HyNet North West

ENVIRONMENTAL STATEMENT (VOLUME II)

Chapter 12 – Landscape and Visual

HyNet Carbon Dioxide Pipeline DCO

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(a)

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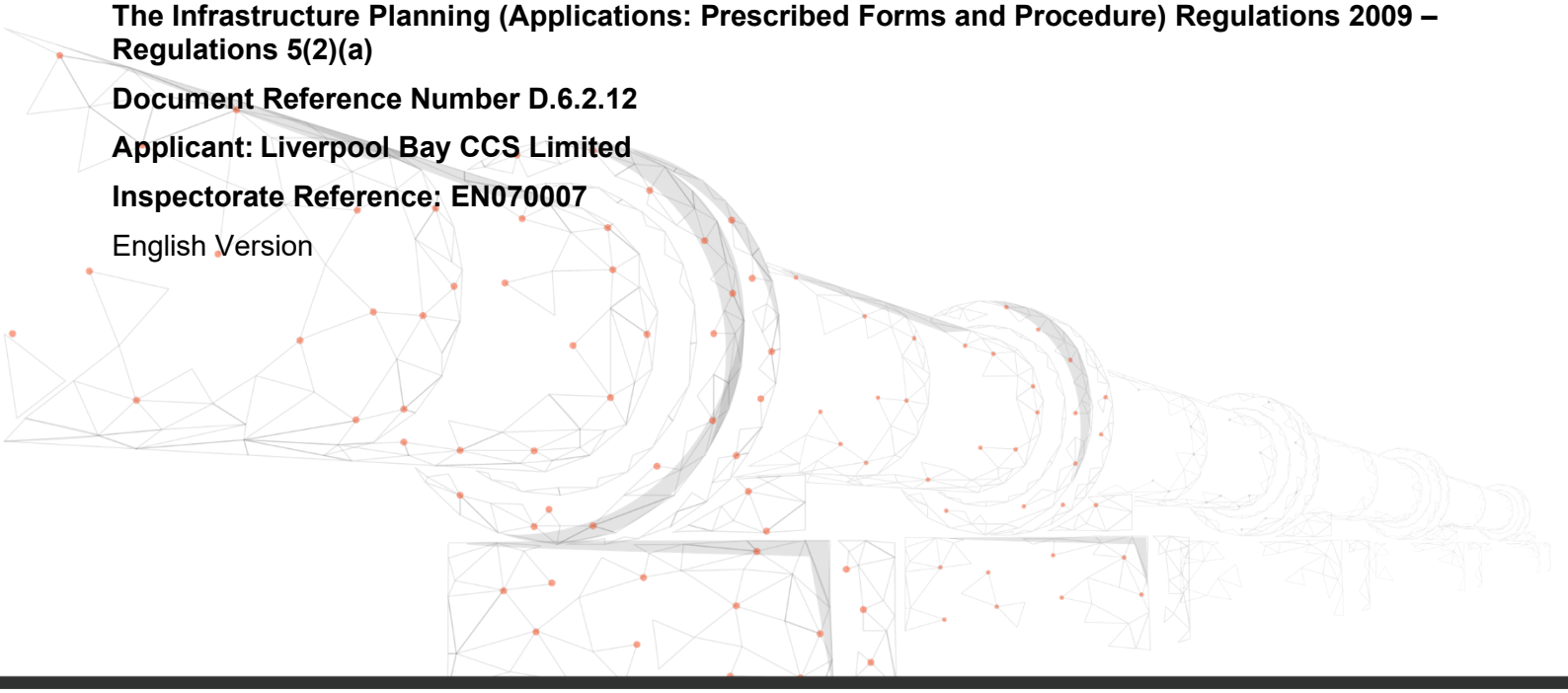

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12 LANDSCAPE AND VISUAL

12.1 INTRODUCTION

BACKGROUND

12.1.1 This Chapter reports the assessment of the likely significant effects of the Development Consent Order (DCO) Proposed Development on landscape character and visual amenity and describes:

- Relevant, legislation, policy and guidance;
- Consultation undertaken;
- Scope of the assessment;
- Assessment methodology;
- Baseline conditions;
- Sensitive receptors;
- Design development and embedded mitigation;
- Assessment of likely impacts and effects;
- Mitigation and enhancement measures;
- Residual effects;
- Monitoring; and
- Next steps.

12.1.2 This Chapter (and its associated figures and appendices) is intended to be read as part of the wider ES, with particular reference to **Chapter 8 - Cultural Heritage** and **Chapter 9 - Biodiversity (Volume II).** The ES contains an **Arboricultural Impact Assessment (Appendix 9-11, Volume III)** which sits within **Chapter 9 - Biodiversity (Volume II).**

12.1.3 In line with **Appendix 5.1 - Relevant Expertise and Competency (Volume III),** this Landscape and Visual Impact Assessment (LVIA) has been undertaken and reviewed by Chartered Landscape Architects on behalf of the Applicant

12.1.4 Landscape and visual assessments are separate although linked processes, describing closely related but distinct sets of effects.

LANDSCAPE

12.1.5 The landscape assessment considers the effects of change and development on landscape as a resource.

12.1.6 The character of the landscape derives from a combination of physical factors, natural processes, and human intervention. Landscape effects are a combination of the physical changes to the landscape and how these will be perceived.

12.1.7 The landscape assessment considers the effects of the DCO Proposed Development on the landscape as a whole, effects on significant individual elements of the landscape, and effects on characteristic combinations or patterns of elements and how these are seen to affect its character and quality.

VISUAL

12.1.8 The visual assessment is concerned with the views that are available to people who may be affected by the DCO Proposed Development, and their perception of and responses to changes in these views, based on presumed levels of interest in and sensitivities to their visual environment.

12.1.9 Visual effects arise from changes in the composition and character of views available in the area affected. The assessment considers the likely change that would be experienced, including the effects both on specific views and on general visual amenity – the pleasantness of the view or outlook – that the people potentially affected enjoy.

12.1.10 For the purposes of assessment, whilst it is the people living, working, passing through or enjoying recreational activities in the area who actually see the views and derive the visual amenity, it is their general locations that are mapped and described as the visual receptors.

12.1.11 This Chapter should be read in conjunction with the following Appendices:

- **Appendix 12.1 - Baseline Information (Volume (III)**
- **Appendix 12.2 - LVIA Methodology (Volume III)**
- **Appendix 12.3 - Landscape Analysis (Volume III)**
- **Appendix 12.4 – Visual Analysis (Volume III)**

12.1.12 This Chapter is also supported by figures as follows:

- **Figure 12.1 - Zone of Theoretical Visibility (Volume IV)**
- **Figure 12.2 - Landscape character plan (Volume IV)**
- **Figure 12.3 - Viewpoint plan (Volume IV)**
- **Figure 12.4 - Viewpoint photography (Volume IV)**
- **Figure 12.5 - Photomontages (Volume IV)**

12.2 LEGISLATIVE AND POLICY FRAMEWORK

12.2.1 This assessment has considered the current legislation, policy, and guidance relevant to the LVIA. The applicable legislative and policy framework is listed and summarised in the following section with further detail set out in **Appendix 12.1 - Baseline Information (Volume III).**

LEGISLATIVE FRAMEWORK

International

European Landscape Convention

12.2.2 The UK is a signatory to the European Landscape Convention (ELC) (Ref. 12.1) which was ratified in 2006 and became binding in the UK from 1 March 2007.

12.2.3 The ELC requires “landscape to be integrated into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as any other policies with possible direct or indirect impacts on landscape”.

National

Countryside Rights of Way Act 2000

12.2.4 The Countryside and Rights of Way Act 2000 (CRoW) (Ref. 12.2) provides a statutory framework for protected landscapes and introduced an additional right of access requiring the identification of “open access land”.

POLICY

National

National Policy Statement

12.2.5 The Overarching National Policy Statement for Energy (‘EN-1’) (**Ref. 12.3**) Department for Energy and Climate Change (DECC, 2011) provides a number of statements and guidance of relevance to the landscape, including green infrastructure (‘GI’) and visual impacts of energy infrastructure in general. The National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (**Ref. 12.16**), within section 2.21, Gas and Oil Pipelines Impacts: Biodiversity and Landscape and Visual, also provides policy guidance with regard to long term impacts and appropriate assessment and mitigation of pipeline features.

National Planning Policy Framework (NPPF) - England

12.2.6 Whilst it does not contain specific policies for Nationally Significant Infrastructure Projects, the NPPF (Ministry of Housing, Communities and Local Government (‘MHCLG’), July 2021) (**Ref. 12.4**) may be considered to contain matters that are relevant to the determination of NSIPs. It is therefore appropriate to consider relevant policies therein contained to the assessment of the landscape and visual impacts of the DCO Proposed Development.

Planning Policy Wales (PPW)

12.2.7 The PPW (Welsh Government, 2021) (**Ref. 12.5**) sets out key guidance and planning policies for development and achieving good design throughout Wales with reference to landscape and natural spaces.

Local

12.2.8 The Landscape and Visual Study Area (described further in **Section 12.5**) spans two Local Planning Authority (LPA) areas: Cheshire West and Chester Council, and Flintshire County Council.

Cheshire West and Chester Council (CWCC)

12.2.9 The Local Plan for CWCC is separated into two parts. Part One (CWCC, 2015) (**Ref. 12.6**) outlines the strategic policies for the area, with Part Two (CWCC, 2019) (**Ref. 12.7**) providing land allocations and detailed policies.

Flintshire County Council (FCC)

12.2.10 The FCC 'Unitary Development Plan 2000-2015' (FCC, 2011) (**Ref. 12.8**) provides key guidance for the development throughout Flintshire. The Development Plan provides a number of policies relating to landscape and sets out a number of design ambitions for the area.

GUIDANCE

12.2.11 This LVIA follows the methodology set out in **Appendix 12.2 - LVIA Methodology (Volume III)** and is in accordance with industry best practice set out in Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (**Ref. 12.9**).

12.2.12 The following sources have also been referred to in the preparation of the methodology for this LVIA and production of visual representations:

- IEMA, Guidelines for Environmental Impact Assessment (2004) (**Ref. 12.10**).
- An Approach to Landscape Character Assessment", Natural England (2014) (**Ref. 12.11**).
- Landscape Institute Technical Guidance Note (TGN) 06/19 (2019); 'Visual Representation of Development Proposals' (**Ref. 12.12**).

12.3 SCOPING OPINION AND CONSULTATION

RESPONSE TO THE SCOPING OPINION

12.3.1 An EIA Scoping Opinion (**Appendix 1-2 – EIA Scoping Opinion, Volume III**) was received by the Applicant from the Planning Inspectorate ('The Inspectorate') on 14 July 2021, including formal responses from Statutory Consultees. A full list of the responses from The Inspectorate and how these

requirements have been addressed by the Applicant are set out in **Appendix 1-3 – EIA Scoping Opinion and Applicant Response (Volume III)**.

CONSULTATION UNDERTAKEN TO DATE

12.3.2 Consultation forms a key part of the DCO Application process and consultation has been undertaken throughout the EIA process for the LVIA.

12.3.3 Pre-application consultation has taken place with technical specialists in the LPAs to agree the scope of the LVIA with regard to the Study Area and representative viewpoints. Discussions have included FCC and CWCC with further advice sought from Natural Resources Wales (NRW), Natural England (NE) and the Canals & River Trust (CRT).

12.3.4 Table 12-1 provides a summary of the consultation undertaken to inform this LVIA.

Table 12.1 – Summary of Consultation Undertaken

Body / organisation	Meeting dates and other forms of consultation	Summary of outcome of discussions
Flintshire County Council (FCC)	An email was issued by the LVIA team on 9 December 2021 outlining the selection of proposed viewpoints along with a viewpoint location plan and baseline photography. The email also highlighted the viewpoints that had been removed from those set out at Scoping stage as a result of design changes. The selection of viewpoints includes those with views incorporating the Shropshire Union Canal and River Dee. It was suggested that up to 6 of the proposed viewpoints will be represented by photomontages.	The information has been issued and currently awaiting a response. No direct response to this email was received, however, the PEIR was submitted shortly after this point in February which also incorporated these items. FCC did provide a response to that which set out broad agreement with the approach to the Landscape and Visual Chapter.
	A further email was issued by the LVIA team on the 12 July 2022, outlining items relating to: • Above Ground Installation (AGI) height increase from 4.5m to 5m; • Lighting columns decrease from 8m to 5m; • Viewpoint plan and proposed photomontage locations; and • Mitigation principles and the assessment assumptions associated with them.	No direct response to this email has been received to date from FCC. However, specifically relating to the lighting column decrease, during the consultation relating to the TCPA Planning Applications, FCC requested a reduction in heights of lighting columns. Subsequent targeted consultation responses from FCC demonstrates that this is welcomed. While this was for the TCPA Planning Applications, it is also relevant in this DCO Application.
Cheshire West and Chester Council (CWCC)	An email was issued by the LVIA team on 9 December 2021 outlining the selection of proposed viewpoints along with a viewpoint location plan and baseline photography. The email also highlighted the viewpoints that had been removed from those set out at Scoping stage as a result of design changes. The selection of viewpoints includes those with views incorporating the Shropshire Union Canal and River Dee. It was suggested that up to 6 of the proposed viewpoints will be represented by photomontages.	A follow up meeting was carried out on the 14 December 2021 to run through the route, viewpoints and potential mitigation. CWCC stated that above ground features at Ince and Stanlow are located in less sensitive areas and are of least concern. Areas of concern for CWCC along the Newbuild Carbon Dioxide Pipeline route are those where open cut trench method would impact upon vegetation and in particular mature trees. This is to be avoided where possible via micro-siting the route and/or using tunnelling methods.

Body / organisation	Meeting dates and other forms of consultation	Summary of outcome of discussions
		For CWCC it is important for the assessment to be clear on the key issues and sensitive receptors. In principle the viewpoint locations appear acceptable. CWCC requested further discussion on Biodiversity Net Gain and replacements for any trees and hedges that will be lost as a result of the works. Further consultation has taken place with the Ecology team and is set out within **Chapter 9 - Biodiversity (Volume II**) and the **Biodiversity Net Gain Report (Document reference: D.6.5.12).**
	A further email was issued by the LVIA team on the 12 July 2022, outlining items relating to: • AGI maximum height increase from 4.5m to 5m due to the addition of roof-mounted fan casings; • Lighting columns decrease from 8m to 5m to reduce potential impacts; • Viewpoint plan and proposed photomontage locations; and • Mitigation principles and the assessment assumptions associated with them. • A meeting was set up for Monday 18 July to discuss the above points.	A follow up meeting was carried out on the 18 of July 2022 to discuss the items set out in the email. CWCC agreed that the increase in height of Kiosks and reduction in lighting column heights would have limited further impacts upon the assessment; CWCC agreed with the proposed viewpoint and photomontage locations; CWCC agreed without approach to mitigation and assessment assumptions associated with them.
Natural Resources Wales (NRW)	An email was issued by the LVIA team on 9 December 2021 outlining the selection of proposed viewpoints along with a viewpoint location plan and baseline photography. The email also highlighted the viewpoints that had been removed from those set out at Scoping stage as a result of design changes. The selection of viewpoints includes those with views incorporating the Shropshire Union Canal and River Dee. It was suggested that up to 6 of the proposed viewpoints will be represented by photomontages.	NRW responded on the 17 December 2021. They re-iterated their stance from the scoping stage stating that “we consider that the scale of development and distance from the AONB would avoid significant visual effects being experienced from within this Designated Landscape. However, we advised that the scope of the landscape and visual impact assessment and location of viewpoints are discussed with the relevant Local Planning Authority’s Landscape Officer/representative. We therefore advise that you consult the relevant Local Planning Authorities

Body / organisation	Meeting dates and other forms of consultation	Summary of outcome of discussions
		regarding these proposed viewpoints, photomontages and baseline photographs."
	A project update teleconference took place on the 7 July 2022. This was led by the Ecology team but also included aspects relating to Landscape and Visual. These included the broad principles of mitigation as well as an update on the design changes including kiosk heights. An email was then followed up on the 12 July 2022, outlining items relating to: • AGI height increase from 4.5m to 5m due to the addition of roof-mounted fan casings; • Lighting columns decrease from 8m to 5m to reduce potential impacts; • Viewpoint plan and proposed photomontage locations; and • Mitigation principles and the assessment assumptions associated with them.	During the call NRW broadly agreed that the increase in Kiosk height was unlikely to further impact the AONB which we had previously scoped out and that it could remain scoped out. A response email was provided on the 14 July 2022 stating that "We have considered the additional information and I can confirm that we have no further comments to make regarding the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty."
Natural England (NE)	An email was issued by LVIA team on 9 December 2021 outlining the selection of proposed viewpoints along with a viewpoint location plan and baseline photography. The email also highlighted the viewpoints that had been removed from those set out at Scoping stage as a result of design changes. The selection of viewpoints includes those with views incorporating the Shropshire Union Canal and River Dee. It was suggested that up to 6 of the proposed viewpoints will be represented by photomontages.	NE responded on the 21 December 2021. They acknowledged receipt of information provided and had no further comments to make regarding the photos and viewpoint plan.
	A project update teleconference took place on the 7 July 2022. This was Ecology led but also included aspects relating to Landscape and Visual. These included the broad principles of	During the call, NE broadly agreed to the points raised and requested a follow up email to confirm some aspects. No further correspondence has taken place to date.

Body / organisation	Meeting dates and other forms of consultation	Summary of outcome of discussions
	mitigation as well as an update on the design changes including kiosk heights. An email was then followed up on the 12 July 2022, outlining items relating to: • AGI height increase from 4.5m to 5m due to the addition of roof-mounted fan casings; • Lighting columns decrease from 8m to 5m to reduce potential impacts; • Viewpoint plan and proposed photomontage locations; and • Mitigation principles and the assessment assumptions associated with them.	
Canal and Rivers Trust (CRT)	An email was issued by LVIA team on 9 December 2021 outlining the selection of proposed viewpoints along with a viewpoint location plan and baseline photography. The email also highlighted the viewpoints that had been removed from those set out at Scoping stage as a result of design changes. The selection of viewpoints includes those with views incorporating the Shropshire Union Canal and River Dee. It was suggested that up to 6 of the proposed viewpoints will be represented by photomontages.	A response was received on the 10 December 2021. CRT are in agreement with viewpoint P14 location. With regards to P13, they suggest a relocation to the western side of Bridge 133 where they consider views more open. CRT also request an additional viewpoint on the southern side with views facing northwards in order to understand any impacts associated with the vicinity of the crossing. CRT acknowledge that the photomontages are not associated with the canal and therefore have no comments to make on these. The above two viewpoint photography locations were captured following the PEIR submission and are included within this ES. The associated assessment text has been amended in **Appendix 12.4 - Visual Analysis (Volume III).**

Body / organisation	Meeting dates and other forms of consultation	Summary of outcome of discussions
	An email was issued by LVIA team on the 12 July 2022, outlining items relating to: • AGI height increase from 4.5m to 5m to reduce potential impacts; • Lighting columns decrease from 8m to 5m to reduce potential impacts; • Viewpoint plan and proposed photomontage locations, update to Zone of Theoretical Visibility (ZTV) method; and • Mitigation principles and the assessment assumptions associated with them.	A response was received from CRT on the 19 July 2022. CRT acknowledged that the increase of the AGI is relatively minor and therefore have no specific concerns and that they acknowledge that Kiosks are set relatively far away from the canal corridor anyway. CRT welcomed the decrease in height of the Lighting columns as this would further limit the chance of light spill. CRT agreed the ZTV approach, viewpoints and photomontages are appropriate.

12.4 SCOPE OF ASSESSMENT

12.4.1 The scope of this assessment has been established through an ongoing process from Scoping Stage, through PEIR stage and as the design has progressed. Further information can be found in **Chapter 5 - EIA Methodology (Volume II)** of this ES.

12.4.2 This section provides the scope of the assessment, as updated from the PEIR stage, and re-iterates the evidence base for scoping out elements following further iterative assessment.

ELEMENTS SCOPED OUT OF THE ASSESSMENT

12.4.3 The elements shown in **Table 12-2** are not considered to give rise to likely significant effects as a result of the DCO Proposed Development and have therefore not been considered within this assessment.

Table 12.2 – Elements Scoped Out of the Assessment

Element Scoped Out	Justification
Existing Flint Connection to Point of Ayr (PoA) Terminal Pipeline at construction, operation and decommissioning.	Assessment of the existing Flint Connection to PoA Terminal Pipeline is scoped out owing to it already being in place, underground and therefore not visible.
Landscape and Visual receptors assigned a negligible level of sensitivity **at construction, operation and decommissioning.**	As set out at the PEIR stage, for the purposes of proportionality and to ensure the effects that are significant are the key focus of this assessment, receptors of negligible sensitivity are scoped out on the basis that significant effects are highly unlikely. Any previous stage assessment can be found in **Appendix 12.4 - Visual Analysis (Volume III).** The full set of viewpoint photography, including that from previous stages which are now scoped out can be found within **Figure 12.4 Viewpoint Photography (Volume IV).**
Landscape or Visual receptors assigned a negligible level of effect at year 1 **at construction, operation and decommissioning.**	As set out at the PEIR stage, any receptors assigned an overall negligible level of effect at year 1 have not been further considered or assessed in year 15 on the basis that effects are highly unlikely to increase to a level of significance at year 15 given year 1 is considered to present the worst-case scenario during operation. Any previous stage assessment can be found in **Appendix 12.4 - Visual Analysis (Volume III)**. The full set of viewpoint photography, including that from previous stages which are now scoped out can be found within **Figure 12.4 Viewpoint Photography (Volume IV).**
Landscape or visual receptors assigned non-significant at PEIR stage (where subsequent design changes do not affect the receptor) **at construction, operation and decommissioning.**	Where there have been no subsequent design changes since the PEIR that impact upon receptors with effects assigned as not significant during either the Construction Stage or Operation Stage, these have not been further considered within this assessment. This allows a focussed and proportionate assessment considering only those receptors with the potential to be significantly affected. The PEIR stage assessment will remain within the relevant appendices for reference and completeness. Any previous stage assessment can be found in **Appendix 12.4 - Visual Analysis (Volume III).** The full set of viewpoint photography, including that from previous stages which are now scoped out can be found within **Figure 12.4 - Viewpoint Photography (Volume IV).**
Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) **at construction, operation and decommissioning.**	The AONB was scoped out during the scoping stage, confirmed at the PEIR stage and this remains the case within this ES. It is not anticipated that there will be any significant effects owing to the lack of inter-visibility between the DCO Proposed Development and the AONB. Initial study reviewed inter-visibility of an AGI with 9m maximum height and through design development, the maximum height is now 5m.
Receptors beyond 2km of the Newbuild Infrastructure Boundary and receptors	The Study Area of 2km for the Newbuild Infrastructure Boundary and 500m for BVSs along the Flint Connection to PoA Terminal Pipeline was agreed during the scoping stage, the

Element Scoped Out	Justification
beyond 500m of the three Block Valve Station (BVS) sites along the Flint Connection to PoA **Terminal Pipeline at construction, operation and decommissioning.**	subsequent PEIR stage, and remains appropriate for this ES. Throughout the design process, this has been adjusted as the Newbuild Infrastructure Boundary has adjusted. Receptors beyond these proposed Study Areas remain unlikely to result in significant effects.
Assessment of **night-time effects from lighting at construction, operation and decommissioning.**	At Scoping and PEIR stages, detail around lighting was not available however this has been confirmed as part of design development. During construction, task orientated lighting will be used in shifts at the lowest luminosity necessary for safe delivery of each task i.e. it will not be continuous. It will be designed, positioned, and directed to reduce the intrusion into adjacent properties and habitats. The exception to this would be at trenchless crossings where 24-hour working may be required. This will be a maximum 4-week period at each location although the duration of 24 hour working at the majority of trenchless crossings is not likely to exceed a period of days. It is therefore considered temporary in nature and unlikely to result in significant effects. At operation, no permanently switched on lighting is required except at Stanlow AGI where the lighting associated with columns up to 5m height may be on permanently for security reasons due to the location within the existing refinery which is already lit and therefore unlikely to result in significant effects. While there will be permanent lighting columns at the AGIs and BVSs during operation, these will be operated manually for maintenance or inspection purposes only. Lighting will therefore only be on for short, temporary periods. It is therefore unlikely that lighting would result in significant effects.
C**athodic Protection (CP) box north of River Dee at construction, operation and decommissioning.**	The CP cabinet north of River Dee will be approximately 1m high x 0.5m long x 0.5m wide installed along an existing track, surrounded by a 1m height timber fence and surrounded by a hedgerow should the location not already benefit from existing hedgerow screening associated with the track. It has been designed and located to minimise visibility and is therefore unlikely to result in significant effects.
Test **Posts and Marker Posts at construction, operation and decommissioning.**	Pipeline marker posts at all road, rail, river, canal crossings, changes in Newbuild Carbon Dioxide Pipeline direction, and field boundaries will be included as part of the DCO Proposed Development. Tests Posts will also be located along the route associated with CP boxes. However, the design and location of these will be confirmed at Detailed Design stage. Such posts currently exist as part of the baseline but do not form prominent features within views. They are therefore unlikely to give rise to significant effects.
Fibre Optic Cable **(FOC) at construction, operation and decommissioning.**	The FOC will be located underground adjacent to the Newbuild Carbon Dioxide Pipeline or similar and will not be visible. The FOC will be placed during construction of the Newbuild Carbon Dioxide Pipeline and will not require any additional construction activities than what is

Element Scoped Out	Justification
	already proposed for the pipeline works. It is therefore not separately referred to within the assessment as it will not create any new or additional impacts not considered already for the pipeline works.
Electricity c**onnections at construction, operation and decommissioning.**	Each AGI, BVS and CP Cabinet will require a connection to the local electricity network at the nearest practicable connection points. For the EIA, it is assumed that would be via the closest adopted highway. Any connection works up to that point would be undertaken via the respective statutory undertakers so are not included as part of the DCO Proposed Development. However, the potential for cumulative impacts from these connections has been considered as part of the EIA (refer to **Chapter 19 – Combined and Cumulative Assessment, Volume II**).

ELEMENTS SCOPED INTO THE ASSESSMENT

12.4.4 For all Stages; construction, operation and decommissioning, the following elements have been scoped into the assessment:

- Landscape character and visual amenity of residents and recreational users within the 2km Study Area of the Newbuild Infrastructure Boundary;
- Landscape character and visual amenity of residents and recreational users within the 500m Study Area of the three BVSs along the Flint Connection to PoA Terminal Pipeline.

12.5 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

STUDY AREA

12.5.1 The initial Study Area for assessing potentially significant landscape and visual effects was set out during the Scoping stage and was identified through a combination of desktop study and field visits. During the desktop study a ZTV was modelled to determine the extent of the area from which the development is potentially visible. Field visits were then carried out to determine the reality on the ground.

12.5.2 The Study Area is shown on Figure 12.1 - Zone of Theoretical Visibility (Volume IV).

12.5.3 The Guidelines for Landscape and Visual Impact Assessment (GLVIA 3) (Ref. 12.9) clarify how study areas should be determined on a project-specific basis. Paragraph 5.2 of GLVIA 3 states that the Study Area extent should be "… based on t*he extent of Landscape Character Areas likely to be significantly affected either directly or indirectly"* and in paragraph 6.2 for visual receptors the Study Area *"…should consider the area from which the proposed development will be potentially visible."*

- For the purposes of this LVIA and as set out within the Scoping stage and PEIR stage, there are two separate elements to the DCO Proposed Development Study Area. This ensures the assessment is kept proportionate and captures all potential significant landscape and visual effects. They key features during Operation are the AGIs and BVSs as these will include permanently visible features above ground. The Newbuild Carbon Dioxide Pipeline will be located underground and so operational impacts as a result of the Newbuild Carbon Dioxide Pipeline itself are limited. There will however be some longer term impacts as a result of vegetation loss associated with the pipeline construction that will go on into the Operational Stage. The Study Area includes:
- A maximum 2km radius from the Newbuild Infrastructure Boundary. This allows for both the AGI and BVS features as well as the Newbuild Carbon Dioxide Pipeline corridor taking place within the Newbuild Infrastructure Boundary.

- A maximum 500m radius from the three BVSs along the Flint Connection to PoA Terminal Pipeline. This reduced Study Area in these locations is due to the BVSs consisting of a small compound where a maximum 5m high kiosk and lighting columns will be the tallest permanent element and is therefore considered appropriate to capture any potentially significant landscape and visual effects during the construction and operation effects.

METHOD OF BASELINE DATA COLLATION

Desk Study

12.5.4 Information on the existing ('baseline') landscape resource within the Study Area has been collected through a desktop study incorporating reference to Local Plans, Ordnance Survey (OS) maps and ZTV mapping using the locations for the proposed AGIs and BVSs. In addition, a review of relevant literature published by CWCC and FCC, including CWCC's Local Plan Part One and Two (**Ref. 12.6 & 12.7**), FCC's 'Unitary Development Plan 2000-2015' (**Ref. 12.8**) and CWCC's *'A Landscape Strategy for Cheshire West and Chester Borough'* 2016 (**Ref. 12.13**) has been undertaken. A review of LANDMAP's Visual and Sensory aspect areas (**Ref. 12.14**) has also been undertaken as part of the desktop study research.

Site Visit and Surveys

12.5.5 An initial field survey was undertaken by a Chartered Landscape Architect between the 22 and 31 March 2021, followed by further site visits on the 05 July 2021, 09 February 2022; and 06 of May 2022 to collect views for the Newbuild Carbon Dioxide Pipeline, AGIs and BVSs. A final visit was carried out on the 26 of July 2022 to capture verified photographs for the six photomontage locations at the relevant AGI and BVS sites.

12.5.6 Site visits were conducted to ascertain the appropriateness of the Study Area, review the ZTV in the field, obtain a general understanding of the landscape character and visual amenity within the Study Area and to capture baseline photography to support the LVIA.

IMPACT ASSESSMENT METHODOLOGY

12.5.7 The methodology for this LVIA has been produced in accordance with best practice by suitably qualified Landscape Architects that are Chartered Members of the Landscape Institute (CMLI).

12.5.8 The assessment considers two distinct but closely related areas: landscape character and visual amenity.

- The landscape assessment considers the effects of a proposed development on landscape character and landscape as a resource; and

- The visual assessment considers the views that are available to people who may be affected by a proposed development and their perception and responses to changes in these views.

12.5.9 The full LVIA methodology is set out in **Appendix** 12.**2 - LVIA Methodology (Volume III).**

SIGNIFICANCE CRITERIA

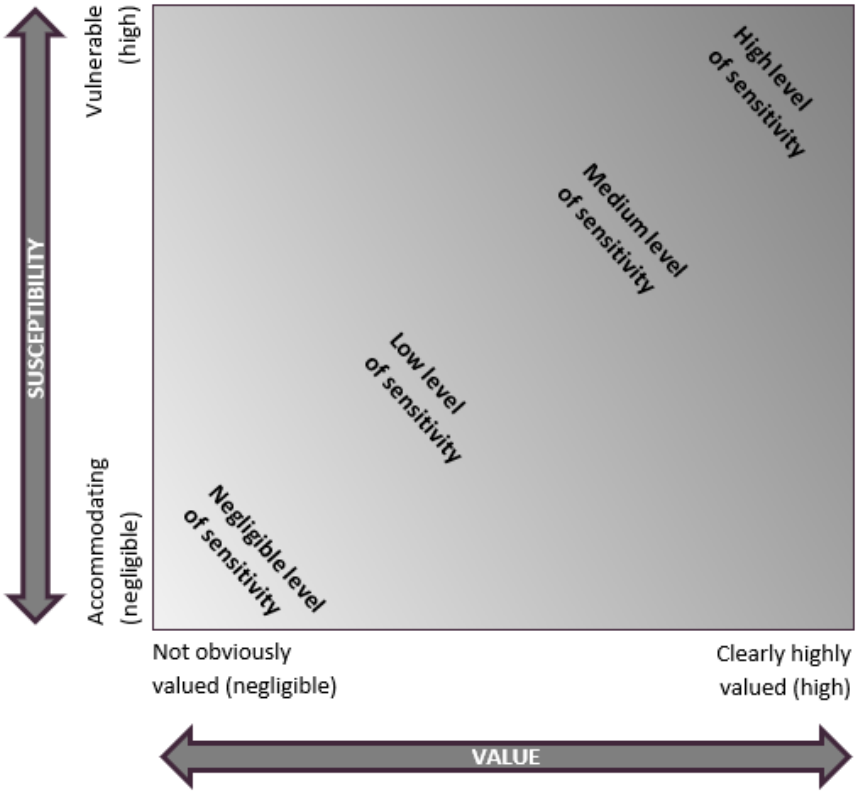
12.5.10 A summary of the approach to determining the significance of effect on landscape and visual receptors is provided below. Full significance criteria are set out in **Appendix 12.2 - LVIA Methodology (Volume III).**

Determining Sensitivity

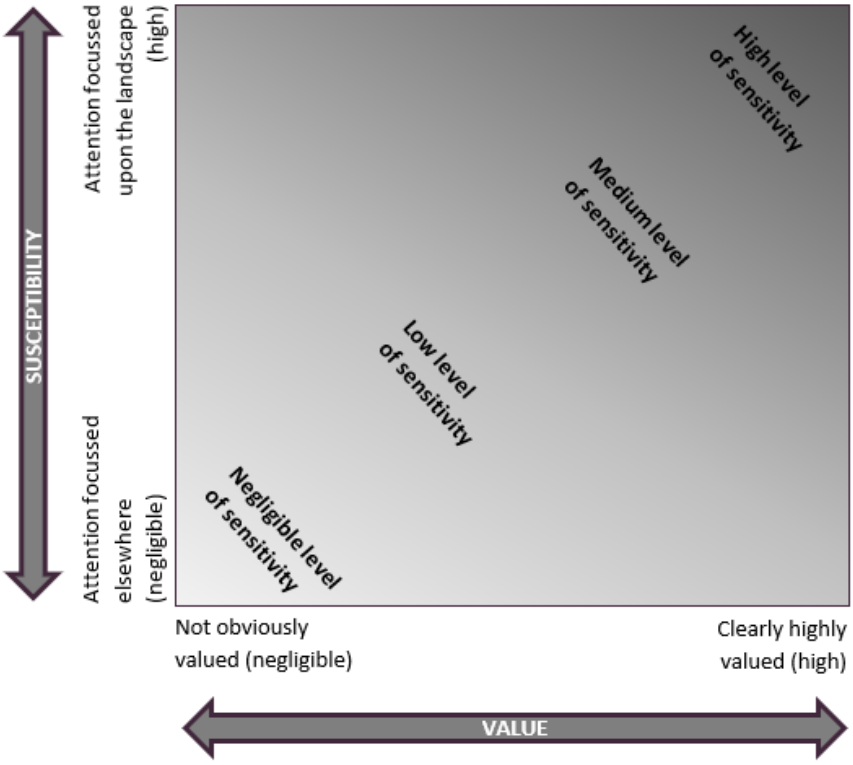
12.5.11 The landscape assessment considers the effects of a proposed development on landscape character and landscape as a resource. The visual assessment considers the views that are available to people who may be affected by a proposed development and their perception and responses to changes in these views.

12.5.12 Sensitivity is determined by combining value and susceptibility. The Inserts presented as **Insert 12.1** and **Insert 12.2** illustrate how value and susceptibility can be combined for landscape and visual receptors respectively. When determining overall sensitivity, it should be noted that the levels are indicative and fall on a sliding scale from high to negligible and professional judgement is always used to determine the overall level of sensitivity.

Insert 12.1 – Level of Landscape Sensitivity



Insert 12.2 – Visual Sensitivity



Determining Magnitude of Change

12.5.13 Magnitude of change is determined by combining factors including:

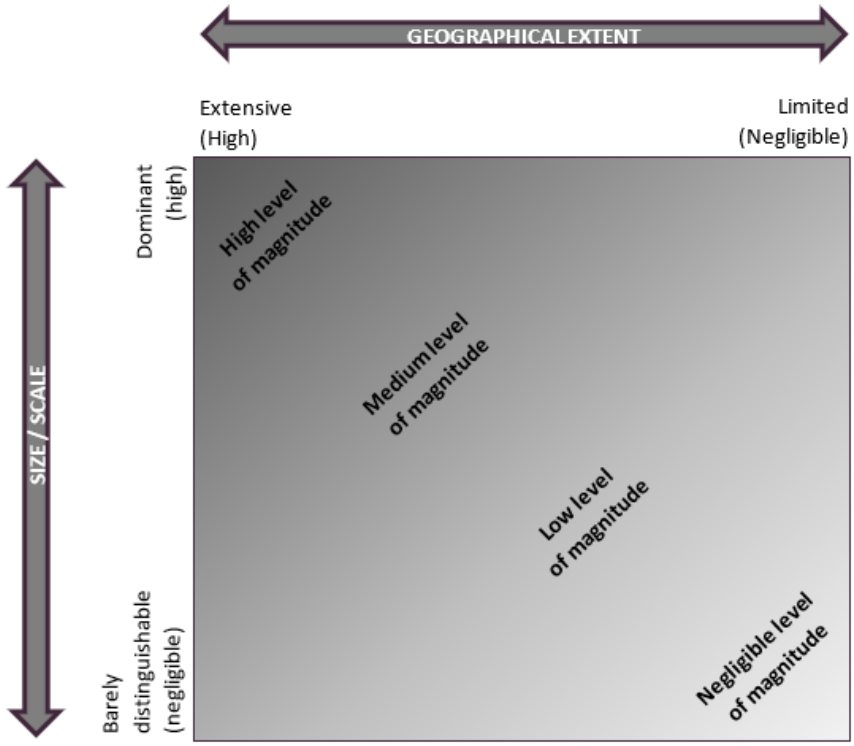
- The size, scale, and nature of change in relation to the context.
- The geographical extent of the area influenced.
- Its duration and reversibility.

12.5.14 As illustrated in **Insert 12.3** and

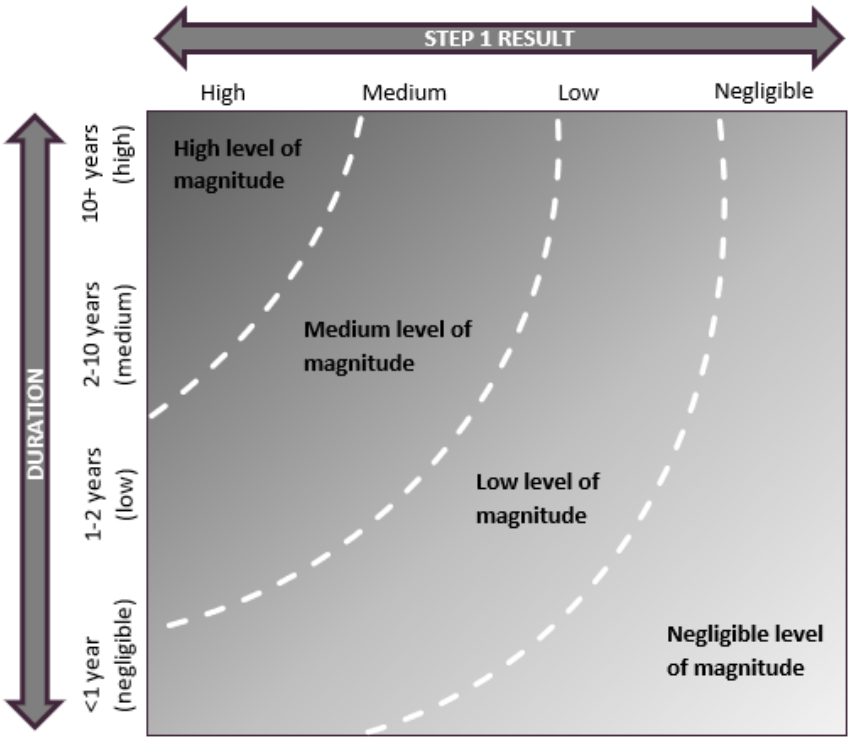
12.5.15 **Insert 12.4** there is a two-step process for determining magnitude of change. First by considering size and scale together with the geographical extent in step one.

12.5.16 For step two, the preliminary result from step 1 is then considered alongside the duration and reversibility which can either increase or decrease the rating accordingly.

Insert 12.3 – Magnitude of Change: Step 1



Insert 12.4 – Magnitude of Change: Step 2



Level of Effect and Significance

12.5.17 Combining the stated measures of magnitude and sensitivity indicates the relative importance of different effects. This, combined with an oversight of professional judgement, allows us to evaluate effects and to determine significance their significance. **Table 12.3** provides general guidance on the inter-relationship between magnitude of change and sensitivity of receptor. However, this matrix is used as a framework and guide for consistency, not as a prescriptive formula.

12.5.18 For the purposes of this EIA, significance levels stated in bold are considered to be significant effects.

Table 12.3 – Significance Matrix

		Magnitude			
		High	**Medium**	**Low**	**Negligible**
Sensitivity	**High**	**Major**	**Major or Moderate**	**Moderate**	Minor or Negligible
	Medium	**Major or Moderate**	**Moderate**	**Moderate** or Minor	Negligible
	Low	**Moderate**	**Moderate** or Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

12.5.19 For the purposes of proportionality and to ensure the effects that are significant are the key focus of this assessment, any landscape or visual receptors assigned a negligible level of sensitivity will not be further considered as part of the assessment on the basis that significant effects are highly unlikely.

12.5.20 Any receptors assigned an overall negligible level of effect at year 1 will not be further considered or assessed in year 15 on the basis that effects are highly unlikely to increase to a level of significance at year 15 given year 1 is considered to present the worst-case scenario at operation.

12.5.21 Similarly, provided there are no subsequent design changes since the PEIR that impact upon these receptors, those with effects assigned as not significant during either the Construction Stage or Operation Stage will not be further considered within the ES. These will be considered as scoped out. This will allow a focussed and proportionate assessment considering only those receptors with the potential to be significantly affected. The PEIR stage assessment will remain within the relevant appendices for reference and completeness.

ASSUMPTIONS AND LIMITATIONS

12.5.22 The following assumption and/or limitations are relevant to this assessment:

- The AGIs and BVS are fixed locations with only a 5m limit of deviation, this has enabled specific Landscape Layouts to be provided which form part of the Preliminary Design and embedded mitigation;
- For the Newbuild Carbon Dioxide Pipeline, the limit of deviation is greater and therefore it is not possible to define exactly at this stage which trees/features will be lost and which will be retained. The assessment in these locations therefore assumes that all vegetation features within the Newbuild Infrastructure Boundary will be lost (unless otherwise stated in the following mitigation section) during construction which presents the worst case scenario.

- For the Newbuild Carbon Dioxide Pipeline operational years, it is assumed that some vegetation retention is possible and where vegetation loss avoidance has not been possible, that replacement will be like-for-like in like-for-like locations. Where this is not possible due to utilities constraints or the constraints relating to the types of planting that can occur over the Newbuild Carbon Dioxide Pipeline , replacement blocks of vegetation have been identified and are shown on **Appendix 1 Landscape and Ecological Mitigation Plan (Document Ref: EN070007 D.6.5.10.1.)** These will be treated as secondary mitigation and therefore have been assumed to be planted to their fullest extension i.e. the entire identified block for the purpose of the residual effects assessment. It is assumed they are planted during the Construction Stage so that they will be in place by operation year 1 and established by year 15;
- Where land is disturbed temporarily for construction purposes, it is assumed it will be returned to its previous use;
- The assessment assumes that all proposed soft landscaping, including hedgerow, tree planting and grassland planting will be planted during the Construction Stage so that they will be in place by winter operation year 1 and established by year 15;
- It is assumed that the mitigation planting proposed around the BVSs and AGIs to achieve screening would be established by operation year 15;
- As discussed in **Chapter 9 – Biodiversity (Volume II),** due to land access limitations, discrete parcels of land within the Newbuild Infrastructure Boundary have not been directly accessed and habitats within those were not able to be assessed. Where this is the case, for the purposes of the LVIA aerial photography has been used to estimate existing vegetation;
- It is assumed that the hedgerow loss will be replaced like-for-like in like-for like locations except for in locations of permanent access;
- Chapter 15 has identified that temporary noise barriers may be required. At this stage, the location of this potential noise mitigation in the form of noise barriers is unknown and therefore cannot be assessed. However, given the temporary nature of these features, it is unlikely they would result in significant effects beyond those already reported during construction. Commitment D-NV-005 under noise and Vibration within the REAC sets out how effects will be minimised at the next stages (**D-NV-005** of the **REAC, Document reference: D.6.5.1**).
- Photomontages provided are to illustrate only the AGIs and BVSs at Operation Stage only. Owing to the variety of activities that take place temporarily during construction, no photomontages have been produced for this stage. Owing to the wider limits of deviation, works associated with the

Newbuild Carbon Dioxide Pipeline are also not illustrated during construction or operation; and

- The baseline photos of the photomontages and viewpoint photography, in some cases, are taken at very slightly different locations and/or orientations. Despite any slight differences, the assessment remains of the receptor and not the viewpoint itself so differing locations do not impact assessment outcomes. These differing locations were due to two factors, either:
  - The viewpoint baseline photos focussing on the DCO Proposed Development as a whole whereas the photomontages are focussed on the operational features only; and/or
  - When returning to the site to capture the baseline photos for photomontages, conditions had changed e.g. roadworks taking place making it not possible to stand in the exact same location.

12.6 BASELINE CONDITIONS

12.6.1 To establish the baseline conditions, a combination of desktop study, walkovers of the area, and ZTVs have been carried out. The existing baseline assessment has been split into two parts covering both landscape character and visual amenity with the findings of this baseline research outlined below.

EXISTING BASELINE

National Landscape Character

12.6.2 Although the National Character Areas (NCA) provide a thorough and robust base for landscape led decision making, they are often too large and too general. Information on the relevant NCAs is included for context only and it is unlikely to experience significant effects as a result of change of this type. The focus of this assessment will be on the Local Landscape Character which is set out below.

12.6.3 As shown on **Figure 12.2 - Landscape Character Plan (Volume IV),** the DCO Proposed Development spans across:

NRW's National Landscape Character Areas:

- NCLA 12: Clwydian Range; and
- NLCA 13: Deeside and Wrexham.

NE's National Character Areas:

- NCA 59 Wirral;
- NCA 60 Mersey Valley; and
- NCA 61 Shropshire, Cheshire, and Staffordshire Plain.

12.6.4 A full description of the key characteristics and environmental opportunities for the above named NCAs are described in Appendix 12.1 - Baseline Information (Volume III).

12.6.5 At a local level the DCO Proposed Development passes through or near to approximately 17 Visual and Sensory aspect areas based on LANDMAP (**Ref. 12.14**) and Landscape Character Areas 9a, 9d and 15i of CWCC's '*A Landscape Strategy for Cheshire West and Chester Borough'* 2016. (**Ref. 12.13**).

Summary of National Landscape Character

12.6.6 Overall, the landscape across the Study Area can be described as varied, ranging from gently undulating in the west around Connah's Quay to flat further east towards Ellesmere Port. Hedgerows, hedgerow trees and drainage ditches with limited pockets of woodland are a characteristic of the landscape. Industrial development to the north of the Newbuild Infrastructure Boundary is prominent, as are the numerous settlements within rural pasture or arable land. A dense network of motorways, roads, railways, canals, and rivers exist, including the M56, Shropshire Union Canal and the River Dee.

Local Landscape Character

12.6.7 As shown on **Figure 12.2 - Landscape Character Plan (Volume IV)**, the Study Area spans across three of the identified landscape character areas within CWCC's Landscape Strategy document (**Ref. 12.13**). A brief description of these is provided below:

LCA 9a Dunham to Tarvin Plain:

- A flat landscape with some gentle undulation, and the Sandstone Ridge presenting a more elevated skyline to the east of the LCA.
- The landscape noted to be comprised of a fieldscape of small to medium enclosures predominantly used by diary agriculture.
- Characterised by hedges and hedgerow trees providing limited vistas with hedgerow oaks forming an important element of the landscape.
- Petro-chemical infrastructure and industrial development outside the character area is prominent across the north of the LCA.
- Significant transport infrastructure dissects the area and diminishes tranquillity and rurality, particularly across the north of the LCA.
- Settlement tends to be scattered across the plain in small linear hamlets and freestanding farmsteads.

LCA 9d Saughall to Waverton Plain:

- The landscape is gently undulating with the Sandstone Ridge to the east presenting a more elevated skyline.

- An urban fringe landscape with significant settlement density and prominent features including key infrastructure routes associated with the urban fringe of Chester and extending across the northern part of this LCA. These features therefore serve to reduce the overall tranquillity of this LCA.
- The urban and industrial character and infrastructure at Ellesmere Port to the north is a prominent landscape feature.
- Urban fringe and industrial features within the landscape serve to dilute the areas of pastoral farmland, principally used for dairy farming, throughout the area with the character area forming a transitional landscape from rural pasture to suburbanised, busy urban fringe.
- Significant suburban villages are evident throughout the area with scattered settlements and farmsteads also forming characteristic features within the wider plain.
- Characterised by hedges and hedgerow trees, notably oaks, providing limited vistas, alongside limited woodland, confined to shelter belts, screening planting and some small copses.

LCA 15i Gowy Valley:

- The character within the northern extent of this LCA is generally open and flat with open vistas in all directions possible.
- The northern reaches of this LCA are characterised by open, very low-lying pasture and some arable land use, with embanked river channels and an extensive drainage ditch network.
- Trees and woodland are sparse in this LCA, although more prevalent around small settlements and buildings and along limited stretches of the river as riparian habitat with some stand of rare Black Poplar trees evident within the character area.
- The M56 motorway and the manufacturing complex at Stanlow dominate views out of this LCA with few screening elements in the landscape to mitigate the visual impact
- The Gowy Landfill Site also lies within the northern part of this LCA, limiting the visual quality of views both into this LCA from the east and views across the LCA from the surrounding landscape.
- The LCA is characterised by low-lying pasture and arable land use, with embanked river channels and extensive drainage ditches with a network of drains and cuts, particularly found around Stamford Bridge and Plemstall to the north.

12.6.8 The full baseline description for each of the above-named character areas is also provided in **Appendix 12.3 - Landscape Analysis (Volume III).**

NRW Wales LANDMAP (Ref. 12.14)

12.6.9 As shown on **Figure 12.2 - Landscape Character Plan (Volume IV),** the DCO Proposed Development lies within, or directly adjacent to 15 Visual and Sensory

aspect areas. A brief description of these areas has been provided in **Table 12.4.**

Table 12.4 – LANDMAP Visual and Sensory Aspect Areas

Visual and Sensory Area	Baseline Description
Dee coastal levels (FLNTVS076)	Open coastal and estuary levels with a mixture of arable (intensive) and pastoral farmland drained by ditches with wetland and urban fringe uses. Settlement is scattered including farmsteads. Hedgerows are low cut with gaps in places and there are few trees except associated with dwellings or other uses. Long views are possible to vertical elements such as power station chimneys and tower blocks to east. With reference to landscape value, it is noted that the area has pleasing rectilinear forms but there are minor detractors in urban fringe uses. The area is generally of consistent character and is productive although it is spoilt slightly by minor intrusive development. The rectilinear levels landscape is distinctive. This type of landscape is rare in Flintshire.
Shotton farmland fringe (FLNTVS072)	Gently rolling lowland farmland with a mixture of small traditional fields, larger more improved rectilinear fields, and drainage ditches. Hedges are a low-cut with occasional field trees. Overall, the area appears well maintained and provides an important setting to adjacent settlements. The A550 passes through the northern part of the area reducing its tranquillity. There are views out from the area to the aircraft factory to the south and settlement to the north. With reference to landscape value, it is noted that the area has pleasing patterns including ditches although there are minor detractors. The area is in moderate condition and consistent character slightly spoilt by development. The area has a moderate sense of place defined by its field patterns and ditches. The area is fairly typical of Flintshire. There are noted to be attractive views both into and out of the LCA, in from the settlements adjacent and out to the backcloth of hills to the southwest.
Queensferry coastal and estuary urban area (FLNTVS022)	An extensive, often linear, and interconnected urban area along the edge of the coast and estuary, with larger towns, sprawling suburban edges and large-scale heavy industry including docks. There are noted to be no attractive views into or out of the aspect area.
Connah's Quay coastal and estuary urban area (FLNTVS020)	An extensive, often linear, and interconnected urban area along the edge of the coast an estuary, with larger towns, sprawling suburban edges and large-scale heavy industry including docks. There are noted to be no attractive views into or out of the aspect area.
Hawarden inland urban area (FLNTVS033)	Nucleated settlements within the farmland fringe landscape character area, which are close spaced to create a suburban landscape, with a predominance of residential buildings and public open spaces, parks and golf courses. There are noted to be attractive views out of the aspect area towards the surrounding farmland.

Visual and Sensory Area	Baseline Description
Farmland Fringe (FLNTVS009)	Gently rolling lowland farmland with a mixture of small traditional fields, larger more improved fields and urban and fringe uses including currently unused quarries and golf courses. There is a large cement work in the southern part of the area. This has large industrial structures, which are locally prominent, rising out of the predominantly rural landscape. There are noted to be attractive views both into and out of this aspect area.
Estuary Edge and Valleys (FLNTVS014)	Gently sloping and rolling lowland estuary edge with distinct east/west grain and mosaic of wooded linear stream valleys, traditional & improved farmland, and a linear settled and urban fringe lower edge; and an overall estuarine influence. There are noted to be attractive views both into and out of this aspect area.
A55 and A494 Road Corridors (FLNTVS084)	The A55 and A494 are busy dual carriageways which link the North Wales coast to England and south Wales. These are busy roads with substantial commercial traffic and therefore affect the tranquillity of the adjacent areas. The embankments and cuttings consist of either rough grass or deciduous and mixed plantation which is now semimature helping to mitigate the visual impact of the road in places although traffic is still visible from the lower land. Broad views of the coast are possible from the road and also of commercial areas. With reference to landscape value, it is noted that it is a road development of little scenic quality. The landscape treatment is well maintained generally although some gorse has encroached. The road has no distinct character. Roads of this type are common. There are noted to be attractive views out towards the coast.
Northop Hall inland urban area (FLNTVS042)	Nucleated settlements within the farmland fringe landscape character area, which are close spaced to create a suburban landscape, with a predominance of residential buildings and public open spaces, parks, and golf courses. There are noted to be attractive views out of the LCA towards the surrounding farmland.
Wooded Valley and Parkland (FLNTVS011)	Narrow and moderately sloping sinuous lowland wooded small river valleys with associated parkland and pastoral farmland. There are noted to be attractive views both into and out of this aspect area.
Northop (FLNTVS057)	Nucleated settlements within the farmland fringe landscape character area, which are close spaced to create a suburban landscape, with a predominance of residential buildings and public open spaces, parks and golf courses. With reference to landscape value, it is noted that the traditional village core is attractive although new village to the west is not. The village expansion does not reflect traditional character of core. Core character has moderate positive sense of place. The village type is typical of the area. There are noted to be attractive views out towards the surrounding countryside.
Limestone Plateau (FLNTVS004)	A settled/domesticated limestone plateau with a diverse mosaic of traditional farmland with small regular semi-improved fields and hay meadows and contrasting pockets of rough grassland, wetland, and scrub, punctuated by well-maintained traditional farm buildings. The condition of the landscape is considered to be

Visual and Sensory Area	Baseline Description
	high and there are noted to be attractive views both into and out of this aspect area.
Limestone Ridge (FLNTVS003)	High overall evaluation - an exposed open upland limestone ridge with a smooth profile and a mosaic of semi-natural moorland, rough grassland, scrub, and bracken, often degraded by quarrying. There are noted to be attractive views both into and out of this aspect area.
Rolling Farmland (FLNTVS008)	Gently rolling fertile lowland farmland with large sized improved grassland and arable fields of regular shape with blocks of conifer woodland punctuating hilltops. There are noted to be no attractive views into or out of the aspect area.
Valley Slopes and Plateau (FLNTVS015)	Open lowland plateaux spurs and associated lower wooded valley/scarp slopes with a mixture of traditional and improved farmland. Woodland clearance has been carried out in parts but is not significant. There are noted to be no attractive views into or out of the aspect area.

Conservation Areas

12.6.10 Reference can be made to **Chapter 8 - Cultural Heritage (Volume II)** for further details on heritage assets. For this LVIA, the conservation areas contribute to the character of the area. There are two conservation areas that lie within the Newbuild Infrastructure Boundary: Thornton-le-Moors Conservation Area; and Chester Canal Conservation Area.

12.6.11 The Shropshire Union Canal falls within Chester Canal Conservation Area and runs from Ellesmere Port to Nantwich, covering a distance of approximately 27 miles. The canal has been designated for a number of reasons. Most notable of relevance to the Study Area includes the presence of original buildings and hard landscape along the canal, and available views to the wider landscape such as Helsby Hills and The Clwydian Range.

12.6.12 Conservation Areas are shown on **Figure 3-3– Environmental Features (Volume IV)**.

Visual Amenity

12.6.13 In order to understand where the DCO Proposed Development will be visible from during operation, a preliminary ZTV was prepared, following publication of the PEIR, this was updated to allow for the range of heights of the DCO Proposed Development's above ground equipment. This is shown on **Figure 12.1 - Zone of Theoretical Visibility (Volume IV)**.

12.6.14 In terms of visual receptors (people with sight of the development), the DCO Proposed Development will be overlooked by a number of settlements and Public Rights of Way (PRoW), with several crossing the Newbuild Infrastructure

Boundary. The Wales Coastal Path also cuts westward across the Newbuild Infrastructure Boundary.

12.6.15 Based on a review of the ZTV, followed up by subsequent site visits, relevant visual receptors have been identified within the Study Area and are represented by a series of viewpoints. These viewpoints are presented in **Table 12.5 Appendix 12.4 - Visual Analysis (Volume III)** provides a baseline description of the viewpoints and key visual receptors. Photographs have been taken to represent views from these key receptors, such as houses and footpaths. At PEIR stage, owing to the on-going design, a number of viewpoint locations and/or receptors were adjusted slightly prior to the submission of the PEIR. These are highlighted with an asterisk (*) on **Table 12-7** which shows where photography has now been captured in the new locations.

12.6.16 The viewpoints are shown on **Figure 12.3 - Viewpoint Plan (Volume IV)**. Baseline photographs are also provided in **Figure 12.4 - Viewpoint Photography (Volume IV).**

Table 12.5 – Overview of Viewpoints

Viewpoint Ref.	Viewpoint Location	Identified Receptors
WAGI1	Cwm Eithion, Flint, Flintshire	Residents of Bryn Onnen
WAGI2	Llwyn Onn, Flint, Flintshire	Residents of farmsteads off Goed-Onn Farm & dwellings off Llwyn Onn Recreational users of Public Footpath Flint 56
WAGI3 (**Figure 12.5 – Photomontages, Volume IV**)	Allt-Goch Lane, Flint, Flintshire	Recreational users of Public Footpath Flint 66
WAGI4 (**Figure 12.5 – Photomontages, Volume IV**)	Allt-Goch Lane, Flint, Flintshire	Residents of Bryn Mawr Recreational users of Public Footpath Flint 68
WAGI7	Tros-y-mynydd, Starkey Lane, Northop	Residents of Tros-y-mynydd, Starkey Lane. Recreational users of Public Footpath Flint 70.
WAGI8 (**Figure 12.5 – Photomontages, Volume IV**)	North Wales Expressway, Northop Hall, Northop, Flintshire	Recreational users of Public Footpath Northop 4
WAGI9	Village Road, Northop Hall, Flintshire	Residents at Northop Hall
EAGI5 (**Figure 12.5 – Photomontages, Volume IV**)	Ash Road, Elton	Residents within Elton

Viewpoint Ref.	Viewpoint Location	Identified Receptors
EAGI9	Yew Tree Close, Thornton-le-Moors	Residents within Yew Tree Close
P1	North Wales Expressway, Northop Hall, Northop	Residents off unnamed road off Connah's Quay Road Recreational users of Public Footpath Northop 2
P2a*	Pinfold Lane, Northop Hall	Residents off Pinfold Lane
P2b*	Magazine Lane, Northop Hall	Residents off Magazine Lane
P3*	Holywell Road, Ewloe	Residents off Holywell Road, Ewloe Recreational users of Public Footpath Hawarden 144
P4	Moorfield Road, Hawarden, Aston	Residents of Aston Recreational users of Public Footpath Hawarden 31
P4b	Old Aston Hill, Deeside	Residents off Old Aston Hill
P6	Chester Road East, Queensferry, Sandycroft	Residents of Sandycroft off Chester Road
P7	Prince William Avenue, Queensferry, Sandycroft	Recreational users of the Wales Coastal Path
P8*	B5129, Saltney Ferry, Saltney	Residents at Cop House Farm Recreational users of Public Footpath East Saltney 2
P9	Chester Millennium Greenway, Sealand	Recreational users of the Chester Millennium Greenway
P10	The Peg, Hermitage Road, Saughall	Residents of Saughall Recreational users of Public Footpath 263 FP6/2
P12	Gypsy Lane, Mollington	Residents off Gypsy Lane PRoW users Public Footpath 211 FP4/1
P12a	Station Road, Mollington, Lea-by-Backford	Recreational users of Public Footpath 177 FP2/1
P13a*	Shropshire Union Canal Towpath, nr Liverpool Road, Backford	Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal
P13b*	Shropshire Union Canal Towpath, nr Liverpool Road, Backford	Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal
P14a*	Pretty Bridge, Caughall road, Chester	Recreational Users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal
P15a	Meadow View, Picton Lane, Picton	Residents off Picton Lane Recreational users of Public Bridleway 241 BR4/1

Viewpoint Ref.	Viewpoint Location	Identified Receptors
P16	Nr M56, Wervin, Stoak	Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way)
B3	Ysceifiog, Babell	Residents of dwellings within Babell Recreational users of Public Footpath Ysceifiog 76
B5	Allt Y Chwiler, Pantlle, Brynford	Residents off Allt Chwiler
B6	Allt Y Chwiler, Pantlle, Brynford	Residents of dwellings off the B5121
B7	Ffordd Babell, Allt Y Chwiler junction, Pantlle, Brynford	Residents of Ffordd Babell and the B5121
B9	Lleprog Lane, Halkyn, Bagillt	Residents off Cornist Lane
B12	Overlea Drive, Hawarden, Ewloe	Residents off Overlea Drive
B13 (**Figure 12.5 – Photomontages, Volume IV**)	Upper Aston Hall Lane, Hawarden, Aston	Recreational users of Public Footpaths Harwarden 29 and 34
B14	Overwood Avenue, Mollington	Residents at Overwood Avenue Recreational users of Public Footpath 211 FP9/1
B15 (**Figure 12.5 – Photomontages, Volume IV**)	Overwood Lane, Mollington	Residents at Mollington

FUTURE BASELINE

12.6.17 In the absence of the DCO Proposed Development, it is likely the majority of the landscape and visual baseline within the Newbuild Infrastructure Boundary would remain similar over the assessment years to that of the current baseline. Current land use and management are predominately related to agricultural land (arable and grazed pasture), thus ecological conditions are unlikely to significantly change over the coming years. Where management lapses over time, natural succession of habitats from grassland to scrub and woodland may occur.

12.6.18 As detailed within **Chapter 9 – Biodiversity (Volume II)**, although species abundance and distribution within the Newbuild Infrastructure Boundary may naturally fluctuate, it is assumed there would be no significant changes to species or habitat status aside from natural succession of habitats and natural increases and decreases in species populations and geographic extent.

12.6.19 Increased air temperature and increased incidence of heatwaves as well as flooding events could result in fluctuations of species abundance and distribution which could alter the future baseline.

12.6.20 Future developments within the Newbuild Infrastructure Boundary would be anticipated, such as industrial, housing and retail developments within urban and suburban areas, which will alter the future baseline.

12.7 SENSITIVE RECEPTORS

12.7.1 For landscape character, sensitive receptors are set out in **Table 12.4** above but in summary include:

- LCA 9a Dunham to Tarvin Plain;
- LCA 9d Saughall to Waverton Plain;
- LCA 15i Gowy Valley;
- Dee coastal levels (FLNTVS076);
- Shotton farmland fringe (FLNTVS072);
- Queensferry coastal and estuary urban area (FLNTVS022);
- Connah's Quay coastal and estuary urban area (FLNTVS020);
- Hawarden inland urban area (FLNTVS033);
- Farmland Fringe (FLNTVS009);
- Estuary Edge and Valleys (FLNTVS014);
- A55 and A494 Road Corridors (FLNTVS084);
- Northop Hall inland urban area (FLNTVS042);
- Wooded Valley and Parkland (FLNTVS011);
- Northop (FLNTVS057);
- Limestone Plateau (FLNTVS004);
- Limestone Ridge (FLNTVS003);
- Rolling Farmland (FLNTVS008); and
- Valley Slopes and Plateau (FLNTVS015).

12.7.2 For visual amenity, sensitive receptors are set out in **Table 12.5** above but in summary include:

- Residents of Bryn Onnen;
- Residents of farmsteads off Goed-Onn Farm & dwellings off Llwyn Onn;
- Recreational users of Public Footpath Flint 56;
- Recreational users of Public Footpath Flint 66;
- Residents of Bryn Mawr;
- Recreational users of Public Footpath Flint 68;
- Residents of Tros-y-mynydd, Starkey Lane;

- Recreational users of Public Footpath Flint 70;
- Recreational users of Public Footpath Northop 4;
- Residents at Northop Hall;
- Residents within Elton;
- Residents within Yew Tree Close;
- Residents off unnamed road off Connah's Quay Road;
- Recreational users of Public Footpath Northop 2;
- Residents off Pinfold Lane;
- Residents off Magazine Lane;
- Residents off Holywell Road, Ewloe;
- Recreational users of Public Footpath Hawarden 144;
- Residents of Aston;
- Recreational users of Public Footpath Hawarden 31;
- Residents off Old Aston Hill;
- Residents of Sandycroft off Chester Road;
- Recreational users of the Wales Coast Path;
- Residents at Cop House Farm;
- Recreational users of Public Footpath East Saltney 2;
- Recreational users of the Chester Millennium Greenway;
- Residents of Saughall;
- Recreational users of Public Footpath 263 FP6/2;
- Residents off Gypsy Lane;
- PRoW users Public Footpath 211 FP4/1;
- Recreational users of Public Footpath 177 FP2/1;
- Recreational users of Shropshire Union Canal towpath;
- Canal users of the Shropshire Union Canal;
- Residents off Picton Lane;
- Recreational users of Public Bridleway 241 BR4/1;
- Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way);
- Residents of dwellings within Babell;
- Recreational users of Public Footpath Ysceifiog 76;
- Residents off Allt Chwiler;
- Residents of dwellings off the B5121;
- Residents of Ffordd Babell and the B5121;
- Residents off Cornist Lane;
- Residents off Overlea Drive;
- Recreational users of Public Footpaths Harwarden 29 and 34;

- Residents at Overwood Avenue;
- Recreational users of Public Footpath 211 FP9/1; and
- Residents at Mollington.

12.8 DESIGN DEVELOPMENT, IMPACT AVOIDANCE AND EMBEDDED MITIGATION

12.8.1 The following measures are committed and part of the Preliminary Design through embedded mitigation and are included in the **Outline Landscape and Ecological Management Plan (OLEMP) (Document Reference: D.6.5.10)** as well as the **Register of Environmental Actions and Commitments (REAC) (Document reference: D.6.5.1).**

Construction Stage

- Where areas of the Newbuild Carbon Dioxide Pipeline are to be constructed via open-cut trench method cross hedgerows, the extent of hedgerow to be removed will be a maximum of 15m .This includes both hedgerows and the trees that sit within the hedgerows (**D-BD-012** of the **REAC, Document reference: D.6.5.1**);
- Where trees (stems) sit outside of the Newbuild infrastructure Boundary, the Root Protection Areas (RPAs) of these trees will be protected and retained. Protective measures will be detailed within a site specific Arboricultural Method Statement (AMS) and shown on a Tree Protection Plan (TPP) and where necessary, working methods will be monitored by a suitable Arboricultural Clerk of Works (ACoW). The Construction Contractor will prepare the AMS following Detailed Design and will ensure works within root protection areas will be appropriately supervised in line with BS5837:2012 (**D-LV-014** of the **REAC, Document reference: D.6.5.1**);
- All ancient woodland areas will be protected. A 15m works exclusion zone or similar approved by an Arboriculturist is assumed, except for environmental mitigation works, such as drainage works. In these areas, works will be carried out as required but will ensure protection of the trees under supervision of a suitably qualified Arboriculturist. In these areas, works will be carried out as required but will ensure protection of the trees. Protective measures will be detailed within a site specific Arboricultural Method Statement (AMS) and shown on a Tree Protection Plan (TPP) and where necessary, working methods will be monitored by a suitable Arboricultural Clerk of Works (ACoW). The Construction Contractor will prepare the AMS (**D-LV-015** of the **REAC, Document reference: D.6.5.1**);
- All existing hedgerow, trees and groups of trees running parallel with the Millennium Greenway will be protected and retained. Any access requirements identified at Detailed Design stage will be sought via existing gaps in trees and hedgerow. Protective measures will be detailed within a site specific AMS and shown on a TPP and where necessary, working

methods will be monitored by a suitable ACoW. (**D-LV-016** of the **REAC, Document reference: D.6.5.1**);

- The hedgerow and tree T771 north of Townfield Lane, Mollington will be retained and protected. Protective measures will be detailed within a site specific AMS and shown on a TPP and where necessary, working methods will be monitored by a suitable ACoW. (**D-LV-017**of the **REAC, Document reference: D.6.5.1)**;
- The large linear belt of trees G1071 and G1073, west of Halls Green Lane will be retained to a minimum of half its current depth, approx. 20m width to ensure the characteristic of screening the motorway is retained (**D-LV-018** of the **REAC, Document reference: D.6.5.1)**;
- Linear belts of trees G1075, G1078, G1086, G1087, G1088, G1089, G1091, G1093, G1094, G1098, G1109, G1134, at Halls Green Lane and to the west of Halls Green Lane will be retained to such a level that visual screening of the M56 and DCO Proposed Development from nearby PRoW and residents will be maintained (**D-LV-019** of the **REAC, Document reference: D.6.5.1)**;

  The large linear belt of trees G1223 to the north of Ince Lane at the Chester Services will be retained to a minimum of half its current depth approx. 15m to ensure the characteristic of screening the Chester Services and associated roads from residents can be retained (**D-LV-020** of the **REAC, Document reference: D.6.5.1**;
- Kiosks and lighting columns within the AGIs and BVSs will be painted to a colour that fits the context in which they are located. This will be RAL6011 for all locations with the exception of Stanlow AGI which may be left as galvanised or painted grey. This external finish paint colour will be subject to approval at Detailed Design stage with the precise shade specified at that time (**D-LV-021** of the **REAC, Document reference: D.6.5.1**)
- Fences around the AGIs and BVSs will be PVC coated green to ensure the colour that fits the context in which they are located. This will be the case everywhere with the exception of Stanlow AGI which may be a standard galvanised finish or coated grey (**D-LV-022** of the **REAC, Document reference: D.6.5.1)**;
- Along the Newbuild Carbon Dioxide Pipeline, where loss of hedgerow, tree or woodland is otherwise unavoidable and takes place as a result of construction works, the loss will be replaced like-for like in a like-for-like location, unless otherwise prohibited by pipeline easement requirements or offset requirements from services. This will be in accordance with National Grid's Notes for guidance –Tree Planting Restrictions on Pipelines **(Ref. 12.15)**, as well as similar or any updated guidance notes for the relevant service provider as appropriate. Where this is the case, the replacement features will be planted as close to the original location as reasonably practicable and in agreement with the relevant Local Planning Authority (**D-LV-026** of the **REAC, Document reference: D.6.5.1)**;

- Hedgerows, trees and woodland which are located between trenchless crossing entry/exit pits (i.e. that Newbuild Carbon Dioxide Pipeline will cross via trenchless method) will be protected and retained. Protective measures will be detailed within a site specific AMS and shown on a TPP and where necessary, working methods will be monitored by a suitable ACoW (**D-LV-028** of the **REAC, Document reference: D.6.5.1)**;
- Where new temporary construction accesses are required in existing hedgerows, the width to be lost will be kept to the minimum practicable and will not exceed 15m. Hedgerows, trees and woodland outside of this 15m will be protected and retained. Protective measures will be detailed within a site specific (AMS and shown on a TPP and where necessary, working methods will be monitored by a suitable ACoW (**D-LV-030** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design will seek to avoid or otherwise minimise the loss of tree groups G576 and G578 which are anticipated to be impacted to make way for a temporary access track (**D-LV-031**of the **REAC, Document reference: D.6.5.1)**; and
- Where hedgerow, trees and woodland loss is unavoidable and takes place to make way for temporary access, these will be replaced on a like-for like basis and as close to the original location as practicable (**D-LV-032** of the **REAC, Document reference: D.6.5.1).**

Operation Stage

- Land disturbed to make way for Construction that isn't then used as part of the DCO Proposed Development during operation will be reinstated and returned to existing land uses following completion of the Construction Stage (**D-LV-002**of the **REAC, Document reference: D.6.5.1)**;
- AGI and BVS sites each have a specific Landscape Layout that forms the Preliminary Design. Deviations from this Preliminary Design may affect LVIA assessment findings within the ES. A check of the final designs at the Detailed Design stage will be made against the findings to ensure no worsening. (**D-LV-023** of the **REAC, Document reference: D.6.5.1).** Each AGI and BVS has a **Landscape Layout (Document reference: D.2.14)** which sets out the embedded mitigation design and are as follows:
  - **EN070007-D.2.14-LAY-Sheet 0 Flint AGI Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 1 Northop Hall AGI Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 2 Ince AGI Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 3 Aston Hill BVS Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 4 Mollington BVS Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 5 Rock Bank BVS Landscape Layout;**
  - **EN070007-D.2.14-LAY-Sheet 6 Babell BVS Landscape Layout;**

- **EN070007-D.2.14-LAY-Sheet 7 Pentre Halkyn BVS Landscape Layout;**
- **EN070007-D.2.14-LAY-Sheet 8 Cornist Lane BVS Landscape Layout;**
- **EN070007-D.2.14-LAY-Sheet 9 Stanlow AGI Landscape Layout.**

- During the Operational Stage, management will take place to ensure all mitigation planting thrives and survives following the principles set out in the **OLEMP (Document Reference: D.6.5.10)**.

Decommissioning Stage

- During decommissioning, appropriate protections to the established vegetation will be provided to ensure damage is avoided during the removal of apparatus. Where damage is unavoidable, replacement of any lost or damaged planting that was provided during the Operational Stage or any pre-existing, or newly planted by others, will be provided in agreement with the relevant LPA (**D-LV-012** of the **REAC, Document reference: D.6.5.1)**; and
- Decommissioning design and works will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP) as included as a Requirement of the **Draft DCO** (**Document Reference: D.3.1**).

12.9 ASSESSMENT OF LIKELY IMPACTS AND EFFECTS

12.9.1 This section details the assessment of predicted impacts and effects for the DCO Proposed Development during the Construction, Operational and Decommissioning Stage.

SIGNIFICANT EFFECTS

Construction Stage

12.9.2 The likely significant effects for Landscape and Visual receptors associated with the Construction Stage are set out below.

12.9.3 Changes to the landscape character within the Newbuild Infrastructure Boundary and Study Area are considered likely to occur during the Construction Stage, alongside changes to the visual amenity of those surrounding sensitive visual receptors.

12.9.4 The construction activities to build the DCO Proposed Development have potential to create temporary and permanent effects on landscape features through activities such as the clearance of vegetation and boundary features to enable space for new above ground assets proposed as part of the DCO Proposed Development.

12.9.5 Temporary, short-term effects on landscape character potentially would occur from the presence and movement of construction plant and associated temporary construction infrastructure.

12.9.6 A detailed assessment of effects on landscape character is set out in **Appendix 12.3 - Landscape Analysis (Volume III)** with a summary of those which are likely to be significant, in the absence of secondary mitigation, shown in **Table 12.6**.

Table 12.6 – Construction Landscape Effects

Landscape Character Area/ Aspect Area	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
LOCAL LEVEL (WALES) – LANDMAP		
Dee coastal levels (FLNTVS076)	The landscape is predominantly open and characterised by mixed agricultural farmland. Influences from industrial areas are experienced to the east. The susceptibility of this aspect area is considered to be Medium. There are no statutory designations within this LCA. The majority of the landscape is characterised by farmland and the flat landscape associated with the estuary. The value of the landscape is considered to be **Medium**. Overall Sensitivity: **Medium**.	Construction activity associated with the DCO Proposed Development will comprise a large section of land across the central part of the LCA, extending through the predominantly agricultural land adjacent to Sealand before crossing the River Dee towards Standycroft. Industrial and urbanising features are evident within the wider landscape at Queensferry, Deeside and Connah's Quay, however the DCO Proposed Development will introduce industrial features into a largely agricultural landscape. The scale of change is assessed as Medium. The Newbuild Infrastructure Boundary extends across a large section within the central part of the LCA. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

Landscape Character Area/ Aspect Area	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
LOCAL LEVEL (WALES) – LANDMAP		
Shotton farmland fringe (FLNTVS072)	The landscape is predominantly rural in character with agricultural fields bound by hedgerows forming the primary character of the landscape. Features associated with key infrastructure routes and settlements are notable. The overall susceptibility of this aspect area is considered to be Medium. There are no statutory designations within this LCA. It is clear that the landscape is in relatively good condition, however it is noted that features associated with settlements and infrastructure do diminish this quality to some degree. The overall value of the landscape is considered to be **Medium**. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will comprise a large section of land along the northern boundary of the LCA to the south of Sandycroft and extending around the northern and western edge of Mancot. Industrial and urbanising features associated with the industrial development along the River Dee and the settlements at Sandycroft and Mancot are evident with the Newbuild Infrastructure Boundary's character relating more to these features than the wider farmland to the south. Construction activity will introduce additional industrial features within the landscape with this existing context. The scale of change is assessed as Medium. Newbuild Infrastructure Boundary extends across a large section along the northern edge of the LCA. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

Landscape Character Area/ Aspect Area	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
LOCAL LEVEL (WALES) – LANDMAP		
Estuary Edge and Valleys (FLNTVS014)	The landscape is predominantly defined by the adjacent estuary and presents a rural character with agriculture interspersed by woodland and streams as key characteristics. The overall susceptibility of this aspect area is considered to be Medium. There are no statutory designations within this LCA. The landscape is in relatively good condition with features such as the estuary, valleys and woodland throughout the LCA providing features of scenic quality. Urban fringe development provides a minor detracting feature within the landscape. The overall value of the landscape is considered to be **Medium**. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will comprise a large portion of this LCA extending from the northern edge of Ewloe along the A494/A55 towards the southern edge of Flint. The landscape is predominantly characterised by improved farmland and the adjacent estuary to the north. Urban fringe associated with Shotton, Northop Hall and Ewloe is evident within the landscape however it is considered that the DCO Proposed Development will introduce industrial features into a largely rural and agricultural landscape. The scale of change is assessed as High. The Newbuild Infrastructure Boundary extends across a large section of the LCA. The geographical extent of change is therefore assessed as High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

12.9.7 A detailed assessment of effects on visual amenity for receptors during construction is set out in **Appendix 12.4 - Viewpoints Analysis (Volume III)** with a summary of those which are likely to be significant shown in **Table 12.7**.

Table 12.7 – Construction Visual Effects

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
Viewpoints associated with Wales based Above Ground Installations (WAGI)		
WAGI3 Recreational users of Public Footpath Flint 66 Distance to AGI: Approx. 170m	Receptors are PRoW users. PRoW users are likely to be traversing this route seeking enjoyment of the countryside. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW adjacent a road corridor and is not identified as a recognised or regionally significant view. The view contains detracting pylons. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development is clearly visible to the foreground of the view. The scale of change is considered to be High. Construction activity will occupy the majority of the view, with views towards the proposed Flint AGI and beyond the existing field boundary vegetation to the right of the view. The existing vegetation within the surrounding landscape will, however, serve to contain these impacts within the more immediate landscape to some degree. The geographical extent of change is considered to be High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
WAGI4 Residents of Bryn Mawr Recreational users of Public Footpath Flint 68 Distance to AGI: Approx. 275m	Receptors are residents of dwellings at home with north-eastern views and PRoW users are likely to be traversing this route seeking enjoyment of the countryside. The susceptibility of the receptors is recorded as High. The view is taken from a PRoW adjacent a road corridor and is not identified as a recognised or regionally significant view. The view contains a number of detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	The DCO Proposed Development is clearly visible, comprising the foreground of the view, with the proposed Flint AGI location and Construction Compound area located beyond the existing hedgerow to the left of the view. Construction activity associated with the DCO Proposed Development will therefore be clearly visible within the view. The scale of change is considered to be High. Construction activity will occupy the majority of the foreground of the view, with proposed vegetation removal affording clear views towards the Flint AGI development to the north. It is noted however that while the view will occupy the foreground, the sloping topography and vegetation to the east will ensure that these changes are localised. The geographical extent of change is considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
WAGI7 Residents of Tros-y-mynydd, Starkey Lane. Recreational users of Public Footpath Flint 70. Distance to AGI: Approx. 670m	Receptors are residents of dwellings at home with western views, and PRoW users. PRoW receptors are likely to be traversing this route seeking enjoyment of the countryside, with an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not taken from within a recognised or regionally significant landscape and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	The DCO Proposed Development is clearly visible, comprising part of the existing arable field to the forefront of the view and extending northwards to the adjoining field to the right of the view. Construction activity associated with the Newbuild Carbon Dioxide Pipeline will therefore be clearly visible within the view, occupying the forefront of the view. The proposed Flint AGI however is not likely to appear visible, located beyond the sloping topography and existing vegetation structure within the wider landscape to the north. The scale of change is therefore assessed as High. The DCO Proposed Development will be clearly visible to the forefront of the view with the limited field boundary vegetation and sloping nature of the topography to the west likely to increase the geographical extent of change. The geographical extent of change is assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
WAGI8 Recreational users of Public Footpath Northop 4 Distance to AGI: Approx. 155m	Receptors are PRoW users. PRoW receptors are likely to be traversing this route seeking enjoyment of the countryside, with an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not taken from within a recognised or regionally significant landscape and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	The DCO Proposed Development and Northop Hall AGI will be clearly visible, across the majority of the existing arable field within the foreground and extending northwards towards the B5125, towards the rear of the view. The scale of change is therefore assessed as High. The DCO Proposed Development will be clearly visible with the open grass field allowing uninterrupted views towards the DCO Proposed Development and Northop Hall AGI. However, the rising topography and dense woodland that lies to the north of the B5125 will serve to limit the geographical extent of change, containing views from the wider landscape and route of the PRoW. The geographical extent of change is assessed as Low. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
Viewpoints associated England based Above Ground Installations (EAGI)		

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
EAGI5 Residents within Elton Distance to AGI: Approx. 1000m	Receptors are noted to be residents with eastern facing views. Residents. The overall susceptibility of the receptors is recorded as High The view is taken from the edge of a settlement and as such is likely to be frequently experienced. The view has detracting features and is not identified as locally or regionally significant. The value of the view is recorded as Negligible. Overall Sensitivity: **Medium**	The DCO Proposed Development is clearly visible within the view, spanning across the existing fieldscape within the fore and middle ground of the view and extending northwards towards Ines Park. Construction activity associated with the DCO Proposed Development will be perceptible within the view above the low-level vegetation. The scale of change is assessed as High. The DCO Proposed Development will extend across the view within the middle ground with construction elements also visible within the foreground to the right of the view. Trenchless Crossing Compounds associated with the trenchless crossing to the north will likely be visible however only in glimpsed views beyond the existing vegetation with the proposed Ince AGI further contained and located to the south of the existing industrial built form. The geographical extent of change is therefore considered to be High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
EAGI9 Residents within Yew Tree Close Distance to AGI: Approx. 1190m	Receptors are residents of Yew Tree Close with eastern facing views. Residents have wide reaching views towards the wider landscape. Detracting features associated with industry at Stanlow and electricity pylons are evident within this view. The susceptibility of the receptor is recorded as High. The view is taken from a residential area. The view is not locally or nationally designated and there are noticeable detracting features evident within the view. The value of the view is recorded as Negligible. Overall Sensitivity: **Medium**	The DCO Proposed Development is clearly visible spanning across the majority of the existing fieldscape within the view and extending northwards towards Stanlow Industrial Park. Construction activity will be visible across the view with Trenchless Crossing Compounds associated with trenchless crossings evident within the foreground and middle ground of the view. The scale of change is therefore High. The DCO Proposed Development will comprise the majority of the view and will be clearly perceptible within the landscape with the open fieldscape allowing for clear views towards construction activity. The geographical extent of change is recorded as High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
Viewpoints associated with the Newbuild Carbon Dioxide Pipeline route (P)		
P1 Residents off unnamed road off Connah's Quay Road Recreational users of Public Footpath Northop **2** Distance to Newbuild Infrastructure Boundary: Approx. 295m	Receptors are noted to be residents and PRoW users with eastern views. Users of the ProW are likely to be traversing this route seeking enjoyment of the countryside with an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is not taken from within nationally or regionally significant landscape. The view contains few detracting features and is representative of a more rural character. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be visible within the background of the view, filtered by the intervening vegetation and extending across the length of the view. The scale of change is Medium. The DCO Proposed Development spans the length of the view, with the undulating topography likely to afford some clear views towards the associated construction activity within the background of the view, with the foreground remaining unchanged. The geographical extent of change is recorded as Medium. The Construction Stage is short term, and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P3* Residents off Holywell Road Recreational users of Public Footpath Hawarden 144 Distance to Newbuild Infrastructure Boundary: Approx. 125m	Receptors are residents and users of the PRoW and are likely to have an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from the route of a PRoW within a predominantly rural landscape. The view is not locally or regionally recognised but has few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be visible within the background of the view with the DCO Proposed Development spanning across the view within the wider landscape to the west and extending under the road corridor. The scale of change is therefore assessed as Medium. The DCO Proposed Development will extend across the background of the view behind the existing residential dwellings at Ewole and farmstead associated with Newbridge Farm, however the rising topography to the west, will help serve to contain these changes within the wider landscape to some degree. The geographical extent of the change is assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P4 Residents of Aston Recreational users of Public Footpath Hawarden 31 Distance to Newbuild Infrastructure Boundary: Approx. 0m (within boundary)	Receptors are noted to be residents at Aston with southern views, and users of the PRoW. The PRoW users are likely to be seeking enjoyment of the countryside with an appreciation for the landscape with residents at home also likely to have an appreciation for views. The overall susceptibility of the receptors is recorded as High. The view is taken from a PRoW route within a rural landscape close to a settlement and as such is likely to be frequently experienced. The view is not locally or regionally recognised but has few detracting features. The value of the view is recorded as Low.	Construction activity associated with the DCO Proposed Development will be clearly visible, extending across the majority of the view to the south and east with the Trenchless Crossing Compounds associated with the proposed tunnelling under the railway line located within the foreground of the view. The scale of change is therefore considered to be High. Construction activity will be visible, albeit screened to some degree by the existing vegetation and topography. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
	Overall Sensitivity: **Medium**	
P4b* Residents off Old Aston Hill, Ewloe Distance to Newbuild Infrastructure Boundary: Approx. 0m (within boundary)	Receptors are noted to be residents off Old Aston Hill. Residents at home are likely to have an appreciation for views and the wider landscape. The overall susceptibility of the receptors is recorded as High. The view is taken from a rural road corridor close to a settlement. The view is not locally or regionally recognised but has few detracting features. The value of the view is recorded as Low.	Construction activity associated with the DCO Proposed Development will be clearly visible within the view, extending across the majority of the view to the north, east and west, with the Trenchless Crossing Compounds associated with the proposed tunnelling to be visible within the middle ground of the view through the existing gap in the field boundary vegetation. The scale of change is therefore considered to be High. Construction activity will be visible throughout the view, albeit screened to some degree by the existing vegetation and topography. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P6 Residents of Sandycroft off Chester Road Distance to Newbuild Infrastructure Boundary: Approx. 60m	Receptors are noted to be residents of Sandycroft with south-western views and road users. Residents are afforded clear views to the wider rural landscape to the west and as such are likely to have an appreciation of the landscape. The overall susceptibility of the receptors is recorded as High. The view is not noted to be taken from with any regionally or locally significant landscapes and is considered to contain minimal detracting features associated with the road corridor and streetlights. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible, with the DCO Proposed Development comprising the majority of the existing grass fields bounding Chester Road within the middle-ground of the view. The scale of change is therefore assessed as High. The DCO Proposed Development spans the length of the view with the low-level vegetation and rising landscape likely to afford clear views toward the Newbuild Infrastructure Boundary from the wider landscape. The geographical extent of change is therefore assessed as High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P7 Recreational users of the Wales Coastal Path Distance to Newbuild Infrastructure Boundary: Approx. 204m	Receptors are PRoW users likely to be seeking enjoyment of the countryside with an appreciation for the wider landscape. The Wales Coastal Path is a nationally recognised long-distance recreational route. The susceptibility of the receptor is recorded as High. The view is taken from the Wales Coast Path a well-known long distance recreational route within the area. The view has few detracting features and demonstrates the more rural character of the landscape at this point. The value of the view is recorded as Medium. Overall Sensitivity: **High**	Construction activity associated with the DCO Proposed Development will be clearly visible, with the DCO Proposed Development comprising a large extent of the existing arable field to the right of the view and extending northwards with the proposed Trenchless Crossing Compounds associated with the trenchless crossing under the River Dee, located within the foreground. The scale of change is assessed as High. The construction activity will be clearly visible within the foreground and the wider landscape to the north with the limited vegetation structure likely to afford clear views from along the Wales Coast Path. The geographical extent of change is therefore as assessed as High. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P8* Residents at Cop House Farm Recreational users of Public Footpath East Saltney 2 Distance to Newbuild Infrastructure Boundary: Approx. 665m	Receptors are noted to be residents and PRoW users and with north-western facing views. The PRoW users are likely to be seeking enjoyment of the countryside with an appreciation for the landscape with residents at home also likely to have an appreciation for views. The overall susceptibility of the receptors is recorded as High. The view is taken from PRoW East Saltney, a locally significant route. Views from this location demonstrate the rural, riverside character of the landscape and contain few detracting features. The value of the view is recorded as Medium. Overall Sensitivity: **High**	Construction activity associated with the DCO Proposed Development will be perceptible, with middle distance views towards the point at which the Newbuild Carbon Dioxide Pipeline will cross the River Dee. Views towards the construction activities either side of the River Dee to the north and south of the river will be visible. The scale of change is therefore assessed as Medium. The construction activity will be clearly visible to the west, with the open views along the river corridor allowing for clear views towards the proposed construction activity in the middle ground. A degree of containment, however, is afforded to the wider development area by the existing vegetation and banks associated with the River Dee. The geographical extent of change is therefore as assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P9 Recreational users of the Chester Millennium Greenway	Receptors are users of the Chester Millennium Greenway. Users are likely to be traversing this route seeking enjoyment of the countryside with an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from the Chester Millennium Greenway, a locally significant route. Views from this location demonstrate	Construction activity associated with the DCO Proposed Development will be clearly visible where gaps in existing vegetation allow, with the DCO Proposed Development comprising the majority of the existing grass field to the right of the view and extending beyond the Greenway to the left of the view, with Trenchless Crossing Compounds associated with the proposed trenchless crossing under the Greenway evident across the view. The scale of change is therefore assessed as Medium. Construction activity associated with the DCO Proposed Development will span across the majority of the view. However, some degree of containment will be afforded by the existing vegetation which is to be

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
Distance to Newbuild Infrastructure Boundary: Approx. 15m	the rural character of the landscape and contain few detracting features. The value of the view is recorded as Medium. Overall Sensitivity: **High**	retained limiting the extent. Views of construction activity within the DCO Proposed Development will likely be visible for reasonable extent of the Greenway where vegetation is limited. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P10 Residents of Saughall Recreational users of Public Footpath 263 FP6/2 Distance to Newbuild Infrastructure Boundary: Approx. 0m (within boundary)	Receptors are noted to be residents of Saughall with south-eastern facing views and users of PRoW. Residents at home are likely to have an appreciation of the wider landscape. Recreational users are likely to be traversing this route seeking enjoyment of the countryside with an appreciation for the wider landscape. The overall susceptibility of the receptors is recorded as High. The view is taken from a road corridor with a number of detracting features. The view is not identified as being located within any areas of regional or local significance. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible, with the view located at the point of the proposed Site access and extending towards the proposed construction envelope associated with the trenchless crossing under Hermitage Road within the southern part of the existing field. The scale of change is therefore considered to be High. Vegetation removal within the south-western corner of the field to the right of the view will likely increase the geographical extent of change, opening up views towards the DCO Proposed Development from the wider landscape, however it is considered that the remaining vegetation and gently sloping topography will serve to contain views to some degree. The geographical extent of change is therefore recorded as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P12 Residents off Gypsy Lane PRoW users Public Footpath 211 FP4/1 Distance to Newbuild Infrastructure Boundary: Approx. 20m	Receptors are noted to be residents off Gypsy Lane with northern facing views, and PRoW users. Both these receptors are considered to have a greater appreciation for the wider landscape. The overall susceptibility of the receptors is recorded as High. The view is taken from a PRoW within a rural area close to dwellings and is likely to be frequently experienced. The view is not identified as being locally or regionally significant and the view contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible within the view comprising the majority of the foreground fields. The scale of change is therefore recorded as High. Construction activity will be clearly visible within the view, however intervening vegetation serves to screen views to a degree. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P12a Residents off Station Road Recreational users of Public Footpath 177 FP2/1 Distance to Newbuild Infrastructure Boundary: Approx. 0m (within boundary)	Receptors are noted to be residents off Station Road and recreational users of Public Footpath 177 FP2/1. Both these receptors are considered to have a greater appreciation for the wider landscape. Overall, the susceptibility of the receptor is recorded as High. The view is taken from a PRoW within a rural area close to dwellings and is likely to be frequently experienced. The view is not identified as being locally or regionally significant and the view contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible, comprising a large part of the existing foreground grass field and extending further south towards the wider landscape. In addition, the Trenchless Crossing Compounds associated with the trenchless crossing under Station Road will also form a prominent feature within the foreground. The scale of change is therefore assessed as High. The works for the DCO Proposed Development will extend across the majority of the view, tunnelling under Station Road and continuing towards the wider landscape to the south and west. It is noted that the existing woodland associated with Viaduct Wood will however serve to limit the geographical extent of change to some degree, containing views towards the Site from the wider landscape to the south. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P13a Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal Distance to Newbuild Infrastructure Boundary: Approx. 23m	Receptors are PRoW users and users of the canal. Both are considered likely to have an appreciation for the wider landscape travelling at low speeds and likely to seeking enjoyment of the countryside. The overall susceptibility of the receptors is recorded as High. The view is taken from the towpath adjacent the Shropshire Union Canal, a route commonly used for tourism. The view contains few detracting features. The view is taken from within	Construction activity associated with the DCO Proposed Development will be clearly visible, with the development boundary lining the northern edge of the canal corridor and extending westwards. In addition, construction envelopes associated with the trenchless crossing under Liverpool Road, visible to the right of the view, and northwards to the south of the built form at Cheshire West Skip Hire will also form prominent features within the foreground. The scale of change is therefore recorded as High. Construction activity is considered to be highly visible, however, contained to an extent within the wider landscape by the sloping topography as it rises away from the canal corridor. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium**

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
	the Chester Canal Conservation Area. The value of the view is recorded as Medium. Overall Sensitivity: **High**	Overall Effect: ***Moderate adverse (significant)***
P13b Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal Distance to Newbuild Infrastructure Boundary: Approx. 25m	Receptors are PRoW users and users of the canal. Both are considered likely to have an appreciation for the wider landscape travelling at low speeds and likely to seeking enjoyment of the countryside. The overall susceptibility of the receptors is recorded as High. The view is taken from the towpath adjacent the Shropshire Union Canal, a route commonly used for tourism. The view contains few detracting features. The view is taken from within the Chester Canal Conservation Area. The value of the view is recorded as Medium. Overall Sensitivity: **High**	Construction activity associated with the DCO Proposed Development will be clearly visible. Construction activity will be visible across the majority of the existing grass pasture field that lies along the northern edge of the Shropshire Union Canal. In addition, the removal of the existing scattered mature trees will result in a greater scale of change opening up views towards Friar's Park. The overall character of the view will become more open. The scale of change is therefore assessed as High. Where gaps allow, views towards construction activity are considered to be readily available within the immediate landscape however, contained to an extent, within the wider landscape by the sloping topography and vegetation bounding Friar's Park. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P14a* Recreational Users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal Distance to Newbuild Infrastructure Boundary: Approx. 95m	Receptors are PRoW users and users of the canal. Both are considered likely to have an appreciation for the wider landscape travelling at low speeds and likely to seeking enjoyment of the countryside. The overall susceptibility of the receptors is recorded as High. The view is taken from the towpath adjacent the Shropshire Union Canal, a route commonly used for tourism. The view contains few detracting features. The view is taken from within the Chester Canal Conservation Area. The value of the view is recorded as Medium. Overall Sensitivity: **High**	Construction activity associated with the DCO Proposed Development will be visible, with the Newbuild Infrastructure Boundary lining the northern and southern edge of the canal corridor to the west, and further views towards the Centralised Compound located beyond the existing grass field that lies adjacent to the canal. In addition, Trenchless Crossing Compounds associated with the trenchless crossing under the canal are also likely to be visible through gaps in the existing vegetation structure along the canal. The scale of change is therefore recorded as High. Views of construction activity will be readily available, however, contained to an extent, within the wider landscape by the existing vegetation lining the canal. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
P15a Residents off Picton Lane Recreational users of Public Bridleway 241 BR4/1 Distance to Newbuild Infrastructure Boundary: Approx. 11m	Receptors are considered to be PRoW and road users of Picton Lane with western views. PRoW users are considered to have a greater appreciation for the wider landscape. Picton Lane is however a rural road corridor with users likely to be travelling at lower speeds. The overall susceptibility of the receptors is recorded as High The view is taken from a PRoW and demonstrates the rural character of the landscape, containing few detracting features. The view is not identified as locally or regionally significant. The value of the view is recorded as Negligible. Overall Sensitivity: **Medium**	Construction activity will be clearly visible, with the temporary access extending across the existing grass field within the foreground of the view. In addition, it is noted that views towards construction activity associated with the wider DCO Proposed Development to the west will also be available within the background, albeit filtered to some degree by the existing vegetation structure. The scale of change is therefore assessed as High. Works associated with the DCO Proposed Development will be visible across the view with construction activity extending from Picton Lane further west. Due the broadly flat topography open views toward construction activity within the DCO Proposed Development will be available along the existing bridleway. While this is noted however, existing field boundary vegetation will serve to contain views from the wider landscape to a degree. The geographical extent of change is therefore considered to be Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
P16 Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way) Distance to Newbuild Infrastructure Boundary: Approx. 176m	Receptors are considered to be PRoW users of the North Cheshire Way. PRoW users are considered to have a greater appreciation for the wider landscape. The overall susceptibility of the receptors is recorded as High The view is taken from the North Cheshire Way Long-Distance Recreational Route which is a nationally identified walking route. The view while rural in character is located within close proximity to the M56 road corridor with detracting features associated with infrastructure and traffic identifiable within the view. The value of this view is therefore assessed as Medium. Overall Sensitivity: **High**	Construction activity associated with the DCO Proposed Development will be clearly visible, with the DCO Proposed Development extending across the fieldscape within the middle ground and along the southern edge of the M56 further to the east. The limited boundary vegetation and flat topography within the immediate landscape also allow for unobstructed views towards the DCO Proposed Development. The scale of change is therefore assessed as High. Due to the relatively open and exposed nature of the landscape within the fore and middle ground, it is considered that construction activity associated with the DCO Proposed Development will be highly visible within the landscape. However, vegetation structure within the wider landscape to the east and the existing infrastructure associated with the M56 to the north will serve to limit views from the wider landscape. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
Viewpoints associated with BVS		
B9 Residents off Cornist Lane Distance to BVS: Approx. 105m	Receptors are noted to residents off Cornist Lane with south-west views. Residents at home are likely to have an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from adjacent a road corridor. The view is not identified as regionally or locally significant but contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity will be clearly visible within the view, with the DCO Proposed Development comprising the existing grass field within the middle ground of the view. The scale of change is assessed as High. While clear views of the construction activity will be available these will be localised views, with wider views likely to be contained by the existing vegetation. The geographical extent of change is therefore assessed as Low. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
B12 Grid Ref: SJ 31209 66819 Address: Overlea Drive, Hawarden, Ewloe Residents off Overlea Drive Distance to BVS: Approx. 96m	Receptors are noted to be residents of dwellings off Overlea Drive with western facing views. Residents at home are considered to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a residential street. The view is not identified as being locally or regionally significant. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity will be clearly visible from the northern facing windows of residential properties off Overlea Drive. While views will likely be filtered to a degree by field boundary vegetation to the south of the proposed Aston Hill BVS it is considered that views towards the DCO Proposed Development and wider Newbuild Infrastructure Boundary will be readily available. The scale of change is therefore considered to be High. The DCO Proposed Development will extend across the existing fieldscape from north to south before extending further west towards the A494. Views of construction activity associated with the Aston Hill BVS are therefore considered to be readily available throughout the immediate landscape. However, it is considered that the existing built form to the north and south of the DCO Proposed Development, will serve to limit views towards the DCO Proposed Development from the wider landscape. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: **Moderate adverse (significant)**
B13 Recreational users of Public Footpaths Harwarden 29 and 34 Distance to BVS: Approx. 170m	Receptors are noted to be PRoW users who are likely to be seeking enjoyment of the countryside and to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not identified as nationally or regionally significant and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible within the existing grass field within the foreground and middle ground of the view, with the DCO Proposed Development extending across the wider fieldscape to the north of the view, and taller elements of construction activity likely to be visible above the existing field boundary vegetation. The scale of change is therefore assessed as High. The DCO Proposed Development will extend across the entire view within the existing fieldscape with the open character of the landscape and low-level vegetation affording clear views within the landscape. However, vegetation further to the north and existing built form to the south will serve to limit views towards the DCO Proposed Development and Aston Hill BVS from the wider landscape. The geographical extent of change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
B14 Recreational users of Public Footpath 211 FP9/1 Distance to BVS: Approx. 185m	Receptors are noted to be PRoW users and residents of Overwood Avenue. PRoW users and residents at home are likely to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High.	Construction activity associated with the DCO Proposed Development will be visible, albeit glimpsed through gaps in the existing vegetation that lines the field boundary to the west within the background of the view. The scale of change is therefore assessed as Medium. The DCO Proposed Development will extend across the background of the view beyond the existing vegetation that lies within the wider landscape to the west. The geographical extent of the change is therefore assessed as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low.

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Construction magnitude and effect
	The view is taken from a PRoW. The view is not identified as nationally or regionally significant and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***
B15 Residents at Mollington Distance to BVS: Approx. 105m	Receptors are noted to be residents of dwellings at Mollington. Residents at home are considered to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a residential street. The view is not identified as being locally or regionally significant. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Construction activity associated with the DCO Proposed Development will be clearly visible, with the existing grass field affording open views towards the proposed Mollington BVS. The scale of change is therefore considered to be High. The DCO Proposed Development area extends across the view and towards the wider landscape to the south. It is noted however that the relatively flat landscape at this point, in addition to the existing field boundary vegetation, will limit the availability of views towards the DCO Proposed Development and Mollington BVS from the wider landscape however and therefore will likely reduce the geographical extent of change to some degree. The geographical extent of change is therefore recorded as Medium. The Construction Stage is considered to be short term and the duration of change is therefore assessed as Low. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)***

Operational Stage

12.9.8 The DCO Proposed Development will introduce new permanent above ground structures, primarily the AGIs and BVSs, that will affect the existing (and future) baseline landscape character of the Study Area.

12.9.9 A detailed assessment of effects on landscape character is set out in **Appendix 12.3 - Landscape Analysis (Volume III).** The assessment concluded that, at Operation Year 1, there will be no adverse effects of Moderate or above, with the greatest effect noted to be Minor adverse. Therefore, there are no significant effects on landscape character receptors anticipated.

12.9.10 A detailed assessment of effects including both significant and not significant on visual amenity for receptors during operation is set out in **Appendix 12.4 - Visual Analysis (Volume III)** with a summary of those which are likely to be significant only shown in **Table 12.8** below.

Table 12.8 – Operational Visual Effects

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Operational magnitude and effect
Viewpoints associated with Wales based Above Ground Installations (WAGI)		
WAGI3 Recreational users of Public Footpath Flint 66	Receptors are PRoW users. PRoW users are likely to be traversing this route seeking enjoyment of the countryside. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW adjacent a road corridor and is not identified as a recognised or regionally significant view. The view contains detracting pylons. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1, the DCO Proposed Development will be visible, with the reinstated land associated with the open trench infill and replacement planting of a small section of the removed hedgerow to the south of the Flint AGI evident within the fore and middle ground, and glimpsed views of the Flint AGI to form a noticeable feature. While the Flint AGI to Flint Connection Pipeline will be located underground, the proposed Flint AGI will form a prominent feature within the landscape. The scale of change therefore is considered to be High. With regard to the geographical extent the majority of the change will be focussed to the right of the view with the Flint AGI and the associated vegetation removal. Although clearly visible, this will occupy a small proportion of the view and will be contained by the topography and vegetation within the wider landscape to the east. The geographical extent of change is considered to be Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
WAGI4 Residents of Bryn Mawr Recreational users of Public Footpath Flint 68	Receptors are residents of dwellings at home with north-eastern views and PRoW users are likely to be traversing this route seeking enjoyment of the countryside. The susceptibility of the receptors is recorded as High. The view is taken from a PRoW adjacent a road corridor and is not identified as a recognised or regionally significant view. The view contains a number of detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1, the DCO Proposed Development will be perceptible, with views towards the proposed Flint AGI to the north, hedgerow removal and replacement planting and reinstated land forming noticeable features. However, these features, while clearly visible, will form a minor component within the wider landscape in the view, and will be viewed beyond middle ground vegetation. The scale of change is therefore considered to be Medium. With regard to the geographical extent the majority of the change will be focussed to the left of the view with the development of the Flint AGI and the associated vegetation removal. While visible this will occupy a small proportion of the view and will be contained by the topography and vegetation within the wider landscape to the east. The geographical extent of change is considered to be Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
WAGI8 Recreational users of Public Footpath Northop 4	Receptors are PRoW users. PRoW receptors are likely to be traversing this route seeking enjoyment of the countryside, with an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not taken from within a recognised or regionally significant landscape and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1 the Northop Hall AGI will be visible, set towards the background of the view towards the existing road corridor, with the open nature of the landscape affording clear views of the DCO Proposed Development. In addition, reinstated land and localised regrading surrounding the Northop Hall AGI will also be visible. Mitigation planting will be visible however, this will not be of sufficient maturity to provide screening at year 1. The scale of change is therefore assessed as Medium. The DCO Proposed Development will be visible within the open grass field however the Northop Hall AGI will be located to the left of the view, partially screened by the existing dense vegetation structure that lines the road corridor. The geographical extent of change is assessed as Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
Viewpoints associated with the Newbuild Carbon Dioxide Pipeline route (P)		
P13a Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	Receptors are PRoW users and users of the canal. Both are considered likely to have an appreciation for the wider landscape travelling at low speeds and likely to seeking enjoyment of the countryside. The overall susceptibility of the receptors is recorded as High.	At operation year 1, while the majority of the DCO Proposed Development will be barely perceptible, with the Stanlow AGI to Flint AGI Pipeline located underground, it is noted however that changes, such as the reinstated land associated with the open trench works and associated removal and replacement planting of the scattered tree and native shrub planting to the south and east of Friar's Park, will be clearly visible, opening up views within the landscape across the majority of the view. New mitigation planting that can be provided in this location will not be of a maturity to provide effective screening at year 1. The scale of change is therefore assessed as Medium. With regard to the geographical extent of change it is noted that proposed changes such as vegetation removal replacement and reinstated land will be perceptible within the view however, highly localised with the sloping topography and retained vegetation along the northern edge of the canal corridor serving to contain views towards the wider landscape. The geographical extent of change is therefore considered to be Low. The

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Operational magnitude and effect
	The view is taken from the towpath adjacent the Shropshire Union Canal, a route commonly used for tourism. The view contains few detracting features. The view is taken from within the Chester Canal Conservation Area. The value of the view is recorded as Medium. Overall Sensitivity: **High**	operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Low** Overall Effect: ***Moderate adverse (significant)*** At operation year 15, while the majority of the DCO Proposed Development will remain largely imperceptible, with the Stanlow AGI to Flint AGI Pipeline located underground, it is noted however that changes, such as the loss of vegetation within the view will remain where like-for-like mitigation has not been achieved due to constraints. Any mitigation planting that is achieved, will have matured at year 15, filtering views towards Friar's Park to the northeast, but the changes in the wider view will still be perceptible. The scale of change is therefore assessed as Low. The scale of change will be largely contained to localised views from the canal corridor and will therefore be highly localised. The geographical extent of change is therefore assessed as Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Low** Overall Effect: ***Moderate adverse (significant)***
P13b Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	Receptors are PRoW users and users of the canal. Both are considered likely to have an appreciation for the wider landscape travelling at low speeds and likely to seeking enjoyment of the countryside. The overall susceptibility of the receptors is recorded as High. The view is taken from the towpath adjacent the Shropshire Union Canal, a route commonly used for tourism. The view contains few detracting features. The view is taken from within the Chester Canal Conservation Area. The value of the view is recorded as Medium. Overall Sensitivity: **High**	At operation year 1, the DCO Proposed Development will be, for the most part, barely perceptible, with the Stanlow AGI to Flint AGI Pipeline located underground. Noticeable changes associated with the removal of the mature scattered trees and limited scrub evident within the foreground will present a more open landscape, allowing greater visibility towards Friar's Park that lies within the background. While a number of trees will be replanted on a like for like basis, they will be immature at this time. The loss of this mature vegetation will remain a notable feature within the view. In addition, while less visible, views of the reinstated land associated with the open trench works will also be available within the open grass field to the north of the canal. The scale of change is therefore assessed as Medium. With regard to the geographical extent of change it is noted that proposed changes associated with the removal of the existing scattered trees are likely to be clearly visible along the canal path where existing vegetation cover is limited. Views towards the DCO Proposed Development from the wider landscape are however contained to a degree by the vegetation cover within the wider landscape to the north and further along the canal corridor. The geographical extent of change is therefore assessed as Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** At operation year 15, the DCO Proposed Development will remain largely imperceptible, with the Stanlow AGI to Flint AGI Pipeline located underground. The mitigation planting will have matured at year 15, views towards Friar's Park and across the existing field to the north will generally be filtered as per the baseline views excluding where like for like mitigation is not able to be achieved. The scale of change is therefore assessed as Low. The scale of change will be largely contained to localised views from the canal corridor and will therefore be highly localised. The geographical extent of change is therefore assessed as Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Low** Overall Effect: ***Moderate adverse (significant)***

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Operational magnitude and effect
P16 Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way)	Receptors are considered to be PRoW users of the North Cheshire Way. PRoW users are considered to have a greater appreciation for the wider landscape. The overall susceptibility of the receptors is recorded as High The view is taken from the North Cheshire Way Long-Distance Recreational Route which is a nationally identified walking route. The view while rural in character is located within close proximity to the M56 road corridor with detracting features associated with infrastructure and traffic identifiable within the view. The value of this view is therefore assessed as Medium. Overall Sensitivity: **High**	At operation year 1, the DCO Proposed Development will be barely perceptible, with the Stanlow AGI to Flint AGI Pipeline located underground. However, changes such as the reinstated land and vegetation removal and replacement planting will be visible within the landscape. However, while some vegetation removal will be required, vegetation along the southern edge of the M56 will be largely retained to a minimum of half its depth to ensure views towards the motorway are contained. The scale of change is therefore assessed as Low. With regard to the geographical extent of change it is clear that with the retention of the existing vegetation views towards the DCO Proposed Development will be limited to those within the immediate landscape context. Longer distance views will be contained by the existing vegetation. The geographical extent of change is therefore considered to be Low. The operational stage comprises the life of the DCO Proposed Development and is therefore assessed as long term. The duration of change is recorded as High. Overall Magnitude: **Low** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
Viewpoints associated with BVS		
B9 **Residents off Cornist Lane**	Receptors are noted to residents off Cornist Lane with south-west views. Residents at home are likely to have an appreciation for the landscape. The susceptibility of the receptor is recorded as High. The view is taken from adjacent a road corridor. The view is not identified as regionally or locally significant but contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1 it is clear that the Cornist Lane BVS will be visible through the existing field gate and beyond the immature mitigation planting which will be seen in the foreground. However, views towards the wider Newbuild Infrastructure Boundary will be obscured by the existing vegetation structure. The scale of change is therefore assessed as Medium. The Cornist Lane BVS and its associated drainage attenuation pond will be visible within the view however this will be largely obscured within the wider landscape, only likely to appear within localised views. The geographical extent of change is therefore assessed as Low. The operational stage is assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
B12 **Grid Ref: SJ 31209 66819** **Address: Overlea Drive, Hawarden, Ewloe** **Residents off Overlea Drive**	Receptors are noted to be residents of dwellings off Overlea Drive with western facing views. Residents at home are considered to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a residential street. The view is not identified as being locally or regionally significant. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1 it is clear that the Aston Hill BVS will be visible within northern facing views from residential dwellings on the northern edge of Overlea Drive above the existing field boundary vegetation, however, the wider works associated with the Stanlow AGI to Flint AGI Pipeline, will not be perceptible, located underground. New mitigation native shrub, hedgerow and screen planting will also be visible adjacent to and to the south of the Aston Hill BVS however, this will be newly planted and as such will not provide screening at year 1. The scale of change is therefore assessed as Medium. The Aston Hill BVS will be visible within northern views from residential dwellings along Overlea Drive, however, the existing built from to the north and south of the DCO Proposed Development will serve to contain views towards the DCO Proposed Development from the wider landscape, ensuring that views towards the Aston Hill BVS are localised to only adjacent dwellings. The geographical extent of change is therefore assessed as Low. The operational stage is assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
B13 **Recreational users of Public Footpaths Harwarden 29 and 34**	Receptors are noted to be PRoW users who are likely to be seeking enjoyment of the countryside and to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not identified as nationally or regionally significant and contains few detracting	At operation year 1 it is clear that the Aston Hill BVS and access track will be visible within the fore and middle ground within the existing fieldscape. However, the wider works associated with the Stanlow AGI to Flint AGI Pipeline, will not be perceptible, located underground. In addition, it is noted that mitigation and replacement native shrub and hedgerow planting will be perceptible however at year 1 planting will not be of a maturity to provide significant screening. The scale of change is therefore assessed as Medium. The proposed Aston Hill BVS will be visible towards the north-eastern corner of the existing grass field within the foreground, with the proposed access track to extend along the northern edge of the field before connecting with the BVS. In addition, newly planted mitigation and replacement hedgerow planting will be seen across the view within both the existing field to the foreground and further north along the boundary with the adjacent field. While it is noted that mitigation planting will be visible across the view, this will represent a minor change, with principal changes associated with the new permanent access track and Aston Hill BVS to be more localised within the existing fieldscape to the foreground. The geographical extent of change is therefore assessed as Low. The operational stage is assessed as long term. The duration of change is assessed as High.

Viewpoint Reference and Type	Susceptibility, value, and overall sensitivity	Operational magnitude and effect
	features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
B14 Recreational users of Public Footpath 211 FP9/1	Receptors are noted to be PRoW users and residents of Overwood Avenue. PRoW users and residents at home are likely to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a PRoW. The view is not identified as nationally or regionally significant and contains few detracting features. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1 the Mollington BVS will be visible, albeit filtered, above the existing hedgerow that lies within the middle ground and forms the existing field boundary. At year 1 views towards the Site are likely to be more available where existing hedgerow has been removed to accommodate the Stanlow AGI to Flint AGI Pipeline works. While mitigation and replacement native shrub and hedgerow planting is proposed and will be perceptible to the left of the view, at year 1 planting will not be of a maturity to provide significant screening to effectively contain views towards the Mollington BVS. Wider works associated with the Stanlow AGI to Flint AGI Pipeline, will not be perceptible, located underground. The scale of change is therefore assessed as Medium. The proposed Mollington BVS will be visible albeit filtered by the existing vegetation structure. While some clear views may be visible where the existing hedgerow has been removed and replacement planting is proposed, it is considered that retained vegetation within the wider landscape will ensure that views towards the DCO Proposed Development are limited and highly localised with only glimpsed views of upper portions of the Mollington BVS likely to be visible. The geographical extent of change is therefore assessed as Low. The operational stage is assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*
B15 Residents at Mollington	Receptors are noted to be residents of dwellings at Mollington. Residents at home are considered to have an appreciation for the wider landscape. The susceptibility of the receptor is recorded as High. The view is taken from a residential street. The view is not identified as being locally or regionally significant. The value of the view is recorded as Low. Overall Sensitivity: **Medium**	At operation year 1 the proposed Mollington BVS will be clearly visible within the view set within the existing field that lies within the foreground. While it is noted that mitigation and replacement hedgerow planting will also be visible, at year 1 this will not be of sufficient maturity to provide effective screening towards the development. However, wider works associated with the Stanlow AGI to Flint AGI Pipeline, will not be perceptible, located underground. The scale of change is therefore assessed as High. The proposed Mollington BVS will be clearly visible within the immediate landscape and within glimpsed views from the wider landscape to the south and west following the removal of hedgerow undertaken during the Construction Stage. However, retained vegetation will serve to ensure that views towards Site are localised with only glimpsed views of the upper portions of the Mollington BVS likely to be visible from within the wider landscape. The geographical extent of change is therefore assessed as Low. The operational stage is assessed as long term. The duration of change is assessed as High. Overall Magnitude: **Medium** Overall Effect: ***Moderate adverse (significant)*** *At operation year 15, effects reduce to not significant.*

Decommissioning Stage

12.9.11 The Decommissioning Stage will see the removal of the AGIs and BVSs only. The Newbuild Carbon Dioxide Pipeline and existing Flint Connection to PoA Terminal Pipeline will remain in-situ but will be considered safely decommissioned. During the decommissioning works it is anticipated that effects associated with AGIs and BVSs will be similar to those experienced during construction of the DCO Proposed Development as set out in **Appendices 12.3 and 12.4.** Upon completion of the decommissioning these will reduce to not significant. This is due to the landscape returning to the baseline situation or similar.

12.10 MITIGATION AND ENHANCEMENT MEASURES

12.10.1 As an inherent part of the design process, landscape and visual effects will be considered in relation to the DCO Proposed Development. This section sets out the additional mitigation and compensation measures which are required to address the significant effects assessed in **Section 12.7**.

Construction Stage

- The Construction Compounds will, where relevant and practicable, be micro-sited to reduce the proximity to residential properties to minimise visibility and avoid key landscape features (**D-LV-001** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design alignment of the Newbuild Carbon Dioxide Pipeline will, wherever practicable, be micro-sited to avoid areas of woodland (including but not limited to National Forest Inventory and Ancient Woodland Inventory) (**D-BD-009** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design alignment of the Newbuild Carbon Dioxide Pipeline will, wherever practicable, be micro-sited to avoid removal of trees covered by Tree Preservation Orders (including but not limited to trees within conservation areas) and Veteran Trees (**D-LV-001** of the **REAC, Document reference: D.6.5.1)**; (**D-BD-009** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design alignment of the Newbuild Carbon Dioxide Pipeline will, wherever practicable, be micro-sited to avoid locally valued landscape features including woodland, hedgerows, and field drains, including root protection zones of existing mature trees (**D-LV-005** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design alignment of the Newbuild Carbon Dioxide Pipeline will, wherever practicable, be micro-sited to use existing visual screening, through location in proximity (but to avoid damage) to areas of woodland, belts and/or locally enclosed topography, such as valley bottoms or dips in localised undulations (**D-LV-006** of the **REAC, Document reference: D.6.5.1)**;

- The Detailed Design will consider further utilisation of trenchless installation techniques to maintain views from towpaths and recreational routes as well as vegetation associated with these features and/or roadside hedgerow. Any additional use of trenchless installation techniques will consider the conclusions of the Environmental Statement, permit requirements and any other agreements to ensure that this would be acceptable (**D-LV-007** of the **REAC, Document reference: D.6.5.1)**;
- The Detailed Design will seek to, as far as practicable, minimise the loss of mature trees, in particular around Shropshire Union Canal (noting this is also a conservation area (**D-BD-007** of the **REAC, Document reference: D.6.5.1)**;
- Prior to the commencement of construction, the Construction Contractor(s) will set out where reinstatement of arable land, fenced boundaries, hedgerows and grassland upon completion of construction will take place. This will include any protective fencing to areas of reinstatement that will typically remain in place to exclude livestock and allow establishment to take place (**D-LV-009** of the **REAC, Document reference: D.6.5.1)**;
- Pipeline marker posts and aerial marker posts will be located to minimise intrusion on the landscape, as far as practicable (**D-LV-010** of the **REAC, Document reference: D.6.5.1)**;
- Where construction will impact road verges, these will be reinstated and, where appropriate and practicable, enhanced through the addition of species rich grass mixes or similar as appropriate for the benefit of biodiversity (**D-LV-011**of the **REAC, Document reference: D.6.5.1)**;
- During Detailed Design, the Construction Contractor(s) will prepare Landscape Layouts for the Newbuild Carbon Dioxide Pipeline route. Indicative planting species and specification has been provided on **Landscape Layouts (Document Reference: EN070007-D.2.14-LAY-Sheet 10 Indicative Species List)** alongside the Landscape Layouts but a full planting schedule with plant numbers, spacing etc will be provided for the whole DCO Proposed Development at Detailed Design stage (**D-LV-024** of the **REAC, Document reference: D.6.5.1)**;
- During Detailed Design, further investigations will take place to ensure minimal tree loss takes place in areas where natural screening from hedgerow and linear belts of trees or woodland exist. This will be considered as part of decision making around the Newbuild Carbon Dioxide Pipeline alignment to avoid such loss (**D-LV-033** of the **REAC, Document reference: D.6.5.1)**;
- During Detailed Design, where vegetation loss is identified to be unavoidable, and replacement cannot take place in like-for-like locations due to utilities constraints or the constraints of the proposed Newbuild Carbon Dioxide Pipeline route, Table 1 of the **OLMEP (Document reference: D.6.5.10)** should be referred to in order to establish how to mitigate for these losses. Replacement blocks for vegetation have been identified and are

shown on **Appendix 1 Landscape and Ecological Mitigation Plan (Document Reference: D.6.5.10.1.)** (**D-LV-036** of the **REAC, Document reference: D.6.5.1)**;

Operational Stage

- The Construction Contractor will ensure suitable landscape management through production of a Detailed LEMP (as included as a Requirement of the **Draft DCO** (**Document Reference: D.3.1**)) to enable the establishment of all proposed vegetation in agreement with the relevant LPA (**D-LV-034** of the **REAC, Document reference: D.6.5.1)**; and
- Following the completion of the Construction Stage, once all planting is in place, a suite of drawings will be produced by the Construction Contractor referred to as 'as built drawings' or similar to ensure what has been constructed matches the proposed drawings, as well as forming a reference for on-going maintenance and associated record keeping (**D-LV-035** of the **REAC, Document reference: D.6.5.1)**.

Decommissioning Stage

12.10.2 No further specific landscape and visual mitigation are required during decommissioning.

12.10.3 As set out above, decommissioning design and works will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan DEMP) as included as a Requirement of the **Draft DCO** (**Document Reference: D.3.1**).

12.11 RESIDUAL EFFECTS

12.11.1 **Table 12-9** summarises the residual effects associated with the DCO Proposed Development. Whilst all proposed mitigation will bring a reduction in magnitude of change, in some cases the changes would not be large enough to alter the level of effects as previously assessed.

Table 12.9 – Summary of Residual Effects

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
Construction Effects			
Landscape character receptors			
Dee coastal levels (FLNTVS076)	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
Shotton farmland fringe (FLNTVS072)	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
Estuary Edge and Valleys (FLNTVS014)	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
Limestone Plateau (FLNTVS004)	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
Visual amenity receptors			
WAGI3 Recreational users of Public Footpath Flint 66	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
WAGI4 Residents of Bryn Mawr Recreational users of Public Footpath Flint 68	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
WAGI7 Residents of Tros-y-mynydd, Starkey Lane. Recreational users of Public Footpath Flint 70.	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
WAGI8 Recreational users of Public Footpath Northop 4	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
EAGI5 Residents within Elton	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
EAGI9 Residents within Yew Tree Close	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
P1 Residents off unnamed road off Connah's Quay Road Recreational users of Public Footpath Northop 2	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P3* Residents off Holywell Road Recreational users of Public Footpath Hawarden 144	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P4 Residents of Aston Recreational users of Public Footpath Hawarden 31	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P4b* Residents off Old Aston Hall, Ewloe	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P6 Residents of Sandycroft off Chester Road	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P7 Recreational users of the Wales Coastal Path	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P8* Residents at Cop House Farm Recreational users of Public Footpath East Saltney 2	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P9 Recreational users of the Chester Millennium Greenway	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P10 Residents of Saughall Recreational users of Public Footpath 263 FP6/2	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
P12 Residents off Gypsy Lane PRoW users Public Footpath 211 FP4/1	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P12a Residents off Station Road Recreational users of Public Footpath 177 FP2/1	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P13a Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P13b Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P14a Recreational Users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P15a Residents off Picton Lane Recreational users of Public Bridleway 241 BR4/1	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
P16 Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way)	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
B9 Residents off Cornist Lane	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
B12 Grid Ref: SJ 31209 66819 Address: Overlea Drive, Hawarden, Ewloe Residents off Overlea Drive	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
B13 Recreational users of Public Footpaths Harwarden 29 and 34	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
B14 Recreational users of Public Footpath 211 FP9/1	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
B15 Residents at Mollington	***Moderate adverse (significant)***	Construction Stage mitigation measures as set out in **Section 12.9.**	***Moderate adverse (significant)***
Operational Effects			
Landscape character receptors			
There are no reported significant residual effects for any LCAs.			
Visual amenity receptors			
WAGI3 Recreational users of Public Footpath Flint 66	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 0 Flint AGI Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at the Flint AGI site.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*
WAGI4 Residents of Bryn Mawr Recreational users of Public Footpath Flint 68	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Negligible neutral (not significant)*	EN070007-D.2.14-LAY-Sheet 0 Flint AGI Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at the Flint AGI site.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Negligible neutral (not significant)*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
WAGI8 Recreational users of Public Footpath Northop 4	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 1 Northop Hall AGI Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at the Northop Hall AGI site.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 – *Minor adverse (not significant)*
P13a Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 - ***Moderate adverse (significant)***	Landscape mitigation proposals to reduce visual effects of the Newbuild Carbon Dioxide Pipeline corridor during both the Construction Stage and operational stage are likely to reduce impacts at both operational year 1 and operational year 15. Additionally, the Mitigation Area Work No 57G will provide screening towards the wider landscape for a short section (approx. 200m) of the Shropshire Union Canal towpath. Area shown on **Appendix 1 Landscape and Ecological Mitigation Plan (Document Ref: EN070007 D.6.5.10.1.)**	Operational Year 1 - *Minor adverse (not significant)* Operational Year 15 **–** *Minor adverse* (*not significant)*
P13b Recreational users of Shropshire Union Canal towpath Canal users of the Shropshire Union Canal	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 1 - ***Moderate adverse (significant)***	Landscape mitigation proposals to reduce visual effects of the Newbuild Carbon Dioxide Pipeline corridor during both the Construction Stage and operational stage are likely to reduce impacts at both operational year 1 and operational year 15.	Operational Year 1 - *Minor adverse (not significant)* Operational Year 15 **–** *Minor adverse (not significant)*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
P16 Recreational users of Public Footpath 309 FP1/2 (North Cheshire Way)	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 – *Not significant*	Landscape mitigation proposals to reduce visual effects of the Newbuild Carbon Dioxide Pipeline corridor during both the Construction Stage and operational stage are likely to reduce impacts at both operational year 1 and operational year 15. Additionally, the Mitigation Areas Work No. 57F and 57E will provide additional screening towards the M56 motorway, supplementing the existing belt of trees in this area along the North Cheshire Way. Area shown on **Appendix 1 Landscape and Ecological Mitigation Plan (Document Ref: EN070007 D.6.5.10.1.)**	Operational Year 1 - *Minor adverse (not significant)* Operational Year 15 **–** *Minor adverse (not significant)*
B9 Residents off Cornist Lane	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 8 Cornist Lane BVS Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at Cornist Lane BVS.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*
B12 Grid Ref: SJ 31209 66819 Address: Overlea Drive, Hawarden, Ewloe Residents off Overlea Drive	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 3 Aston Hill BVS Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at Aston Hill BVS.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*
B13 Recreational users of Public Footpaths Harwarden 29 and 34	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 3 Aston Hill BVS Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at Aston Hill BVS.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 **–** *Minor adverse (not significant)*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
B14 Recreational users of Public Footpath 211 FP9/1	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 – *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 4 Mollington BVS Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required to reduce effects at operational year 1 at Mollington BVS.	Operational Year *1* - ***Moderate adverse (significant)*** Operational Year 15 – *Minor adverse (not significant)*
B15 **Residents at Mollington**	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 – *Minor adverse (not significant)*	EN070007-D.2.14-LAY-Sheet 4 Mollington BVS Landscape Layout as part of the embedded mitigation reduce the effects to not significant at year 15 following vegetation maturity. Therefore, no further mitigation measures are required y to reduce effects at operational year 1 at Mollington BVS.	Operational Year 1 - ***Moderate adverse (significant)*** Operational Year 15 – *Minor adverse (not significant)*
Decommissioning Effects			
Landscape character receptors			
There are no reported significant residual effects for any LCAs.			
Visual amenity receptors			
WAGI3 Recreational users of Public Footpath Flint 66	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
WAGI4 Residents of Bryn Mawr Recreational users of Public Footpath Flint 68	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
WAGI7 Residents of Tros-y-mynydd, Starkey Lane. Recreational users of Public Footpath Flint 70.	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
WAGI8 Recreational users of Public Footpath Northop 4	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
WAGI9 Residents at Northop Hall	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
EAGI5 Residents within Elton	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
EAGI9 Residents within Yew Tree Close	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
B5 Residents off Allt Chwiler	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
B6 Residents of dwellings off the B5121	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
B7 Residents of Ffordd Babell and the B5121	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
B9 Residents off Cornist Lane	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
B12 Residents off Overlea Drive	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
B13 Recreational users of Public Footpaths Harwarden 29 and 34	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

Description of the effect	Pre-mitigation significance of effects	Mitigation measure	Residual effect
B14 Recreational users of Public Footpath 211 FP9/1	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*
B15 Residents at Mollington	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*	Significant effects are expected to be short term and temporary reducing to not significant at the end of the Decommissioning Stage. Decommissioning design and works including further mitigation, will be undertaken in compliance with all necessary legislation, permits and best practice at that time. This will be set out in the end of life Decommissioning Environmental Management Plan (DEMP).	During decommissioning: ***Moderate adverse (significant)*** End of Decommissioning: *Not significant*

12.12 IN-COMBINATION CLIMATE CHANGE IMPACTS

12.12.1 Increased air temperature and increased incidence of heatwaves as well as flooding events could result in reduced success in establishment of new planting and longevity of existing established vegetation. Consideration will be given to the potential effects of climate change on the selection of species for proposed planting and the management of new and existing planting as set out in the and **Outline Construction Environmental Management Plan (OCEMP) (Document reference: D.6.5.4)** and **REAC (Document reference: D.6.5.1).** The OCEMP, together with the REAC will ensure appropriate planting methods and on-going survival of planting. Effects are therefore not considered likely to be significant.

12.13 MONITORING

12.13.1 It is important that the mitigation planting proposed can establish and reach sufficient maturity by operational Year 15. The **REAC (Document reference: D.6.5.1)** and **OLEMP (Document Reference: D.6.5.10)** sets out the management practices that will need to be established to enable this to happen. This should be reviewed at key stages.

12.14 REFERENCES

- **Ref. 12.1**: European Landscape Convention, Council of Europe (2000)
- **Ref. 12.2**: Countryside Rights of Way Act, c.37, Royal Assent (2000)
- **Ref. 12.3**: Overarching National Policy Statement for Energy (EN-1), Department of Energy & climate change (2011)
- **Ref. 12.4**: National Planning Policy Framework, Ministry of Housing, Communities and Local Government (2021)
- **Ref. 12.5**: National Planning Policy Wales, Welsh Government (2021)
- **Ref. 12.6**: Cheshire West and Chester Council Local Plan Part One - Strategic Polices, CWCC (2015)
- **Ref. 12.7**: Cheshire West and Chester Council Local Plan Part Two - Land Allocations and Detailed Policies, CWCC (2019)
- **Ref. 12.8**: Flintshire County Council Unitary Development Plan 2000-2015, FCC, 2011
- **Ref. 12.9**: The Guidelines for Landscape and Visual Assessment (GLVIA) Landscape Institute (LI) and the Institute of Environmental Management and Assessment (IEMA), 3rd Edition (2013).
- **Ref. 12.10**: IEMA, Guidelines for Environmental Impact Assessment (2004)
- **Ref. 12.11**: An Approach to Landscape Character Assessment, Natural England (2014)

- **Ref. 12.12**: Visual Representation of Development Proposals. Landscape Institute Technical Guidance Note 06/19 (2019)
- **Ref. 12.13**: Cheshire West and Chester Landscape Strategy, CWCC (2016)
- **Ref. 12.14**: Natural Resources Wales / Using LANDMAP in Landscape and Visual Impact Assessments GN46 [online] Available at: [redacted]
- **Ref. 12.15:** National Grid's Notes for guidance –Tree Planting Restrictions on Pipelines [online] Available at: https://www.nationalgrid.com/gas-transmission/document/82976/download#:~:text=The%20above%20trees%20may%20only,10%20metres%20from%20the%20pipeline.
- **Ref. 12.16:** National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), Department of Energy & climate change (2011)