

Lighthouse Green Fuels

Development Consent Order

Preliminary Environmental Information Report

Chapter 13: Landscape and Visual Impact Assessment

Planning Inspectorate Reference: EN0110025

2nd December 2025

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1. Introduction

1.1 Overview

- 1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) has been prepared by landscape architects with experience of the assessment of similar developments, with reference to current planning policy and best practice guidance. It presents the preliminary results of a Landscape and Visual Impact Assessment (LVIA) of the proposed Sustainable Aviation Fuel (SAF) production facility, hereafter the Proposed Development, on the character of the landscape and on people's views and visual amenity. The assessment is still work in progress and will be finalised in the ES where photomontages of the concept design of the Proposed Development will be presented and assessed from agreed viewpoints.
- 1.1.2 The purpose of undertaking a LVIA is to express clearly to decision-makers the landscape professional's judgement about changes to the landscape and views and to explain which aspects of landscape and visual change are relevant in planning terms. Further detail is provided in the following appendices (PEIR, Volume 3):
- a. Appendix 13A sets out the methodology for the LVIA;
 - a. Appendix 13B comprises tables setting out descriptions of the baseline, sensitivity, magnitude of impact and significance of effects for each landscape receptor; and
 - b. Appendix 13C comprises tables setting out descriptions of the baseline, sensitivity, magnitude of impact and significance of effects for each visual receptor group.
- 1.1.3 This chapter is supported by the following figures (PEIR, Volume 2):
- a. Figure 13.1 Site Location and Study Area;
 - b. Figure 13.2 Topography and Hydrology;
 - c. Figure 13.3 Landcover;
 - d. Figure 13.4 Relevant Designations;
 - e. Figure 13.5 Published Landscape Character Areas;
 - f. Figure 13.6 Project Specific Landscape Character Areas;
 - g. Figure 13.7 Zone of Theoretical Visibility and Proposed Viewpoints; and
 - h. Figures 13.8 – 13.17 Representative viewpoints.
- 1.1.4 There are clear differences between landscape effects and visual effects, and the following distinctions have been made:
- a. Landscape effects relate to changes to the landscape as a resource, including physical changes to the fabric or individual elements of the

landscape, its aesthetic or perceptual qualities, and landscape character; and

- b. Visual effects relate to changes to existing views of identified visual receptors ('people'), from the loss or addition of landscape features within their view due to the Proposed Development.

1.1.5 Landscape effects and visual effects have therefore been assessed and reported separately.

1.2 Proposed Development

1.2.1 Lighthouse Green Fuels is a proposed Sustainable SAF Production Facility. The main features of the Proposed Development are:

- a. The stacks and flare (up to 140m);
- b. SAF Production - Main Product Processing, containing predominantly open steel structures with multiple stacks and columns (up to 90m);
- c. Conveyor, storage sheds and silos (up to 65m);
- d. Associated structures and infrastructure (up to 55m);
- e. Utility connection corridors, including above ground pipelines; and
- f. Access roads.

1.2.2 Refer to Figure 4.1, Chapter 4: Proposed Development (PEIR, Volume 1) for layout of the Proposed Development.

1.3 Assumptions and limitations

1.3.1 This section sets out the assumptions which have been made and the limitations which inform the scope of the LVIA:

- g. It is assumed that all existing vegetation will be removed from within the Main Site. Some vegetation removal might also be necessary within the connection corridors. It is not anticipated that the removal of vegetation would change the overall level of effects reported due to the scale of the development, the distance of visual receptors and the industrial nature of the Proposed Development and its surroundings;
- a. All fieldwork has been undertaken from publicly accessible locations. Professional judgement has been used to assess residents' views, aided by aerial photography and fieldwork observations;
- b. The Landscape Institute published Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3) (Ref 1) (LITGN-2024-01) (Ref 2) in August 2024. This confirmed that "*an LVIA should consider views from local communities focusing on the way that a community currently experiences views from public locations such as streets and open spaces and how those will change.*" It goes on to state that "*views from houses and individual properties are a matter of private amenity, noting that it is an established planning principle that there is no right to a view*". Views of communities and groups of properties, or in some

cases individual properties, have been considered within the LVIA with reference to publicly assessable viewpoints; and

- c. Landscape and visual impacts arising from decommissioning of the Proposed Development are assumed to be no greater than those identified during the construction phase and are therefore assessed as construction effects as a reasonable worst-case scenario.

2. Legislation and Planning Policy Context

2.1 Overview

- 2.1.1 This section summarises the relevant legislation and key national and local planning policies relevant to landscape and visual amenity and explains, where relevant, how they have informed the assessment and design of the Proposed Development.

2.2 Legislation

Table 2-1 Legislation

Legislation	Relevance to assessment
European Landscape Convention (ELC) 2000 (Ref 3)	<p>Paragraph 2.1 of Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) states that:</p> <p><i>“The UK has signed and ratified the European Landscape Convention (ELC) since 2002, when the last edition of this guidance was published. The recognition that government has thus given to landscape matters raises the profile of this important area and emphasises the role that landscape can play as an integrating framework for many areas of policy. The ELC is designed to achieve improved approaches to the planning, management and protection of landscapes throughout Europe and to put people at the heart of this process.”</i></p> <p>European Union treaty signed by the UK to include planning, protection and management of landscape within policy. The ELC defines landscape as: “...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.”^{##}</p>
Town and Country Planning Act 1990 (Ref 4)	Sets out the legislative planning framework for the Proposed Development.
Countryside and Rights of Way Act 2000 (Ref 5)	Sets out the legislative framework relating to access to the countryside including recreational routes.
Planning Act 2008 (Ref 6)	Sets out the legislative planning framework relating to development consent orders for nationally significant infrastructure projects.

2.3 Policy

Table 2-2 Policy

Policy	Relevance to assessment
Overarching NPS for Energy (EN-1) 2024 (Ref 7)	<p>Section 4.6 of NPS EN-1 sets out policies with respect to environment and Biodiversity Net Gain. It requires applicants to submit a statement with applications for development consent, demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design of the project.</p> <p>Section 4.7 of NPS EN-1 notes the need for careful siting and criteria for good design which takes account of potential impacts on landscape and visual amenity in order to minimise negative effects and recognising opportunities for enhancement.</p> <p>NPS EN-1 section 5.10 recognises that virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape. It sets out the requirements for applicants to carry out a landscape and visual impact assessment, including cumulative effects in accordance with relevant guidance. Content should include effects on landscape character, landscape components and visibility during construction and operation.</p> <p>An updated draft NPS EN-1 was published for consultation in April 2025, but the sections summarised above remain unchanged.</p>
NPS for Renewable Energy Infrastructure (EN-3) (Ref 8)	<p>Sets out the needs case for renewable energy and secondly to establish the specific criteria by which applications for development consent for such schemes are to be assessed. Paragraph 2.5.2 states that proposals for renewable energy infrastructure should demonstrate good design, particularly in respect of landscape and visual amenity, opportunities for co-existence/co-location with other marine and terrestrial uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage. Paragraph 2.7.38 states that an assessment of the landscape and visual effects of the proposed infrastructure should be undertaken in accordance with the guidance set out in 5.10 of EN-1.</p>
National Planning Policy Framework, 2024, Department for Levelling Up, Housing & Communities (Ref 9)	<p>Chapter 12 of the NPPF requires that planning decisions ensure developments “...are sympathetic to local character” (paragraph 135c). Chapter 15 requires planning decisions to “contribute to and enhance the natural and local environment, by: a) [inter alia] protecting and enhancing valued landscapes...” and “b)</p>

Policy	Relevance to assessment
	<p><i>recognising the intrinsic character and beauty of the countryside</i>" Chapter 16: Conserving and enhancing the historic environment notes the LPAs responsibility to take account of the desirability of new development making a positive contribution to local character and distinctiveness. Paragraph 131 states that high quality buildings and places should be at the core of what the planning and development process should achieve, and that good design is a key aspect of sustainable development.</p>
UK Marine Policy Statement (MPS), 2011 (Ref 10)	<p>Chapter 2 of the MPS outlines the vision for the UK marine area, the high-level approach to marine planning and general principles for decision making covering inter alia environmental considerations. Amongst others it covers detailed considerations relevant to seascape such as the impact of an activity or development on seascape to take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development.</p>
North East Inshore and North East Offshore Marine Plan, 2021 (Ref 11)	<p>Policy NE-SCP-1 requires proposals to be <i>'compatible with their surroundings and should not have a significant adverse impact on the character and visual resource of the seascape and landscape of the area.'</i></p> <p><i>'The location, scale and design of proposals should take account of the character, quality and distinctiveness of the seascape and landscape.'</i></p>
Stockton-on-Tees Borough Council – Local Plan 2019 (Ref 12)	<p>Policy SD5 requires that that development proposals are responsive to the landscape, mitigating their visual impact where necessary. Developments will not be permitted where they would lead to unacceptable impacts on the character and distinctiveness of the Borough's landscape unless the benefits of the development clearly outweigh any harm. Wherever possible, developments should include measures to enhance, restore and create special features of the landscape.</p> <p>Policy SD8: sets out broad design criteria for new developments, requiring them to consider the surrounding environment, heritage, building separation, privacy, green infrastructure, and appropriate access and waste facilities; and</p> <p>Policy ENV6: Green Infrastructure, Open Space, Green Wedges and Agricultural Land: focuses on protecting the environment by encouraging the use of sustainable</p>

Policy	Relevance to assessment
	transport, promoting integrated public transport, safeguarding cycleways and footways, and ensuring appropriate infrastructure for sustainable freight movement.
Hartlepool Local Plan 2018 (Ref 13)	<p>Policy LS1: refers to the Local Spatial Strategy within Hartlepool Borough Council's local planning documents, which guide development and land use in the area;</p> <p>Policy NE1: Natural Environment recognises the important role that Hartlepool's natural environment plays in enhancing people's quality of life and improving quality of place; and</p> <p>Policy NE2: Green Infrastructure: The Borough Council will safeguard green infrastructure within the Borough from inappropriate development and will work actively with partners to improve the quantity, quality, management and accessibility of green infrastructure and recreation and leisure facilities.</p>
Middlesbrough Council Publication Local Plan 2025 (Ref 14)	<p>Middlesbrough Council Publication Local Plan (2025) sets out a strategy, vision and planning framework for the future development of Middlesbrough between 2022 – 2041. The Publication Local Plan has been submitted to the Secretary of State for examination. The emerging Local Plan includes the following policies relevant to the landscape and visual assessment:</p> <p>Policy CR1: requires proposals to achieve well designed buildings and places;</p> <p>Policy CR3: requires developments to be of high quality design, which inter alia contributes to the identity, character and appearance of the area;</p> <p>Policy CR6: requires developments to be of highest quality design;</p> <p>Policy NE1 seeks to protect and enhance Green and Blue Infrastructure network in accordance with the Green and Blue Infrastructure Strategy and Action Plan;</p> <p>Policy NE2 seeks to protect and enhance Green Wedges.</p>
Middlesbrough adopted Local Plan will remain the Local Plan for the borough until it is replaced by a new Local Plan. The current Local Plan comprises of a number of documents, including Housing Local Plan (2014) (9.1.1Ref 31), Core Strategy Development Plan Document (DPD) (2008) (9.1.1Ref 32), and the Middlesbrough Local Plan, Saved Policies (1999) (9.1.1Ref 30).	
Housing Local Plan 2014 (Ref 15)	CS20 Green Infrastructure seeks to create integrated network of green infrastructure.
Core Strategy DPD Policies 2008	CS5 Design requires development to ' <i>demonstrate a high quality of design in terms of layout, form and</i>

Policy	Relevance to assessment
(Ref 16)	<p><i>contribution to the character and appearance of the area.'</i></p> <p>DC1 General Development requires development to satisfy <i>'the visual appearance and layout of the development and its relationship with the surrounding area in terms of scale, design and materials will be of a high quality.'</i></p>
Saved policies within the Middlesbrough Local Plan 1999 (Ref 17)	<p>E2 Green Wedges seeks to protect inter alia visual amenity and green character of a Green Wedge.</p> <p>E3 Development Adjoining Green Wedges requires adjoining development to complement the character of the Green Wedge.</p> <p>E4 Greenlink Network seeks to protect and enhance open space corridors with foot and cycle paths.</p> <p>E21 Special Landscape Areas seeks to protect and conserve <i>'scenic quality and character of the landscape in the areas designated as Special Landscape Areas.'</i></p>
Redcar and Cleveland Borough Council - Local Plan 2018 (Ref 18)	<p>Policy N 1 states that:</p> <p>Development proposals will be considered within the context of the Landscape Character Assessment, the Landscape Character Supplementary Planning Document and the Historic Landscape Characterisation. Developments will not be permitted where they would lead to the loss of features important to the character of the landscape, its quality and distinctiveness, unless the benefits of development clearly outweigh landscape considerations. In such cases appropriate mitigation will be required. Protection will be commensurate to the status of the landscape within the hierarchy.</p> <p>Policy SD4: pertains to Sustainable Development and is likely a policy that aims to ensure that development within the borough is sustainable, considering environmental, social, and economic factors to create a framework for future development.</p>
Tees Valley Green Infrastructure Strategy 2008 (Ref 19)	Sets out a vision for a strategic network of Green Infrastructure for the Tees Valley
Biodiversity Net Gain (Ref 20)	A strategy to develop land and contribute to the recovery of nature, to ensure habitat for wildlife is in a better state than it was before development.

2.4 Guidance

2.4.1 The following standards and guidance have been used to inform the scope and content of the LVIA, and to assist the identification and mitigation of

likely significant effects. This builds upon the overarching EIA methodology and guidance presented in Chapter 2, Assessment Methodology (PEIR, Volume 1.

Table 2-3 Guidance

Guidance	Relevance to assessment
Guideline for Landscape and Visual Impact Assessment, Third Edition (GLVIA 3) 2013 (Ref 1)	Sets out the guidelines for undertaking a landscape/townscape/seascape and visual impact assessment.
An approach to Landscape Character Assessment 2014 (Ref 21)	Informs the methodology for defining and describing the landscape character baseline.
Visual Representation of Development Proposals: Landscape Institute Technical Guidance Note 06/19 (Ref 22)	Provides advice on how to capture and represent visual amenity through representative viewpoints as well as how the viewpoints should be presented and photomontages should be produced.
Nationally Significant Infrastructure Projects: Advice on Good Design 2025 (Ref 23)	Informs the development of design principles for NSIP.
Assessing landscape value outside national designations, Technical Guidance Note 02/21 (Ref 24)	Informs the methodology for assessing the value attached to the landscape and whether a landscape can be considered “valued landscape” in the context of NPPF paragraph 187(a).
Infrastructure, Technical Guidance Note 04/20 (Ref 25)	Background information for the planning and design process for infrastructure projects for landscape.
Planning Practice Guidance (PPG), Natural Environment (Landscape) (Ref 26)	Sets out the benefits of landscape character assessments and the importance of considering Green Infrastructure in the early stages of schemes.
Planning Practice Guidance, Renewable and Low-carbon Energy (Ref 27)	Sets out that planning has an important role in the delivery of new renewable and low-carbon energy infrastructure. The PPG identifies several LVIA considerations, including visual impact, mitigation through screening and glint and glare.

3. Assessment Methodology and Significance Criteria

3.1 Overview

- 3.1.1 The detailed methodology, including the criteria referred to in making judgements on the sensitivity of landscape and visual receptors, the magnitude of impact and the significance of effects is set out in Appendices 13C and 13D (PEIR, Volume 3).
- 3.1.2 The methodology for the LVIA involved the following stages:
1. A review of published landscape character assessments, studies, relevant supporting evidence base documents, aerial photography, mapping and fieldwork to define the baseline and to determine the extent of the study area within which there is potential for landscape and visual effects;
 2. Define the landscape and visual receptors and describe the landscape and visual baseline;
 3. Review the design to embed mitigation measures into the Proposed Development to avoid or minimise adverse landscape and visual effects and maximise opportunities for landscape integration and enhancement;
 4. Determine the sensitivity (nature of the receptor) of landscape and visual receptors, by considering the value attached to the landscape or views and susceptibility to change of the receptor;
 5. Assess the magnitude of impact (nature of effect) of the Proposed Development in relation to size, scale, duration and reversibility; and
 6. Assess the significance of effects resulting by considering the relationship between the sensitivity of the receptor and the magnitude of impact and determine which effects are significant.
- 3.1.3 The assessment of the likely landscape and visual effects of the Proposed Development has been undertaken for the following scenarios:
- a. The peak of construction activity; and
 - b. Year 1 of operation, assuming the Proposed Development is built out.

3.2 Scope of the assessment

- 3.2.1 A scoping exercise was undertaken in September 2025 to identify the matters to be covered by the LVIA and agree the approach with relevant statutory bodies, primarily the local planning authorities but also other statutory bodies, Natural England and Historic England. The Scoping Report was submitted to PINS on 01 October 2025 and the Scoping

Opinion was issued on 11 November 2025.

- 3.2.2 The assessment scope was established at that time by comparing available design details for the Proposed Development with data, information and records relating to landscape character and the visual environment.
- 3.2.3 The outcomes of scoping were recorded in a Scoping Report, which included a summary of all assessment work undertaken as part of the design-development of the Proposed Development at that stage.
- 3.2.4 The scoping opinion identified a number of additional overarching EIA and topic-specific matters that were subsequently brought into the overall scope of the LVIA. Table 3-1 sets out these matters and provides a summary of how the Applicant has responded to the points raised, and where this information is reported.

Table 3-1 Landscape and visual matters raised in the Scoping Opinion

Matters raised	How this is addressed in the LVIA
Photography from a second season (ID 3.6.1): <i>'the Inspectorate considers that a single season of photography is likely to be sufficient, however this should be agreed with the local planning authority and evidence should be provided in the ES to demonstrate that visibility does not differ between summer and winter.'</i>	Approach was agreed with Stockton Borough Council. Winter photography will be added at ES stage.
National landscape character (NCA) receptors (ID 3.6.2): <i>'The Inspectorate notes the commitment to include the national level landscape character area to provide context and agrees with the rationale for scoping this out as a receptor.'</i>	NCA is included in the baseline description to provide context only.
Seascape Character Assessment for the North-east Inshore (ID 3.6.3): <i>'The Inspectorate agrees with the rationale for scoping this receptor out.'</i>	Marine Character Area is included in the baseline description to provide context only.
Site specific character (ID 3.6.4): <i>'The Inspectorate agrees with the rationale for scoping this receptor out.'</i>	The site was described and assessed as part of the project specific Local Landscape Character Area 01: Tees Industry.
Decommissioning (ID 3.6.5.): <i>'The Inspectorate agrees to scope out the impacts of this phase on landscape and visual receptors.'</i>	Decommissioning phase was not assessed.
North York Moors National Park (ID 3.6.6): <i>'The Inspectorate agrees that significant effects are not likely and this receptor can be scoped out.'</i>	Effects on North York Moors National Park was not assessed.
Residential amenity survey (ID 3.6.7): <i>'The Inspectorate agrees given the context of the site, this is not necessary.'</i>	A separate residential amenity assessment was not undertaken.
Impacts to visual amenity resulting from lighting at night (ID 3.6.8): <i>'The Inspectorate agrees with the rationale for scoping this out.'</i>	Night time visual assessment has not been undertaken.
Photomontages (ID 3.6.9): <i>'The applicant should ensure that an adequate number of photomontages are included within the assessment to ensure that the maximum visual envelope is able to be fully understood. The Inspectorate acknowledges the applicant's intention to agree viewpoint locations with local planning authorities. Evidence of any agreement reached over viewpoint locations and visualisation selection should be provided as part of the application documentation.'</i>	Locations of viewpoints and visualisations was agreed with Stockton Borough Council.

3.2.5 In addition to the matters raised in the scoping opinion, the final assessment scope has also been informed by the following:

- a. The outcomes of consultation and engagement with statutory bodies, non-statutory organisations and those with an interest in landscape character and visual amenity;
- b. Design changes made to the form and extent of the Proposed Development and the area of land required for its construction and operation; and
- c. The outcomes of further desk-based and field surveys undertaken to establish the landscape and visual baseline, and to inform the identification of the likely significant effects of the Proposed Development.

3.2.6 Consultation with Stockton-on-Tees Borough Council.

Table 3-2 Landscape and visual matters raised in consultation

Matters raised	How this is addressed in the LVIA
<p>It was suggested <i>'to consider the Proposed Development within a single season for the visual receptors (either summer or winter). Following a visit to the area in winter last year and a full site visit in summer this year the applicant is confident that a single season would be sufficient due of the openness of the landscape and the lack of screening vegetation within the views. As the visibility of the site and the Proposed Development between winter and summer would not differ noticeably, we scoped out the photography of a second season.'</i></p>	<p>Approach was accepted by Stockton Borough Council (21/11/2025)</p> <p>Winter photography will be added at ES stage in line with PINS request in scoping opinion.</p>
<p>Location of the representative viewpoints for the visual assessment and the selected locations for visualisations was suggested.</p> <p>The applicant proposed <i>'to prepare wireline visualisations of the maximum parameters of the proposed development for two of the viewpoint locations. These would be viewpoints 7 at the Saltholme RSPB and 9 at South Gare.'</i> The viewpoints were selected <i>'based on the likely impact of the development, the sensitivity of the receptor and to show the proposed development from two different angles.'</i> The applicant also aims <i>'to provide visual presentations of the indicative design.'</i></p>	<p>Locations of viewpoints and visualisations was agreed with Stockton Borough Council (12/11/2025)</p>

4. Baseline Conditions

4.1 Overview

- 4.1.1 This section summarises the information gathered and assessed to describe the study area, landscape baseline and visual baseline.

4.2 Study area

- 4.2.1 The study area for the LVIA includes all land within the Proposed Development and the area within which the Proposed Development may give rise to significant landscape and visual effects, as illustrated in Figure 13.1 (PEIR, Volume 2).
- 4.2.2 A review was undertaken to identify landscape and visual receptors that have potential to be affected by the Proposed Development. This analysis determined the study area, defined as the extent in which the Proposed Development may result in important landscape or visual effects. Visual effects can be perceived within the 10km search area from the centre of the Site. Beyond this distance, significant visual effects are not likely as the perceived height of the Proposed Development would diminish with distance. Therefore, a 10km study area was considered to be appropriate for assessing the visual effects.
- 4.2.3 The Proposed Development sits within the extensive industrial landscape along the Tees estuary. Due to the heavily industrialised nature of this landscape of which the Proposed Development is part, significant effects on landscape character are not expected beyond 2km from the Proposed Development. It is anticipated that beyond 2km the Proposed Development would be perceived as part of the wider industrial landscape along the Tees estuary. Therefore, a 2km study area is considered to be appropriate for assessing the landscape effects of the Proposed Development.
- 4.2.4 The following sections set out details of the existing landscape and visual context across this study area.

Future baseline

- 4.2.5 In the absence of the Proposed Development, the local area is likely to be subject to continued major industrial development due to the strategic location of the Tees estuary and the long-established infrastructure which facilitates the dominant industrial land uses. The Stockton-on-Tees Local Plan has identified land at Seal Sands including some areas within the Proposed Development as Specialist Employment Allocations (Policy SD 4 and Policy EG4 within Stockton-on-Tees Local Plan (Ref 12)) which will

likely see existing industrial land uses become more intensive. The numerous statutory ecological designations in the estuary provide a key constraint to new development so it is expected that the expanses of wetland in and around the estuary will remain untouched.

- 4.2.6 For the purposes of the LVIA, the future baseline scenario will assume the Specialist Employment Allocations in the Stockton-on-Tees Local Plan are fully built out during the operation phase.

4.3 Landscape baseline

Introduction

- 4.3.1 This section summarises the information gathered and assessed to describe the landscape baseline, including published landscape character assessments at various scales. It defines which landscape receptors form the basis of the assessment landscape effects and summarises the effects on these receptors. Detailed descriptions of these landscape receptors and effects are reported in Appendix 13B (PEIR, Volume 3).

Published landscape character assessments

- 4.3.2 Relevant national and district scale published landscape character assessments have been reviewed as part of the LVIA to identify the key features and characteristics of the study area.
- 4.3.3 Landscape character assessment is defined within the glossary of GLVIA3 as *the “process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive.”*. Natural England’s ‘An approach to Landscape Character Assessment’ notes the use and purpose of key characteristics, stating:
- 4.3.4 *“Key characteristics are those combinations of elements which help give an area its distinctive sense of place. If these characteristics change, or are lost, there will be significant consequences for the current character of the landscape. Key characteristics are particularly important in the development of planning and management policies. They are important for monitoring change and can provide a useful reference point against which landscape change can be assessed. They can be used as indicators to inform thinking about whether and how the landscape is changing and whether, or not, particular policies – for example - are effective and having the desired effect on landscape character.”*

National Character Areas

- 4.3.5 National Character Areas (NCA) are broad scale and provide context to more detailed studies of local landscape character.
- 4.3.6 The Proposed Development and most of the landscape study area lies within National Character Area Profile NCA 23: Tees Lowlands (Ref 28), as defined by Natural England and illustrated on Figure 13.5 (PEIR, Volume 2).
- 4.3.7 The character of NCA 23 is summarised as:
- a. Broad, low-lying and open plain;
 - b. Arable agricultural land, with low woodland cover and large fields;
 - c. Wide views to distant hills;
 - d. Large area of urban and industrial development around the Tees Estuary, much of which is on reclaimed land, contrasts with the quieter rural areas;
 - e. Major industrial installations around Teesmouth form a dramatic skyline, but are juxtaposed with expansive mudflats, sand dunes and salt marshes;
 - f. Transport corridors, power lines and energy infrastructure are conspicuous elements in the landscape; and
 - g. Brownfield sites where semi-natural vegetation has started to regenerate on previously developed land.

Marine Character Area

- 4.3.8 The seascape around England's coastline has been divided into several Marine Character Areas (MCA) (Ref 29). A small part of the Proposed Development, namely the quay and the dredging works, lie within the Marine Character Area 22 (MCA 22): Tyne, Tees and Wear Estuaries and Coastal Waters, which is illustrated on Figure 13.5 (PEIR, Volume 2).
- 4.3.9 MCA22 extends from Newbiggin Point in the north (north of Newcastle upon Tyne) to Saltburn-by-the-Sea in the south (south of Redcar) and is described within the Seascape Character Assessment for North East, Inshore and Offshore marine plan areas (MMO1134).
- 4.3.10 The relevant key characteristics of MCA 22 as described within the Seascape Character Assessment are:
- h. Busiest coastal waters off the north-east coast of England, including shipping lanes to the two main ports, Port of Tyne and Teesport, as well as recreational boating areas;
 - a. Characterised by proximity to and views of an extensively developed lowland coast, and associated estuaries, rivers and shelving coastal waters.
 - b. Tidal rivers extend inland;

- c. Brightly lit at night, particularly as a result to the large industrial area at Middlesbrough;
- d. Relatively industrialised, with a rich heritage of mining, ship building and fishing, and many sections where sea defences or harbour walls provide coastal protection;
- e. Stretches of sandy shore between settlements;
- f. Harbours defended by walls, breakwaters and piers;
- g. Ecologically diverse with internationally and national important habitats and rare species; and
- h. Expansive views across the North Sea, including views of the moving turbines of the Teesside.

Local Planning Authority Landscape Character Assessment

- 4.3.11 Onshore, the 2km landscape study area is covered by three published Landscape Character Assessments, which are illustrated on Figure 13.5 (PEIR, Volume 2):
- Stockton-on-Tees Landscape Character Assessment, which covers the area to the west of the study area and contains the East Billingham to Teesmouth Landscape Character Area (LCA) (Ref 33);
 - Redcar and Cleveland Landscape Character Assessment, which covers the area to the east of the River Tees and contains the Redcar Flats LCA (Ref 33); and
 - Hartlepool Landscape Character Assessment, which covers the area north of Greatham Creek; and includes Coastal and Estuarine Landscape Character Types (LCT) (Ref 35), which are relevant to the Site.
- 4.3.12 The published Landscape Character Areas are listed for information only. They do not cover the whole extent of the study area and are too broad in their description of the baseline and in some cases combine areas of different sensitivities. Whilst the published Landscape Character Areas will not be further assessed, they helped to inform the project specific Local Landscape Character Areas (LLCA) below.
- 4.3.13 For the purpose of this assessment a total of 5 Local Landscape Character Areas have been identified to provide a finer level of detail to inform the assessment of landscape effects. These LLCA, the location and extents of which are illustrated on Figure 13.6 (PEIR, Volume 2) have been defined through desk study and fieldwork surveys to detail existing landscape character at a more relevant and proportionate scale to the Proposed Development. Baseline descriptions of each LLCA are provided in Appendix 13B (PEIR, Volume 3).

Summary of landscape baseline

- 4.3.14 Table 4-1 below sets out the landscape receptors that will form the basis of the assessment of landscape effects.

Table 4-1 Landscape receptors

Landscape receptor	Value attached to landscape	Susceptibility	Sensitivity
LLCA 1 Tees Industry	Very Low	Very Low	Very Low
LLCA 2 Tees Urban/Residential	Low	High	Medium
LLCA 3 Tees Coast and Estuary	High	High	High
LLCA 4 Tees Wetlands	High	High	High
LLCA 5 Tees Farmland	Medium	High	High

4.4 Visual baseline

Introduction

- 4.4.1 This section summarises the visual baseline identified within the study area through a review of Zone of Theoretical Visibility (ZTV) and through fieldwork surveys. Detailed descriptions of the baseline and likely effects are provided in Appendix 13C (PEIR, Volume 3).

Zones of Theoretical Visibility

- 4.4.2 The ZTV presented in Figure 13.7 (PEIR, Volume 2) has been used to help identify sensitive visual receptor groups and locate representative viewpoints.
- 4.4.3 Fieldwork surveys have shown that buildings as well as vegetation such as scrub, trees and hedges along field boundaries and private gardens which are not modelled into the ZTV, further reduce the extent of visibility indicated on the ZTVs.

Visual receptors and representative viewpoints

- 4.4.4 Visual receptors likely to experience views of the construction or existence and operation of the Proposed Development were identified through interrogation of the ZTVs and fieldwork.
- 4.4.5 Where a collection of visual receptors in the same category are located in proximity and are likely to experience similar views, they have been grouped.
- 4.4.6 Representative viewpoints have been used to inform the assessment of visual effects. These viewpoints, which have been agreed with the local

authorities, have been selected to represent a range of close, middle and long-distance views from various receptor groups including residents, recreational users and people travelling through the area.

- 4.4.7 Appendix 13C (PEIR, Volume 3) sets out in detail the baseline and assessment of effects relating to the visual receptors associated with each viewpoint. The location of these viewpoints is shown in Figure 13.7 (PEIR, Volume 2).
- 4.4.8 Annotated photographs of the existing baseline view are included for each representative viewpoint. Visualisations are presented for viewpoints 7 at RSBP and 9 at South Gare. To show the maximum parameters of the Proposed Development wirelines of the proposed scheme have been prepared. Visualisations showing an indicative design have been prepared for the same viewpoints. These Baseline photography and visualisations are shown on Figures 13.8 - 13.17 (PEIR, Volume 2).

Summary of visual baseline

- 4.4.9 This section provides a summary of the extent and character of views and visual amenity across the study area, determined through desk study and fieldwork. Table 4-2 below sets out the visual receptors that will form the basis of the assessment of visual effects.

Table 4-2 Representative viewpoints and visual receptors

Representative viewpoint	Associated visual receptor groups	Sensitivity attached to views
1 Hartlepool seafront	residents of local communities	High
1 Hartlepool seafront	recreational	High
2 Seaton Carew, Seaton Sands	residents of local communities	High
2 Seaton Carew, Seaton Sands	recreational	High
3 North Gare Sands	recreational	High
4 Seal Sands car park, hide	recreational	High
5 Cowpen Bewley Woodland Park	recreational	High
6 Cowpen Bewley	residents of local communities	High
6 Cowpen Bewley	recreational	Medium
7 Saltholme RSPB	recreational	High
8 Port Clarence	residents of local communities	High
8 Port Clarence	recreational	Medium
9 South Gare	recreational	High
10 Eston Nab	recreational	High

5. Development Design and Impact Avoidance

5.1 Overview

- 5.1.1 Due to the functional and operational requirements of the Proposed Development as well as the scale of the built structures there is limited scope for avoidance of impact on the landscape and visual resource through design. Nevertheless, a design concept has been developed by an architect and design matters will be addressed through a Design Approach Document that will be prepared to accompany the DCO application. Some points for construction and operation have been listed below.

Construction

- 5.1.2 The Outline Construction Environmental Management Plan (oCEMP) will detail the general construction measures that would be implemented during construction of the Proposed Development to mitigate temporary effects. These measures will include:

- a. Lighting will be designed to include shielded and directional luminaires to limit the amount of light spill.

Operation

- 5.1.3 Where cladding is used for the components of the Proposed Development, this will be completed using visually recessive, non-reflective colours to reduce their visual prominence and to blend in with surrounding industrial features.
- 5.1.4 Proposed planting would not be effective in screening the proposed stacks, columns and tall buildings in long distance views due to their scale.

6. Likely Impacts and Effects of the Proposed Development

6.1 Overview

- 6.1.1 This section summarises the landscape and visual impacts and effects. A full description of the Proposed Development is provided in Chapter 4: Proposed Development (PEIR, Volume 1). A detailed assessment of all landscape and visual effects, including those that are considered not significant, are reported in Appendices 13C and 13D (PEIR, Volume 3) respectively.

6.2 Landscape impacts and effects

Potential landscape impacts of construction

- 6.2.1 Impacts on landscape during construction of the Proposed Development are likely to include the following:
- Installation of temporary boundary hoardings;
 - Site clearance including vegetation removal;
 - Establishment of temporary site compound including materials storage, plant and machinery, site office, welfare facilities and parking;
 - Earthworks and soil movement, including excavations, grading and reprofiling, and stockpiling of materials;
 - Movement and presence of HGVs and marine vessels, deliveries and transportation of materials and associated construction traffic and activity in and around the Site;
 - Construction of new buildings, process plants and equipment for the SAF Production Facility including various stacks and flare (up to 140m high), process columns (up to 90m), buildings of various heights (up to 80m), towers and silos (up to 65m), including the use of piling equipment, cranes, and temporary scaffolding;
 - Installation of utility connection corridors, including some above ground pipework;
 - Demolition of existing jetties and construction of new quay; and
 - Temporary lighting to facilitate nighttime working and as required for security.
- 6.2.2 The overall construction and commissioning period would be approximately 3-4 years in duration.

Summary of landscape effects of construction

- 6.2.3 The following section provides a summary of the significant landscape

effects that would result from the construction of the Proposed Development. A detailed assessment of all landscape effects, including those that are considered not significant, is reported in Appendix 13B (PEIR, Volume 3).

- 6.2.4 Due to the presence of the existing heavy industry within the Tees Valley, all effects during the construction phase have been judged as not significant for all landscape receptors. The Proposed Development would result in a barely noticeable change for the Tees Lowlands NCA (NCA 23) and only a slight change to the character for all other landscape receptors. Table 6-1 provides a summary of the assessment of the landscape effects during construction.

Table 6-1 Summary of landscape effects of construction

Landscape receptor	Sensitivity	Magnitude of impact	Significance of effect
LLCA 1 Tees Industry	Very Low	Medium	Minor adverse (not significant)
LLCA 2 Tees Urban/Residential	Medium	Very low	Minor adverse (not significant)
LLCA 3 Tees Coast and Estuary	High	Very low	Minor adverse (not significant)
LLCA 4 Tees Wetlands	High	Very low	Minor adverse (not significant)
LLCA 5 Tees Farmland	High	Very low	Minor adverse (not significant)

Potential landscape impacts during operation

- 6.2.5 Impacts on landscape during the operation of the Proposed Development are likely to include the following:
- j. Change of use from hardstanding, grassland and scrub to heavy industry with ancillary structures and elements including associated parking, access roads, security fencing;
 - k. Presence of new built form, process plants and equipment for the SAF facility within the Main Site, including various stacks and flare (up to 140m), process columns (up to 90m), buildings of various heights (up to 80m), towers and silos (up to 65m) and associated structures and infrastructure;
 - a. Additional above ground pipes and cables within existing pipeline corridors;
 - b. Presence of new quayside and moored vessels;
 - c. Presence of other associated features, such as administration buildings, kiosks, welfare facilities, laydown areas, drainage; and
 - d. New hard landscaping.

Summary of landscape effects during operation

- 6.2.6 This section provides a summary of the significant landscape effects that would result from the Proposed Development during operation. A detailed assessment of all landscape effects, including those that are considered not significant, is reported in Appendix 13B (PEIR, Volume 3).
- 6.2.7 Due to the presence of the existing heavy industry within the Tees Valley, all effects during the operation have been judged as not significant for all landscape receptors. The Proposed Development would result in a barely noticeable change for the Tees Lowlands NCA (NCA 23) and only a slight change to the character for all other landscape receptors. Table 6-2 provides a summary of the assessment of the landscape effects during operation.

Table 6-2 Summary of landscape effects at existence and operation

Landscape receptor	Sensitivity	Magnitude of impact	Significance of effect
NCA: Tees Lowlands (NCA 23)	Very Low	Medium	Minor adverse (not significant)
LLCA 1 Tees Industry	Medium	Very low	Minor adverse (not significant)
LLCA 2 Tees Urban/Residential	High	Very low	Minor adverse (not significant)
LLCA 3 Tees Coast and Estuary	High	Very low	Minor adverse (not significant)
LLCA 4 Tees Wetlands	High	Very low	Minor adverse (not significant)
LLCA 5 Tees Farmland	Very Low	Medium	Minor adverse (not significant)

6.3 Visual impacts and effects

Potential visual impacts of construction

- 6.3.1 Impacts on visual receptors during construction of the Proposed Development include the same as identified under landscape impacts of construction, described in 6.2.1 and 6.2.2.

Summary of visual effects of construction

- 6.3.2 The following section provides a summary of the significant visual effects that would result from the construction of the Proposed Development. A detailed assessment of all visual effects, including those that are

considered not significant, is reported in Appendix 13C (PEIR, Volume 3).

6.3.3 All other visual receptors would only receive a small or barely perceivable change in the view as a result of the Proposed Development.

6.3.4 Table 6-3 provides a summary of the assessment of the visual effects during operation.

Table 6-3 Summary of visual effects of construction

Visual receptor group number	Visual receptor group name	Sensitivity	Magnitude of impact	Significance of effect
1 Hartlepool seafront, residential	residents of local communities	High	Very low	Minor adverse (not significant)
1 Hartlepool seafront, recreational	recreational	High	Very low	Minor adverse (not significant)
2 Seaton Carew, Seaton Sands, residential	residents of local communities	High	Very low	Minor adverse (not significant)
2 Seaton Carew, Seaton Sands, recreational	recreational	High	Very low	Minor adverse (not significant)
3 North Gare Sands	recreational	High	Very low	Minor adverse (not significant)
4 Seal Sands car park, hide	recreational	High	Medium	Moderate adverse (significant)
5 Cowpen Bewley Woodland Park	recreational	High	Very low	Minor adverse (not significant)
6 Cowpen Bewley, residential	residents of local communities	High	Very low	Minor adverse (not significant)
6 Cowpen Bewley, recreational	recreational	Medium	Very low	Minor adverse (not significant)
7 Saltholme RSPB	recreational	High	Medium	Moderate adverse (significant)
8 Port Clarence, residential	residents of local communities	High	Low	Minor adverse (not significant)
8 Port Clarence, recreational	recreational	Medium	Low	Minor adverse (not significant)
9 South Gare	recreational	High	Very low	Minor adverse (not significant)
10 Eston Nab	recreational	High	Very low	Minor adverse (not significant)

Potential visual impacts at existence and operation

6.3.5 Impacts on visual receptors during operation of the Proposed Development

are likely to include changes to views and visual amenity as a result of the same impacts identified for operation of landscape impacts, described in 6.2.5.

- 6.3.6 The cooling tower cells are expected to be of a height of around 29m. A visible plume is expected from the cooling towers during certain weather conditions although exact evaporative losses are to be confirmed for the ES. If appropriate, a visible plume assessment will be undertaken for the ES to inform whether any plume visibility mitigation is required.

Summary of visual effects at existence and operation

- 6.3.7 The following section provides a summary of the significant visual effects that would result from the operation of the Proposed Development. A detailed assessment of all visual effects, including those that are considered not significant, is reported in Appendix 13C (PEIR, Volume 3).
- 6.3.8 All other visual receptors would only receive a small or barely perceivable change in the view as a result of the Proposed Development.
- 6.3.9 Table 6-4 provides a summary of the assessment of the visual effects during operation.

Table 6-4 Summary of visual effects at existence and operation

Visual receptor group number	Visual receptor group name	Sensitivity	Magnitude of impact	Significance of effect
1 Hartlepool seafront, residential	residents of local communities	High	Very low	Minor adverse (not significant)
1 Hartlepool seafront, recreational	recreational	High	Very low	Minor adverse (not significant)
2 Seaton Carew, Seaton Sands, residential	residents of local communities	High	Very low	Minor adverse (not significant)
2 Seaton Carew, Seaton Sands, recreational	recreational	High	Very low	Minor adverse (not significant)
3 North Gare Sands	recreational	High	Very low	Minor adverse (not significant)
4 Seal Sands car park, hide	recreational	High	Medium	Moderate adverse (significant)
5 Cowpen Bewley Woodland Park	recreational	High	Very low	Minor adverse (not significant)
6 Cowpen Bewley, residential	residents of local communities	High	Very low	Minor adverse (not significant)
6 Cowpen Bewley, recreational	recreational	Medium	Very low	Minor adverse (not significant)
7 Salholme RSPB	recreational	High	Medium	Moderate adverse (significant)
8 Port Clarence, residential	residents of local communities	High	Low	Minor adverse (not significant)
8 Port Clarence, recreational	recreational	Medium	Low	Minor adverse (not significant)
9 South Gare	recreational	High	Very low	Minor adverse (not significant)
10 Eston Nab	recreational	High	Very low	Minor adverse (not significant)

7. Mitigation and Enhancement Measures

7.1 Overview

- 7.1.1 The most effective mitigation for adverse landscape and visual effects is to avoid impacts at source as part of the design process. All landscape mitigation is therefore considered embedded and primary. Embedded measures are modifications to the design of a scheme, made during the pre-application phase, which are an inherent part of the design and do not require additional action to be taken.

Construction phase

- 7.1.2 Due to the scale of the Proposed Development, additional planting would not be effective in mitigating landscape or visual effects during the construction phase. There are therefore no proposals for further mitigation measures to be embedded within the design.

Operation phase

- 7.1.3 Due to the scale of the Proposed Development, additional planting would not be effective in mitigating landscape or visual effects during the operational phase. There are therefore no proposals for further mitigation measures to be embedded within the design at this stage.

8. Residual Effects and Conclusions

8.1 Overview

- 8.1.1 No additional mitigation is likely to materially reduce the effects of the construction and operational phases on landscape and visual receptors. Therefore, residual effects for all landscape and visual receptors are considered the same as identified in Section 6.

9. Summary of Significant Effects

9.1 Introduction

- 9.1.1 Summaries of the potential significant effects associated with the construction (and decommissioning) and operation of the Proposed Development are presented in Table 9-1 and

9.1.3 Table 9-2, respectively.

Table 9-1 Construction (and Decommissioning) Phase

Potential Impact	Receptor	Importance (Sensitivity)	Magnitude of Impacts	Likely Significant Effects	Proposed Mitigation	Residual Effects
Landscape character						
Loss of vegetation, Loss of openness, Introduction of large scale Construction works in the landscape	LLCA 1 Tees Industry	Very Low	Medium	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 2 Tees Urban /Residential	Medium	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 3 Tees Coast and Estuary	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 4 Tees Wetlands	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 5 Tees Farmland	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
Visual amenity						
Loss of vegetation, Loss of openness, Introduction of large scale Construction works in views	1 Hartlepool seafront, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	1 Hartlepool seafront, recreational	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	2 Seaton Carew, Seaton Sands, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	2 Seaton Carew, Seaton Sands, recreational	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)

	3 North Gare Sands	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	4 Seal Sands car park, hide	High	Medium	Moderate adverse (significant)	n/a	Moderate adverse (significant)
	5 Cowpen Bewley Woodland Park	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	6 Cowpen Bewley, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	6 Cowpen Bewley, recreational	Medium	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	7 Saltholme RSPB	High	Medium	Moderate adverse (significant)	n/a	Moderate adverse (significant)
	8 Port Clarence, residential	High	Low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	8 Port Clarence, recreational	Medium	Low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	9 South Gare	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	10 Eston Nab	High	Very Low	Minor adverse (not significant)	n/a	Minor adverse (not significant)

Table 9-2 Operation Phase

Potential Impact	Receptor	Importance (Sensitivity)	Magnitude of Impacts	Likely Significant Effects	Proposed Mitigation	Residual Effects
Landscape character						
Loss of vegetation Loss of openness, Introduction of new large scale industrial structures (such as stacks and flares up to 140m, large scale buildings and columns, far reaching connection corridors) in the landscape	LLCA 1 Tees Industry	Very Low	Medium	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 2 Tees Urban /Residential	Medium	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 3 Tees Coast and Estuary	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 4 Tees Wetlands	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	LLCA 5 Tees Farmland	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
Visual amenity						
Loss of vegetation, Loss of openness, Introduction of new large scale industrial structures (such as stacks and flares up to 140m, large scale buildings and columns, far reaching connection corridors) in views	1 Hartlepool seafront, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	1 Hartlepool seafront, recreational	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	2 Seaton Carew, Seaton Sands, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	2 Seaton Carew, Seaton Sands, recreational	High	Very low	Minor adverse (not significant)		Minor adverse (not significant)
	3 North Gare Sands	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)

	4 Seal Sands car park, hide	High	Medium	Moderate adverse (significant)	n/a	Moderate adverse (significant)
	5 Cowpen Bewley Woodland Park	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	6 Cowpen Bewley, residential	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	6 Cowpen Bewley, recreational	Medium	Very low	Minor adverse (not significant)		Minor adverse (not significant)
	7 Saltholme RSPB	High	Medium	Moderate adverse (significant)	n/a	Moderate adverse (significant)
	8 Port Clarence, residential	High	Low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	8 Port Clarence, recreational	Medium	Low	Minor adverse (not significant)		Minor adverse (not significant)
	9 South Gare	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)
	10 Eston Nab	High	Very low	Minor adverse (not significant)	n/a	Minor adverse (not significant)

References

- Ref 1 Landscape Institute and the Institute of Environmental Management and Assessment. The Guidelines for Landscape and Visual Assessment (GLVIA). 3rd edition. Oxon: Routledge, 2013.
- Ref 2 Landscape Institute. Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3). Landscape Institute Technical Guidance Note LITGN-2024-01. 2024. (Online) Available from: https://www.landscapeinstitute.org/wp-content/uploads/2024/08/LITGN-2024-01-GLVIA3-NC_Aug-2024.pdf (Accessed 20 November 2025).
- Ref 3 Council of Europe. The European Landscape Convention (ELC), 2000 Ref 10.8: UK Government (2008) Town and Country Planning Act. Available from: <https://rm.coe.int/european-landscape-convention-book-text-feb-2008-en/16802f80c6> (Accessed 20 November 2025).
- Ref 4 UK Government. Town and Country Planning Act 1990, 2025 (Online) Available from: <https://www.legislation.gov.uk/ukpga/1990/8/contents> (Accessed 20 November 2025).
- Ref 5 UK Government. Countryside and Rights of Way Act (2000), 2025. (Online) Available from: <https://www.legislation.gov.uk/ukpga/2000/37/contents>. (Accessed 20 November 2025).
- Ref 6 UK Government. Planning Act 2008, 2008 (Online) Available from: <https://www.legislation.gov.uk/ukpga/2008/29/contents> (Accessed 20 November 2025).
- Ref 7 Department for Energy Security and Net Zero. Overarching National Policy Statement (NPS) for Energy (EN-1), 2024. (Online) Available from: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1> (Accessed 20 November 2025).
- Ref 8 Department for Energy Security and Net Zero. Overarching National Policy Statement (NPS) for Renewable Energy Infrastructure (EN-3), 2024. (Online) Available from: <https://www.gov.uk/government/publications/deleted-national-policy-statement-for-renewable-energy-infrastructure-en-3> (Accessed 20 November 2025).
- Ref 9 Ministry of Housing, Communities & Local Government. National Planning Policy Framework, 2024. (Online) Available from: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (Accessed 20 November 2025).
- Ref 10 HM Government. UK Marine Policy Statement, 2011. (Online) Available from: <https://assets.publishing.service.gov.uk/media/5a795700ed915d042206795b/pb3654-marine-policy-statement-110316.pdf> (Accessed 20 November 2025).
- Ref 11 HM Government. North East Inshore and North East Offshore Marine Plan, 2021. (Online) Available from: https://assets.publishing.service.gov.uk/media/60f6f3df8fa8f50c7450ebf1/FINAL_North_East_Marine_Plan_1.pdf (Accessed 20 November 2025).

- Ref 12 Stockton-on-Tees Borough Council. Local Plan, 2019. (Online) Available from: https://www.stockton.gov.uk/media/2518/Local-Plan-2019/pdf/Local_Plan_2019.pdf?m=1645450086087 (Accessed 20 November 2025).
- Ref 13 Hartlepool Borough Council. Hartlepool Local Plan, 2018. (Online) Available from: <https://www.hartlepool.gov.uk/downloads/download/15/hartlepool-local-planning-framework> (Accessed 20 November 2025).
- Ref 14 Middlesbrough Council. Middlesbrough Publication Local Plan, 2025. (Online) Available from: <https://www.middlesbrough.gov.uk/media/3wwgjfal/lp-middlesbrough-publication-local-plan-2025.pdf> (Accessed 20 November 2025).
- Ref 15 Middlesbrough Borough Council. Middlesbrough Housing Local Plan: Housing Core Strategy and Housing Development Plan Document, 2014. (Online) Available from: <https://www.middlesbrough.gov.uk/media/kkql4nqi/planning-policy-housing-local-plan-2014.pdf> (Accessed 20 November 2025).
- Ref 16 Middlesbrough Borough Council. Middlesbrough Local Development Framework: Core Strategy, 2008. (Online) Available from: <https://www.middlesbrough.gov.uk/media/2nvloyfb/planning-policy-core-strategy-2008.pdf> (Accessed 20 November 2025).
- Ref 17 Middlesbrough Borough Council. Middlesbrough Local Plan Saved policies within the Middlesborough Local Plan, 1999 (Online) Available from: https://www.cartogold.co.uk/MiddlesbroughLDF2016/saved_text/00_contents.html (Accessed 20 November 2025).
- Ref 18 Redcar and Cleveland Borough Council. Redcar & Cleveland Local Plan, 2018. Available at: <https://www.redcar-cleveland.gov.uk/planning/local-plan/redcar-and-cleveland-local-plan> (Accessed 20 November 2025).
- Ref 19 Tees Valley Joint Strategy Unit. Tees Valley Green Infrastructure Strategy, 2008. (Online). Available from: teesvalleynaturepartnership.org.uk/wp-content/uploads/2013/11/Tees-Valley-Green-Infrastructure-Strategy.pdf (Accessed 20 November 2025).
- Ref 20 Department for Environment, Food and Rural Affairs. Biodiversity net gain, 2025. (Online) Available from: <https://www.gov.uk/government/collections/biodiversity-net-gain> (Accessed 20 November 2025).
- Ref 21 Natural England. An Approach to Landscape Character Assessment, 2014. (Online) Available from: <https://assets.publishing.service.gov.uk/media/5aabd31340f0b64ab4b7576e/landscape-character-assessment.pdf> (Accessed 20 November 2025).
- Ref 22 Landscape Institute. Visual Representation of Development Proposals, Landscape Institute Technical Guidance Note (LITGN) 06/19, 2019. (Online) Available from: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstituteorg/2019/09/LI_TGN-06-19_Visual_Representation.pdf (Accessed 20 November 2025).
- Ref 23 Planning Inspectorate. Guidance: Nationally Significant Infrastructure Projects: Advice on Good Design, 2025. (Online) Available from:

- <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-good-design> (Accessed 20 November 2025).
- Ref 24 Landscape Institute. Assessing landscape value outside national designations, Technical Guidance Note 02/21, 2021. (Online) Available from: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2021/05/tgn-02-21-assessing-landscape-value-outside-national-designations.pdf> (Accessed 20 November 2025).
- Ref 25 Landscape Institute. Infrastructure, Technical Guidance Note 04/20, 2020. (Online) Available from: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2018/01/LI-Infrastructure-TGN-FINAL-200924.pdf> (Accessed 20 November 2025).
- Ref 26 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities. Planning Practice Guidance (PPG), Natural Environment (Landscape), 2025. (Online) Available from: <https://www.gov.uk/guidance/natural-environment> (Accessed 20 November 2025).
- Ref 27 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities. Planning Practice Guidance (PPG), Renewable and Low-carbon Energy, 2023. (Online) Available from: <https://www.gov.uk/guidance/renewable-and-low-carbon-energy> (Accessed 20 November 2025).
- Ref 28 Natural England. National Character Assessment 23 Tees Lowlands, 2014. (Online) Available from: <https://nationalcharacterareas.co.uk/tees-lowlands/> (Accessed 20 November 2025).
- Ref 29 Marine Management Organisation. MMO 1134: Seascape Character Assessment for the North East Inshore and Offshore marine plan areas, 2018. (Online) Available from: https://assets.publishing.service.gov.uk/media/5bcdac56ed915d4334b5e1f5/North_East_-_Seascape_character_assessment_report.pdf (Accessed 20 November 2025).
- Ref 30 Middlesbrough Council, Middlesbrough Publication Local Plan, 2025. (online) Available from: [Middlesbrough Publication Local Plan. March 2025](#)
- Ref 31 Middlesbrough Council, Housing Core Strategy and Housing Development Plan Document, 2014. (Online) Available from: [planning-policy-housing-local-plan-2014.pdf](#)
- Ref 32 Middlesbrough Council, Middlesbrough Local Development Framework, 2008 (Online) Available from: [untitled](#)
- Ref 33 WYG Environment. Stockton-on-Tees Borough Council, Stockton-on-Tees Landscape Character Assessment, 2011. (Online) Available from: https://www.stockton.gov.uk/media/3151/Landscape-Character-Assessment-Reportwithappendices/pdf/Landscape_Character_Assessment_Report_with_appendices.pdf?m%20=637889964559870000 (Accessed 20 November 2025).

- Ref 34 Redcar & Cleveland Borough Council. Redcar & Cleveland Borough Council Landscape Character SPD, 2010. (Online) Available from: <https://www.redcarcleveland.gov.uk/sites/default/files/2022-05/Landscape%20Character%20SPD.pdf>
- Ref 35 Hartlepool Borough Council, The Landmark Partnership. Hartlepool Landscape Assessment, 2000. (Online) Available from: https://www.hartlepool.gov.uk/download/downloads/id/2967/hlp03_49_hbc_landscape_assessment_2000pdf.pdf



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