of the PRoW between North Field and the edge of the Fergusons Business Park would be of **moderate-major adverse significance**, which is **significant**. Effects would be long term, and reversible.

7.13.4.18. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 423. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be High, and the sensitivity of the receptors is considered to be Medium-High and Medium on people at this location on the edge of the settlement and on users of the PRoW respectively. The effects will, therefore, be of major and moderate-major adverse significance, which is significant. Effects would be long term, and reversible.
- 424. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

VIEWPOINT 3: BROCK LANE / KING CHARLES III ENGLAND COAST PATH / NCR 1

7.13.4.19. BASELINE

- 425. This viewpoint is located on a footpath adjacent to Brock Lane, to the east of East Sleekburn. This location is also part of the ECP and NCR 1. The viewpoint is therefore representative of users of the long-distance recreational routes and users of the local road network.
- 426. The view west looks along the line of Brock Lane. At this point, the road has an open aspect to the south. Views to the north are screened by roadside vegetation and the existing NSL Converter Station built form. To the west, the road is enclosed by dense woodland to the north of East Sleekburn and by scrub vegetation to the north of Brock Lane. A parallel line of overhead pylon lines and towers span the view, from the north-west through to the south-east. The edge of East Sleekburn is visible to the south of the dense woodland, lower down the slopes that lead to the Sleek Burn. The visible part of the settlement is also partially screened by intervening woodland.
- 427. To the north, high hedgerow and immature woodland planting partially screens the existing NSL converter station. Only the upper parts of the buildings are visible. The buildings are large scale,

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approximately 24.4 m above a platform level of 9.9 m AOD, with a broadly rectangular massing. The NSL Converter Station buildings have an industrial character.

- 428. To the east, woodland planting screens views to the north-east and north of Brock Lane / Harbour View road. The aspect opens further east, beneath the lines of pylons which continue to traverse the landscape in this direction, leading the eye to the large National Grid substation to the north of the River Blyth, and to distant industrial structures beyond at North Blyth. The emerging industrial development for the manufacturing of subsea cables at Land North of Blyth Power Station Substation is visible along the overhead pylon lines.
- 429. To the south, the landform falls away to the Sleek Burn. A large parcel of open farmland occupies the foreground of the view in this direction. High hedgerow and clumps of scrub woodland offer some enclosure to the view further south. In gaps through the intervening vegetation, the farmed and settled landscape to the south of the Sleek Burn and Blyth is visible. Seen above the vegetation, and therefore more prominent in the view, are a number of overhead pylon lines and towers which span the view to the south. Scattered onshore wind turbines are seen along the skyline to the south and south-west.

7.13.4.20. SENSITIVITY OF THE RECEPTOR

- 430. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. The scenic quality of the view is locally reduced by existing infrastructure. Overall, value is considered to be medium-low.
- 431. The ECP is a well-publicised long-distance route which will be used by local residents and visitors to the area. Recreational walkers are likely to be focused on their surroundings where views are available, particularly at open locations (such as at the viewpoint location). However, views are transient, and the route also runs through urban and industrial areas in this vicinity so that expectations are not of an undeveloped landscape (see Illustrative Viewpoint B, Technical Appendix 7.1). This moderates susceptibility in this instance. Close range, open views towards the Onshore Scheme would be gained from approximately 0.8 km of the route between Taranis Street and East Sleekburn.
- 432. NCR 1 is also a well-publicised long-distance route which will be used by local residents and visitors to the area. Cyclists are likely to be focused on their surroundings where views are available. However, views are transient, and the route also runs through urban and industrial areas in this vicinity so that expectations are not of an undeveloped landscape. This moderates susceptibility in this instance. Close range, open views towards the Onshore Converter Station and/or HVDC/HVAC cables would be gained from approximately 1 km of the route from Taranis Street in the east, to the Brock Lane junction at East Sleekburn to the west (close to Viewpoint 1, Figure 7.10, Volume 4).
- 433. Drivers are less likely to be focused on their surroundings where views are available. Views from vehicles are transient and the speed limit locally is 60 mph and so drivers will be travelling at speed, and the duration of views fleeting. Close range, open views towards the Onshore Scheme would be gained from approximately 1 km of the route from Taranis Street in the east, to the Brock Lane junction at East Sleekburn to the west (close to Viewpoint 1, Figure 7.10, Volume 4).
- 434. Existing large-scale electrical infrastructure, including the existing NSL converter station, NGL Substation, and multiple overhead pylon lines, are components of the view in most directions from these routes, seen at a range of distances, which further moderates receptor's susceptibility to the type of change proposed.
- 435. The view is deemed to be of medium-low value, users of the ECP and NCR 1 at this location are considered to have medium susceptibility. The sensitivity of these receptors is therefore, considered to be Medium.



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436. The susceptibility of users of the local road network is considered to be Low. The sensitivity of these receptors is therefore, considered to be Medium-Low.

7.13.4.21. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 437. Details of the MDS are set out in section 7.8.1.
- 438. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation). At this location, mitigation includes a commitment to the retention of existing woodland immediately to the south of the NSL converter station, and retention of some of the existing woodland to the north of East Sleekburn (Technical Appendix 7.2, Volume 3).
- 439. During construction, the assessment scenario for this viewpoint considers that construction activity would occur at the closest point to this location, immediately south of the viewpoint location within the HVAC Zone, and within the Converter Station Zone to the west.
- 440. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest location within the Converter Station Zone, approximately 0.3 km to the west of the viewpoint location. It considers that proposed built form would extend up to the boundary of the Converter Station Zone.
- 441. The assessment scenario for this receptor assumes that the permanent access road would be sited in the closest and most visible location, to the north of Brock Lane, at the south-east corner of the Converter Station Zone.
- 442. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions and uncertainties to planting within the Converter Station Zone.

7.13.4.22. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 443. Potential impacts would occur during the construction phase.
- 444. Construction activity withing the HVAC Zone would be visible to the west and south of this viewpoint location. Construction activity would be visible to the north of this location, seen at close proximity, at a range of 0.3 km.
- 445. Receptors would experience unrestricted visibility of construction activity within the HVDC/HVAC cable corridor immediately to the south and west of this location, to the south of Brock Lane, seen at very close proximity. Construction activity would, therefore, be visible across a large horizontal extent of the view.
- 446. Construction would occur on a rolling programme, including the formation of the haul roads, open cut trenching, and activity within construction compounds.
- 447. The assessment scenario considers that vegetation removal would occur across the of width of 200 m within the HVAC Zone. The removal of woodland within the HVAC Zone to south of Brock Lane and to the east of East Sleekburn would open up views to parts of the settlement edge. Vegetation removal to the north of Brock Lane would be required to facilitate the permanent access road to the Converter Station Zone.
- 448. From this viewpoint, construction activities associated with the Onshore Converter Station would be visible in combination with the construction of the HVDC/HVAC cables. The resulting intensification of effects is considered in this assessment.



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449. Construction of the Onshore Converter Station is likely to be visible across a large horizontal extent, to varying degrees, in views from the west through to the north-west.

- 450. Retained woodland and hedgerow planting to the south of the existing NSL converter station would provide intervening screening of the permanent access road and the lower level construction activities within the Converter Station Zone. To the north and north-west, the intervening built form of the existing NSL converter station would also screen lower level construction activities. However, taller elements involved in the Onshore Converter Station construction, and the gradual emergence of the Onshore Converter Station built form are likely to be visible across the extent of the Converter Station Zone, seen above intervening retained woodland and built form.
- 451. Construction activity associated with the development of Land North of Blyth Power Station Substation (22/00879/FUL) is visible to the south-east. Views in this direction also include moving cranes at the Port of Blyth. In surrounding views there are numerous overhead pylon lines and other tall features. These components of the view would moderate the change during the construction phase.
- 452. Construction and construction activity would introduce elements that are prominent though somewhat characteristic to the existing view, seen at close range.
- 453. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Medium-High.

7.13.4.23. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 454. As shown in the visualisation (Figure 7.12, EIA Volume 4, ES Figures), the MDS Onshore Converter Station envelope would be visible to the north-west of this viewpoint, seen at relatively close proximity over a distance of approximately 0.3 km.
- 455. The MDS Onshore Converter Station envelope would theoretically occupy a large horizontal extent of the view, from the west through to the north-west. However, at this location, parts of the MDS Onshore Converter Station envelope would be screened by intervening retained woodland and the built form of the existing NSL converter station, seen at closer proximity, which is considered to moderate the change.
- 456. There would be open, unrestricted visibility of the Onshore Converter Station MDS seen further to the west along Brock Lane, where the permanent access is likely to create a relatively narrow open view corridor into the Converter Station Zone from locations where scrub vegetation to the north of the road is likely to be removed.
- 457. Overall, the MDS Onshore Converter Station envelope would be an apparent influence in the view. The MDS Onshore Converter Station envelope would be prominent, though not uncharacteristic in the context of other large-scale electricity infrastructure in the form of the existing NSL converter station, National Grid Substation, and overhead pylon lines.
- 458. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Medium.

7.13.4.24. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

459. Overall, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of users of the ECP and NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **significant**. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively, between Taranis Street and East Sleekburn / Brock Lane Junction.



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- 460. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **not significant**. On balance, owing to the speed of travel and occupation of drivers, views of construction activity would be oblique and of shorter duration and consequently lesser influence on visual amenity of these receptors. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of the effect would occur over approximately 1 km, between Taranis Street and Brock Lane Junction.
- 461. Effects during construction would be short term, and reversible.

7.13.4.25. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 462. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 463. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of users of the ECP and NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **significant**. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively, between Taranis Street and East Sleekburn / Brock Lane Junction.
- 464. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **not significant**. On balance, owing to the speed of travel and occupation of drivers, view of construction activity would be oblique and of shorter duration and consequently lesser influence on visual amenity of these receptors. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of the effect would occur over approximately 1 km, between Taranis Street and Brock Lane Junction.
- 465. Effects during construction would be short term, and reversible.
- 466. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.13.4.26. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

- 467. Overall, the magnitude of the impact is deemed to be Medium, and the sensitivity of users of the England Coast Path and NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse significance**, though **not significant**. On balance, whilst the Onshore Converter Station would add to the built form in the view, it would be comparable to the scale and industrial character of the existing NSL converter station, seen in the same portion of the view. Applying professional judgement, this effect is therefore considered not significant. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively, between Taranis Street and East Sleekburn/Brock Lane Junction.
- 468. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of **moderate-minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur over approximately 1 km, between Taranis Street and Brock Lane Junction.



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469. Effects during operation and maintenance would be long term, and reversible.

SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON 7.13.4.27. AND MAINTENANCE

- 470. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11.
- 471. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium, and the sensitivity of users of the ECP and NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of moderate adverse significance, though not significant for the reasons given above. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively, as described above.
- 472. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of moderate-minor adverse significance, which is not significant. The geographic extent of the effect would occur over approximately 1 km, as described above.
- 473. Effects during operation and maintenance would be long term, and reversible.
- 474. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

VIEWPOINT 4: WEMBLEY GARDENS, CAMBOIS

7.13.4.28. BASELINE

- 475. This viewpoint is located on a footpath to the north of Wembley Gardens road, to the west of the northernmost part of Cambois. The viewpoint is representative of residents within the settlement and users of the local minor road network, which includes users of NCR 1.
- 476. The primary aspect of properties off Wembley Gardens and South View varies. Parts of the settlement with open, unrestricted views to the south include properties to the south of Wembley Gardens / South View and Wembley Terrace. Largely, these views are from rear elevations of properties, which have a uniformly south-east aspect. Elsewhere, intervening built form and landform screen views south from the settlement.
- 477. The view looks south-west, across Wembley Gardens. The foreground to the south of the road is characterised by open paddocks, enclosed by post and wire fences. A railway line runs to the south of the paddocks, at grade with the surrounding the landscape, lined by security fences and low scrub vegetation, which bisects the view. The midground of this portion of the view looks across the extensive former colliery site to the south and south-east. The landform is generally level, to slightly undulating. To the south-east are the vegetated PFA mounds, which screen more distant views. At the time of survey and writing (May 2023) parts of the former coal stocking yard have had topsoil stripped and material stockpiles are visible, as is a large site-office compound. To the south-west, the landform rises gently to the A189. Belts of woodland enclose the colliery site to the south and southwest. In the background of the view to the south-east, the Alcan silos and wind turbine at North Blyth are visible in a gap between the PFA mounds. To the south, the NGL Substation is visible, partially screened by woodland to the south of the colliery site, and in the distant background are parts of Blyth. To the south-east, the existing NSL converter station lies on slightly elevated ground, enclosed to the



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north by belts of mixed deciduous and coniferous woodland. A number of overhead pylon lines and towers span the view from the midground to the background, piercing the skyline, through the east to the south.

- 478. To the west, views are contained by roadside vegetation along Wembley Gardens, by intervening built form at Sleekburn Business Centre, and by woodland planting on embankment along the A189.
- 479. To the east the view takes in suburban housing at Cambois. This is the northernmost part of the settlement, off Wembley Gardens and South View road. The settlement is mostly post-war, 20th century suburban housing stock, which has no notable architectural distinctiveness. Built form within the settlement and woodland to the north of Wembley Gardens road contains the view to the east.

7.13.4.29. SENSITIVITY OF THE RECEPTOR

- 480. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. The existing large scale industrial and commercial built form to the south in the view reduces the local scenic quality. Overall, value is considered to be medium-low.
- 481. There is the potential for views from internal and external spaces from parts of the settlement which are more susceptible to change arising from the Onshore Scheme. The susceptibility of residents is medium-high. Residential receptors have an appreciation of the surrounding landscape, particularly the immediate landscape context of the property's setting. The high part of the susceptibility rating relates to the duration of their views potentially each day and also over the years, and the medium part relates to the influence of varied built forms in the view.
- 482. This viewpoint is also representative of users of NCR 1. Cyclists are likely to be focused on their surroundings where views are available. However, views are transient and would not be experience across the entirety of the route. Similar open views towards the Onshore Converter Station and/or HVDC/HVAC cable corridors would be gained from along a section of the route approximately 0.35 km west of the viewpoint location, oblique to the direction of travel. Users of the NCR 1 at this location are considered to have medium susceptibility.
- 483. Drivers are less likely to be focused on their surroundings where views are available. There are similar open views gained from Wembley Gardens along a section of the road approximately 0.35 km west of the viewpoint location, oblique to the direction of travel. The speed limit along this section of the road is 60 mph and so drivers will be travelling at speed and the duration of views fleeting. The susceptibility of users of the local road network is considered to be low.
- 484. The view is deemed to be of medium-low value, and people in the settlement are considered to have medium-high susceptibility. On balance, sensitivity of these receptors is therefore, considered to be Medium.
- 485. Users of the NCR 1 at this location are considered to have medium susceptibility. The sensitivity of these receptors is therefore, considered to be Medium.
- 486. The susceptibility of users of the local road network is considered to be low. The sensitivity of these receptors is therefore, considered to be Medium-Low.

RECEPTOR WORST-CASE ASSESSMENT SCENARIO 7.13.4.30.

487. Details of the MDS are set out in section 7.8.1.



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488. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation). Mitigation includes a commitment to the retention of certain areas of existing woodland within the Site (Technical Appendix 7.2, Volume 4).

- 489. During construction, the assessment scenario for this viewpoint considers that activity would occur at the closest point to this location, within the Landfall/HVDC Zone and HVAC Zone, and within the Converter Station Zone.
- 490. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest location within the Converter Station Zone, approximately 0.9 km to the south-west of the viewpoint location. It considers that proposed built form would extend up to the boundary of the Converter Station Zone.
- 491. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions and uncertainties to planting within the Converter Station Zone.

7.13.4.31. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 492. Potential impacts would occur during the construction phase.
- 493. The closest construction activity likely to be visible from this location would be within the Landfall/HVDC Zone, to the south-east and south of this viewpoint location at a range of distances between approximately 0.4 km and 0.75 km. More distant construction activity within the HVAC Zone to the south would be visible at over approximately 1.5 km.
- 494. Receptors would experience open visibility of construction activity across the midground of this location, across the raised landform of the PFA mounds and within the generally open and level brownfield land of the former coal stocking yard. Construction would occur on a rolling programme, including localised earthworks across the PFA mounds, the formation of the haul roads, open cut trenching, and activity within construction compounds.
- 495. The assessment scenario considers that vegetation removal would occur across the maximum width of 110 m within the Landfall/HVDC Zone, and across the maximum of width of 200 m within the HVAC Zone (see Technical Appendix 7.2, Volume 3). The likely removal of woodland vegetation would be visible towards the background of the view to the south of the former coal stocking yard. This would slightly increase the visibility of the lower parts of the existing NSL converter station and National Grid Substation.
- 496. HVDC/HVAC construction activity would be visible across a large horizontal extent within the view, from the south-east through to the south-west within the Landfall/HVDC Zone and HVAC Zone.
- 497. From this viewpoint, construction activities associated with the Onshore Converter Station would be visible in combination with the installation of the Onshore Export Cable. The resulting intensification of effects is considered in this assessment.
- 498. The construction activities within the Converter Station Zone would extend further to the south-west of the Onshore Export Cable within the view.
- 499. Construction activity within the Converter Station Zone would be seen in the view to the south-west at a range of approximately 0.9 km. Potential woodland removal within the Converter Station Zone (Technical Appendix 7.2, Volume 4) is likely to result in more open, but distant, visibility of ground-based construction activities, and the formation of the Onshore Converter Station platform. The taller elements of construction and gradual emergence of the Onshore Converter Station MDS is likely to be visible across the Converter Station Zone.



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500. Construction activity would introduce elements that are prominent, though considering the construction works evident in the midground not entirely uncharacteristic to the existing view.

501. It is predicted that the impact will affect the views of residential receptors at this location directly. Principally as a result of the wide horizontal extent of activity seen in direct views from parts of the settlement, the magnitude of impact on these receptors is considered to be Medium-high. Because users of the NCR 1 and road users would experience similar views as oblique to the direction of travel, the magnitude of impact on these receptors is therefore considered to be Medium.

7.13.4.32. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 502. As shown in the visualisation (Figure 7.13, Volume 4), the MDS Onshore Converter Station envelope would be visible to the south-west of this viewpoint, seen over a distance of approximately 0.9 km.
- 503. The MDS Onshore Converter Station envelope would occupy a medium horizontal extent of the view, broadly equivalent to the existing NSL converter station it would be seen adjacent to. The scale of the MDS Onshore Converter Station envelope would be noticeably taller, and more prominent than the existing buildings, filling part of the view where there is not built form currently, although there are existing pylons and overhead lines present.
- 504. Overall, the MDS Onshore Converter Station envelope would be an apparent influence in the view. The MDS Onshore Converter Station envelope would be prominent, though not uncharacteristic in the context of other prominent large-scale electricity infrastructure in the form of the existing NSL converter station, National Grid Substation, and overhead pylon lines.
- 505. It is predicted that the impact will affect the views of residential receptors at this location directly. The magnitude is considered to be Medium. Because users of the NCR 1 and road users would experience similar views as oblique to the direction of travel, the magnitude of impact on these receptors is considered to be Medium-Low.

7.13.4.33. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

- 506. Overall, the magnitude of the impact on people within settlement is deemed to be Medium-High, and the sensitivity of residential receptors is considered to be Medium. The effect on these receptors will, therefore, be moderate adverse, which is significant.
- 507. The sensitivity of users of NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of moderate adverse significance, though not significant. Views from NCR 1 would be transient and for this short section of the route would be oblique to the direction of travel. Applying professional judgement, it is considered that the effect would not be significant in EIA terms. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 508. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of moderate-minor adverse significance, which is not significant. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 509. Effects during construction and installation would be short term, and reversible.



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7.13.4.34. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 510. Embedded mitigation and good-practice construction phase mitigation practices are set out in Table 7.10.
- 511. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of residential receptors is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **significant**.
- 512. The sensitivity of users of NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse** significance, though **not significant**. Views from NCR 1 would be transient and for this short section of the route would be oblique to the direction of travel. Applying professional judgement, it is considered that the effect would not be significant. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above..
- 513. The sensitivity of road users is considered to be Medium-Low. The effect on these receptors will, therefore, be of **moderate-minor adverse significance**, which is **not significant.** The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 514. Effects during construction would be short term, and reversible.
- 515. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Onshore Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.13.4.35. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

- 516. Overall, the magnitude of the impact is deemed to be Medium, and the sensitivity of people within settlement is considered to be Medium. The effect on these receptors will, therefore, be of **moderate** adverse significance, which is significant.
- 517. The sensitivity of users of NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate-minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 518. The sensitivity of road users is considered to be Medium-low. The effect on these receptors will, therefore, be of **minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 519. Effects during operation and maintenance would be long term, and reversible.

7.13.4.36. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

520. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11.



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- 521. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, Overall, following mitigation, the magnitude of the impact is deemed to be Medium, and the sensitivity of these residential receptors is considered to be Medium. The effect on these receptors will, therefore, be of **moderate adverse significance**, which is **significant**.
- 522. The sensitivity of users of NCR 1 is considered to be Medium. The effect on these receptors will, therefore, be of **moderate-minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 523. The sensitivity of road users is considered to be Medium-low. The effect on these receptors will, therefore, be of **minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and up to 0.35 km to the west along the road, as described above.
- 524. Effects during operation and maintenance would be long term, and reversible.
- 525. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

VIEWPOINT 5: A189, SOUTHBOUND

7.13.4.37. BASELINE

- 526. This viewpoint is located on an overbridge on the A189, on the southbound side of the road. The viewpoint is accessible from a flight of steps up the road embankment, which provides a pedestrian connection to the south of the bridge. This viewpoint is primarily representative of road users on the A189, travelling southbound. Although public access is possible at this location, it is unlikely that pedestrians would choose this route and the overgrown vegetation around the steps at the time of survey (May 2023) indicates that this route is not frequently used.
- 527. The view looks south. At this location the road is elevated on embankment as it crosses roads and railway lines. These routes are visible in the foreground below the bridge, lined by scrub vegetation and security fences. More distant views to the south and south-east are screened by woodland planting along the A189 road embankment and Fergusons Business Park. A telecommunication mast and overhead pylon lines appear above the intervening treeline. The upper parts of the NSL converter station are visible, albeit heavily screened by the intervening woodland.
- 528. To the south-east, the view is slightly more open. In this portion of the view the built form within Fergusons Business Park is seen to the south of the railway. In the mid-to-background of the view, is the extensive tract of vacant land within the former coal stocking yard which comprises grassland, areas where topsoil has been stripped, and material stockpiled. The coal stocking yard is enclosed by PFA mounds to the east, which are high enough to screen all but the roofs of properties along Foster Terrace at Cambois. In the background of the view to the south-east, the tall Alcan silos, onshore wind turbine, and large industrial buildings at North Blyth are visible.
- 529. To the south-east, along the line of the A189, the road drops away further south, leaving a narrow, channelled view, within which road infrastructure, tall lighting columns, and distant overhead pylon lines are visible.



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530. Long sections of the A189 are enclosed by roadside woodland planting. The route also undulates through the landscape, occasionally at grade or within shallow cutting, with short sections over bridges crossing river valleys.

7.13.4.38. SENSITIVITY OF THE RECEPTOR

- 531. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. Overall, value is considered to be medium-low.
- 532. Drivers are less likely to be focused on their surroundings where views are available. There are few open views towards the Site from the A189. Fleeting sections of more open visibility are gained travelling southbound approximately 0.5 km south of the North Seaton roundabout, and when travelling northbound between Blyth and Bedlington. The speed limit along this section of the road is 70 mph and so drivers will be travelling at speed and the duration of views would be short and slightly oblique to the direction of travel. Where short duration views of the landscape to the east are gained, prominent built form including the National Grid Substation, NGL Converter Station, and overhead pylon lines are visible. The susceptibility of road users on the A189 is low.
- 533. The view is deemed to be of medium-low value, and road users are considered to have Low susceptibility. On balance, sensitivity of these receptors is therefore, considered to be Low.

7.13.4.39. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 534. Details of the MDS are set out in section 7.8.1.
- 535. Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation). Mitigation includes a commitment to the retention of selected areas of existing woodland within the Site (Technical Appendix 7.2, Volume 3).
- 536. During construction, the assessment scenario for this viewpoint considers that activity would occur at the closest point to this location, within the Landfall/HVDC Zone and HVAC Zone, and within the Converter Station Zone.
- 537. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest location within the Converter Station Zone, approximately 0.8 km to the south-east of the viewpoint location. It considers that proposed built form would extend up to the boundary of the Converter Station Zone.
- 538. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions and uncertainties to planting within the Converter Station Zone.

7.13.4.40. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 539. Potential impacts would occur during the construction phase.
- 540. The closest construction activity likely to be visible from this location would be the installation of the Onshore Export Cable corridor within the HVDC Zone, to the east of this viewpoint location at a distance of approximately 0.5 km, oblique to the direction of travel. More distant installation activity within the HVAC Zone to the south-east would be screened by intervening built form and vegetation in the foreground.
- 541. Receptors would experience open visibility of construction activity across the midground of this location, across the raised landform of the PFA mounds and within the generally open and level



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brownfield land of the former coal stocking yard. Construction would occur on a rolling programme, including localised earthworks across the PFA mounds, the formation of the haul roads, open cut trenching, and activity within construction compounds.

- 542. The assessment scenario considers that vegetation removal would occur across the maximum width of 110 m within the Landfall/HVDC Zone (see Technical Appendix 7.2, Volume 3). As a result, the likely removal of woodland vegetation would be visible in fleeting views, in the background of the view to the east of the former coal stocking yard.
- 543. Construction activity would only be visible across a small horizontal extent within the view to the east as a result of the screening effect of intervening vegetation and built form.
- 544. From this viewpoint, construction activities associated with the Onshore Converter Station would be visible in combination with the construction of the HVDC and HVAC cables. The resulting intensification of effects is considered in this assessment.
- 545. Intervening roadside vegetation and built form would screen lower-level construction activities, even during winter months. The taller elements of construction and gradual emergence of the Onshore Converter Station MDS is likely to be visible across the Converter Station Zone and the Onshore Converter Station itself is likely to be visible only slightly above the intervening treeline.
- 546. Construction activity would introduce elements that are slightly apparent within the view. Considering the construction works evident in the form coal stocking yard to the east, and former power station site to the south-east, and movement of traffic on the busy A189, these elements are not considered to be entirely uncharacteristic to the baseline.
- 547. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Low.

7.13.4.41. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 548. As shown in the visualisation (Figure 7.14, Volume 4), the MDS Onshore Converter Station envelope would be largely screened by intervening roadside vegetation, although less so in winter months.
- 549. The MDS Onshore Converter Station envelope would occupy a small horizontal extent of the view, seen over a distance of approximately 0.8 km. Only the very upper portions of the MDS Onshore Converter Station envelope would be visible above the intervening screening vegetation. Although in winter months the screening effect might be slightly reduced.
- 550. Overall, the MDS Onshore Converter Station envelope would be a slightly apparent influence in the view. Considering the nature of oblique views from the A189 as it passes through the LVIA study area, the Onshore Converter Station would not be uncharacteristic to the context of other prominent large-scale electricity infrastructure in the form of the existing NSL converter station, National Grid Substation, and overhead pylon lines seen from this route.
- 551. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Low.

7.13.4.42. SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION

552. Overall, the magnitude of the impact is deemed to be Low, and the sensitivity of road users is considered to be Low. The effect on these receptors will, therefore, be of **negligible adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and at closer range where fleeting, isolated views may occur.



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553. Effects during construction would be short term, and reversible.

7.13.4.43. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 554. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 555. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage and would not typically be required for effects of negligible significance. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Low, and the sensitivity of road users is considered to be Low. The effect on these receptors will, therefore, be of **negligible adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location; however, with distance, in the extents described above, the significance of effect would reduce further.
- 556. Effects during construction would be short term, and reversible.
- 557. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.

7.13.4.44. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

- 558. Overall, the magnitude of the impact is deemed to be Low, and the sensitivity of road users is considered to be Low. The effect on these receptors will, therefore, be of **negligible adverse significance**, which is **not significant**. The geographic extent of the effect would occur at this location and in more distant locations where there would be more distant visibility.
- 559. Effects during operation and maintenance would be long term, and reversible.

7.13.4.45. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 560. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11.
- 561. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage and would not typically be required for effects of negligible significance. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Low, and the sensitivity of road users is considered to be Low. The effect on these receptors will, therefore, be ofn**Negligible adverse significance**, which is **not significant**.
- 562. Effects during operation and maintenance would be long term, and reversible.
- 563. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.



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VIEWPOINT 6: CAMBOIS NORTH BEACH CAR PARK

7.13.4.46. BASELINE

- 564. This viewpoint is located on an informal footpath part of the ECP which leads south from the southernmost Cambois North Beach car park to the beach itself. This viewpoint is situated where people are able to see out to sea, the beach and coastal edge to the east, and inland to the west. It is representative of users of the ECP, and visitors to the beach and car park.
- 565. From this location the view south looks across, a narrow strip of informal grassland and undulating sand dunes which defines the coastal margin, becoming rocky further south. Towards the background of the view, the coastal margin transitions to an industrial character at North Blyth, which contains a variety of built forms; a small pocket of terraced housing; large industrial structures with rectangular massing; the three prominent cylindrical Alcan silos; an onshore wind turbine; and tall lighting columns.
- 566. To the east, the dunes have been cut to form a low coastal cliff which backs the wide, sandy Cambois North Beach. 'The Rockers' is a small rocky island close to the shore which provides a near focal point. Out to sea, Blyth Wind Farm is visible approximately 0.8 km offshore. The offshore wind farm comprises five evenly spaced turbines, each 191.5 m to blade tip height, and a smaller wind monitoring mast.
- 567. To the south-west, the view looks inland to Cambois. This small, linear settlement comprises fragmented clusters of properties strung out along the coastline. Brightly coloured terraced buildings and Church of St Andrew mark the southernmost part of Cambois. Areas of open space separate this part of the settlement from Cambois Primary School. The closest property to this viewpoint is due west, next to an industrial yard. To the west of Cambois, the two PFA mounds on the former colliery site contain more distant views. Parts of the large National Grid substation building to the north of the River Blyth are seen beyond Cambois and above intervening vegetation, as are rows of tall overhead pylon lines.
- 568. To the north and north-west, low embankments and scrub vegetation enclose the view. To the north-east there are views across wide arcing beaches to the promontory to the north of Blyth, Newbiggin Point and settlement at Newbiggin by the Sea.

7.13.4.47. SENSITIVITY OF THE RECEPTOR

- 569. This viewpoint is not located within any national, regional, or local scenic designations or recognised scenic views. Nor is this an OS marked viewpoint. Views are, however, likely to be valued locally, particularly in the context of the settled and industrialised coastal edge within the LVIA Study Area. Overall, value is considered to be Medium.
- 570. The ECP is a well-publicised long-distance route which will be used by local residents and visitors to the area. Recreational walkers are likely to be focused on their surroundings where views are available (such as at the viewpoint location). However, views are transient and take in many diverse features, including development.
- 571. Open and more scenic views are gained to the east looking out to sea, which would be the primary focus for users of the route at this location. Visitors to the beach and car park would similarly be focused on the wide, open seascape, rather than the view inland. Views inland are strongly influenced by the variety of industrial built forms in the view, and landscape features modified by human activity. Similar views inland are gained over a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location. Further north, woodland and landform are likely to screen



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visibility inland. To the south, the route drops down onto the open sandy beach where views inland are contained by low coastal cliffs and dunes. Overall, susceptibility is considered to be medium-high.

572. The view is deemed to be of medium value, and users of the ECP are considered to have mediumhigh susceptibility. On balance, sensitivity of these receptors is therefore, considered to be Medium-High.

7.13.4.48. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

- 573. Details of the MDS are set out in section 7.8.1.
- 574. Section 7.10 and Table 7.10 sets out measures adopted as part of the Onshore Scheme (designed in measures and tertiary mitigation). Mitigation includes a commitment to the retention of certain areas of existing woodland within the Site (Technical Appendix 7.2, Volume 3).
- 575. During construction, the assessment scenario for this viewpoint considers that activity would occur at the closest point to this location and entirely within the open part of the view to the south, which is within the Landfall/HVDC Zone. Trenchless techniques would be used to avoid disturbance to the beach and sand dunes.
- 576. During operation and maintenance, the worst-case scenario considers that the Onshore Converter Station MDS would occupy the closest location within the Converter Station Zone, approximately 1.2 km to the west of the viewpoint location. It considers that proposed built form would extend up to the boundary of the Converter Station Zone.
- 577. The worst-case scenario for mitigation assumes that it would not be possible to provide landscape screening of the visible parts of the Onshore Converter Station because of the potential restrictions and uncertainties to planting within the Converter Station Zone.

7.13.4.49. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 578. Potential impacts would occur during the construction phase.
- 579. Installation activity within the Landfall and HVDC Zone would be visible to the west and south of this viewpoint location.
- 580. Receptors would experience open visibility of construction activity within the HVDC/HVAC cable corridor immediately to the south and south-west of this location, seen at very close proximity and visible across a large horizontal extent of the view.
- 581. Installation would occur on a rolling programme, including the formation of the haul roads, open cut trenching, and activity within construction compounds.
- 582. The assessment scenario considers that woodland vegetation removal would occur across the maximum width of 110 m within the Landfall and HVDC Zone. The removal of woodland vegetation to the west of Cambois is likely to open visibility of railway embankments and parts of the former coal stocking yard, and some of the upper portions of larger scale built form to the south of Harbour View Road including the National Grid Substation and overhead pylon lines.
- 583. Screening provided by the PFA mounds to the west of the railway would obscure all but the taller construction activities associated with the Onshore Converter Station, and a small extent of the emerging built form.



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- 584. Construction activity associated with the Onshore Converter Station would introduce elements that are readily apparent. However, considering the movement and activity of cranes and vehicles at the Port of Blyth to the south, they would not be entirely uncharacteristic to the existing view.
- 585. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Medium-High.

7.13.4.50. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 586. As shown in the visualisation (Figure 7.15, Volume 4) the MDS Onshore Converter Station envelope would occupy a very small horizontal extent within the view.
- 587. The low, horizontal profile of the MDS Onshore Converter Station Envelope would help assimilate into the raised landform of the PFA mounds in views to the west of this location.
- 588. The introduction of the Onshore Converter Station would provide only slightly apparent influence. It would be characteristic of a number of prominent built forms seen in views inland at this location and from a short section of the ECP to the north.
- 589. It is predicted that the impact will affect the views of receptors at this location directly. The magnitude is considered to be Low.

SIGNIFICANCE OF THE EFFECT DURING CONSTRUCTION 7.13.4.51.

- 590. Overall, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of users of the ECP is considered to be Medium-High. The effect on these receptors will, therefore, be of moderatemajor adverse significance, which is significant. The geographic extent of the effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location, as described above.
- 591. Effects during construction would be short term, and reversible.

SECONDARY MITIGATION AND RESIDUAL EFFECT DURING 7.13.4.52. CONSTRUCTION

- 592. Embedded mitigation and good-practice construction phase mitigation practices are set out in section 7.10 and Table 7.10.
- 593. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Medium-High, and the sensitivity of users of the ECP is considered to be Medium-high. The effect on these receptors will, therefore, be of moderate-major adverse significance, which is significant. The geographic extent of the effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location, as described above.,
- 594. Effects during construction would be short term, and reversible.
- 595. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station. These will be developed and set out in a Landscape and Ecological Mitigation Plan which will form part of future application(s) for approval of Reserved Matters.



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7.13.4.53. SIGNIFICANCE OF THE EFFECT DURING OPERATION AND MAINTENANCE

- 596. Overall, the magnitude of the impact is deemed to be Low, and the sensitivity receptors on the ECP is considered to be Medium-high. The effect on these receptors will, therefore, be **moderate-minor significance**, which is **not significant**. The geographic extent of the effect would occur effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location.
- 597. Effects during operation and maintenance would be long term, and reversible.

7.13.4.54. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 598. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11.
- 599. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the impact is deemed to be Low, and the sensitivity receptors on the ECP is considered to be Medium-High. The effect on these receptors will, therefore, be of **moderate-minor adverse significance**, which is **not significant**. The geographic extent of the effect would occur effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location.
- 600. Effects during operation and maintenance would be long term, and reversible.
- 601. The detailed design process will seek to further reduce visual effects. Section 7.10.2.1.2 identifies key principles which are considered to form an appropriate landscape and visual mitigation strategy for the Converter Station.

7.14. Potential Impacts During Decommissioning

- 602. This section describes the potential impacts of the decommissioning of the onshore elements of Onshore Scheme with regard to impacts on landscape and visual receptors.
- 603. At the end of the operational lifetime of the Onshore Scheme, the operator will develop and agree a solution for the onward handling of the onshore infrastructure with the regulator. This decision will be based on the advice from the regulator at the time and informed by the prevailing environmental regulatory requirements at that time, and relevant industry practice.
- 604. Decommissioning of the Onshore Converter Station would involve the main components being dismantled and removed for recycling or disposal in accordance with the relevant waste disposal regulations. In relation to the Onshore Converter Station, the programme for decommissioning is expected to be similar in duration to the construction phase. The detailed activities and methodology would be determined later within the Onshore Scheme's lifetime, but are expected to include:
 - Dismantling and removal from Site of any outside electrical equipment located within the Onshore Converter Station platform operational compound, and removal of cabling;
 - Dismantling and removal of electrical equipment from within the Onshore Converter Station buildings and removal of the buildings themselves;
 - · Removal of areas of hardstanding; and
 - Reinstatement of the landscape within the Onshore Converter Station platform areas.



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605. With regards to the buried onshore cables, it is proposed that these would be left in-situ during decommissioning, allowing the cables to remain in place is considered an acceptable option with minimal environmental impact.

- 606. No decision has been made regarding the final decommissioning policy for the Onshore Export Cable, as it is recognised that industry practice, rules and legislation change over time. It is likely the HVDC and HVAC cables would be pulled through the ducts and removed, with the ducts themselves left in situ in order to minimise further ground disturbance, although this section assess total removal as the MDS.
- 607. The approach to decommissioning will align with regulatory guidance, requirements, and industry practices at the time of decommissioning and will be agreed with the relevant stakeholder and regulatory bodies.
- 608. Whilst details regarding the decommissioning of the Onshore Scheme are currently unknown, considering the worst-case assumption (which would be the removal and reinstatement of the current land use at the Converter Station Zone) it is anticipated that the impacts would be similar to or less than those assessed during construction. The difference at decommissioning phase would be that any potential mitigation planting (see section 7.10) is likely to have matured over the 35 years of the operational life of the Onshore Scheme and may assist in screening decommissioning works from parts of the surrounding landscape and visual receptors.
- 609. Considering the above, the summary of effects presented in Table 7.16 identifies where receptors would experience effects during decommissioning that would be similar to those reported during construction, which would principally relate to the Onshore Converter Station.

7.15. Proposed Monitoring

610. No monitoring is considered necessary.

7.16. Cumulative Effects Assessment

7.16.1. Methodology

- 611. The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Onshore Scheme together with other relevant plans, developments and activities. Cumulative effects are therefore the complete set of effects arising from the Onshore Scheme together with the effects from a number of different developments, on the same receptor or resource. Please see Volume 2, Chapter 3 for detail on CEA methodology.
- 612. The developments selected as relevant to the CEA presented within this Chapter are based upon the results of a screening exercise and the development of a 'long list' of cumulative developments relevant to the Onshore Scheme (see Volume 3, Appendix 3.2 and shown on Figure 7.9 EIA Volume 4 ES Figures). Each development has been considered on a case by case basis for screening in or out of this Chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved, to create the 'short list' as summarised inTable 7.14.
- 613. The CEA for landscape and visual amenity was undertaken in two stages. The first stage is to identify specific projects scoped into the CEA for landscape and visual amenity, outlined in Table 7.14 and shown in Figure 7.9 (Volume 4).



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Development / Plan	Cumulative Development Reference	Status	Approximate Distance from Study Area (km)	Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme	Rationale
Cambois Connection Marine Scheme	n/a	Application	0 km	The Cambois Connection Marine Scheme will involve the construction, operation and maintenance, and decommissioning of up to four subsea HVDC cables (the Offshore Export Cable) from within the Berwick Bank Wind Farm (BBWF) array area located in Scottish waters.	2025 onwards	2030 onwards	Offshore works (below MHWS therefore overlap with the Onshore Scheme in the intertidal area) associated with the Cambois Connection project (whilst subject to separate consents) are linked to the Onshore Scheme. Construction 2025 onward; anticipated to be operational from 2030.	Potential cumulative interaction with the Cambois Connection Onshore Scheme. Cambois Connection Marine Scheme scoped into CEA.
Land at Former Power Station Site on Northern Side of Cambois (hereafter described as Battery Manufacturing Plant)	21/00818/FULES	Consented	0km (adjacent to boundary)	Erection of battery manufacturing plant with ancillary offices, together with associated development and infrastructure works (including site preparation works, ground modelling, drainage, landscaping, vehicular assess, cycle and pedestrian access, parking provision, substation and other associated works)	N/A	N/A	Potential for the construction programme and operation to overlap with the Onshore Scheme.	Potential for cumulative interaction with landscape and visual receptors. Battery Manufacturing Plant Scoped into CEA



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Development / Plan	Cumulative Development Reference	Status		Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme	Rationale
Blyth Demonstrator Offshore Wind Farm 2	MLA/2012/00122/10 20/03717/SCREEN	Consented		In addition to the existing operational turbines within the Blyth Demonstrator, a further five floating OWF turbines have been consented by the MMO under variation to the existing Blyth Demonstrator marine licence. This application is for floating foundations and turbine dimensions only and does not comprise additional onshore cable components.		N/A	Construction and operation of the cumulative development would take place beyond the LVIA Study Area.	Scoped Out. Outwith LVIA Study area.
Land North of Sandfield Road Cambois Northumberland	20/01835/SCOPE	Scoping	0km (adjacent to boundary)	Scoping opinion for a single wind turbine with a tip height of up to circa 300m and a rotor diameter of up to 200m	N/A	N/A	N/A	Scoped out of CEA. Not progressed beyond Scoping. Assumed superseded by consent for Land At Former Power Station Site on Northern Side of Cambois (21/00818/FULES)
Battery Storage Site, West Sleekburn	22/01725/FUL	Consented	0.7 km	Demolition of existing structures and construction of a Battery Energy Storage System and associated infrastructure. The system comprises 36 Energy Storage containers and 9 Power Conversion System units with a combined	N/A	N/A	N/A	Scoped out of CEA. This cumulative development would be situated to the west of the A189. There would be limited potential for cumulative interactions to arise on either landscape or visual receptors.



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Development / Plan	Cumulative Development Reference	Status		Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme	Rationale
				connection capacity of circa 30 MW				
Land North of Charcon Brock Lane, West Sleekburn	21/03977/FUL	Consented	0.7 km	Erection of steel portal framed building complete with all associated cladding and building works to be used for manufacturing of luxury lodges (use class B2)	N/A	N/A	N/A	Scoped out of CEA. This cumulative development is relatively small scale and would be situated to the west of the A189. There would be limited potential for cumulative interactions to arise on either landscape or visual receptors.
Land To North of Spring Ville East Sleekburn	21/03723/FUL	Under construction	0.1 km	Residential development for 48 dwellings with associated access and an area of public open space.	Started 2023	Unknown	CEMP (Rev B – 08/08/23) (23/02060/DISCON) states that construction may take up to 36 months. Potential for short duration overlap with the installation / construction programme of the Onshore Scheme.	Under construction and therefore considered as part of the baseline included in the main assessment.
Pump House and Land South of River Wansbeck West Sleekburn		Consented	0.7 km	Construction of extension to existing pipeline to supply consented development at Land At Former Power Station Site on Northern Side of	N/A	N/A	N/A	Scoped out of CEA. This cumulative development is relatively small scale and would be situated to the west of the A189. There would be limited potential for cumulative



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Development / Plan	Cumulative Development Reference	Status		Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme	Rationale
				Cambois (21/00818/FULES).				interactions to arise on either landscape or visual receptors.
Land North East of Cambois Wembley Gardens	21/03005/CCD	Consented	0.5 km	Construction of 2no. ponds at nature reserve site, deposition of arising soil materials at site.	N/A	N/A	N/A	Scoped out of CEA. This cumulative development is relatively small scale. There would be limited potential for cumulative interactions to arise on either landscape or visual receptors.
Former Vald Birn Foundry Cambois	23/01278/SCREEN	Screening Opinion issued May 2023	0.1 km	Screening Opinion under Environmental Impact Assessment Regulations. Residential development and associated infrastructure.	N/A	N/A	N/A	Although a development framework plan has been submitted with the Screening Request, there is uncertainty that cumulative developments at this stage of planning may come forward, and there is insufficient information to accurately assess likely cumulative impacts. This cumulative development is not considered further in the CEA
Former Coal Stocking Yard, Cambois	21/04089/FUL	Assumed constructed from review of Google Earth aerial photography dated July 2023	0 km	Formation of hoggin access track to viewing area on a PFA mound at former stocking yard	N/A	N/A	N/A	Assumed constructed and therefore considered as part of baseline.



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Development / Plan	Cumulative Development Reference	Status	Approximate Distance from Study Area (km)	Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme	Rationale
Land North of Blyth Power Station Substation, East Sleekburn	22/00879/FUL	Under construction	0 km	Erection of building for manufacturing of subsea cables, with ancillary offices and outdoor cable storage, together with associated development and infrastructure works including vehicular accesses off Brock Lane, landscaping and vehicular parking	N/A	N/A	CMP (05/01/23) (23/00263/DISCON) states that construction may have a duration of 85 weeks from November 2022. On the basis of this information, it is considered that construction activities would be unlikely to overlap with those of the Onshore Scheme	Under construction and therefore considered as part of the baseline included in the main assessment.
Land East of Sleekburn Business Centre, West Sleekburn	21/01746/FUL	Consented	0 km	Provision of temporary substations and associated cabling for the construction of Land At Former Power Station Site on Northern Side of Cambois (21/00818/FULES)	N/A	N/A	N/A	Scoped out of CEA. This cumulative development is relatively small scale and would be situated to the west of the A189. There would be limited potential for cumulative interactions to arise on either landscape or visual receptors.
Land East of Sleekburn Business Centre, West Sleekburn	21/02506/HAZARD	Consented	0 km	Hazardous Substance Consent. Related to Land At Former Power Station Site on Northern Side of Cambois (21/00818/FULES)	N/A	N/A	N/A	Scoped out of CEA. This application is for Hazardous Substance Consent and there would be no potential for cumulative interactions to arise on either landscape or visual receptors



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614. The second stage was to consider the potential for the impacts assessed as part of the Onshore Scheme to lead to cumulative impacts in conjunction with other cumulative developments, identified in Table 7.14.

Table 7.14 Potential cumulative impacts considered for landscape and visual amenity

Impact	Potential Cumulative Impact	Rationale
Physical landscape	There is the potential for impacts of the construction of the Onshore Scheme to overlap with those of the Battery Manufacturing Plant cumulative development. There would be limited overlap with the Cambois Connection Marine Scheme.	Based on available information, it is predicted that cumulative developments scoped into the CEA would principally result in the loss of brownfield land, and that woodland trees are largely proposed to be retained. In cumulative terms, the interaction would be minimal and the loss of valued landscape features, namely woodland, hedgerows, and agricultural land, would principally be attributable to the Onshore Scheme and not the cumulative developments. The site of the proposed substation for the Battery Manufacturing Plant indicates that a small area of woodland would require to be removed to accommodate it. This limited woodland removal is not sufficient to give rise to a significant cumulative effect over and above those identified in the project-alone assessment. Physical landscape receptors not included in the CEA.
LCA 41a Blyth and Wansbeck Estuaries	The Onshore Scheme and the cumulative developments would be partially or fully located within this LCA.	There is potential for significant cumulative effects on the character of this LCA due to the addition of the Onshore Scheme to the construction and operation of the cumulative developments. Receptor included in the CEA.
LCA 42a	The Onshore Scheme (Onshore Converter Station in part) would be located within this LCA. Cumulative developments are located in adjacent parts of LCA 41a. There would be no overlap with the impacts of the Cambois Connection Marine Scheme.	The cumulative developments are not located within this LCA. Their influence on the wider character of LCA 42a would be limited by the physical and visual separation provided by the A189, and it is considered that they would exert a limited influence on the perceived characteristics of this landscape. The detailed assessment of effects on LCA 42a in Section 7.12.4 supports the judgement that aside from direct physical change to a small geographic extent of LCA 42a, the Onshore Scheme would exert limited influence on the perceived characteristics of this landscape and would not have the potential to result in significant cumulative effects. Therefore, this receptor is not included in the CEA.
Viewpoint 1: Spring Ville / Brock Lane, East Sleekburn	There would not be any visibility of cumulative developments from this viewpoint location.	No potential for significant cumulative effects as a result of the addition of the Onshore Scheme over and above the significant effects identified in the project-alone assessment. Therefore, this receptor is not included in the CEA.
Viewpoint 2: Northfield / Waterfield Road, near East Sleekburn	There is the potential for visibility of the Battery Manufacturing Plant at close range. The construction of the Onshore Export Cable and construction of the Onshore	There is the potential for significant cumulative effects with the Battery Manufacturing Plant during the construction an operational phases of the Onshore Scheme. This receptor is included in the CEA.



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Impact	Potential Cumulative Impact	Rationale
	Converter Station would also be visible from this viewpoint. There would be no visibility of the Cambois Connection Marine Scheme.	
Viewpoint 3: Brock Lane / King Charles III England Coast Path / NCR 1	As a result of the commitment of woodland retention within the Site (Technical Appendix 7.2, Volume 4), there would be very limited / no visibility of cumulative developments from this viewpoint location.	No potential for significant cumulative effects as a result of the addition of the Onshore Scheme over and above the significant effects identified in the project-alone assessment. Therefore, this receptor is not included in the CEA.
Viewpoint 4: Wembley Gardens, Cambois	There is the potential for visibility of the Battery Manufacturing Plant cumulative development in the midground of the view. The construction of the Onshore Export Cable and construction of the Onshore Converter Station would also be visible from this viewpoint. There would be no visibility of the Cambois Connection Marine Scheme.	There is the potential for significant cumulative effects with the Battery Manufacturing Plant during the construction phase of the Onshore Scheme, it is likely that during operation the proposed Onshore Converter Station would be almost entirely screened by the intervening built form of the cumulative development. This receptor is included in the CEA.
Viewpoint 5: A189, southbound	There is the potential for distant and restricted visibility of the Battery Manufacturing Plant cumulative development to the east of the A189. Potential visibility of the Onshore Scheme during construction and operation of the Onshore Scheme would also be distant and restricted from this viewpoint. There would be no visibility of the Cambois Connection Marine Scheme.	The detailed assessment of Viewpoint 5 in section 7.13.4.37 demonstrates that there would be very limited impacts on the view from this location as a result of the introduction of the Onshore Scheme. Potential visibility of cumulative development to the east of the A189 would be limited for the same reasons identified in the detailed assessment. Given the limited nature of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Scheme. Therefore, this receptor is not included in the CEA.
Viewpoint 6: Cambois North Beach Car Park	There is the potential for restricted visibility of the Battery Manufacturing Plant cumulative development to the west of this viewpoint. Potential visibility of the Onshore Scheme during construction of the Onshore Export Cable would be seen at close range from this viewpoint, whilst construction and operation of the Onshore Converter Station would be distant and heavily restricted. There would be potential visibility of the Cambois Connection Marine Scheme.	Potential visibility of the Battery Manufacturing Plant cumulative development to the west would be limited by the intervening PFA mounds to the west of Cambois. Given the limited nature of the potential cumulative interaction, it is considered that there is no potential for significant cumulative effects as a result of the addition of the Onshore Scheme. There may be visibility of the Cambois Connection Marine Scheme during construction. Therefore, this receptor is included in the CEA in relation to the Cambois Connection Marine Scheme.



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7.16.2. Cumulative Effects Assessment

615. An assessment of the likely significance of the cumulative effects of the Onshore Scheme upon landscape and visual receptors arising from each identified impact is given below.

CUMULATIVE EFFECTS - CAMBOIS CONNECTION MARINE SCHEME

- 616. The Marine Scheme offshore export cable will be installed along the seabed and would therefore not be visible during operation. During the construction and decommissioning of the offshore export cable the only effect on the landscape and visual resource would be the visibility of a small number of vessels out at sea. Nearshore these may be located in LCT 41a and may be visible from Viewpoint 6: Cambois North Beach Car Park. However, vessels out at sea are a common occurrence as part of the baseline character and views.
- 617. It is considered that, notwithstanding the proximity of the offshore export cable, the temporary, short duration effects are not likely to give rise to significant cumulative effects with the addition of the Onshore Scheme in relation to landscape character or visual amenity, therefore this development is not considered further within the CEA.
- 618. Therefore, this section only considers likely cumulative effects with the Battery Manufacturing Plant.

7.16.3. **Cumulative Landscape Effects**

LANDSCAPE CHARACTER AREA 41A: BLYTH AND WANSBECK ESTUARIES

7.16.3.1. **BASELINE**

619. Please refer to section 7.12.4. The sensitivity of the receptor is considered to be Medium-low.

RECEPTOR WORST-CASE ASSESSMENT SCENARIO 7.16.3.2.

620. It is not clear how this overlap in geographic extent would restrict the activities associated with the Onshore Scheme. Therefore, the MDS set out previously stands particularly in relation to the potential routeing of the HVDC/HVAC cables and potential woodland removal. Please refer to section 7.12.2.3.

7.16.3.3. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 621. The construction of the Battery Manufacturing Plant would potentially occur within the same time period as the construction of the HVDC and HVAC cables and construction of the Converter Station.
- 622. The construction of the Onshore Scheme would result in an increase to the geographic extent of construction activity within this LCA in very close proximity to, and partly overlapping, the cumulative scheme.
- 623. The Onshore Scheme would, therefore, add further construction activities and features in the context of the Battery Manufacturing Plant. There would be an intensification of the influence of these activities and features on perceived character and views and changes in both the physical features of the landscape and through their visibility, would become more widespread to the west and east within the LCA. However, in the context of the cumulative development, which would itself result in large scale change across an extensive area, the perceived change from the Onshore Scheme would be moderated.



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624. The cumulative change would occur within an already established baseline context of construction activity within this LCA at Land North of Blyth Power Station Substation, and the influence of construction in close proximity in the adjacent LCA 42a at Land to the north of Spring Ville, which would moderate the change.

- 625. Considering the close proximity of the Onshore Scheme and cumulative developments, there would be a cumulative interaction within a similar part of the landscape and views.
- 626. The cumulative impact of the addition of the Onshore Scheme to a context which includes the construction of the Battery Manufacturing Plant is predicted to be Medium-high within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Medium-Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance.

7.16.3.4. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 627. During operation and maintenance, the introduction of the Battery Manufacturing Plant cumulative development within LCA 41a would further strengthen the influence of industrial built form across a large geographic extent, within part of the landscape to the east of the A189 between the River Wansbeck and River Blyth.
- 628. In this context, the cumulative change to landscape character as a result of the addition of the Onshore Scheme would be moderated. The character of LCA 41a will have been modified by industrial development, which would become one of the defining characteristics of this landscape. The addition of the Onshore Converter Station would infill open farmland to the west of the Battery Manufacturing Plant.
- 629. Within LCA 41a, east of the A189, large parts of the landscape are allocated as a 'Strategic Employment Area' under Policy ECN 2 of the (2022) adopted Northumberland Local Plan, within which employment and industrial uses will be prioritised. The cumulative change would consolidate the pattern of ongoing, planned change within this part of the landscape.
- 630. The cumulative impact of the addition of the Onshore Scheme to a context which includes the operation of the Battery Manufacturing Plant is predicted to be Medium within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance.

7.16.3.5. SIGNIFICANCE OF EFFECT DURING CONSTRUCTION

- 631. The magnitude of the cumulative change is deemed to be Medium-High within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Medium-low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance. The sensitivity of the receptor is considered to be Medium-Low.
- 632. The cumulative effect within a very localised extent will, therefore, be of moderate adverse significance, which is significant. The cumulative effect across the wider LCA would be of Minor adverse significance, which is not significant. Effects would be short term, and temporary.



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SECONDARY MITIGATION AND RESIDUAL EFFECT DURING 7.16.3.6. CONSTRUCTION

- 633. Embedded mitigation and good-practice construction phase mitigation practices are set out in Table 7.10. No secondary mitigation is proposed. The detailed design process will seek to further reduce landscape and visual effects.
- 634. Following mitigation, the magnitude of the cumulative change is deemed to be Medium-High within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Medium-Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance. The sensitivity of the receptor is considered to be Medium-Low.
- 635. The cumulative effect within a very localised extent will, therefore, be of moderate adverse significance, which is significant. The cumulative effect across the wider LCA would be of minor adverse significance, which is not significant. Effects would be short term, and temporary.

7.16.3.7. SIGNIFICANCE OF EFFECT DURING OPERATION AND MAINTENANCE

636. The magnitude of the cumulative change is deemed to Medium within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance. The sensitivity of the receptor is considered to be Medium-Low. The cumulative effect will, therefore, be of moderate-minor adverse significance or lower, which is not significant. Effects would be long term, and reversible.

7.16.3.8. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 637. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. The Battery Manufacturing Plant planning documents include a landscape mitigation plan, which could inform the future mitigation proposals for the Onshore Scheme when developing the detailed design. Therefore, taking a precautionary approach, and including only confirmed mitigation the magnitude of the cumulative change is deemed to Medium within the Converter Station Zone and a localised area up to approximately 0.5 km. Impacts would be Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance. The sensitivity of the receptor is considered to be Medium-Low. The cumulative effect will, therefore, be of moderate-minor adverse significance or lower, which is not significant. Effects would be long term, and reversible.
- 638. The detailed design process will seek to further reduce landscape and visual effects.

Cumulative Visual Effects 7.16.4.

VIEWPOINT 2: NORTHFIELD / WATERFIELD ROAD, NEAR EAST SLEEKBURN

7.16.4.1. **BASELINE**

639. Please refer to section 7.13.4.10. The sensitivity of the receptor is considered to be Medium-High (people in settlement) and Medium (users of PRoW).



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7.16.4.2. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

640. It is not clear how this overlap in geographic extent would restrict the activities associated with the Onshore Scheme. Therefore, the MDS set out previously stands particularly in relation to the potential routeing of the HVDC and HVAC cables and potential woodland removal. Please refer to section 7.13.4.12.

7.16.4.3. MAGNITUDE OF IMPACT DURING CONSTRUCTION

- 641. The construction of the Battery Manufacturing Plant would potentially occur within the same time period as the construction of the HVDC and HVAC cables and construction of the Converter Station.
- 642. Areas of woodland which may be removed during construction of the Onshore Scheme (Technical Appendix 7.2, Volume 4) would result in open visibility to construction activity associated with the Battery Manufacturing Plant.
- 643. The construction of the Onshore Scheme would potentially appear in views to the west and in closer proximity to this viewpoint, to the north and east with the Battery Manufacturing Plant visible beyond to the north and east. The Onshore Scheme construction would increase the extent of construction activity across a wider horizontal field of view. Consequently, construction activities would become the defining feature across much of the fore-to-midground to the north, west and east.
- 644. The cumulative impact of the Onshore Scheme in the context of the Battery Manufacturing Plant is therefore, considered to be Medium-High.

7.16.4.4. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 645. The Battery Manufacturing Plant would be visible in combination with the Converter Station.
- 646. Areas of woodland which may be removed during construction of the Onshore Scheme (Technical Appendix 7.2, Volume 3) is likely to result in more open visibility to the operational Battery Manufacturing Plant, which would contribute to an increase in the cumulative impact on the view.
- 647. The Onshore Converter Station would not introduce built form to the view but would be adding to it. Such industrial features are a component of the baseline and would become a defining part of the view following the introduction of the Battery Manufacturing Plant. The Onshore Converter Station itself would be partly screened by the built form of the existing NSL converter station, which would be more visible to the west as a result of woodland removal during the HVDC and HVAC cable construction process. The addition of the Onshore Converter Station in the context of the Battery Manufacturing Plant would result in industrial development being perceived across a wide extent of the views to the west, north and east.
- 648. The cumulative magnitude of change is therefore, considered to be Medium-High.

7.16.4.5. SIGNIFICANCE OF EFFECT DURING CONSTRUCTION

649. Overall, the magnitude of the cumulative effect is deemed to be Medium-high, and the sensitivity of the receptor is considered to be Medium-High (people in settlement) and Medium (users of PRoW). The cumulative effect on people in the settlement will, therefore, be of **moderate-major adverse significance**, which is **significant**, and of **moderate adverse significance** on users of PRoW, which is **significant**. Effects would be short term, and temporary.



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7.16.4.1. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 650. Embedded mitigation and good-practice construction phase mitigation practices are set out in Table 7.10. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. The Battery Manufacturing Plant planning documents include a landscape mitigation plan, which could inform the future mitigation proposals for the Onshore Scheme when developing the detailed design. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the cumulative impact is deemed to be Medium, and the sensitivity of the receptor is considered to be Medium-High (people in settlement) and Medium (users of PRoW). The cumulative effect on people in the settlement will, therefore, be **moderate-major adverse significance**, which is **significant** and of **moderate adverse significance** on users of PRoW, which is **significant**. Effects would be short term, and temporary.
- 651. The detailed design process will seek to further reduce landscape and visual effects.

7.16.4.2. SIGNIFICANCE OF EFFECT DURING OPERATION AND MAINTENANCE

652. Overall, the magnitude of the cumulative impact is deemed to be Medium-High, and the sensitivity of the receptor is considered to be Medium-High (people in settlement) and Medium (users of PRoW). The cumulative effect on people in the settlement will, therefore, be of **moderate-major adverse significance**, which is **significant**, and of **moderate adverse significance** on users of PRoW, which is **significant**. Effects would be long term, and reversible.

7.16.4.3. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 653. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. The Battery Manufacturing Plant planning documents include a landscape mitigation plan, which could inform the future mitigation proposals for the Onshore Scheme when developing the detailed design. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the cumulative impact is deemed to be Medium-High, and the sensitivity of the receptor is considered to be Medium-High (people in settlement) and Medium (users of PRoW). The cumulative effect on people in the settlement will, therefore, be of moderate-major adverse significance, which is significant, and of Moderate adverse significance on users of PRoW, which is significant. Effects would be long term, and reversible.
- 654. The detailed design process will seek to further reduce landscape and visual effects.

VIEWPOINT 4: WEMBLEY GARDENS, CAMBOIS

7.16.4.4. BASELINE

655. Please refer to section 7.13.4.28. The sensitivity of the receptor is considered to be Medium (people in settlement), Medium (users of NCR 1) and Medium-Low (road users).



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7.16.4.5. RECEPTOR WORST-CASE ASSESSMENT SCENARIO

656. It is not clear how this overlap in geographic extent would restrict the activities associated with the Onshore Scheme. Therefore, the MDS set out previously stands particularly in relation to the potential routeing of the HVDC and HVAC cables and potential woodland removal. Please refer to section 7.13.4.30.

MAGNITUDE OF IMPACT DURING CONSTRUCTION 7.16.4.6.

- 657. The construction of the Battery Manufacturing Plant would potentially occur within the same time period as the construction of the HVDC and HVAC cables and construction of the Converter Station.
- 658. Based on available information, the predicted construction of the Battery Manufacturing Plant would occupy much of the midground of the view, to the south of the railway line.
- 659. It is likely that construction of the HVDC and HVAC cables to the south-east and south, and the construction of the Onshore Converter Station to the south-west, would be visible within the same horizontal extent. There is the potential for the HVDC and HVAC cable construction to be seen at similar distances to construction activities taking place across the Battery Manufacturing Plant cumulative development site whilst the construction of the Onshore Converter Station would be more distant and behind the Battery Manufacturing Plant in this view. Construction activities would become the defining feature across much of the midground of the view. Taking the above into account, the addition of the Onshore Scheme would increase the visible activities and features of construction in the view; however, they are likely to be difficult to discern in isolation from those of the intervening cumulative development, which would reduce the incremental cumulative change caused by the Onshore Scheme.
- 660. The magnitude of the cumulative impact is therefore, considered to be Medium-Low.

7.16.4.7. MAGNITUDE OF IMPACT DURING OPERATION AND MAINTENANCE

- 661. The Battery Manufacturing Plant is likely to be visible in combination with the Converter Station.
- 662. The Onshore Converter Station would not introduce built form to the view but would be adding to it. Industrial development features are a component of the baseline and would become a defining part of the view following the introduction of the Battery Manufacturing Plant.
- 663. The Onshore Converter Station is likely to be almost entirely screened by the intervening built form of the Battery Manufacturing Plant cumulative scheme. Consequently, its addition would result in a small increase in the horizontal extent of built form seen beyond the Battery Manufacturing Plant.
- 664. The magnitude is therefore, considered to be Low.

7.16.4.8. SIGNIFICANCE OF EFFECT DURING CONSTRUCTION

- 665. The magnitude of the cumulative impact is deemed to be Medium-Low, and the sensitivity of the people within settlement is considered to be Medium. The cumulative effect will, therefore, be of moderate-minor adverse significance, which is not significant.
- 666. The sensitivity of users of NCR 1 is considered to be Medium. The cumulative effect will, therefore, be of moderate-minor adverse significance, which is not significant.
- 667. The sensitivity of road users is considered to be Low. The cumulative effect will, therefore, be Minor adverse significance, which is not significant.



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668. Effects would be short term, and reversible.

7.16.4.9. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING CONSTRUCTION

- 669. Embedded mitigation and good-practice construction phase mitigation practices are set out in Table 7.10. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. The Battery Manufacturing Plant planning documents include a landscape mitigation plan, which could inform the future mitigation proposals for the Onshore Scheme when developing the detailed design. Therefore, taking a precautionary approach, and including only confirmed mitigation the magnitude of the cumulative impact is deemed to be Medium-Low, and the sensitivity of the people within settlement is considered to be Medium. The cumulative effect will, therefore, be of **moderate-minor adverse significance**, which is **not significant**.
- 670. The sensitivity of users of NCR 1 is considered to be Medium. The cumulative effect will, therefore, be of **moderate-minor adverse significance**, which is **not significant**.
- 671. The sensitivity of road users is considered to be Low. The cumulative effect will, therefore, be of **minor** adverse significance, which is **not significant**.
- 672. Effects would be short term, and reversible.
- 673. The detailed design process will seek to further reduce landscape and visual effects.

7.16.4.10. SIGNIFICANCE OF EFFECT DURING OPERATION AND MAINTENANCE

- 674. Following mitigation, the magnitude of the cumulative impact is deemed to be Low, and the sensitivity of people within settlement is considered to be Medium. The cumulative effect will, therefore, be of **minor adverse significance**, which is **not significant**.
- 675. The sensitivity of users of NCR 1 is considered to be Medium. The cumulative effect will, therefore, be of **minor adverse significance**, which is **not significant**.
- 676. The sensitivity of road users is considered to be Low. The cumulative effect will, therefore, be **negligible adverse significance**, which is **not significant**.
- 677. Effects would be long term, and reversible.

7.16.4.11. SECONDARY MITIGATION AND RESIDUAL EFFECT DURING OPERATON AND MAINTENANCE

- 678. Landscape and visual mitigation is discussed in section 7.10, and set out in Table 7.11. No secondary mitigation is included within the proposals assessed as the MDS as the geographical locations and extent of proposals cannot be confirmed at this stage. The Battery Manufacturing Plant planning documents include a landscape mitigation plan, which could inform the future mitigation proposals for the Onshore Scheme when developing the detailed design. Therefore, taking a precautionary approach, and including only confirmed mitigation, the magnitude of the cumulative impact is deemed to be Low, and the sensitivity of people within settlement is considered to be Medium. The cumulative effect will, therefore, be of moderate-minor adverse significance, which is not significant.
- 679. The sensitivity of users of NCR 1 is considered to be Medium. The cumulative effect will, therefore, be of **minor adverse significance**, which is **not significant**.



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- 680. The sensitivity of road users is considered to be low. The cumulative effect will, therefore, be negligible adverse, which is not significant.
- 681. Effects would be long term, and reversible.
- 682. The detailed design process will seek to further reduce landscape and visual effects.

7.16.5. Proposed Monitoring

683. No monitoring is considered necessary.

7.17. Inter-Related Effects

- 684. Inter-related effects are the effects of multiple impacts, affecting one receptor or a group of receptors. Inter-related effects include interactions between the impacts of the different stages of the Onshore Scheme (i.e., interaction of impacts across construction, operation and maintenance and decommissioning), as well as the interaction between impacts on a receptor within an Onshore Scheme stage. A description of the likely inter-related effects arising from the Onshore Scheme on Landscape and Visual Amenity is provided below.
- 685. Regarding the assessment of individual phases of the Onshore Scheme, although the assessment is broken down into different receptors based upon both physical and policy definitions (physical landscape, landscape character, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect in one way (visually) not via multiple pathways simultaneously.
- 686. In respect of the assessment of the Onshore Scheme across the lifetime of the project, Although the assessment is broken down into different receptors based upon both physical and policy definitions (seascape character, landscape character, designations, and views/visual receptors), the actual receptor is the same in each case i.e., the people perceiving the effect. Therefore, these people will only perceive the effect one way (visually), at one point in time, and will not experience the construction and decommissioning, operation, and maintenance phases simultaneously.
- 687. Table 7.15 below provides a summary of inter-relationships with other Chapters.

Table 7.15: Inter-relationships between the LVIA and other Chapters of the Onshore EIA Report

Topic / Chapter	Rationale
Chapter 9: Terrestrial Ecology and Ornithology	Both Chapters consider the potential effects of grassland, hedgerow, and tree removal resulting from the introduction of the Onshore Scheme. The LVIA considers the impact on these features as landscape elements and their contribution to landscape character, Chapter 9 considers the impacts on these features as ecological assets.
Chapter 16: Socioeconomics, Recreation and Tourism	Both Chapters consider the potential effects of the Onshore Scheme on the amenity of recreational receptors in the local area.

7.18. Summary of Impacts, Mitigation Measures, Likely Significant **Effects and Monitoring**

688. Information on the landscape and visual effects within the LVIA Study Area was collected through desktop review, site surveys, analysis of the Zone of Theoretical Visibility, photography and the preparation of visual materials. Table 7.16 presents a summary of the potential impacts, mitigation



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measures and the conclusion of likely significant effects in respect to the landscape and visual resource. The impacts assessed include:

- Physical impacts on landscape features including woodland, hedgerows and agricultural land;
- Impacts on landscape character;
- Impacts on views with particular reference to six agreed viewpoints and visual receptors including areas of settlement, roads, PRoW, NCR 1 and the King Charles III England Coast Path; and
- Cumulative impacts with other development in the LVIA Study Area.
- 689. Overall, it is concluded that there will be the following likely significant effects arising from the Onshore Scheme during the construction, operation and maintenance or decommissioning phases.
 - Physical landscape woodland
 - Landscape Character Area 41a: Blyth and Wansbeck Estuaries within a localised extent within approximately 0.5km of the Converter Station Zone.
 - Landscape Character Area 42a: Urban Fringe, Ashington, Blyth and Cramlington
 - Viewpoint 1: Spring Ville / Brock Lane, East Sleekburn representing people on the edge of the settlement and users of NCR 1 for approximately 1km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east.
 - Viewpoint 2: North Field / Waterfield Road, near East Sleekburn representing people on the edge of the settlement and users of the PRoW between North Field and to where it runs alongside Fergusons Business Park to the north.
 - Viewpoint 3: Brock Lane/ King Charles III England Coast Path / NCR 1 representing users of the ECP and NCR 1.
 - Viewpoint 4: Wembley Gardens, Cambois representing people on the edge of the settlement and users of NCR 1.
 - Viewpoint 6: Cambois North Beach Car Park representing users of the car park and the ECP.
- 690. Table 7.17 presents a summary of the potential cumulative impacts, mitigation measures and the conclusion of likely significant effects on the landscape and visual resource. The cumulative effects assessed include effects on landscape character and selected viewpoints. Overall, it is concluded that there will be the following likely significant cumulative effects from the Onshore Scheme alongside other developments:
 - Landscape Character Area 41a: Blyth and Wansbeck Estuaries, within the Converter Station Zone and its immediate environs.
 - Viewpoint 2: North Field / Waterfield Road, near East Sleekburn representing people on the edge of the settlement and users of the PRoW between North Field and to where it runs alongside Fergusons Business Park to the north.

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Table 7.16 Summary of potential likely significant environmental effects, mitigation and monitoring

Description of Impact		Phase O D ⁶	Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
Physical Landscape – Woodland	✓	×	Medium-Low	Medium-High	Moderate adverse and significant. Effects would be long term, and reversible following decommissioning.	None	Moderate adverse and significant	None
Physical Landscape – Hedgerows	√	×	Low	Medium	Minor adverse and not significant Effects within the Onshore Converter Station Zone would be long term and reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the reinstated hedgerows re- establish.	None	Minor adverse and not significant	None
Physical Landscape – Agricultural land	√	×	Medium-Low	Medium	Moderate-minor adverse and not significant. Effects within the Onshore Converter Station Zone would be long term, and reversible following decommissioning. Effects within the HVDC and HVAC cable corridors will be short term and temporary occurring until the agricultural land is reinstated.	None	Moderate-minor adverse and not significant	None
Landscape Character Area 41a: Blyth and Wansbeck Estuaries	✓	x ✓	High within the Onshore Converter Station Zone and a localised area within up to approximately	Medium-Low	The effect within a localised extent within approximately 0.5 km of the Onshore Converter Station Zone would be moderate adverse, which is significant.	None	The residual effect within a localised extent within approximately 0.5 km of the Onshore Converter Station	None

⁶ Please refer to section 7.14.



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Description of Impact		Phas O		Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
				0.5 km. Impacts would be Medium or lower across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south.		The effect on the LCA within the remaining extent would be moderate-minor (or lower) adverse, which is not significant. Effects would be short term, and reversible in part.		Zone would be moderate adverse, which is significant. The effect on the LCA within the remaining extent would be moderate-minor (or lower) adverse, which is not significant. Effects would be short term, and reversible in part.	
Landscape Character Area 42a: Urban Fringe, Ashington, Blyth, and Cramlington	✓	×	✓	High within the Onshore Converter Station Zone and immediate environs to the east of the A189. Impacts would be Low across the wider LCA within the Study Area.	Medium-Low	The effect within a localised extent to the east of the A189 would be moderate adverse, which is significant. The effect across the wider LCA would be minor adverse, which is not significant. Effects would be short term, and reversible in part.	None	The residual effect within a localised extent to the east of the A189 would be Mmoderate adverse, which is significant. The effect across the wider LCA would be minor adverse, which is not significant. Effects would be short term, and reversible in part.	
Viewpoint 1: Spring Ville / Brock Lane, East Sleekburn		×	✓	Medium-High	Medium-High (people in settlement). Medium (users of NCR 1) Medium-low (road users)	The effect on people in the settlement (including future occupiers of 'The Pastures') will be moderate-major adverse, which is significant. The effect on users of NCR 1 will be Moderate adverse, which is significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane	None	The residual effect on people in the settlement (including future occupiers of 'The Pastures') will be moderatemajor adverse, which is significant. The effect on users of NCR 1 will be moderate adverse, which is significant. The geographic extent of the effect would occur travelling northbound on Brock Lane	None



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Description of Impact		Phase O D ⁶	Magnitude of ImpactSe Re	ensitivity of eceptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
					junction at East Sleekburn to Taranis Street to the east. The effect on road users will be moderate adverse, which is not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. Effects would be short term, and reversible in part.		from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. The effect on road users will be moderate adverse, which is not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. Effects would be short term, and reversible in part.	
Viewpoint 2: North Field / Waterfield Road, near East Sleekburn	n 🗸	x	(p se Me	edium-High eople in ettlement) edium (users of RoW)	The effect for people in the settlement at the viewpoint will be major adverse, which is significant. The effect for people using the PRoW between North Field and to where it runs alongside Fergusons Business Park to the north will be moderate-major adverse, which is significant. Effects would be short term, and reversible.	None	The residual effect for people in the settlement at the viewpoint will be major adverse, which is significant. The effect for people using the PRoW between North Field and to where it runs alongside Fergusons Business Park to the north will be moderate-major adverse, which is significant.	None



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Description of Impact		Phase O D ⁶	Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
							Effects would be short term, and reversible.	
Viewpoint 3: Brock Lane / King Charles III England Coast Path / NCR 1	✓	×	Medium-high	Medium (users of ECP and NCR 1) Medium-Low (road users)	The effect on users of the ECP and NCR 1 will be moderate adverse, which is significant. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively. The effect road users will be moderate adverse, which is not significant. The geographic extent of the effect would occur over approximately 1 km. Effects would be short term, and reversible.	None	The residual effect on users of the ECP and NCR 1 will be moderate adverse, which is significant. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively. The effect road users will be moderate adverse, which is not significant. The geographic extent of the effect would occur over approximately 1 km. Effects would be short term, and reversible.	None
Viewpoint 4: Wembley Gardens, Cambois	✓	×	Medium-high for people in settlement Medium for users of the NCR and road users	Medium (people in settlement) Medium (users of NCR 1) Medium-low (road users)	The effect on people in settlement will be moderate adverse, which is significant. The effect on users of NCR 1 will be moderate adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. The effect road users will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. Effects would be short term, and reversible.	None	The residual effect on people in settlement will be moderate adverse, which is significant. The effect on users of NCR 1 will be moderate adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. The effect road users will be moderate-minor adverse, which is not significant. The geographic extent of the	



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Description of Impact		Phase O D ⁶	Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
							effect would occur at this viewpoint location and over approximately 0.35 km to the west.	
							Effects would be short term, and reversible.	
Viewpoint 5: A189, southbound	✓	×	Low	Low	The effect on these receptors will negligible adverse, which is not significant. The geographic extent of the effect would occur at this location and at closer range where fleeting, isolated views may occur. Effects would be short term, and reversible.	None	The residual effect on these receptors will negligible adverse, which is not significant. The geographic extent of the effect would occur at this location and at closer range where fleeting, isolated views may occur. Effects would be short term, and reversible	None
Viewpoint 6: Cambois North Beach car park	✓	×	Medium-High	Medium-High	The effect will, be moderate-major adverse, which is significant. Effects would be short term, and reversible.	None	The residual effect will, be moderate-major adverse, which is significant. Effects would be short term, and reversible.	None
Landscape Character Area 41a: Blyth and Wansbeck Estuaries	×	√	Medium-high within up to approximately 0.5 km of the Onshore Converter Station Zone. Impacts would be Medium-low or lower across the wider LCA to the east of the A189, to the River Wansbeck in	Medium-Low	The effect within a localised extent within up to approximately 0.5 km of the Onshore Converter Station Zone. would be Moderate adverse, which is significant. The effect across the wider LCA within the remaining extent would be minor (or lower) adverse, which is not significant. Effects would be long term, and reversible.	None	The residual effect within a localised extent within up to approximately 0.5 km of the Onshore Converter Station Zone. would be Moderate adverse, which is not significant. The effect across the wider LCA within the remaining extent would be minor (or lower) adverse, which is not significant.	None



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Description of Impact		Phase O D ⁶	Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
			the north and River Blyth in the south.				Effects would be long term, and reversible.	
Landscape Character Area 42a: Urban Fringe, Ashington, Blyth, and Cramlington	×	√	Medium-high within the Onshore Converter Station Zone and immediate environs to the east of the A189. Impacts would be Low across the wider LCA within the Study Area.	Medium-Low	The effect within a localised extent to the east of the A189 would be moderate adverse, which is not significant. The effect across the wider LCA would be minor adverse, which is not significant. Effects would be long term, and reversible.	None	The residual effect within a localised extent to the east of the A189 would be moderate adverse, which is not significant. The effect across the wider LCA would be minor adverse, which is not significant. Effects would be long term, and reversible.	
Viewpoint 1: Spring Ville / Brock Lane, East Sleekburn	×	✓	Medium	Medium-High (people in settlement). Medium (users of NCR 1) Medium-low (road users)	The effect on people in settlement (including future occupiers of 'The Pastures') will be moderate adverse, which is significant. The effect on users of NCR 1 will be moderate adverse, though not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. The effect on road users will be moderateminor adverse, which is not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. Effects would be long term, and reversible.	None	The residual effect on people in settlement (including future occupiers of 'The Pastures') will be moderate adverse, which is significant. The effect on users of NCR 1 will be moderate adverse, though not significant. The geographic extent of the effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. The effect on road users will be moderate-minor adverse, which is not significant. The geographic extent of the	



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Description of Impact		Phase O D ⁶	Magnitude of Impac	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
							effect would occur travelling northbound on Brock Lane from East Sleekburn for approximately 0.2 km to the junction north of this viewpoint and across 1 km of the route from Brock Lane junction at East Sleekburn to Taranis Street to the east. Effects would be long term, and reversible.	
Viewpoint 2: North Field / Waterfield Road, near East Sleekburn	×	✓	High	Medium-High (people in settlement) Medium (users of PRoW).	The effect on people in the settlement will be major adverse, which is significant. The effect on users of the PRoW between North Field and the edge of the Fergusons Business Park would be moderate-major, which is significant. Effects would be long term, and reversible.	None	The residual effect on people in the settlement will be major adverse, which is significant. The effect on users of the PRoW between North Field and the edge of the Fergusons Business Park would be moderate-major, which is significant. Effects would be long term, and reversible.	None
Viewpoint 3: Brock : Lane / King Charles III England Coast Path / National Cycle Route 1	×	√	Medium	Medium (users of ECP and NCR 1) Medium-low (road users)	The effect on users of the ECP and NCR 1 will be moderate adverse, which is not significant. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively. The effect road users will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur over approximately 1 km.	None	The residual effect on users of the ECP and NCR 1 will be moderate adverse, which is not significant. The geographic extent of the effect would occur over approximately 0.7 km and 1 km, respectively. The effect road users will be moderate-minor adverse,	None



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Description of Impact		hase O D ⁶	Magnitude of Impact	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
					Effects would be long term, and reversible.		which is not significant. The geographic extent of the effect would occur over approximately 1 km. Effects would be long term, and reversible.	
Viewpoint 4: Wembley Gardens, Cambois	x	\	settlement Medium-low for	settlement) Medium (users of NCR 1)	The effect on people in settlement will be Moderate adverse, which is significant. The effect on users of NCR 1 will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. The effect road users will be minor adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. Effects would be long term, and reversible.	None	The residual effect on people in settlement will be moderate adverse, which is significant. The effect on users of NCR 1 will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. The effect road users will be minor adverse, which is not significant. The geographic extent of the effect would occur at this viewpoint location and over approximately 0.35 km to the west. Effects would be long term, and reversible.	
Viewpoint 5: A189, southbound	×	√	Low	Low	The effect on these receptors will negligible adverse, which is not significant. The geographic extent of the effect would occur	None	The residual effect on these receptors will negligible adverse, which is not significant. The geographic	None



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Description of Impact		Phase O D ⁶	Magnitude of Impact	tSensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
					at this location and at closer range where fleeting, isolated views may occur. Effects would be short term, and reversible.		extent of the effect would occur at this location and at closer range where fleeting, isolated views may occur. Effects would be short term, and reversible.	
Viewpoint 6: Cambois North Beach car park	×	√	Low	Medium-High	The effect on these receptors will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location. Effects would be long term, and reversible.	None	The effect on these receptors will be moderate-minor adverse, which is not significant. The geographic extent of the effect would occur effect would occur across a section of the route approximately 0.3 km to the north, and 0.4 km to the south of the viewpoint location. Effects would be long term, and reversible.	

Table 7.17 Summary of likely significant cumulative environment effects, mitigation and monitoring

Description of Impact	Pha C	o O	D Effects Assessmentier		Sensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
Landscape Character Area 41a: Blyth and Wansbeck Estuaries	✓	×	Tier 1	Medium-High within the Converter Station Zone and a localised area up to approximately 0.5 km.	Medium-Low	The cumulative effect within the Converter Station Zone and a localised area up to approximately 0.5 km	None	The residual cumulative effect within the Converter Station Zone and a localised area up to approximately 0.5 km would be of moderate adverse	



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Description of Impact	Pha C	se O	D	Cumulative Effects Assessment Tier	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
					Medium-Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance		would be of moderate adverse significance, which is significant. The cumulative effect across the wider LCA would be of minor adverse significance, which is not significant. Effects would be short term, and temporary.		significance, which is significant. The cumulative effect across the wider LCA would be of minor adverse significance, which is not significant. Effects would be short term, and temporary.	
Viewpoint 2: North Field / Waterfield Road, Near East Sleekburn	√	×		Tier 1	Medium-High	Medium-High (people in settlement) Medium (users of PRoW).	Effects on people in settlement would be moderate-major adverse, which is significant. Effects on users of PRoW would be moderate adverse, which is significant. Effects would be short term and temporary.	None	Residual effects on people in settlement would be moderate-major adverse, which is significant. Effects on users of PRoW would be moderate adverse, which is significant. Effects would be short term and temporary.	None
Viewpoint 4: Wembley Gardens, Cambois	√	×		Tier 1	Medium-Low	Medium (people in settlement) Medium (users of NCR 1) Medium-Low (road users)	significant. Effects on road users would be minor adverse, which is not significant. Effects would be short term		Residual effects on people in settlement and users of NCR 1 would be moderate-minor adverse, which is not significant. Effects on road users would be minor adverse, which is not significant. Effects would be short term	None
Landscape Character Area	×	✓		Tier 1	Medium within the Converter Station Zone and a localised	Medium-Low	and temporary. The cumulative effect on the LCA would be	None	and temporary. The residual cumulative effect on the LCA would be	None



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Description of	Pha	ise		Cumulative	Magnitude of Impact	Sensitivity of	Significance of Effect	Secondary	Residual Effect	Proposed
Impact	С	0	D	Effects Assessment Tier		Receptor		Mitigation		Monitoring
41a: Blyth and Wansbeck Estuaries					area up to approximately 0.5 km. Low across the wider LCA to the east of the A189, to the River Wansbeck in the north and River Blyth in the south, reducing rapidly with distance.		moderate-minor adverse or lower, which is not significant. Effects would be short term and temporary.		moderate-minor adverse or lower, which is not significant. Effects would be short term and temporary.	
Viewpoint 2: Northfield / Waterfield Road, Near East Sleekburn	×	✓		Tier 1	Medium-High	Medium-High (people in settlement) Medium (users of PROW)	Effects on people in settlement would be moderate-major adverse, which is significant. Effects on users of the ProW would be moderate adverse, which is significant. Effects would be long term and reversible.	None	Effects on people in settlement would be moderate-major adverse, which is significant. Effects on users of the ProW would be moderate adverse, which is significant. Effects would be long term and reversible.	None
Viewpoint 4: Wembley Gardens, Cambois	ж	✓		Tier 1	Low	Medium (people in settlement) Medium (users of NCR 1) Medium-Low (road users)	Effects on people in settlement and users of NCR 1 would be minor adverse, which is not significant. Effects on road users would be negligible adverse, which is not significant. Effects would be short term and temporary.	None	Residual effects on people in settlement and users of NCR 1 would be minor adverse, which is not significant. Effects on road users would be negligible adverse, which is not significant. Effects would be short term and temporary.	None



Status: Final

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7.19. References

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