

8. Landscape and Visual

8.1 Introduction

8.1.1 This chapter presents the preliminary assessment of the likely significant effects of the Project with respect to Landscape and Visual. The preliminary assessment is based on information obtained to date. It should be read in conjunction with the Project description provided in **Chapter 2: The Project**.

8.1.2 Landscape and visual considerations interact with several other environmental topics and, as such, should be considered alongside:

- **Chapter 5: Biodiversity;**
- **Chapter 6: Historic Environment;**
- **Chapter 10: Noise and Vibration;** and
- **Chapter 11: Traffic and Transport.**

8.1.3 This chapter describes:

- the legislation, policy and technical guidance that has informed the assessment (**Section 8.2**);
- consultation and engagement that has been undertaken to date and how comments from consultees relating to the Landscape and Visual chapter will be addressed (**Section 8.3**);
- the study area and methods used for baseline data gathering (**Sections 8.4 and 8.5**);
- overall baseline and future baseline (**Section 8.6**);
- embedded environmental measures relevant to the Landscape and Visual chapter (**Section 8.7**);
- the scope of the assessment for the Landscape and Visual chapter (**Section 8.8**);
- the methodology applied for the assessment (**Section 8.9**);
- the preliminary assessment of landscape and visual effects (**Sections 8.10 to 8.14**);
- a summary of the preliminary significance conclusions (**Section 8.15**); and
- an outline of further work to be undertaken for the Environmental Statement (ES) (**Section 8.16**).

8.1.4 The chapter is accompanied by Appendices 8A – 8D and Figures 8.1 - 8.48.

Limitations and assumptions

- 8.1.5 The information provided in this Preliminary Environmental Information Report (PEIR) is preliminary, the final assessment of likely significant effects will be reported in the ES. The PEIR has been produced to fulfil the Applicant's consultation duties and enable consultees to develop an informed view of the likely significant effects of the Project.
- 8.1.6 No detailed assessment of construction traffic has been undertaken. Consequently, the preliminary assessment of impacts upon landscape and visual receptors closest to the construction compounds, substation sites and construction routes, where the effects of the Construction Phase are most likely to be perceived, will be updated as required in the ES.
- 8.1.7 No detailed assessment of tree or hedgerow loss has been undertaken due to the preliminary nature of the scheme design. An Arboricultural Impact Assessment (AIA) in accordance with British Standard 5837 (2012)¹ will be undertaken based upon the development parameters and will quantify the losses of structural vegetation that will inform outline reinstatement measures to address losses. The AIA will be appended to the Landscape and Visual ES Chapter.
- 8.1.8 The Outline Landscape Mitigation Plans reflecting the scheme design of permanent above ground infrastructure i.e., the HAGI (Hydrogen Above Ground Installations) and Block Valve installations will be prepared between the PEIR, and ES and the impact of predicted vegetation growth assessed at Year 15 following construction.

8.2 Relevant legislation, planning policy and technical guidance

- 8.2.1 This section identifies the legislation, planning policy and technical guidance that has informed the assessment of effects with respect to the Landscape and Visual chapter. Further information on policies relevant to the Project is provided in **Chapter 4: Legislation and policy overview**.

¹ British Standards Institution (2012), Trees in Relation to Design, Demolition and Construction – Recommendations (BS 5837). BSI; London, UK.

Legislation

8.2.2 A summary of the relevant legislation is given in **Table 8.1**.

Table 8.1 Legislation relevant to the Landscape and Visual Impact Assessment

Legislation	Legislative context
The European Landscape Convention (2000)²	A Council of Europe initiative that provides a broad framework for landscape planning and management across all member states including the UK, which ratified the European Landscape Convention (ELC) in 2007. The status of this convention is not affected by Brexit. These commitments are implemented by existing domestic policy and legislation rather than through any ELC-specific framework. The ELC defines landscape as, “<i>an area, as perceived by people, whose character is the result of the action and interaction of natural. and/or human factors</i>” and is committed to several core principles and actions.
Hedgerow Regulations (1997)³	Hedgerows are protected under these Regulations that may be relevant to the LVIA, specifically the assessment of impacts upon landscape elements, and the development of mitigation.

Planning policy

8.2.3 A summary of the relevant national and local planning policy is set out in **Table 8.2**.

Table 8.2 Planning policy relevant to the Landscape and Visual Impact Assessment

Policy	Policy context
National planning policy	
National Planning Policy Framework	Planning policies and decisions should ensure that development (amongst other criteria):

² The Council of Europe (2000). The European Landscape Convention. (online) Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/236096/8413.pdf (Accessed 30 August 2022).

³ UK Government (1997). The Hedgerow Regulations 1997 (Online). Available at:

<https://www.legislation.gov.uk/ukxi/1997/1160/contents/made> (Accessed 30 November 2021).

Policy	Policy context
(NPPF)⁴ Paragraph 130	<i>'(b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;</i> <i>(c) are sympathetic to local character and history, including the surrounding built environment and landscape setting'</i>
National Planning Policy Framework (NPPF)⁵ Paragraph 174	It is stated that <i>'planning policies and decisions should contribute to and enhance the natural and local environment by [amongst other criteria] 'protecting and enhancing valued landscapes... (in a manner commensurate with their statutory status or identified quality in the development plan) [and] 'recognising the intrinsic character and beauty of the countryside.'</i> Whilst there are no national landscape designations within the draft LVIA Study Area, the LVIA will assess the effects of the development on local landscape designations and landscape character.
Overarching National Policy Statement for Energy (EN-1)⁶ Paragraph 5.9.1	It is stated that the effects of energy projects will vary on a case-by-case basis according to the type of development, its location, and the landscape setting of the Project.
Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.5	It is stated that an applicant should carry out a landscape and visual assessment and report it in its Environmental Statement. The assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impact relevant to a proposed project.
Overarching National Policy Statement for Energy (EN-1) Paragraphs 5.9.6 and 5.9.7	The overarching issues that should be included within the landscape and visual assessment are described as follows: • The effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character; and

⁴ Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework [online]. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (Accessed 30 August 2022)

⁵ Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. (online) Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (Accessed 30 August 2022).

⁶ Department of Energy and Climate Change (2011). Overarching National Policy Statement for Energy (EN-1). (online) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf (Accessed 30 August 2022).

Policy	Policy context
	The visibility and conspicuousness of the project and potential impacts on views and visual amenity including light pollution effects.
Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.8	It is stated that landscape effects will depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. The assessment will need to take these factors into consideration in judging the impact of the Project on the landscape. EN-1 recognises that virtually all nationally significant energy infrastructure projects will have effects on the landscape
Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.17	It is stated that <i>“The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.”</i>
Overarching National Policy Statement for Energy (EN-1) Paragraphs 5.9.18 and 5.9.19	Visual effects upon sensitive visual receptors such as local residents and <i>“visitors to the local area”</i> may outweigh the benefits of a project. It may be helpful for attention to be drawn to examples of existing permitted infrastructure with <i>“a similar magnitude of impact upon sensitive receptors”</i>.
Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.22	It is stated that adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.
Draft Overarching National Policy Statement for Energy (EN-1) Paragraph 1.7.4	It is stated there is a need to consider <i>“potential cumulative negative effects on landscape ... at regional or sub-regional levels depending upon the location of and extent of clustering of new energy and other infrastructure.”</i>
Draft Overarching National Policy Statement for Energy (EN-1) Paragraphs 4.6.1 and 4.6.3	Paragraph 4.6.1 states that <i>“the Visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design.”</i> Paragraph 4.6.3 states that the Secretary of State need to be satisfied that energy infrastructure developments <i>“are as attractive, durable and adaptable ... as they can be.”</i> The applicant <i>“has to take into account functionality and aesthetics (including its contribution to the quality of the area</i>

Policy	Policy context
	<i>in which it would be located ... and visual impacts upon the landscape as far as possible.” Good design should be demonstrated “in terms of siting relative to existing landscape character, landform and vegetation.”</i>
Draft Overarching National Policy Statement for Energy (EN-1) Paragraph 5.10.16	It is stated that outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation and should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.
Draft Overarching National Policy Statement for Energy (EN-1) Paragraph 5.12.9	It is recognised that there is a requirement for balancing the need for good design to select the quietest or most acceptable cost-effective plant available and noise containment measures against potential adverse impacts upon landscape and visual receptors.
National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)⁷ including Draft EN-4 issued Sept 2021⁸ Paragraph 2.21.1	Additional considerations during the construction phase include effects upon specific landscape elements within and adjacent to the pipeline route, such as grasslands, field boundaries (hedgerows, hedgebanks, drystone walls, fences), trees, woodlands, and watercourses. There will also be temporary visual impacts caused by the need to access the corridor and to remove flora and soil. Temporary impacts could include large excavations where deep pits are needed for boring beneath rivers, roads, and sensitive features.
National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) including Draft EN-4 issued Sept 2021 Paragraph 2.21.2	It is stated that long term impacts upon the landscape for pipelines are likely to be limited, given the main infrastructure is usually buried. These limited impacts are likely to include limitations on the ability to replant landscape features such as hedgerows or deep-rooted trees over or adjacent to the pipeline; and structures and indication points necessary to identify the pipeline route and provide it with service access.

⁷ Department of Energy and Climate Change (2011). National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). (online) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47857/1941-nps-gas-supply-oil-en4.pdf (Accessed 30 August 2022).

⁸ Department for Business, Energy & Industrial Strategy (2021). Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). (online) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015237/en-4-draft-for-consultation.pdf (Accessed 30 August 2022).

Policy	Policy context
National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) including Draft EN-4 issued Sept 2021 Paragraph 2.21.3	It is stated that the ES should include an assessment of the landscape and visual effects of the proposed route and main alternatives. The application should also include proposals for reinstatement of the pipeline route as close to its original state as possible, accounting for landowner agreements to access areas for aftercare. Where it is not possible to restore landscape to its original state, measures to avoid, mitigate, or compensate for any adverse effect on the landscape should be included.
Local planning policy	
Cheshire West and Chester Adopted Development Plan, 29 January 2015 (part 1) ⁹	
SO12 Strategic objective Environmental Page 18	New development should be of sustainable and high-quality design that respects local distinctiveness and the character and appearance of the landscape and townscape.
STRAT 9 Green Belt and countryside Page 43	The intrinsic character and beauty of the countryside will be protected by restricting development to that which requires a countryside location and cannot be accommodated within identified settlements. Development must be of an appropriate scale and design to not harm the character of the countryside.
ENV 2 Landscape Page 85	The Local Plan will protect and, wherever possible, enhance landscape character and local distinctiveness. The development should take account of the characteristics of the development site and surroundings and where appropriate views into, over and out of the site. Features of landscape quality should be retained and incorporated into the design.
ENV 3 Green Infrastructure Page 87	The Local Plan will support the creation, enhancement, protection and management of a network of high quality multi-functional Green Infrastructure.
ENV 6 High quality design and sustainable construction Page 94	Development should, where appropriate, respect local character and be sympathetic to landscape assets. Development should meet applicable nationally described standards for design and construction.

⁹ Cheshire and Chester West Council (2015) Adopted Development Plan, 29 January 2015 (part 1) (online) Available at http://consult.cheshirewestandchester.gov.uk/portal/cwc_idf/adopted_cwac_lp/lp_1_adopted?tab=files (Accessed 04 May 2022)

Policy	Policy context
ENV 7 Alternative energy supplies Page 97	Low carbon energy proposals will be supported where there are no unacceptable impacts on landscape, visual or residential amenity considerations. Proposals should be accompanied by appropriate arrangements for decommissioning.
Cheshire West and Chester, Local Plan part 2 Land Allocations and Detailed Policies ¹⁰	
GBC 2 - Protection of landscape Page 82	Where development requires a countryside location, it must, be sympathetic to the character, protect and, wherever possible, enhance landscape character and distinctiveness, and preserve special landscape character and scenic value.
DM 3 - Design, character and visual amenity Page 119	Development will be expected to respect, contribute positively to the character, and protect the visual amenity of the local area. Development should contribute positively to the character of the area, respect and where appropriate enhance the landscape, and be sympathetic to the characteristics of the development site.
DM 44 - Protecting and enhancing the natural environment Page 203	Development will be supported where there is no net loss of natural assets and, wherever possible, it delivers net gains within the borough. Developments will be supported that; utilise native species in landscaping schemes, where appropriate.
DM 45 - Trees, woodland, and hedgerows Page 206	Development will be supported where it conserves, manages and, wherever possible, enhances existing trees, woodlands, traditional orchards, and hedgerows.
DM 49 - Registered Parks and Gardens and Battlefields Page 214	Development proposals affecting landscapes identified on the Register of Historic Parks and Gardens of special historic interest in England (Registered Parks and Gardens) will only be supported where it has been demonstrated that: • great weight is given to the asset's conservation and significance, taking into consideration the integrity of the landscape, setting and key views, the prevention of sub-division of the landscape.

¹⁰ Cheshire and Chester West Council (2019) Local Plan part 2 Land Allocations and Detailed Policies 29 January 2015 (part 2). (online) Available at https://consult.cheshirewestandchester.gov.uk/portal/cwc_ldf/adopted_cwac_lp/parttwo_adapted?tab=files (Accessed 04 May 2022)

Policy	Policy context
Cheshire East Local Plan Strategy, 27 July 2017¹¹	
Strategic Priority 3 Protecting and enhancing environmental quality Page 45	Protecting and enhancing environmental quality This will be delivered by respecting the character and distinctiveness of places, buildings and landscapes through the careful design and siting of development.
Policy SD 2 Sustainable Development Principles Page 83	Respect and, where possible, enhance the landscape character of the area, particular attention will be paid toward significant landmarks and landscape features. Creating or reinforcing local distinctiveness.
Policy SE 2 Efficient Use of Land Page 127	Cheshire East Council will manage development to protect previously developed land where it can be clearly demonstrated that either the landscape amenity or biodiversity value of the site has become of a high value and as such would be compromised through redevelopment of the site.
Policy SE 4 The Landscape Page 132	Cheshire East Council will manage development to protect previously developed land where it can be clearly demonstrated that either the landscape amenity or biodiversity value of the site has become of a high value and as such would be compromised through redevelopment of the site.
Policy SE 4 The Landscape Page 132	All development should conserve the landscape character and quality and should where possible, enhance and effectively manage the historic, natural, and man-made landscape features that contribute to local distinctiveness of both rural and urban landscapes.
Policy SE 5 Trees, Hedgerows and Woodland Page 134	Trees, hedgerows, and woodland will be protected and development proposals which will result in the loss of, or threat to, trees, hedgerows or woodlands that provide a significant contribution to the amenity and landscape character will not normally be permitted. Exceptions may occur where there are clear overriding reasons for allowing the development.
Policy SE 6 Green Infrastructure Page 135	Cheshire East Council aims to deliver a good quality, green infrastructure. This will be done by linking the various assets of Cheshire East's unique landscape and enhancing and

¹¹ Cheshire East Local Plan (2017). Local Plan Strategy 2010 - 2030 (online). Available at: https://www.cheshireeast.gov.uk/planning/spatial-planning/cheshire_east_local_plan/local-plan-strategy/local_plan_strategy.aspx (Accessed 04 May 2022)

Policy	Policy context
	protecting the green infrastructure. Any development should contribute to the creation of a good quality network of green spaces.
Macclesfield Borough Local Plan (Adopted January 2004) ¹²	
NE1: Areas of Special County Value Page 18	The spatial extents of Areas of Special County Value now known as Local Landscape Designations are relevant until reviewed and updated through the production of a Site Allocations and Development Policies DPD. New local plan Cheshire East Local Plan Strategy, 2017 Policy SE4 includes restrictions and aims within the local landscape designations.
NE3: Landscape Conservation Page 19	The conservation and enhancement of the rural landscape will be encouraged through the creation and restoration of hedgerows, woodlands, drystone walls and ponds and other natural features. Preference will be given to the use of native species. Developments of 1 hectare or more which include such measures will normally be permitted, subject to green belt and countryside policies.
NE5: Conservation of Parkland Landscapes Page 20	Macclesfield Borough Council (now Cheshire East Council) will promote the conservation and enhancement of historic landscapes, parklands and gardens. Development which would adversely affect their special historic interest, setting or the enjoyment of any part of their grounds will not normally be allowed.
DC8: Design – Landscaping Page 172	Where appropriate, applications for new development must include a landscape scheme which should, achieve a balance the development and open space, provide screening, retain trees and shrubs, utilise species which are in sympathy with the character of the area, make provision for maintenance of the scheme.
St Helens Core Strategy, 31 October 2012 ¹³	
CP1 Quality Developments	All proposals for development within the administrative area of St Helens Council will be expected to maintain or enhance

¹² Macclesfield Borough administrative area is now part of the Cheshire East administrative area; however, some Macclesfield Borough Local Plan (2004) policies are still extant as set out in the Cheshire East (2017) List of policies saved and deleted on adoption of the Cheshire East Local Plan Strategy 27 July 2017 (online). Available at: <https://www.cheshireeast.gov.uk/pdf/planning/local-plan/macclesfield-policies-list.pdf> (Accessed 05 May 2022)

¹³ St Helens Council (2012) Local Plan Core Strategy. (online) available at: [http://www.knowsley.gov.uk/pdf/LC21_StHelensLocalPlanCoreStrategy\[1\].pdf](http://www.knowsley.gov.uk/pdf/LC21_StHelensLocalPlanCoreStrategy[1].pdf) (Accessed 05 May 2022).

Policy	Policy context
Page 90	the overall character and appearance of the local environment, provide landscaping as an integral part of the development, protecting existing landscape features, providing open space and enhancing the public realm.
CQL 1 Green Infrastructure Page 126	St. Helens Council will protect, manage, enhance and where appropriate expand the Green Infrastructure network reinforcing greenways and linkages, promote and improve the accessibility.
CQL 2 Trees and Woodland Page 129	Trees, woodlands and hedgerows, will be protected and enhanced, developers are required where appropriate to plant new trees, woodlands and hedgerows on appropriate sites, and conserve enhance and manage existing trees, woodlands and hedgerows.
CQL 4 Heritage and Landscape Page 134	St. Helens Council will protect, conserve, preserve and enhance St. Helens historic built environment and landscape character, by implementing Management Plans, education, interpretation, and public access measures; Ensuring all new development respects the landscape character and context.
ENV 3 Greenways Page 136	A strategic network of Greenways will be safeguarded.
St Helens, Unitary Development Plan, 1998 Saved Policies¹⁴	
ENV 12 Development Affecting Existing Trees Page 145	Proposals affecting existing trees and woodlands will not normally be permitted if they result in significant loss of existing trees and do not incorporate retention or make provision for replanting.
Bold Forest Park Area Action Plan (adopted July 2017) ¹⁵	
BFP1: A Sustainable Forest Park	In developing the Forest Park infrastructure and attractions, St Helens Council will work with its

¹⁴ St Helens Council (2007) St. Helens unitary development plan (Originally Adopted by St. Helens Metropolitan Borough Council on 2nd July 1998) (saved policies) (online) Available at:

[https://www.omegawestdocuments.com/media/documents/2%20Development%20Plan/St%20Helens%20Unitary%20Development%20Plan%20\(1998\).pdf](https://www.omegawestdocuments.com/media/documents/2%20Development%20Plan/St%20Helens%20Unitary%20Development%20Plan%20(1998).pdf) (Accessed 05 May 2022)

¹⁵ St Helens Council (2017) Bold Forest Park Area Action Plan. (online). Available at:

<https://www.omegawestdocuments.com/media/documents/43/43.1%20bold-forest-park-area-action-plan-adopted-2017-web.pdf> (Accessed 05 May 2022)

Policy	Policy context
Page 31	partners to seek an economic focus, balanced with environmental sustainability, initiatives include: Enhancing the landscape character, Enhancing the natural environment through targeted delivery of Green Infrastructure programmes that improve and expand the biodiversity and landscape quality of Bold Forest Park area.
BFP ENV1: Enhancing Landscape Character Page 51	Ensure a high-quality landscape within Bold Forest Park. taking in a range of issues including, landscape amenity; wildlife, habitat, land use, background noise amelioration, and; heritage.
Trafford Local Plan Core Strategy, January 2012¹⁶	
QE 3 Green Infrastructure Page 85	Trafford Council will work with partners to develop and adopt an integrated approach to the provision, care and management of Green Infrastructure by; protecting existing provision, increasing the functionality of existing provision and improving the quality of existing provision, including local networks and corridors.
CC 2 Protecting the Countryside Page 140	Development proposals in the countryside, which accord with Green Belt policies set out in national planning policy, will be supported provided that the detailed siting and design of the development relates satisfactorily to its rural setting, in terms of its scale, layout and use of materials; and the development respect local landscape character, both in terms of immediate impact, or from distant views.
Halton Delivery and Allocations Local Plan (2022)¹⁷	
CS(R)6: Green Belt	A Green Belt is designated around the urban areas and new allocations of both Runcorn and Widnes/Hale. Development proposals for the sites removed from the Green Belt and allocated or safeguarded in this plan should include compensatory improvements to the environmental quality and accessibility of remaining Green Belt land to offset the impact of the removal of the land from the Green Belt.

¹⁶ Trafford Council (2012) Trafford local plan: core strategy. (online) Available at: <https://www.trafford.gov.uk/planning/strategic-planning/docs/core-strategy-adopted-final.pdf> (Accessed 05 May 2022).

¹⁷ Halton Borough Council (2022) Halton Delivery and allocations Local Plan. (online) Available at: <https://www3.halton.gov.uk/Documents/planning/planning%20policy/newdalp/DALP-%20Adopted%20%28Links%29%20Web%20v1-2.pdf> (Accessed 05 May 2022).

Policy	Policy context
Policy CS(R)18: High Quality Design	Development proposals, where applicable, will be expected to incorporate appropriate landscape schemes into development designs, integrating local habitats and biodiversity.
CS(R)20: Natural And Historic Environment	The landscape character and condition as informed through the Halton Landscape Character Assessment will be promoted and sustained, and where applicable, development proposals will be expected to enhance the value of Halton's natural assets.
CS(R)21: Green Infrastructure	Halton's green infrastructure network will be protected, enhanced and expanded, where appropriate.
HE1: Natural Environment and Nature Conservation	Designated Sites, Priority Habitats and Priority Species will be considered. Any development which may affect a designated natural asset will be considered in line with the mitigation hierarchy Avoidance, Minimisation, Mitigation, Compensation.
HE4: Greenspace and Green Infrastructure	All development where appropriate will be expected to incorporate high quality green infrastructure.
HE5: Trees and Landscaping	Tree Survey information must be submitted with all planning applications where trees are present on site and in some cases where trees are present on adjacent sites. The Survey should include information in relation to protection, mitigation and management measures. All development will be required to conserve and where appropriate enhance the character and quality of the local landscape.
Warrington Local Plan Core Strategy, 21 July 2014¹⁸	
QE 3 Green Infrastructure Page 85	The Council will work with partners to protect, enhance, increase functionality, improve the quality, and increase green infrastructure.

Technical guidance

- 8.2.4 A summary of the technical guidance for the Landscape and Visual Chapter is given in **Table 8.3**.

¹⁸ Warrington Borough Council (2014) Local Plan Core Strategy. (online) Available at: https://www.warrington.gov.uk/sites/default/files/2019-08/local_plan_core_strategy_adopted_2014.pdf (Accessed 05 May 2022)

Table 8.3 Technical guidance relevant to the Landscape and Visual Impact Assessment

Technical guidance document	Context
Guidelines for Landscape and Visual Impact Assessment Third Edition (2013)¹⁹	The third edition of this guidance (known as 'GLVIA 3') is regarded as the 'industry standard' document guiding LVIA. GLVIA 3 provides the framework within which the remaining sections of this chapter have been undertaken and informs the methodology by which the LVIA will be undertaken, as set out in Appendix 8A: Landscape and Visual Impact Assessment Methodology
Technical Guidance Note 06/19: Visual Representation of Development Proposals²⁰	Provides supplementary guidance to GLVIA3 as to appropriate techniques to capture site photography and the selection, production, and presentation of types of visualisations, appropriate to the circumstances in which they will be used.
Technical Guidance Note 02/21: Assessing landscape value outside national designations²¹	This technical note provides a framework, checklist, and background to the concept of landscape value and expands upon the summary of relevant factors set out in Appendix 5.1 in GLVIA3. It incorporates subsequent methodological developments and clarifications provided in subsequent studies and Planning Inspectors' reports.
Technical Information Note 01/17: Tranquillity – An overview²²	Provides an overview of what is understood by the term 'tranquillity' within the landscape profession.

¹⁹ The Landscape Institute and Institute of Environmental Management & Assessment (2013). Guidelines for Landscape and Visual Impact Assessment Third Edition. Routledge, Oxfordshire, UK.

²⁰ The Landscape Institute (2019), Technical Guidance Note 06/19: Visual Representation of Development Proposals. (Online). Available at: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf (Accessed 30 November 2021).

²¹ Landscape Institute (2021). Technical Guidance Note 02/21 Assessing landscape value outside national designations. (Online). Available at: <https://www.landscapeinstitute.org/publication/tgn-02-21-assessing-landscape-value-outside-national-designations/> (Accessed 08 July 2022).

²² The Landscape Institute (2017), Technical Information Note 01/2017 (Online). Available at: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2017/02/Tranquillity-An-Overview-1-DH.pdf> (Accessed 30 November 2021).

8.2.5 It is intended that this PEIR shall form the basis for consultation with Natural England and all the local authorities that fall within the draft LVIA Study Area, namely:

- Cheshire West and Chester Council;
- Cheshire East Council;
- Halton Borough Council;
- Warrington Borough Council;
- Trafford Council;
- St. Helens Metropolitan Borough Council;
- Salford City Council; and
- Knowsley Metropolitan Borough Council.

8.2.6 It is intended to agree the extent of the LVIA Study Area, the baseline sources of information and the approach to the LVIA methodology that is to be adopted for the Environmental Statement. It is not possible at this stage to provide a definitive list of viewpoint locations to be used to inform the LVIA, given the optionality and outline nature of the design at this stage. However, as the scheme design progresses it is intended to consult the Local Planning Authorities on the viewpoint locations from where photography would be obtained and the selected number of views where computer-generated visualisations would be prepared in accordance with best practice guidance²³. It is expected that these photo locations are likely to include a number of the photo locations undertaken in late winter 2022 and presented in the ES. A limited number of additional viewpoints may be required subject to refinement of optionality. These will be identified on the basis of being representative of the views that may be obtained by highly sensitivity receptors.

8.3 Consultation and engagement

Overview

8.3.1 The assessment has been informed by consultation responses and ongoing statutory and technical engagement. An overview of the approach to consultation is provided in **Section 3.4 of Chapter 3: Approach to preparing the PEIR**.

Scoping Opinion

8.3.2 A Scoping Opinion was adopted by the Secretary of State, administered by the Planning Inspectorate, on 8 March 2022. A summary of the relevant responses received in the Scoping Opinion in relation to the Landscape and Visual chapter

²³ Landscape Institute (2019). Technical Guidance Note 06/19: Visual Representation of Development Proposals. (online) Available at: https://www.n-somerset.gov.uk/sites/default/files/2022-05/E2%20-%20%20LI_TGN-06-19_Visual_Representation.pdf (Accessed 30 August 2022).

and confirmation of how these have been addressed within the assessment to date is presented in **Table 8.4**.

8.3.3

The information provided in the PEIR is preliminary and not all of the Scoping Opinion comments have been addressed at this stage, however all comments will be addressed within the ES.

Table 8.4 Summary of EIA Scoping Opinion responses for the Landscape and Visual Chapter

Consultee	Consideration	How addressed in this PEIR
Planning Inspectorate: PINS ID 3.30 Ref 3.4.1	At paragraph 8.6.2 of the scoping report the Applicant proposes to scope out landscape and visual effects resulting from the operational period of the Project (with the exception of the HAGIs) from the ES assessment, on the basis that the pipeline will be buried along the entire route and will consequently not be visible. The Inspectorate is content that significant effects on landscape and visual receptors are not likely to arise from the operational buried pipeline itself and agrees this matter can be scoped out of the assessment. However, the Inspectorate advises that consideration should be given to the potential for operational phase effects on landscape and visual receptors as a result of any planting restrictions imposed by the easements. The ES should assess any likely significant effects. Landscape and visual impacts resulting from other relevant forms of surface development (in addition to the HAGIs), such as the proposed block valve compounds, should be assessed in the ES where significant effects are likely.	The extent of planting that would be removed along the pipeline and resulting easements is unlikely to have the potential for significant effects upon any landscape and visual receptors. However, justification for scoping out the assessment of landscape elements along the pipeline route will be made within the LVIA at ES Stage with reference to the mature scheme design and the vegetation removal and reinstatement proposals including restriction on the permanent easement. Proposed HAGI and Block Valve compounds have been assessed where significant effects are likely.
Planning Inspectorate: PINS ID 3.31 Ref 3.4.2	Paragraphs 8.6.3 and 8.6.9 Effects arising from: • Pipeline construction; • Site clearance; and • Construction activity along pipeline route (traffic, plant and cranes)	The LVIA in this PEIR has provided an assessment of impacts from construction of the Project, where significant effects are likely.

Consultee	Consideration	How addressed in this PEIR
	The Applicant proposes to scope out landscape and visual effects resulting from pipeline construction from the ES assessment, on the basis that construction activities are subject to very short timescales (i.e., several days), and therefore there is a short window for any discernible adverse effect upon high sensitivity landscape and visual receptors. Effects from site clearance are described as localised. The Inspectorate considers that in the absence of certainty regarding the locations of construction activities and facilities (e.g., construction compounds), the potential for significant effects resulting from the presence and movement of construction plant and associated temporary construction infrastructure, as well as vegetation clearance and other material removal, cannot be excluded. The ES should provide an assessment of impacts from construction of the Project where significant effects are likely.	
Planning Inspectorate: PINS ID 3.32 Ref 3.4.3	Paragraph 8.6.9 Operational phase – maintenance activity The Applicant proposes to scope out landscape and visual impacts arising from the movement of vehicles and activity associated with maintenance visits to the HAGIs during the operational phase, given the infrequent nature of maintenance requirements. The Inspectorate is content that this matter can be scoped out of further assessment.	Agreement that this can be excluded from the PEIR is noted.

Consultee	Consideration	How addressed in this PEIR
Planning Inspectorate: PINS ID 3.33 Ref 3.4.4	Paragraph 8.6.9 Scope of assessment – National Landscape Character Areas (LCA) The Applicant proposes to scope out the impact of the Project upon National LCAs on the basis that the scale of change from the Project is unlikely to result in significant effects during either the construction or operational phases, together with the expansive geographical extent of the National LCAs and the transitory nature of landscape impacts associated with the construction phase of the Project and the localised effects that would occur during the operational phase. Further, the Applicant proposes that such an assessment would also duplicate the detailed assessment based on local LCAs/types that will be scoped in. The Inspectorate agrees that the impact of the Project upon National LCAs can be scoped out, on the basis of the evidence presented.	The LVIA at PEIR focusses the landscape assessment on the local landscape character areas, with a description of the National Character Areas provided for background context.
Planning Inspectorate: PINS ID 3.34 Ref 3.4.5	Paragraph 8.6.9 Methodology – views from Registered Parks and Gardens and Country Parks to edge of study area but outside Zone of Theoretical Visibility (ZTV). The Applicant proposes that views experienced by visitors to Registered Parks and Gardens and Country Parks that lie just within or close to the edge of the study area but outside the ZTV of the Project should be scoped out, as no operational elements would be visible. The Inspectorate is content that this matter can be scoped out of further assessment.	Registered Park and Gardens and Country Parks outside the ZTV of the operational elements of the Project have been excluded as receptors from the scope of the assessment.

Consultee	Consideration	How addressed in this PEIR
Planning Inspectorate: PINS ID 3.35 Ref 3.4.6	Paragraph 8.6.9 Methodology – visual receptors of medium and low sensitivity where focus is not on the landscape The Applicant proposes to scope out visual receptors that are likely to fall into the medium and low sensitivity categories (including road users, railway passengers, retail and industrial estates, schools, people at their place of work, and people engaging in active sports, where the focus is not on the landscape). This is on the basis that, given the reduced sensitivity of the receptors, the magnitude of change resulting from the Project would need to be greater than Low to result in potentially significant visual effects and this scenario is not predicted to occur based on the receptor locations and the draft ZTV of the HAGI search areas. The Inspectorate agrees that this matter can be scoped out on the basis of the evidence presented.	Visual receptors of a medium and low sensitivity, where focus is not on the landscape, have been scoped out of the assessment.
Planning Inspectorate: PINS ID 3.36 Ref 3.4.7	Paragraph 8.4.3 Landscape designations The Inspectorate notes that the Cheshire Sandstone Ridge is being considered for status as an Area of Outstanding Natural Beauty (AONB) by Natural England. The ES should consider the implications of a future designation as part of the assessment of landscape and visual impacts and the assignment of significance.	Natural England has confirmed that <i>‘there is no boundary for the proposed Cheshire Sandstone Ridge AONB as this would be determined through the future landscape assessment process that would underpin any future designation’</i>.²⁴ The potential component landscape character areas within the Sandstone Ridge Landscape Character Type are set out in the Cheshire West and Chester Landscape Strategy

²⁴ Natural England (Cheshire, Greater Manchester, Merseyside and Lancashire Area Team) email correspondence 16/05/22.

Consultee	Consideration	How addressed in this PEIR
		(2016), that fall within the LVIA Study Area, and are assessed in this PEIR.
Planning Inspectorate: PINS ID 3.37 Ref 3.4.8	Paragraphs 8.3.3 and 8.4.14 Methodology – viewpoints The Applicant should make effort to agree the number and location of viewpoints with relevant consultation bodies.	The requirement for winter photography (obtained in March 2022) and the evolution of the Project has resulted in no opportunity for consultation to date on the viewpoints that are presented as part of this PEIR. However, feedback from relevant consultees on these viewpoints will be sought. Any additional viewpoints identified will be obtained in winter 2022/2023 when trees are not in leaf and will be presented and assessed in the ES.
Planning Inspectorate: PINS ID 3.38 Ref 3.4.9	Scope of assessment – lighting The Scoping Report refers to the need for temporary lighting. The ES should contain an assessment of lighting effects on visual amenity and landscape character during construction and operation or a justification as to why significant effects would not arise. The Applicant's attention is drawn to the consultation response from the Canal and River Trust in this regard (see Appendix 2 of this Opinion).	A justification as to why significant effects from temporary lighting would not arise and can be scoped out of detailed assessment will be provided in the Environmental Statement. Reference will be made to the measures contained within the CoCP.
Planning Inspectorate: PINS ID 3.39 Ref 3.4.10	Scope of assessment – cumulative effects The cumulative impact of any tree removal to facilitate the development should be assessed within the LVIA and conclusions drawn with regards to the potential for significant effects. The Applicant's attention is drawn to consultation responses from the Canal and River Trust in this regard (see Appendix 2 of this Opinion).	The impact of cumulative tree removal upon landscape character will be assessed with reference to the Arboricultural Impact Assessment (which will be appended to the LVIA at ES stage). However, it should be noted that only localised tree removal is currently predicted upon the route of the pipeline, which would not have the potential for significant

Consultee	Consideration	How addressed in this PEIR
		effects upon landscape character. Any tree removals associated with construction compounds and HAGIs will be scoped in and assessed with reference to the Arboricultural Impact Assessment at ES stage.
Planning Inspectorate: PINS ID 3.40 Ref 3.4.11	Scope of assessment – Green Belt Construction and operational landscape and visual impacts on the Green Belt should be assessed as part of the ES. The Applicant’s attention is drawn to the consultation responses from Cheshire West and Chester Council and Action Bridge Parish Council in this regard (see Appendix 2 of this Opinion).	Green Belt is a planning, not a landscape designation. The visual component of Green Belt will be assessed by suitably qualified landscape architects in the ES. A Green Belt assessment will accompany the Planning Statement.

Technical engagement

- 8.3.4 Technical engagement with consultees in relation to the Landscape and Visual chapter will commence in the summer/autumn of 2022 to allow potential additional or replacement viewpoints taken in winter 2022/2023 to be incorporated in the ES.

Planned future engagement

- 8.3.5 All local authorities that fall within the LVIA Study Area will be consulted between production of the PEIR and the ES, on the location of any revised or additional photo viewpoints and photomontages, to reflect changes in scheme design and reduction in optionality.

8.4 Study Area

Spatial scope

- 8.4.1 The LVIA Study Area is defined by a 1km offset from the Preliminary Order Limits, that incorporates the full extent of the pipeline corridors, including all temporary construction compounds and material storage areas. The LVIA Study Area also incorporates all operational above ground elements i.e., the HAGIs and Block Valve installations.
- 8.4.2 The definition of the spatial scope of the LVIA Study Area has been assisted by a visual angle calculation of a HAGI at 3m high above ground over a range of distances in **Table 8.5**. Professional experience of assessing development projects in accordance with GLVIA 3 indicates that when the vertical angle subtended is less than 0.3 degrees, the new structures would be barely discernible and/or would occupy a very small part of the view. Consequently, a magnitude greater than Very Low is highly unlikely. The Study Area, which typically comprises relatively flat topography, can therefore be conservatively defined at a distance of 1km from the HAGIs, with a high level of confidence that no potentially significant effects would be experienced by high sensitivity receptors beyond this distance, in accordance with **Appendix 8A: LVIA Methodology**. Isolated locations where elevated views would be available include the Cheshire Sandstone Ridge, close to Frodsham and Helsby, that lie close to the edge of the LVIA Study Area.

Table 8.5 Visual angle calculation in relation to distance from a HAGI²⁵

Distance from viewer of a 3m high object	Vertical angle subtended
0.1km	1.72°
0.2km	0.86°

²⁵ Elvers (2022). Visual Angle calculator. (online) Available at: <https://elvers.us/perception/visualAngle/> (Accessed 30 August 2022).

Distance from viewer of a 3m high object	Vertical angle subtended
0.5km	0.34°
1.0km	0.17°
1.5km	0.11°
2.0km	0.09°

- 8.4.3 Temporary construction compounds to facilitate the pipeline crossing construction and these compounds together with material storage areas have been scoped into the Landscape and Visual Impact Assessment (LVIA).
- 8.4.4 The LVIA Study Area adopted for PEIR will be reviewed and updated for the ES following evolution of the scheme design, further desk and site-based analysis, and feedback from consultees.

Temporal scope

- 8.4.5 The temporal scope of the LVIA is consistent with the period over which the Project would be constructed as described in **Chapter 2: The Project** and therefore will cover the duration of construction phase effects.
- 8.4.6 The pipeline will be predominantly constructed using open cut techniques and trenchless crossing at key locations including motorways, A roads, rail, main rivers, and canals. Pipelines are constructed within the pipeline “spread” or temporary working width, which is a corridor of land extending along the route. Pipe laying can be likened to a production line with successive activities moving along the spread. Activities include site preparation, pipe delivery and welding, pipe laying, backfill and finally reinstatement. Pipeline construction typically starts in the spring and each of the construction activities can advance at approximately 500m to 1km per day, with successive activities following behind.
- 8.4.7 Construction of a HAGI would typically take between 6-12 months and a Block Valve installation up to 4 months and may be in progress at any point during the year, subject to any local constraints. Limited 24 hour working, including for trenchless crossings and pipeline testing, may be required and in this scenario temporary artificial lighting would be needed that would be designed to minimise impacts upon surrounding high sensitivity receptors as set out in the Outline CoCP.
- 8.4.8 Apart from the HAGIs the pipeline will be buried along the entire route and consequently during the operational period the pipeline has been scoped out of the LVIA, as it will not be visible.
- 8.4.9 The operational phase assessment is proposed to be confined to the HAGI and Block Valve installations given that these are the only elements of above ground infrastructure that will be visible and have the potential to result in significant landscape and visual effects. The assessment will be undertaken at Year 1

following construction prior to the implementation of any landscape mitigation planting as set out in this PEIR and also at Year 15 following construction within the ES to assess the growth of any mitigation planting that will be detailed on Outline Landscape Mitigation Plans, prior to finalisation of the ES, once the design has sufficiently matured.

8.5 Data Gathering Methodology

Desk study

- 8.5.1 Baseline conditions have been reviewed in relation to the draft LVIA Study Area described in **Section 8.4**.
- 8.5.2 A summary of the organisations that have supplied data, together with the nature of that data, is outlined in **Table 8.6**.

Table 8.6 Data sources used to inform the Landscape and Visual Impact Assessment

Source	Date	Summary
Ordnance Survey (OS)	June 2022	Digital 1:25,000 scale 'Explorer' mapping covering the Study Area. Terrain data at 5m resolution. Vectormap District boundary data. Baseline information on landscape context including topography, drainage, settlement pattern, land-use, woodland, promoted recreational routes, transport network and infrastructure. Terrain data to generate ZTV plans with Vectormap District boundary data to generate exclusion zones for woodland and buildings.
Google Earth Pro.	June 2022	Baseline information in plan and Street View covering landscape context including topography, drainage, settlement pattern, land use, landcover, transport network and infrastructure.
Natural England	June 2022	National Character Area profiles ²⁶ . The Shropshire, Cheshire and Staffordshire Plain (NCA 61);

²⁶ Natural England (2014). National Character Area profiles (online). Available at: <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles> 04/07/2022 (Accessed 30 August 2022).

Source	Date	Summary
		The Cheshire Sandstone Ridge (NCA 62); The Mersey Valley (NCA 60); and The Lancashire Coal Measures (NCA 56). Baseline information on a national level and sets the landscape context for regional and local level landscape character assessments.
MAGIC interactive map²⁷	June 2022	Baseline information to inform landscape sensitivity assessment, including details of environmental designations for example, heritage and ecology that may influence landscape value.
Sustrans	June 2022	National Cycle Network. GIS dataset covering promoted cycle routes.
Cheshire East Council Cheshire East Landscape Character Assessment²⁸	2018	Baseline information on landscape character at a local/district level.
Cheshire West and Chester Cheshire West and Chester Landscape Strategy²⁹	2016	Baseline information on landscape character at a local/district level.

²⁷ Defra (2022). Multi-Agency Geographic Information for the Countryside (MAGIC) website. (online) Available at <https://magic.defra.gov.uk/magicmap.aspx> (Accessed 15 June 2022)

²⁸ Cheshire East Council (2018). Cheshire East Landscape Character Assessment. (online) Available at: https://www.cheshireeast.gov.uk/planning/spatial-planning/cheshire_east_local_plan/site-allocations-and-policies/sadpd-examination/documents/examination-library/ed10-cheshire-east-lca.pdf (Accessed 10 June 2022)

²⁹ Cheshire West and Chester Council (2016). Cheshire West and Chester Landscape Strategy 2016. (online) Available at: <https://www.cheshirewestandchester.gov.uk/residents/planning-and-building-control/total-environment/local-landscape-character-assessment-landscape-strategy-2016> (Accessed 10 June 2022)

Source	Date	Summary
Halton Borough Council, Halton Landscape Character Assessment³⁰	2009	Baseline information on landscape character at a local/district level.
Knowsley Metropolitan Borough Landscape Character Assessment of Knowsley Metropolitan Borough³¹	2007	Baseline information on landscape character at a local/district level.
St Helens, Landscape Character Assessment for St Helens³²	2006	Baseline information on landscape character at a local/district level.
Trafford Metropolitan Borough Supplementary Planning Guidance Landscape Strategy³³	2004	Baseline information on landscape character at a local/district level.
Warrington Borough Council Warrington A Landscape Character Assessment³⁴	2007	Baseline information on landscape character at a local/district level.

³⁰ Halton Borough Council, Halton Landscape Character Assessment 2009
<https://www3.halton.gov.uk/Pages/planning/policyguidance/PolicyBackgroundDocuments.aspx> (Accessed 10 June 2022)

³¹ Knowsley Council (2007). Landscape Character Assessment of Knowsley Metropolitan Borough (online). Available at:
http://www.knowsley.gov.uk/pdf/eb20_landscapecharacterassessment.pdf (Accessed 10 June 2022)

³² St Helens Council (2006). Landscape Character Assessment for St Helens (online). Available at: https://www.sthelens.gov.uk/media/2065/NAT001-St-Helens-Landscape-Character-Assessment-2006/pdf/NAT001_St_Helens_Landscape_Character_Assessment_2006.pdf?m=637794869203630000 (Accessed 10 June 2022)

³³ Trafford Metropolitan Borough (2004). Supplementary Planning Guidance Landscape Strategy 2004 SPG 2004 - Landscape Strategy (online). Available at:
<https://www.trafford.gov.uk/planning/strategic-planning/docs/spg-2004-landscape-strategy.pdf> (Accessed 10 June 2022)

³⁴ Warrington Borough Council (2007). Warrington A Landscape Character Assessment (online). Available at: https://www.warrington.gov.uk/sites/default/files/2019-08/landscape_character_assessment_2007.pdf (Accessed 10 June 2022)

Survey work

- 8.5.3 A site survey and photography were undertaken in early-March 2022 following submission of the Scoping Report in late January 2020. The timing of the site survey was designed to ensure photography reflected the maximum visibility scenario prior to deciduous trees and shrubs coming into leaf. It was therefore not possible to obtain consultee feedback on the initial viewpoint selection in winter conditions prior to this site visit.
- 8.5.4 The potential viewpoint locations were identified by desktop review of the preliminary Zone of Theoretical Visibility (ZTV), OS mapping and Google Earth Pro. Review in the field required some viewpoint locations to be adjusted, for example, to obtain less restricted views towards the Project or to avoid foreground clutter.
- 8.5.5 All photography has been undertaken in accordance with the guidance outlined in the Landscape Institute's Technical Guidance Note 06/19 and was taken using:
- A high-resolution digital Single-lens Reflex (SLR) camera with a 'full frame' sensor (i.e., 36 x 24mm) with the camera set at 1.5m above ground level;
 - A 50mm fixed focal length (prime) lens; and
 - A professional quality tripod fitted with a panoramic head.
 - The location of the camera was established using a hand-held Global Positioning System (GPS) unit.
- 8.5.6 The selection of 29 No. publicly accessible viewpoints and justification rationale is set out in **Table 8.7**. In accordance with paragraph 6.21 of GLVIA 3 the selection has covered as '*wide a range of situations as is possible, reasonable and necessary to cover the likely significant effects*'.
- 8.5.7 In the absence of details of construction compounds in March 2022, the viewpoint selection focussed on locations close to the HAGI locations. This was at a time where there would be the potential for significant visual effects, as part of the Operational Phase. However, since the March 2022 site visit some of the viewpoints are less relevant following the subsequent evolution of the Project design. It is intended that additional and/or replacement viewpoints will be selected in the summer/autumn of 2022 and discussed with consultees prior to updated photography for the ES being undertaken in the winter of 2022/2023.

Table 8.7 Photoviewpoint Selection (see Figures 8.49 – 8.77)

Viewpoint	Name/Location	Selection Justification
CH1	Marsh Lane, northeast of Central Hub HAGI	Representative Viewpoint. Views experienced by road users.
CH2	Marsh Lane, adjacent Newholme Farm	Representative Viewpoint. Views experienced by road users and similar to nearby Farmstead (Newholme Farm).

Viewpoint	Name/Location	Selection Justification
CH3	Northwich Road (A553), adjacent Dane Farm	Representative Viewpoint. Views experienced by road users and similar to residential dwellings south of the A553 (Dane Farm and Dane Barns).
CF1	Jubits Lane (B5419)	Representative Viewpoint. Views experienced by road users and users of adjacent footway.
CF2	Jubits Lane (B5419), M62 overpass	Representative Viewpoint. Views experienced by road users and users of adjacent footway.
CF3	Warrington Road (A57), adjacent Sandhill Farm	Representative Viewpoint. Views experienced by road users and similar to residential dwellings south of the A57 (including Sandhill Farm).
E1	South of Stanlow Refinery (A5117)	Representative Viewpoint. Views experienced by road users and users of adjacent footway.
H1	PRoW south of Moor Nature Reserve (northwest of Higher Walton HAGI)	Representative Viewpoint. Views experienced by westbound users of the PRoW south of Moor Nature Reserve.
H2	PRoW south of Moor Nature Reserve (northeast of Higher Walton HAGI)	Representative Viewpoint. Views experienced by eastbound users of the PRoW south of Moor Nature Reserve.
P1	Restricted byway (Tra-26) northwest of Partington HAGI	Representative Viewpoint. Views experienced by eastbound users of Restricted byway (Tra-26).
P2	Eastern end of Restricted byway (Tra-26)	Representative Viewpoint. Views experienced by westbound users of Restricted byway (Tra-26).
P3	Manchester Road (A6144)	Representative Viewpoint. Views experienced by road users and users of adjacent footway.
RC1	Weaver View	Representative Viewpoint. Views experienced by road users' adjacent access to Rock Savage Power.
RC2	Frodsham Substation Access Road	Representative Viewpoint. Views experienced by road users.

Viewpoint	Name/Location	Selection Justification
RSH1	PRoW FP81	Representative Viewpoint. Intermittent views experienced by east and westbound users of FP81.
RSH2	Ship Street, western edge of Frodsham	Representative Viewpoint. Views experienced by road users and similar to residential dwellings east of Ship Street on the western edge of Frodsham.
RSH3	PRoW FP93, South of River Weaver	Representative Viewpoint. Views experienced by east and westbound users of FP93.
RSH4	M56 overbridge (PRoW FP81)	Representative Viewpoint. Views experienced by east and westbound users of FP81.
SH1	Burtonhead Road, (southwest of St. Helens HAGI) entrance to Bridleway 222	Representative Viewpoint. Views experienced by eastbound road users, users of adjacent footway.
SH2	Burtonhead Road, (southeast of St Helens HAGI)	Representative Viewpoint. Views experienced by westbound road users, users of adjacent footway.
SH3	St Helens Retail Park	Representative Viewpoint. Views experienced of users of the car park of St Helens Retail Park.
SH4	Ravenhead Nature Park	Specific Viewpoint. Views experience by users orientated northwest within Ravenhead Nature Park.
W1	Carrgreen Lane	Representative Viewpoint. Views experienced by southwest bound road users
W2	Dunham Road, adjacent Boxedge Farm	Representative Viewpoint. Filtered views experienced by east bound road users, similar to dwellings adjacent Dunham Road (including Boxedge Farm).
W3	Dunham Road, northeast of WarburtonHAGI	Representative Viewpoint. Intermittent filtered views experienced by road users, similar to dwellings adjacent Dunham Road.
W4	Trans Pennine Trail and National Cycle Route 62	Illustrative Viewpoint. Demonstrating the restricted visibility experienced by walkers and cyclists on Trans Pennine Trail and National Cycle Route 62.

Viewpoint	Name/Location	Selection Justification
WC1	A530 layby	Representative Viewpoint. Views experienced by north bound road users
WC2	Whatcroft Hall Lane	Representative Viewpoint. Views experienced by road users, similar to dwellings north of Whatcroft Hall Lane.
WC3	Restricted Byway (RB7) northwest of Drakelow Hall Farm	Representative Viewpoint. Filtered views experienced by northwest bound users of Restricted By way (RB7), similar to views orientated west from Drakelow Hall Farm.

8.6 Overall Baseline

Current Baseline

Landscape Designations

- 8.6.1 There are no national landscape designations (i.e., National Parks, Areas of Outstanding Natural Beauty, or Heritage Coasts) in the LVIA Study Area. The closest national designation is the Peak District National Park, which is located ~20km to the southeast of the LVIA Study Area.
- 8.6.2 In the Scoping Opinion (PINS ID 3.36 Ref 3.4.7), the Inspectorate notes the Cheshire Sandstone Ridge is being considered for status as an Area of Outstanding Natural Beauty (AONB) by Natural England. In a subsequent consultation Natural England stated that *'there is no boundary for the proposed Cheshire Sandstone Ridge AONB as this would be determined through the future landscape assessment process that would underpin any future designation'*.³⁵ The potential component landscape character areas within the Sandstone Ridge Landscape Character Type, set out in the Cheshire West and Chester Landscape Strategy (2016) that fall within the LVIA Study Area, are assessed in this PEIR.
- 8.6.3 Local landscape designations within the LVIA Study Area are illustrated in **Figure 8.1** and comprise the Weaver Valley Area of Special County Value (ASCV) and the Helsby and Frodsham ASCV, both within the Cheshire West and Chester Council administrative area. ASCV's are protected by Policy GBC 2 'Protection of Landscape'³⁶. In addition there is the former Macclesfield ASCV retained as a

³⁵ Natural England (Cheshire, Greater Manchester, Merseyside and Lancashire Area Team) email correspondence 16 May 2022.

³⁶ Cheshire West & Chester Council (2018). Local Plan (Part Two) Land Allocations and Detailed Policies. (online) Available at: https://consult.cheshirewestandchester.gov.uk/portal/cwc_ldf/cw_lp_part_two/ (Accessed 30 August 2022).

local landscape designation, now located in the Cheshire East administrative area and covered by Policy SE 4 (until reviewed and updated through the production of a Site Allocations and Development Policies DPD).

8.6.4

The Special Qualities of the Weaver Valley ASCV and Helsby and Frodsham ASCV are reproduced below.²²

Special Landscape Qualities of the Weaver Valley ASCV (Lower Weaver):

- *Distinct valley with a flat open floodplain and steep, wooded, valley sides.*
- *Contains the course of the River Weaver and the engineered Weaver Navigation with many artificial channels ('cuts'), remnant meanders, major locks, sluices and weirs such as at Dutton and Saltersford.*
- *The steep valley sides and series of steep sided tributary valleys support distinctive clough woodland, much of which is ancient - some have notable bluebell swathes.*
- *The ASCV includes Beechmill Wood and Pasture, Warburton's Wood and Well Wood SSSIs and Hunter's Wood nature reserve. Dutton Park is a large mixedhabitat Woodland Trust estate.*
- *Valley sides also support small/medium scale arable and pastoral fields, bounded by low gappy hedgerows.*
- *Alluvium on the valley floor gives rise to waterlogged soils which generally support permanent pasture including seasonally wet species rich grassland.*
- *Recreational opportunities are provided by public footpaths alongside the river/navigation, including Delamere Way and the Cheshire Ring Canal Walk long distance recreational footpaths.*
- *The locks and 'boat graveyard' at Dutton are distinctive sites and popular visitor attractions.*
- *Views are typically restricted to within the valley, for example there are views across the valley from either side, and from floodplains to the valley sides. The top of the valley sides form a skyline.*
- *Generally, a quiet, tranquil landscape with significant opportunity for quiet recreation.*
- *The Trent and Mersey Canal Walk (designated as a linear Conservation Area) follows the northern flank of the valley – contributing associated structures and artefacts of industrial archaeology, many of which are listed.*
- *Marker stones at the meadows at Frodsham are listed as are buildings to the northern valley side at Aston.*
- *Scheduled Monuments are found at Bradley Promontory Fort and Middleton moated monastic grange.*
- *Designed parkland surrounding the former Aston Hall (now demolished) contributes to the wooded character of the ridge and is a locally important historic site.*

- *The Acton Swing Bridge (A49) and huge sandstone arched Dutton railway viaduct contribute to the industrial influence of the valley and importance as a navigable waterway.*
- *Settlement is generally absent from floodplain, except at locks and small areas of ribbon development alongside the A49. Scattered farms are typical of the less steep valley sides, such as Weaverham Wood Farm and Bartington Hall Farm.*
- *There is a minimal road network beyond the A49 crossing.*

8.6.5

Special Landscape Qualities of the Helsby and Frodsham Hills ASCV:

- *Outcrops of Triassic sandstone form a prominent ridge reaching over 150m with summit features at Beacon Hill, Harrol Edge and Birch Hill.*
- *Helsby Hill at 141m elevation stands as a prominent free-standing outcrop with distinctive, steep sided profile, including the ‘Old Man of Helsby’.*
- *Pronounced sandstone scarps to the north and west of the ASCV support dense woodland, including ancient oak woodland, for example at Alvanley Cliff Wood.*
- *Dry gorges, created by glacial meltwater, are features of the northern and western edges of the ridge.*
- *A strong mosaic land cover of grassland, arable farmland and woodland.*
- *Groups of Scots pines form distinctive skyline elements.*
- *Regular geometric fields, resulting from late eighteenth and early nineteenth century enclosure by private agreement and Parliamentary Act, characterise the ridge.*
- *17th century deer park to the south of the ASCV at New Pale with distinctive circular boundary is a feature in the landscape.*
- *Low density of dispersed farms and hamlets – many farm buildings are constructed from sandstone (quarried from the ridge) with welsh slate roofs.*
- *Sunken lanes network provides access over the ridge, responding to landform whilst there is an absence of main roads.*
- *The promontory forts at Helsby Hill and Woodhouses Hill (Scheduled Monuments) occupy prominent positions along the ridge. Other archaeological sites include the remains of the possible motte and bailey castle at Castle Cobb and the remains of the Maidens Cross wayside cross (Scheduled Monuments).*
- *Historic buildings range from seventeenth century manor houses and farmsteads, nineteenth century follies and the buildings of Crossley East Sanatorium (Listed Buildings).*
- *The War Memorial on Frodsham Hill is a landmark feature, from where there are panoramic views over the Mersey Estuary.*

- *Long distance footpaths run along the length of the ridge from where there are some spectacular panoramic views from the ridge as far as Wales to the west and the Peak District to the east.*

National Character Areas

8.6.6 Natural England has divided the country into 159 National Character Areas (NCAs). With reference to **Figure 8.1**, the NCA's within the LVIA Study Area are:

- the Shropshire, Cheshire and Staffordshire Plain (NCA 61);
- the Cheshire Sandstone Ridge (NCA 62);
- the Mersey Valley (NCA 60); and
- the Lancashire Coal Measures (NCA 56).

8.6.7 The descriptions of the National Character Areas are contained in **Appendix 8B**.

Regional Landscape Character Areas

8.6.8 The Greater Manchester Landscape Character and Sensitivity Assessment³⁷ provides up-to-date landscape evidence for Trafford and the other eight Greater Manchester local authorities to support preparation of the Greater Manchester Spatial Framework. However, the planning policy for Trafford, as set out under Policy R2: Natural Environment of the Trafford Local Plan: Core Strategy¹⁶ and the emerging Policy NE1 – The Natural environment in Trafford Local Plan Regulation 18 Consultation Draft³⁸ references the Landscape Character Types as defined in the Supplementary Planning Guidance Landscape Strategy³³. Accordingly, the LVIA has used these defined LCTs as the landscape receptor units within Trafford.

Local Landscape Character Areas

8.6.9 The local Landscape Character Areas (LCA) and/or Landscape Character Types (LCT) that fall within the LVIA Study Area are described within the following published landscape character assessments.

- A Landscape Strategy for Cheshire West and Chester Borough, 2016;
- Halton Landscape Character Assessment, 2009;
- St. Helens Borough Landscape Character Assessment, 2006;
- Warrington Landscape Character Assessment, 2007;
- Cheshire East Landscape Character Assessment, 2018;

³⁷ LUC (2018). Greater Manchester Landscape Character and Sensitivity Assessment. (Online). Available at: <https://www.greatermanchester-ca.gov.uk/media/1727/greater-manchester-landscape-character-and-sensitivity-report.pdf> (Accessed 30 August 2022).

³⁸ Trafford Council (2021). Trafford Local Plan Regulation 18 Consultation Draft. (Online). Available at: <https://www.trafford.gov.uk/planning/strategic-planning/local-plan/Trafford-Local-Plan-Consultations.aspx> (Accessed 30 August 2022).

- Landscape Character Assessment of Knowsley Metropolitan Borough, 2007; and
- Trafford Landscape Strategy 2004.

8.6.10 The local Landscape Character Areas (LCA) and/or Landscape Character Types (LCT) that fall within the LVIA Study Area are illustrated on **Figures 8.2 to 8.14** and the key characteristics of each LCA and LCT scoped into the assessment are included in **Appendix 8C**.

Landscape Elements

8.6.11 Where there is the potential for tree and hedgerow losses to be significant the impacts will be reported in the ES. The Landscape and Visual chapter of the ES will be supported by a BS:5837 Arboricultural Assessment. This document, together with the Chapter 5 Biodiversity surveys that are currently ongoing, will cover the trees and hedgerows that have the potential to be significantly affected as a result of the Project. Away from the construction compounds and HAGI/ Block Valve installations the loss of hedgerows and trees is predicted to be localised in extent with limited potential for significant landscape and visual effects.

Visual Receptors

8.6.12 Visual receptors within the Study Area may have the potential to experience significant visual effects with reference to the visual receptor plans at **Figures 8.15 to 8.27** and the ZTVs of the operational HAGI and Block Valves at **Figures 8.28 to 8.48**.

- Settlements:
 - ▶ consisting of residents in the towns of St. Helen's, Widnes, Warrington, Runcorn and Frodsham;
 - ▶ 43 villages and hamlets as set out in **Table 8.9**;
- National and regional cycle routes (NCRs and RCRs):
 - ▶ parts of routes NCR 5, 62, 562, 573 and RCR 70;
- Long distance footpaths and other promoted recreational walking routes:
 - ▶ parts of the Weaver Way, Trent and Mersey Canal Walk, E8, North Cheshire Way 3, Delamere Way, Dane Valley Way, Bollin Valley Way, Timberland Trail, Mersey Way, Trans Pennine Trail, Bridgewater Way, Cheshire Ring Canal walk, Palatine Plod, Longster Trail, Sandstone Trail, Eddisbury Way, Salford Trail;
- Canals and rivers:
 - ▶ consisting of parts of the Manchester Ship Canal, Weaver Navigation, River Weaver, River Mersey and River Bollin.
- Marbury Country Park; and
- Golf Courses:

- ▶ High Legh Par Golf Club, Fiddlers Ferry Golf Course, , Walton Hall Golf Club, Mersey Valley Golf and Country Club, Runcorn Golf Club, Vale Royal Abbey Golf Academy, Sherdley Park Golf Course, Sandiway Golf Club and Antrobus Golf Club.

Future baseline

- 8.6.13 Landscape change is an ongoing and inevitable process, which will continue across the LVIA Study Area irrespective of whether the Project goes ahead. Change can arise through natural processes (e.g., the maturity of woodlands) and natural systems (e.g., river erosion) or, as is often the case, occurs due to human activity, land use, management, or neglect.
- 8.6.14 Climate change is increasingly acknowledged as a key driver of future landscape change. The National Character Assessment profiles identify that increased rainfall, periods of drought and more frequent storm events, are likely to result in changes to the character of the landscape within the LVIA Study Area. Periods of drought may change the suitability of current agricultural crops and will make veteran trees in exposed locations more susceptible to loss by wind throw. The changes in weather will encourage the spread of non-native insect pests and pathogens with oak and ash, particularly at threat of being significantly impacted. Location-specific changes cited include the higher risk of fluvial flooding of Northwich.
- 8.6.15 Other key drivers identified across the NCAs within the LVIA Study Area include increased demand for land for housing, road improvements, industry, renewable energy installations and telecommunications infrastructure. Agricultural changes leading to larger land holdings with larger more centralised buildings are likely in many places. Increased recreational and tourism may threaten sensitive habitats and tranquillity in places.
- 8.6.16 Notable development projects that will have an impact on baseline landscape character and visual amenity include HS2, currently planned to pass east of Northwich and west of Altrincham.

8.7 Embedded Environmental Measures

- 8.7.1 An Outline Code of Construction Practice (OCoCP) would be prepared to help ensure protection of existing vegetation, where possible, and to minimise direct and indirect construction related effects upon landscape and visual receptors. An Arboricultural Impact Assessment (AIA) in accordance with BS 5837 (2012) will be submitted with the application and plans accompanying the AIA will identify trees and hedgerows to be removed and any protection measures for retained vegetation required during the Construction Phase.
- 8.7.2 Following consultation on the PEIR, the precise location of the Project will be confirmed, including the Pipeline Corridor, the HAGIs, Block Valves, construction compounds and material storage areas. This will allow appropriate embedded outline landscape measures. These measures will be formulated and included as part of the Outline Landscape Mitigation Plans submitted with the DCO application. The measures will involve, but will not be limited to, maximising the

use of existing screening elements, and minimising both the footprint and height of any permanent infrastructure. The evolving designs will also be reviewed against the potential to introduce low level earth mounding, screen fencing and/or new planting, taking into consideration technical restrictions relating to issues such as clearance and appropriate security.

- 8.7.3 As part of the project design process, a number of embedded environmental measures are proposed to reduce the potential for impacts on landscape and visual receptors. **Table 8.8** outlines how these embedded measures will influence the LVIA.

Table 8.8 Summary of embedded environmental measures

Embedded measures	Compliance mechanism
Construction phase	
Minimising the visibility of activity within construction compounds and material storage areas Achieved by utilising existing vegetation as screening where possible and the adoption of solid fencing on sensitive boundaries. In some locations temporary earthwork bunds may be an appropriate measure and are subject to iterative design evolution between PEIR and ES Stage.	CoCP and Works Plans
Minimisation of impact of construction traffic upon high sensitivity visual receptors, including settlements The project layout and construction route strategy has sought to avoid routing HGV construction traffic through settlements, where possible and considering safety issues. This will look to minimise the visual impact of HGV traffic on local communities as a secondary benefit, in addition to addressing the primary environmental sensitivities of construction related traffic including traffic management, noise and air quality.	CoCP and Works Plans
Minimisation of hedgerow and tree loss. The project design has been optimised to minimise the removal of hedgerows and trees to accommodate the siting and working areas associated with the HAGI / Block Valve installations, construction compounds and material storage areas. Localised losses of hedgerows and trees related to the pipeline corridor, temporary/permanent access and associated visibility splays have been minimised and will be refined by the	CoCP, BS 5837 (2012) Arboricultural surveys and the Outline Landscape Mitigation Plans to be produced at ES stage.

Embedded measures**Compliance mechanism**

BS 5837 (2012) arboricultural surveys and ecological surveys currently underway.

Minimisation of night-time visual impact of construction

Adoption of measures that minimise light spill by restricting periods when lighting will be operating and the adoption of LED luminaires, cowlings and columns at a restricted height above ground level.

CoCP to be prepared at ES Stage

Operation phase

Consideration of permanent low-level earthworks and/or tree/shrub planting to screen views of HAGIs and Block Valve installations

These considerations will help screen and/or integrate the above ground development into the wider landscape or townscape and green infrastructure.

CoCP and Outline Landscape Mitigation Plans prepared at ES Stage with further details

8.8 Scope of the Assessment

Potential receptors

- 8.8.1 Landscape and visual receptors within the LVIA Study Area are most likely to be significantly affected tend to be those which are of higher sensitivity, located closest to the construction compounds, HAGI and Block Valve installations, incurring a direct and/or higher magnitude or level of effect. Viewpoint analysis and site survey, which includes an assessment of sensitivity and magnitude, has been used as part of the assessment to identify those receptors, which are most likely to be significantly affected.
- 8.8.2 The landscape and visual receptors in **Table 8.9** and **Table 8.10** respectively have been scoped into the assessment. The landscape and visual receptors in **Table 8.11** have been scoped out of the assessment.

Table 8.9 Landscape and visual receptors scoped in for further assessment

Landscape character area receptors	Principal Corridor or Spur ³⁹	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Likely Significant effects: Direct and/or indirect changes to the baseline landscape from the pipeline corridor, access, construction compounds, HAGI and Block Valve construction including options where stated (where likely significant effects may occur). These changes may result in the potential for significant effects upon landscape character at construction and from the completed HAGI and Block Valves during the operational phase.		
Cheshire West & Chester		
4a Frodsham, Helsby & Lordship Marshes	West Corridor including Options WP1 and WP2	Rocksavage HAGI (Option RSH1)
9a Dunham to Tarvin Plain	West Corridor	HPP HAGI
8a Aston	West Corridor including Options WP1 and WP4	Rocksavage HAGI (Option RSH1) and Runcorn HAGI
15c Lower Weaver Valley	West Corridor including Options RSp1 and RSp2	Rocksavage Option RSH1 and Runcorn HAGI's
5b Frodsham to Northwich	South Corridor including Options SP1 and SP4	South Corridor Block Valves (Options SBV 1,2 3 and 4)
5a Norley	South Corridor	N/A
2a Frodsham Sandstone Ridge	West Corridor including Options WP1 and WP2	N/A
2b Helsby Hill	West Corridor including Options WP1 and WP2	N/A

³⁹ The Principal Corridor or Spur is the element of the Project that the identified receptor either predominantly lies within (direct effects) or is the predominant Corridor or Spur Project element located within the LVIA Study Area (indirect effects). Some receptors accommodate more than a single Pipeline Corridor and/or Spurs as set out in the assessment text in **Section 8.10**.

Landscape character area receptors	Principal Corridor or Spur ³⁹	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
5f Helsby to Frodsham	West Corridor including Options WP1 and WP2	N/A
1a Delamere	South Corridor	South Corridor Block Valves (Options SBV 1,2 3 and 4)
15b Mid Weaver Valley	South Corridor including Options SP1, SP2, SP3 and SP4.	South Corridor Block Valves (Options SBV 1,2 3 and 4)
5c Eaton, Marton & Over	South Corridor route Option SP4	South Corridor Block Valve (Options SBV 4)
5e East Winsford	South Corridor (Options SP2, SP3 and SP4)	South Corridor Block Valve (Option SBV5)
13b Arley West	East Corridor	N/A
5d Whitley and Comberbach	East Corridor, and Northwich Spur	Central Hub HAGI (Options CHH1 and CHH2)
14a Northwich	Northwich Spur	N/A
10b Stublach Plain	South Corridor	Hydrogen Storage Facility HAGI
15e Dane Valley	South Corridor	N/A
Halton		
Runcorn Hill and Heath Parkland	Runcorn Spur	Runcorn HAGI
North Widnes Farmland	North Corridor	Clock Face HAGI
Norton Wooded Parkland	West Corridor	N/A
Daresbury Sandstone Escarpment	North Corridor including Options NP1, NP2 and NP3	Higher Walton HAGI (Options HWH1 and HWH2)
Moore Village and Keckwick Brook Valley	North Corridor including Options NP1 and NP4	Higher Walton HAGI (Options HWH1 and HWH2)

Landscape character area receptors	Principal Corridor or Spur ³⁹	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Preston on the Hill Undulating Enclosed Farmland	North Corridor	N/A
Knowsley		
Cronton and Pex Hill	North Corridor	Clock Face HAGI
St Helens		
BRS5 Rainhill Slopes	North Corridor	Clock Face HAGI
FF2 Sutton Manor Fringe	North Corridor	Clock Face HAGI
RSH1 Sutton Manor	North Corridor	Clock Face HAGI
FF4 Bold Heath	North Corridor	Clock Face HAGI
WFE4 Bold Hall	North Corridor	N/A
FF3 Clock Face Farming	North Corridor	N/A
RSF4 Sutton	North Corridor	Clock Face HAGI
RSH4 Lea Green	North Corridor	N/A
IF1 Link Road	North Corridor	N/A
SS6 Rainhill	North Corridor	Clock Face HAGI
EF1 Elton Head Hall Farm	North Corridor	N/A
UG2 Sherdley Park	North Corridor and St Helens Spur	St Helens HAGI
RVI1 Thatto Heath	North Corridor and St Helens Spur	St Helens HAGI
UG3 Rainhill Golf Course	North Corridor	N/A
RFS1 Grange Park	North Corridor	N/A
UIV3 Ravenhead	North Corridor and St Helens Spur	St Helens HAGI
SLV1 St Helens Historic Core	North Corridor and St Helens Spur	St Helens HAGI
SLV2 St Helens Retail Ring	North Corridor and St Helens Spur	St Helens HAGI

Landscape character area receptors	Principal Corridor or Spur ³⁹	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
SLV3 St Helens Terraces	North Corridor and St Helens Spur	St Helens HAGI
UIV2 Sutton Brook	North Corridor and St Helens Spur	St Helens HAGI
Trafford		
Mossland	East Corridor	Partington HAGI
Settled Sandlands	East Corridor	Warburton HAGI
Urban River Valley	East Corridor	Partington HAGI
River Meadowlands	East Corridor	Warburton HAGI
Wooded Estatelands	East Corridor	Warburton HAGI
Warrington		
3c Lymm	East Corridor	N/A
5a River Mersey/Bollin (West)	North Corridor including Warrington Spur Options WSp1 and WSp2	Higher Walton (Options HWH1 and HWH2), HAGI
5a River Mersey/Bollin (East)	East Corridor including Option NP4	Warburton HAGI
1f Penketh & Cuerdley	North Corridor	N/A
1a Stretton & Hatton	North Corridor including Options NP1 and NP3	N/A
3a Appleton Park & Grappenhall	North Corridor including Options NP1, NP2, NP3, NP4 and NP5.	Higher Walton HAGI (Options HWH1 and HWH2).
6a Victoria Park to Fiddlers Ferry	North Corridor	Higher Walton HAGI (Options HWH1 and HWH2)
Cheshire East		
7a Arley	East Corridor	East Corridor Block Valves (Options EBV1, 2 and 3)

Landscape character area receptors	Principal Corridor or Spur ³⁹	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
10a Lower Bollin	East Corridor	Warburton HAGI

Table 8.10 Visual Receptors scoped in for further assessment

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Likely Significant effects: Changes to baseline views from construction activity along the pipeline corridor, access routes, construction compounds, material storage areas, construction of HAGI and Block Valves, and options where stated (where likely significant effects may occur), resulting in the potential for significant effects upon visual amenity during the construction stage. Views of the completed HAGI and Block Valve installations during the operational phase, resulting in the potential for significant effects upon visual amenity during the operational phase.		
Settlements		
Thornton-le-Moors	West Corridor	HPP HAGI
Elton	West Corridor including Options WP1 and WP2	HPP HAGI
Hapsford	West Corridor including Options WP1 and WP2	N/A
Helsby	West Corridor including Options WP1 and WP2	N/A
Frodsham	West Corridor including Options WP1 and WP2	Rocksavage HAGI (Options RSH1, RSH2, and RSH3)
Runcorn	West Corridor	Runcorn HAGI
Clifton	West Corridor	Runcorn HAGI
Sutton Weaver	West Corridor	N/A

⁴⁰ The Principal Corridor or Spur is the predominant element of the Project located within the LVIA Study Area that the identified receptor would experience. Some receptors would experience effects from more than a single Pipeline Corridor and/or Spurs as set out in the assessment text in **Sections 8.11 to 8.14**.

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Aston	West Corridor	N/A
Aston Heath	West Corridor	N/A
Dones Green	South Corridor, Northwich Spur	Central Hub HAGI (Options CHH1 and CHH2)
Little Leigh	Northwich Spur	N/A
Barnton	Northwich Spur	N/A
Anderton	Northwich Spur	N/A
Northwich, including Winnington	Northwich Spur	N/A
Bartington	South Corridor	N/A
Acton Bridge	South Corridor	N/A
Weaverham	South Corridor	N/A
Gorstage	South Corridor	N/A
Cuddington	South Corridor	N/A
Sandiway	South Corridor	South Corridor Block Valve (Options SBV 1,2,3 and 4)
Hartford	South Corridor	South Corridor Block Valve (Options SBV 1,2,3 and 4)
Whitegate	South Corridor	N/A
Davenham	South Corridor	N/A
Moulton	South Corridor	South Corridor Block Valve (Option SBV5)
Winsford (Wharton)	South Corridor	N/A
Bostock Green	South Corridor	South Corridor Block Valve (Option SBV5)
Lower Whitley	East Corridor	N/A

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Higher Whitley	East Corridor	N/A
Antrobus	East Corridor	N/A
Arley	East Corridor	N/A
Frandlely	East Corridor	N/A
High Legh	East Corridor	East Corridor Block Valve (Options EBV2 and EBV3)
Broomeedge	East Corridor	N/A
Dunham Woodhouses	East Corridor	Warburton HAGI
Sinderland Green	East Corridor	N/A
Partington	East Corridor	Partington HAGI
Daresbury	North Corridor (Option NP1)	N/A
Hatton	North Corridor (Options NP2 and 3)	N/A
Moore	North Corridor (Option NP4)	N/A
Higher Walton	North Corridor (Options NP3 and NP5)	Higher Walton HAGI (Options HWH1 and HWH2)
Lower Walton	North Corridor and Warrington Spurs (Option WSp1)	N/A
Warrington	North Corridor and Warrington Spurs (Options WSp1 and WSp2)	N/A
Widnes	North Corridor	N/A
Cuerdley Cross	North Corridor	N/A
Bold Heath	North Corridor	N/A
Rainhill	North Corridor	Clock Face and St. Helens HAGI's
St. Helens	North Corridor and St. Helens Spurs	St. Helens HAGI

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
National cycle routes		
NCR 5	West Corridor (Options West 1, West 2, WP3, and WP4) and South Corridor (Options SP1, SP2, SP3, and SP4)	HPP HAGI, Rocksavage HAGI (Option RSH1, RSH2, and RSH3), Runcorn HAGI, South Corridor Block Valves (Options SBV1, SBV2, SBV3, SBV4 and SBV5)
NCR 562	West Corridor (Options West 1, West 2, WP3, and WP4)	
RCR 70	East and South Corridor (Options SP1, SP2, SP3, and SP4)	East Corridor Block Valve (Option EBV2, Option EBV3)
NCR573	South Corridor (Options SP1, SP2, SP3, and SP4)	N/A
NCR62	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	Warburton HAGI
Long distance footpaths		
Weaver Way	West Corridor (Options West 1, West 2, WP3, and WP4) and South Corridor (Options SP1, SP2, SP3, SP4)	Rocksavage HAGI (Options RSH1, RSH2, and RSH3)
Trent and Mersey Canal Walk	West Corridor (Options West 1, West 2, WP3, WP4) and South Corridor (Options SP1, SP2, SP3, SP4)	N/A
E8	North Corridor (Option NP1, Option NP2, Option NP3, Option NP4, Option NP5) and East Corridor	Warburton HAGI
North Cheshire Way 3	West Corridor (Options West 1, West 2, WP3, WP4) and East Corridor	N/A

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Delamere Way	North Corridor (Options NP1, NP2, NP3, NP4, NP5), West Corridor (Options West 1, West 2, WP3, WP4) and East Corridor	N/A
Dane Valley Way	East Corridor	N/A
Bollin Valley Way	East Corridor	Warburton HAGI
Timberland Trail	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	N/A
Mersey Way	North Corridor (Options NP1, NP2, NP3, NP4, and NP5) and Warrington Spur	N/A
Trans Pennine Trail	North Corridor (Options NP1, NP2, NP3, NP4, and NP5) and Warrington Spur (Options WSp1 and WSp2)	Warburton HAGI
Bridgwater Way	North Corridor (Option NP1, NP2, NP3, NP4, and NP5) and Warrington Spur (Options WSp1 and WSp2)	Higher Walton HAGI (Options HWH1 and HWH2)
Cheshire Ring Canal Walk	West Corridor (Options West 1, West 2, WP3, and WP4), East and South Corridor (Options SP1, SP2, SP3, and SP4), Northwich Spur, Warrington Spur (Options WSp1 and WSp2)	Higher Walton HAGI (Options HWH1 and HWH2)
Palatine Plod	North Corridor (Options NP1, NP2, NP3, NP4, and NP5) and Warrington Spur (Options WSp1 and WSp2)	N/A
Longster Trail	West Corridor (Options West 1, and West 2, WP3, and WP4)	N/A
Sandstone Trail	West Corridor (Options West 1, West 2, WP3, and WP4)	N/A

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Eddisbury Way	West Corridor (Options West 1, West 2, WP3, and WP4)	N/A
Salford Trail	Partington Spur	N/A
Recreational Destinations		
Country Parks		
Marbury Country Park	Northwich Spur	N/A
Golf Courses		
High Legh Park Golf Club	East Corridor	N/A
Fiddlers Ferry Golf Course	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	N/A
Walton Hall Golf Club	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	N/A
Runcorn Golf Club	West Corridor, (Options West 1, West 2, WP3, and WP4), Runcorn Spur (Options RSp1 and RSp2)	Runcorn HAGI
Vale Royal Abbey Golf Academy	South Corridor (Options SP1, SP2, SP3, and SP4)	South Corridor Block Valves (Options SBV1, SBV2, SBV3, SBV4 and SBV5)
Sandiway Golf Club	South Corridor (Options SP1, SP2, SP3, and SP4)	South Corridor Block Valves (Option SBV1, Option SBV2, Option SBV3, Option SBV4, Option SBV5)
Mersey Valley Golf and Country Club	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	N/A

Visual receptors	Principal Corridor or Spur ⁴⁰	Operation year 1 Phase (within 1km of HAGI and/or Block Valve)
Sherdley Park Golf Course	North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	St Helens HAGI
Antrobus Golf Club	East Corridor	N/A
Canals and Rivers		
Manchester Ship Canal	West Corridor (Options West 1, West 2, WP3, and WP4) and North Corridor (Options NP1, NP2, NP3, NP4, and NP5)	Higher Walton HAGI (Options HWH1, and HWH2)
Weaver Navigation	West Corridor (Option West 1, West 2, WP3, and WP4)	Runcorn HAGI ,Rocksavage HAGI (Options RSH1, RSH2, and RSH3)
River Weaver	West Corridor (Options West 1, West 2, WP3, and WP4) and South Corridor (Options SP1, SP2, SP3, and SP4)	Runcorn HAGI, Rocksavage HAGI (Options RSH1, RSH2, and RSH3)
River Mersey	North Corridor (Options NP1, NP2 NP3, NP4, and NP5)	Higher Walton HAGI (Options HWH1, and HWH2)
River Bollin	East Corridor	Warburton HAGI

8.8.3 The visual impact upon users of local Public Rights of Way within the LVIA Study Area will be covered at ES stage and will include temporary closure and/or diversion of routes as set out in the Outline Public Rights of Way Management Plan (PRoWMP).

Elements scoped out of further assessment

8.8.4 The receptors/effects detailed in **Table 8.11** have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant.

Table 8.11 Summary of effects scoped out of the Landscape and Visual Impact Assessment

Receptors/potential effects	Justification
Operational effects from the buried pipeline (excluding visible above ground infrastructure i.e., HAGIs and Block Valves)	Pipeline will not be visible. Agreed as part of Scoping Opinion (PINS ID 3.30 Ref 3.4.1).
National Landscape Character Areas	The scale of change from the Project is unlikely to result in significant effects to an NCA. Assessment of NCA would also duplicate the detailed assessment based on local landscape character areas that has been scoped into the assessment. Agreed as part of Scoping Opinion (PINS ID 3.33 Ref 3.4.4).
Registered Parks and Gardens and Country Parks that lie close to the edge of the LVIA Study Area but outside the ZTV of the Project	No potential for views of the Project. Agreed as part of Scoping Opinion (PINS ID 3.34 Ref 3.4.5).
Visual receptors that are likely to fall into the medium and low sensitivity categories where the focus is not on the landscape.	Includes road users, railway passengers, retail and industrial estates, schools, people at their place of work, and people engaging in active sports. Agreed as part of Scoping Opinion (PINS ID 3.35 Ref 3.4.6).
Movement of vehicles and activity associated with maintenance visits to the HAGIs in the operational phase	Scoped out due to infrequent nature of maintenance requirements. Agreed as part of Scoping Opinion (PINS ID 3.32 Ref 3.4.3).
Temporary and Operational Lighting	A justification of why significant effects from lighting would not arise and can be scoped out of detailed assessment will be provided in the Environmental Statement. Reference will be made to the measures to be contained within the CoCP.
Green Belt	Green Belt is a planning, not a landscape designation. The visual component of Green Belt will be assessed by suitably qualified landscape architects as part of the ES; however, the Green Belt assessment will accompany the Planning Statement.

Receptors/potential effects	Justification
Settlements on the edge of the Study Area and outside the ZTV comprising Arthill, Carrington, Keckwick, Comberbach, Ince and Dutton	No potential for views of the Project from these settlements.
Individual private scattered dwellings outside settlement boundaries	To accord with the proportionate requirements of LVIA set out in best practice guidance as <i>'it is impractical to visit all properties that might be affected'</i> ⁴¹ The assessment of individual private dwellings within the Study Area has been scoped out of the LVIA.

8.9 Methodology for PEIR Assessment

Introduction

- 8.9.1 The generic project-wide approach to the assessment methodology is set out in **Chapter 4: Approach to Preparing the PEIR**, and specifically in **Sections 4.7 to 4.10**. However, whilst this has informed the approach that has been used in this LVIA, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this LVIA.

Assessment of effects and determining significance

- 8.9.2 The full methodology is contained in **Appendix 8A: Landscape and Visual Impact Methodology**. The key stages of the methodology that is outlined in this section are based best practice guidance contained in GLVIA 3⁴².
- 8.9.3 GLVIA 3 states that the assessment of significance of landscape and visual effects is *"an evidence-based process combined with professional judgement."* All assessments and judgements must be transparent and capable of being understood by others.

⁴¹ Paragraph 6.17 of The Landscape Institute and Institute of Environmental Management & Assessment (2013). Guidelines for Landscape and Visual Impact Assessment Third Edition. Routledge, Oxfordshire, UK.

⁴² The Landscape Institute and Institute of Environmental Management & Assessment (2013). Guidelines for Landscape and Visual Impact Assessment Third Edition. Routledge, Oxfordshire, UK.

Landscape Assessment

- 8.9.4 The sensitivity of a landscape receptor for example, a landscape character area, to a Project is determined by the susceptibility of that landscape receptor to the changes identified as a result of the construction and/or operation of the Project and the landscape receptor's value. The methodology describes landscape sensitivity as high, medium, or low.
- 8.9.5 Landscape value is determined by taking into consideration a range of attributes including: the presence or absence of landscape designations; landscape and scenic qualities; rarity and representativeness; conservation interests; recreational value; perceptual qualities; and historic and cultural value. It is also concerned with landscape quality and the physical state of a landscape receptor. This could include consideration of the landscape receptor's intactness and the condition of individual landscape elements. The absence of landscape planning designations does not automatically mean that an area or landscape receptor is of low landscape value. These attributes are determined by review of extant landscape character assessments, management guidelines and other similar documentation supplemented by observations made during site visits.
- 8.9.6 Landscape susceptibility concerns the ability of a landscape receptor to accommodate the Project without undue consequences for the maintenance of the baseline situation.
- 8.9.7 The landscape assessment will include analysis for each landscape receptor of the factors that have been assessed in the determination of its landscape value and the assessment of its susceptibility to the Project. These will be set out in a proforma completed for each landscape receptor, in accordance with GLVIA 3, that will show how the assessment of the landscape value and landscape susceptibility have been combined to determine that landscape receptor's sensitivity as set out in **Table 8.12** below.

Table 8.12 Evaluation of Landscape Sensitivity

Value	Susceptibility		
	High	Medium	Low
High	High	High or Medium	Medium
Medium	High or Medium	Medium	Medium or Low
Low	Medium	Medium or Low	Low

- 8.9.8 The magnitude of landscape change resulting from the construction and operation of the Project will be assessed as high, medium, low, or very low. In accordance with GLVIA 3 the magnitude of landscape change will consider:
- The size and/or scale of the change that would result from each identified landscape effect acting upon a landscape receptor;

- The geographical extent over which each identified landscape effect would be experienced; and
- The duration and reversibility of each identified landscape effect.

8.9.9 **Table 8.13** details the basis for assessing magnitude of landscape change.

Table 8.13 Establishing the magnitude of landscape change

Magnitude	Criteria
High	A large-scale change that may include the loss of key landscape elements/characteristics or the addition of uncharacteristic new features or elements that would alter the perceptual characteristics of the landscape. The size or scale of landscape change could create new landscape characteristics and may change the overall distinctive landscape quality and character, typically, but not always affecting a larger geographical extent.
Medium	A medium-scale change that may include the loss of some key landscape characteristics or elements, or the addition of some uncharacteristic new features or elements that could alter the perceptual characteristics of the landscape. The size or scale of landscape change could create new landscape characteristics and may lead to a partial change in landscape character, typically, but not always affecting a more localised geographical extent.
Low	A small-scale change that may include the loss of some landscape characteristics or elements of limited characterising influence, or the addition of some new features or elements of limited characterising influence. They may be a small partial change in landscape character, typically, but not always affecting a localised geographical extent.
Very Low	A very small-scale change that may include the loss or addition of some landscape elements of limited characterising influence. The landscape characteristics and character would be unaffected.

Visual Assessment

8.9.10 The sensitivity of visual receptors will consider the susceptibility of the visual receptor to the visual change identified and the value that is likely to be attributed by the visual receptor to their baseline view. These are described as high, medium, or low. The main influencing factors are:

- The occupation or activity of the visual receptor at each location;
- The extent to which the visual receptors' attention or interest is focused upon the available views;
- The importance and/or popularity of the view;

- The typical numbers of visual receptors to whom that view is available;
- In a link with landscape considerations, the context of a viewpoint in terms of landscape value and quality within a view; and
- Any indication of a view being valued such as the presence of interpretation boards, parking, and seating facilities, it being referenced in a guidebook or marked on a published map.

8.9.11

Table 8.14 details the basis for assessing visual receptor sensitivity.

Table 8.14 Evaluation of Visual Sensitivity

Sensitivity	Criteria
High	<u>Susceptibility:</u> Visual receptors in this category would generally include residents, tourists/visitors, walkers, cyclists, and horse riders, either stationary or travelling through the landscape, and/or undertaking outdoor recreational activities where the focus of the activity involves an appreciation of the landscape: Residential properties or settlements and related community outdoor spaces. Outdoor tourist and visitor attractions. Recreational routes (national trails, long distance footpaths and PRoWs; Sustrans national and regional cycle routes; open access land/beaches and recognised scenic driving routes); and People generally, undertaking recreational activity where the focus of the activity involves an appreciation of the landscape (especially within internationally or nationally designated landscapes). <u>Value:</u> Notable specific value attached for example in relation to heritage assets, references in literature/art and or promoted by planning designation. Likely inclusion of facilities at or near viewpoint e.g., parking places, sign boards and interpretative material. Likely to be of high scenic quality and located within or overlooking a designated landscape
Medium	<u>Susceptibility:</u> Visual receptors in this category would generally include people travelling through the landscape on road, rail or other transport routes as rail passengers and road users and people undertaking recreational and sporting activities where it is likely that their surroundings have some influence upon their enjoyment (e.g., angling and golfing). <u>Value:</u> Some indicators of value are present e.g., views well known at a local level and/or may be part of wider visual amenity experienced along a locally promoted footpath route. Likely to be of moderate scenic quality.
Low	<u>Susceptibility:</u> Visual receptors in this category would generally include people for whom their surroundings are unlikely to be a primary concern or affect how they

Sensitivity Criteria

undertake their current activity. Receptors are likely to include people at their place of work, people travelling on main roads through built up areas, dual-carriageways or motorways or taking part in activities not involving an appreciation of the landscape (e.g., playing team sports).

Value:

No indication of any value attached to view/s or visual amenity. Likely to be of low scenic quality.

8.9.12 The nature of visual effects or their magnitude of change resulting from the construction and operation of the Project will be assessed as high, medium, low, or very low, in accordance with GLVIA 3. The magnitude of visual change will be described by reference to the scale of visual change; the contrast with the baseline view; separation distance; the duration over which a view is available; the angle of view; levels of screening; and whether new visual elements are seen on a skyline or against a background.

8.9.13 **Table 8.15** details the basis for assessing magnitude of visual change.

Table 8.15 Establishing the magnitude of visual change

Magnitude	Criteria
High	A large and prominent change to the view, appearing in the fore to middle ground and involving the loss/addition of several features, which is likely to have a strong degree of contrast and benefits from little or no screening. The view is likely to be experienced at static or low speed and is more likely to be continuously/sequentially visible from a route.
Medium	A moderate and prominent/noticeable change to the view, appearing in the middle ground and involving the loss/addition of features and a degree of contrast with the existing view. There may be some partial screening. The view is likely to be experienced at static or low to medium speed and is more likely to be intermittently or partially visible from a route.
Low	A noticeable or small change, affecting a limited part of the view that may be obliquely viewed or partly screened and/or appearing in the background of the view. This category may include rapidly changing views experienced from fast-moving road vehicles or trains.
Very Low	A small or negligible change to the view that may be obliquely viewed and mostly screened and/or appearing in the distant background or viewed at high speed over short periods and capable of being missed by the casual observer.

Evaluation of significance of landscape and visual effects

- 8.9.14 The level of landscape and visual effects will be determined with reference to landscape or visual sensitivity and the magnitude of landscape or visual change likely to be experienced in accordance with GLVIA 3. Likely significant landscape and visual effects arising from the construction and operation of the Project would be effects that are assessed as being likely to result in effects that would be greater than a 'moderate' level. In addition, effects assessed at a 'moderate' level may be classified as significant, based on professional judgement. Effects assessed as being less than 'moderate' would be evaluated as not significant.
- 8.9.15 In line with the emphasis placed in GLVIA 3 upon application of professional judgement, the adoption of an overly mechanistic approach will be avoided. This will be achieved by the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor over and above the outline assessment provided by use of a matrix in **Table 8.16**. Wherever possible cross references will be made to a visual assessment at the proposed viewpoints and figures to support and explain the rationale.

Table 8.16 Evaluation of Landscape and Visual Effects

Sensitivity	Magnitude			
	High	Medium	Low	Very Low
High	Major (Significant)	Major/Moderate (Significant)	Moderate* (potentially Significant)	Minor (Not Significant)
Medium	Major/Moderate (Significant)	Moderate* (potentially Significant)	Minor (Not Significant)	Minor/Negligible (Not Significant)
Low	Moderate* (potentially Significant)	Minor (Not Significant)	Minor/Negligible (Not Significant)	Negligible (Not Significant)

*Note: Moderate levels of effect may or may not be significant subject to the assessor's opinion which shall be clearly explained.

8.10 Preliminary Assessment of Landscape Effects

Introduction

- 8.10.1 The preliminary assessment of the effects of the Project upon the 58 Landscape Character Areas (LCA) or Landscape Character Types (LCT) that fall within the LVIA Study Area, is set out in the detailed assessment in **Appendix 8C: Landscape Receptor Assessment**. A summary of the detailed assessment is set out below arranged under the four main route corridors noting those LCA/LCT that cross more than one corridor are covered under the corridor that the majority of

the route lies within and any differences in the level of effect upon the LCA/LCT between corridor sections are reported.

- 8.10.2 Construction effects have been assessed within the full LVIA study area comprising a 1km offset from the Preliminary Order Limits in **Figures 8.2-8.14**. Operational effects have been assessed within a 1km radius from the HAGI and Block Valve installations, which covers fewer LCA/LCT, is also illustrated in **Figures 8.2-8.14** and with reference to the ZTV plans at **Figures 8.28 to 8.48**.

Construction Phase

West Corridor

- 8.10.3 The 4a Frodsham, Helsby & Lordship Marshes LCA (**Table 8C.1 in Appendix 8C**) is assessed as having a low sensitivity due to the extensive industrial, energy and transport infrastructure present. The southeast edge of the LCA on the edge of Frodsham is elevated to medium landscape sensitivity. As a host LCA it would experience direct impacts as a result of the pipeline corridor through the centre of the LCA and also construction compounds at the northern end LCA associated with the River Weaver crossing and Rocksavage HAGI (Option RSH1) construction. The magnitude of change would be high along the pipeline corridor and construction compounds with **Moderate** and **Significant** effect and low to zero elsewhere resulting in Minor effects that would be Not Significant to No Effects. There are no appreciable differences in landscape effects between pipeline corridor options WP1 and WP2.
- 8.10.4 The Project passes through the northern part of the 9a Dunham to Tarvin Plain LCA (**Table 8C.2 in Appendix 8C**) that is assessed to have a medium sensitivity. Collectively the construction works involving the underground pipeline, the HPP HAGI (located outside but adjacent to the LCA), temporary construction and storage compounds and construction access options. The magnitude of change locally from direct impacts and indirect effects close to the construction activity would be high, resulting in localised **Major/Moderate** and **Significant** effects close to the pipeline corridor. Overall, the magnitude of change on the wider LCA would be low to zero with a Minor Effect that would be Not Significant to No Effect.
- 8.10.5 The 8a Aston LCA (**Table 8C.3 in Appendix 8C**) and 15c Lower Weaver Valley LCA (**Table 8C.4 in Appendix 8C**) lie southwest of Runcorn and adjoin each other with parts of each LCA located within the Weaver Valley Area of Special County Value. Both LCA's are assessed as having a high-medium sensitivity and would experience a high magnitude as a result of the open trench cut of the pipeline corridor (including Options WP1 and WP4) and from construction compounds associated with the trenchless crossings of the River Weaver in the west of the 8a Aston LCA and the railway crossing at the northern end of the 15c Lower Weaver Valley LCA. The overall effect in both LCA's would be **Major to Major/Moderate** and **Significant** where direct impacts on the LCA would occur, reducing to a Minor and Not Significant level or No Effect elsewhere within the wider LCA where the indirect impact of construction activity would be reduced and a low to zero magnitude is recorded.

- 8.10.6 The 2a Frodsham Sandstone Ridge LCA and 2b Helsby Hill LCA (**Tables 8C.13 and 8C.14 in Appendix 8C**) are part of the Sandstone Ridge character type and together with 5f Helsby to Frodsham LCA (**Table 8C.15 in Appendix 8C**) at a lower elevation all lie within the Helsby and Frodsham Hills ASCV local landscape designation with a high overall sensitivity. Only the northern fringes of the LCA's lie within the LVIA Study Area and indirect effects would arise from elevated views of the pipeline corridor (including Options WP1 and WP2) and the construction compounds north and south of the railway close to the M56 motorway. The construction activity would be perceived in the context of heavy industry, major transport corridors and the Frodsham Windfarm. The indirect effects from the isolated summits of the Sandstone Ridge that are popular with recreational users would comprise a very low magnitude and a Minor effect that is Not Significant. Elsewhere within the LCA's apart from some partially restricted views in the vicinity of the B5393, the magnitude would be typically zero with No Effect.
- 8.10.7 A very small part of the Norton Wooded Parkland LCA (**Table 8C.22 in Appendix 8C**) at its southern end coincides with the LVIA study area for the Western Corridor. The overall sensitivity is low, and the magnitude of change would be very low as a result of HGV routes for construction access along the A533 and A56 where the visual and audible influence of construction vehicles would be incremental to high volumes of traffic on these routes. The effect would be Negligible and Not Significant with a Zero magnitude and No Effect experienced from the wider LCA.

North Corridor and Clock Face and St. Helens Spurs

- 8.10.8 The North Widnes Farmland LCA (**Table 8C.21 in Appendix 8C**) is assessed to have a medium sensitivity. The pipeline corridor passes through the northeastern corner of the LCA and collectively the construction works involving the underground pipeline, material storage area and construction access routes would represent a low to zero magnitude of change with localised areas experiencing up to a high magnitude close to the pipeline corridor. The overall effect would be Minor and Not Significant to No Effect with localised **Major/Moderate and Significant** effects.
- 8.10.9 The Project passes through the centre of Daresbury Sandstone Escarpment LCA (**Table 8C.23 in Appendix 8C**) that is assessed to have a medium sensitivity. Options NP1, NP2 and NP3 of the pipeline cross this LCA between Newton Lane and the administrative boundary with Warrington. HAGI options HWH1 or HWH2 are located within the LVIA Study Area. The magnitude of change locally, which applies to all options and localised removal of vegetation to accommodate road widening, access junctions and visibility splays would be high, resulting in localised **Major/Moderate and Significant** effects. Overall, the magnitude of change on the wider LCA would be low to zero with a Minor effect that would be Not Significant or No Effect.
- 8.10.10 The Project passes through the northern part of LCA Moore Village and Keckwick Brook Valley (**Table 8C.24 in Appendix 8C**) that is assessed to have a medium sensitivity. Collectively the works involving the underground pipeline (including options NP4 and NP1), construction access, a single trenchless crossing compound and HAGI options HWH1 or HWH2 to the north, beyond the LCAs

boundary would result in a localised medium magnitude of change and a **Moderate** effect that is potentially **Significant**. Elsewhere within the majority of the LCA the magnitude would be very low and commonly zero resulting in a Minor and Not Significant effect or No Effect.

- 8.10.11 Preston on the Hill Undulating Enclosed Farmland LCA (**Table 8C.25 in Appendix 8C**) has an overall medium sensitivity. The Project passes through the centre of the LCA and the magnitude locally would be medium to high as a result of the underground pipeline, construction access routes, an extensive material storage area and a single trenchless crossing compound to the north, adjacent to the LCAs boundary. These changes would result in localised **Major/Moderate** and **Significant** effect on landscape character, noting that elsewhere within the LCA the magnitude would be typically low to zero with a Minor Effect that is Not Significant to No Effect.
- 8.10.12 The Project passes to the northeast of Cronton and Pex Hill LCA, in Knowsley (an adjacent local authority area) (**Table 8C.26 in Appendix 8C**) that has an overall low sensitivity. Collectively the underground pipeline, Clock Face HAGI, temporary construction compounds and construction access routes would have a very low to zero magnitude with a Negligible effect that would be Not Significant to No Effect.
- 8.10.13 The Project passes to the west of BRS5 Rainhill Slopes LCA (**Table 8C.27 in Appendix 8C**) which lies within the LVIA study Area and has an overall medium sensitivity. There would be very limited indirect effects from the proposed pipeline corridor, associated construction compounds and the Clock Face HAGI under construction, due to distance and intervening woodland and tree belts. The magnitude would be very low to zero with a Minor/Negligible effect that is Not Significant to No Effect.
- 8.10.14 The FF2 Sutton Manor Fringe LCA (**Table 8C.28 in Appendix 8C**) is assessed to have a medium to low sensitivity and would accommodate part of the North Corridor and Clock Face Spur and associated construction, material storage areas and construction access options. There would be limited intervisibility to the Clock Face HAGI under construction that would be located in the adjoining LCA. The magnitude of change on the LCA would be low with localised areas experiencing up to a high magnitude of change in close proximity to the pipeline corridor. The effects would range from localised **Major/Moderate** to **Moderate** and **Significant** effects to Minor/Negligible and Not Significant to No Effect within the wider LCA.
- 8.10.15 The Project passes to the west of RSH1 Sutton Manor LCA (**Table 8C.29 in Appendix 8C**) that has an overall high to medium sensitivity. There would be very limited indirect effects from the proposed pipeline, associated construction compounds, access routes and the Clock Face HAGI under construction, due to distance and intervening engineered road embankment, woodland, and roadside vegetation. The magnitude would be very low to zero with a Minor/Negligible effect that is Not Significant to No Effect.
- 8.10.16 The Project passes through the western part of FF4 Bold Heath LCA (**Table 8C.30 in Appendix 8C**) that has an overall medium to low sensitivity. The construction works involving underground pipeline, temporary construction and storage compounds, the Clock Face HAGI and access options. The magnitude of change would be low with localised areas close to the new infrastructure experiencing up

to a high magnitude of change. The resulting direct effects would range from **Major/Moderate** to **Moderate** and **Significant** effects closely associated with pipeline corridor and aforementioned infrastructure to No Effect or Not Significant effects upon the wider LCA.

- 8.10.17 The Project passes to the south of WFE4 Bold Hall LCA (**Table 8C.31** in **Appendix 8C**) and to the west of FF3 Clock Face Farming (**Table 8C.32** in **Appendix 8C**) that have been assessed as having an overall medium and medium-low sensitivity, respectively. There would be very limited indirect effects from the proposed pipeline due to distance and intervening vegetation. The magnitude would be very low to zero with a Minor/Negligible to Negligible effect that is Not Significant to No Effect.
- 8.10.18 The Project passes to the south of RS4 Sutton LCA (**Table 8C.33** in **Appendix 8C**) and to the west of RSH4 Lea Green LCA (**Table 8C.34** in **Appendix 8C**) that have been assessed as having an overall medium and low sensitivity, respectively. There would be very limited indirect effects from the proposed pipeline, and the Clock Face HAGI under construction, due to distance and intervening vegetation and buildings. The magnitude would be very low to zero with a Minor/Negligible to Negligible effect that is Not Significant to No Effect.
- 8.10.19 The IF1 Link Road LCA (**Table 8C.35** in **Appendix 8C**) is assessed to have a low sensitivity and would accommodate part of the North Corridor and Clock Face Spur. Collectively the construction works involving the pipelines, temporary storage compounds and temporary construction access options would represent a locally high to medium magnitude of change and **Moderate** and **Significant** effect, noting that elsewhere within the LCA the magnitude would be Low to Zero with a Minor/Negligible effect that would be Not Significant.
- 8.10.20 The Project passes northeast of SS6 Rainhill LCA (**Table 8C.36** in **Appendix 8C**) that has an overall medium sensitivity and is predominantly urban development. There would be limited indirect effects from the proposed pipeline and the Clock Face HAGI under construction, to the eastern edge of the LCA where construction activity would be visible in views affecting the adjoining character area and would comprise a low magnitude of change. Elsewhere the effects on the character and elements of the Rainhill LCA would be very low to zero due to distance and intervening built environment and vegetation. These effects would be Minor and Not Significant to No Effect.
- 8.10.21 The Project passes through the centre of EF1 Elton Head Hall Farm LCA and the centre of LCA RVI1 Thatto Heath (**Tables 8C.37 and 8C.39** in **Appendix 8C**). Both LCA's have been separately assessed as having an overall medium-low sensitivity. Within both LCAs the construction works involving underground pipelines, temporary construction compounds, and access options would result in a high to medium magnitude of change and a **Major/Moderate** to **Moderate** and **Significant** effect in close proximity to the pipeline corridor. Intervening vegetation, whilst intermittent in nature, would combine with the surrounding built environment to limit the extent of visible influence of the construction works upon the wider landscape character, where the magnitude of change would typically be low to zero with a Minor and Not Significant Effect to No Effect.

- 8.10.22 The Project passes to the northwest of UG2 Sherdley Park (**Table 8C.38 in Appendix 8C**) that is assessed to have a medium sensitivity. There would be very limited indirect effects from the proposed pipeline and the St Helen's HAGI under construction, due to intervening dense vegetation. The magnitude would be very low to zero with a Minor/Negligible effect that is Not Significant to No Effect.
- 8.10.23 The UG3 Rainhill Golf Course LCA (**Table 8C.40 in Appendix 8C**) is assessed to have a medium sensitivity and the Project passes to the southeast of the LCA. There would be very limited indirect effects from the proposed pipeline due to intervening vegetation. The magnitude would be very low to zero with a Minor/Negligible effect that is Not Significant to No Effect.
- 8.10.24 The RFS1 Grange Park LCA (**Table 8C.41 in Appendix 8C**) is assessed to have a medium sensitivity and the Project passes along the southeast of the LCA. Overall, the magnitude of change on the LCA would be low to zero with a Minor and Not Significant Effect to No Effect, however there would be localised areas along the southern boundary of the LCA in close proximity to the pipeline corridor that would experience up to a high-medium magnitude of change and where there would be a **Moderate** effect that would be **Significant**.
- 8.10.25 The Project passes through the centre of UIV3 Ravenhead LCA (**Table 8C.42 in Appendix 8C**) assessed to have a medium to low sensitivity. Collectively the construction works involving the underground pipelines, St Helens HAGI and construction compound and access options would result in up to a locally high magnitude and a **Major/Moderate** to **Moderate** and Significant effect. Elsewhere roadside vegetation, whilst intermittent in nature would combine with the surrounding built environment to limit the extent of visible influence of the construction works on the landscape character and the magnitude would be low to zero resulting in a Minor to Negligible and Not Significant Effect to No Effect.
- 8.10.26 Three urban landscape character areas within St. Helens comprising SLV1 St Helens Historic Core, SLV2 St Helens Retail Ring and SLV3 St Helens Terraces are located to the north of the Project and partly fall within the LVIA Study Area (**Appendix 8C: Tables 8C.43, 8C.44 and 8C.45**). All LCA's have been assessed separately as having a medium sensitivity and the magnitude of change would vary from zero within SLV1 St Helens Historic Core LCA and SLV3 St Helens Terraces LCA where there would be No Effect, to a low to zero magnitude in SLV2 St Helens Retail Ring as a result of the limited visibility of construction works associated with the St Helen's HAGI under construction, and also the St. Helens Spur that may be perceptible along the A570 St Helens Linkway from the southern edge of the LCA. The resulting effect would be Minor and Not Significant with the majority of the LCA experiencing zero magnitude and No Effect.
- 8.10.27 The Project comprising the end of St. Helens Spur passes through the western part of UIV2 Sutton Brook LCA (**Table 8C.46 in Appendix 8C**) that is assessed to have a medium to low sensitivity. The open cut sections comprising the majority of the pipeline corridor may require the removal of occasional street trees within the Preliminary Order Limits along St Helens Linkway (further details to be provided at ES stage). The St. Helens HAGI is located in the adjoining LCA. The magnitude of change resulting from the potential temporary partial road closure, movement of construction vehicles and localised removal of vegetation to accommodate

pipeline works would potentially be up to a high-medium magnitude. The overall effect would be a very localised **Moderate** and **Significant** Effect along the pipeline corridor, reducing to a low to zero magnitude elsewhere within the LCA, with a resulting Minor effect that is Not Significant to No Effect.

- 8.10.28 1f Penketh & Cuerdley LCA (**Table 8C.54** in **Appendix 8C**) has been assessed as having a low overall sensitivity. Collectively the construction works involving the underground pipeline, construction access, four trenchless crossing compounds and two large material storage areas would result in a high magnitude of change and a **Moderate** effect that is **Significant** along the pipeline corridor, reducing to a low to zero magnitude that is Minor/Negligible and Not Significant to No Effect elsewhere within the wider LCA.
- 8.10.29 The River Mersey/Bollin (West) (**Table 8C.53** in **Appendix 8C**) is assessed as having a medium sensitivity. The construction works would include the open trench installation of part of the Northern pipeline, Warrington Spur options WSp1 and WSp2, the Higher Walton HAGI (Options HWH1 and HWH2) sited on the northern banks of the Manchester Ship Canal and associated construction compounds. In addition, there would be trenchless crossing compounds and material storage areas in the western part of the LCA. The high magnitude of change, whilst localised, would affect a substantial area of the LCA, resulting in **Major/Moderate** and **Significant** effects. The magnitude upon the LCA at the fringes of the LCA would be reduced to low to Zero due to intervening distance and intermittent screening from vegetation, resulting in a Minor effect that would be Not Significant to No Effect.
- 8.10.30 The Project passes through the western edge of 1a Stretton & Hatton LCA that has a medium sensitivity (**Table 8C.55** in **Appendix 8C**). Option NP3 of the Northern Corridor and temporary trenchless crossing compounds that are common to all options would be sited on agricultural fields either side of the M56 motorway. The construction activity would result in up to a locally high magnitude and a **Major/Moderate** and **Significant** effect encompassing the pipeline corridor, construction compounds and adjacent landscape. Elsewhere within the LCA due to intervening field boundary vegetation the extent of visible influence of the construction works on landscape character, including Option NP1, would diminish and the magnitude would be low to zero resulting in a Minor and Not Significant Effect to No Effect.
- 8.10.31 The Project passes through the centre of 3a Appleton Park & Grappenhall LCA (**Table 8C.56** in **Appendix 8C**). The five route options (NP1 to NP5) and associated construction access and compounds would have a similar impact upon landscape character (subject to detailed tree survey and understanding of vegetation loss at ES stage). The Higher Walton HAGI (Option HWH2) is sited on the northern banks of the Manchester Ship Canal, outside the LCA but within the study area noting some limited intervisibility of construction activity. The construction activity would result in up to a locally high magnitude and a **Major/Moderate** and **Significant** effect encompassing the pipeline corridor, construction compounds and adjacent landscape. Elsewhere within the LCA due to intervening field boundary vegetation, the extent of visible influence of the construction works on landscape character would diminish and the magnitude would be low to zero resulting in a Minor and Not Significant Effect to No Effect.

- 8.10.32 The Project passes through the west of 6a Victoria Park to Fiddlers Ferry LCA (**Table 8C.57 in Appendix 8C**) that has been assessed to have a medium sensitivity. Collectively the construction works involving the presence of the trenchless crossing compound and Higher Walton HAGI (Options HWH1 and HWH2) just beyond the boundary of the LCA would represent a small-scale development from within this LCA. Overall, the magnitude of change upon the majority of the LCA would be very low to zero with a Minor/Negligible effect that is Not Significant to No Effect. Localised areas experiencing up to a medium magnitude of change in close proximity to the trenchless crossing compound would result in a **Moderate** effect that is potentially **Significant**.

Runcorn Spur

- 8.10.33 The Runcorn Hill and Heath Parkland LCA (**Table 8C.20 in Appendix 8C**) has a medium overall sensitivity. The magnitude of change would range from High (in respect of landscape elements and LCA within and adjacent to the pipeline corridor, temporary compounds and construction access widening of local roads) to Medium affecting a small area around the Runcorn HAGI and Low/zero elsewhere within the LCA. The effect would range from **Major/Moderate** and locally **Significant** in close proximity to the construction works associated with the pipeline corridor and parts of the construction access to Moderate and Not Significant at the Runcorn HAGI site. Elsewhere within the wider LCA the effects would be Minor and Not Significant to No Effect.

East Corridor and Northwich Spur and Partington Spur

- 8.10.34 The Arley West LCA (**Table 8C.11 in Appendix 8C**) has a medium overall sensitivity. The magnitude of change would range from High (in respect of landscape elements and LCA within and adjacent to the pipeline corridor and construction access widening of local roads) to low /zero elsewhere within the LCA. The effect would range from **Major/Moderate** and locally **Significant** in close proximity to the construction works associated with the pipeline corridor and parts of the construction access. Elsewhere within the wider LCA the effects would be Minor and Not Significant to No Effect.
- 8.10.35 The pipeline corridor of the Project passes through the 5d Whitley and Comberbach LCA in five places as parts of the East, West, North and South Corridors and the Northwich Spur and would also accommodate the Central HAGI (CHH1 and CHH2 options). The LCA has been assessed to have a medium sensitivity (**Table 8C.17 in Appendix 8C**). Collectively the construction works involving the underground pipeline, temporary construction compounds, Central HAGI construction (CHH1 and CHH2 options), material storage areas and construction access would result in localised areas close to this construction activity experiencing up to a high magnitude of change and a **Major/Moderate** and **Significant** effect. However the magnitude of change upon the wider LCA closer to the edge of the LVIA Study Area, would be low to zero due to intervening hedgerow and tree screening. This reduction in magnitude would result in a Minor effect that is Not Significant to No Effect.
- 8.10.36 The 14a Northwich LCA (**Table 8C.16 in Appendix 8C**) is assessed as having a medium sensitivity and the magnitude of change would be high as a result of

construction works involving the Northwich Spur underground pipeline, trenchless crossing compounds and potential removal of young woodland to accommodate construction access within the Anderton Nature Park at the western edge of the LCA. The high magnitude of change would be localised affecting the LCA where directly impacted by the Project and in close vicinity, resulting in **Major/Moderate** and **Significant** effects. The overall effect from the majority of the LCA would be a low magnitude or zero resulting in a Minor effect that would be Not Significant to No Effect.

- 8.10.37 The Eastern pipeline corridor of the Project including the Partington Spur passes through the western part of the Mossland LCT (**Table 8C.47 in Appendix 8C**). The LCA has been assessed to have a medium sensitivity (**Table 8C.47 in Appendix 8C**). The construction works involving the open trench installation of the underground pipeline across open agricultural land would result in localised areas close to this construction activity experiencing up to a high magnitude of change and a **Major/Moderate** and **Significant** effect. It should be noted that construction effects related to the Partington HAGI, given its brownfield location and surrounding screening, would not represent a significant effect. The magnitude of indirect change upon the wider LCA closer to the edge of the LVIA Study Area, including the built-up areas would be low to zero, due to intervening vegetation screening. This reduction in magnitude would result in a Minor effect that is Not Significant to No Effect.
- 8.10.38 The Settled Sandlands LCT (**Table 8C.48 in Appendix 8C**) is assessed as having a medium sensitivity. The Project passes through the centre of the LCA and the magnitude of change would be high as a result of construction works involving the Eastern Corridor and Warburton Spur underground pipelines, crossings of the Sinderland Brook and Caldwell Brook by open cut installation and the construction of Warburton HAGI and temporary material storage areas to the north and south of the HAGI. The high magnitude of change would be localised affecting the LCA where directly impacted by the Project and in close vicinity, resulting in **Major/Moderate** and **Significant** effects. The overall effect from the majority of the LCA would be a low to zero magnitude resulting in a Minor effect that would be Not Significant to No Effect.
- 8.10.39 The Urban River Valleys LCT (**Table 8C.49 in Appendix 8C**) is assessed as having a low sensitivity. The Project follows a small part of the eastern boundary of the LCA and the only direct (physical) changes to this LCA would be in relation to a short length of the Partington Spur and piggling compound within the boundary of the SAICA Paper Mill. The medium magnitude of change would be localised affecting the LCA where directly impacted by the Project and in close vicinity, resulting in Minor and Not Significant effect. The overall impact upon the majority of the LCA, including the construction of the Partington HAGI, would comprise a very low to zero magnitude resulting in a Negligible effect that would be Not Significant to No Effect.
- 8.10.40 The River Meadowlands LCT (**Table 8C.50 in Appendix 8C**) is assessed as having a medium sensitivity. The construction works involving the underground pipeline within the LCT and open trench crossing of the River Bollin would be augmented by the indirect visibility of the Warburton HAGI, under construction and material storage areas to the north. Beyond the LCT's boundary would represent a

medium magnitude of change that would be localised affecting the LCA where directly impacted by the Project and in close vicinity. This would result in **Moderate** and **Significant** effects. The overall effect from the majority of the LCA would be a low to zero magnitude resulting in a Minor effect that would be Not Significant to No Effect.

- 8.10.41 The Wooded Estatelands LCT (**Table 8C.51 in Appendix 8C**) is assessed as having a medium sensitivity. The LVIA study area for the Eastern Corridor of the pipeline coincides with a small proportion of the LCT, on its western fringes. Indirect effects from limited visibility of the pipeline corridor construction, Warburton HAGI construction and materials storage area would represent a very low to zero magnitude of change. This would result in Minor to Minor/Negligible and Not Significant Effects to No Effect upon the Wooded Estatelands LCT.
- 8.10.42 The Eastern pipeline corridor of the Project including the trenchless crossing compounds to the west of the A56/south of the Bridgewater Canal and construction access directly impacts the eastern fringes of the Lymm LCA. The LCA has been assessed to have a medium sensitivity (**Table 8C.52 in Appendix 8C**). The construction works would result in localised areas along the pipeline corridor experiencing up to a high magnitude of change and a **Major/Moderate** and **Significant** effect, noting the magnitude of indirect change upon the wider LCA would be low to zero, due to intervening vegetation screening within and around Broomedge, resulting in a Minor effect that is Not Significant to No Effect.
- 8.10.43 The River Mersey/Bollin (East) (**Table 8C.53 in Appendix 8C**) is assessed as having a medium sensitivity. The Project passes through the eastern edge of the LCA where the magnitude of change would be locally high as a result of construction works involving the Eastern Corridor by open cut installation (including Option NP4). The high magnitude of change would be localised affecting the LCA where directly impacted by the Project and in close vicinity, resulting in **Major/Moderate** and **Significant** effects. The magnitude upon the LCA further east, including the construction of the Warburton HAGI, would reduce to low/zero due to screening from intervening hedgerows and the resulting in a Minor effect would be Not Significant to No Effect.
- 8.10.44 The 7a Arley LCA (**Table 8C.58 in Appendix 8C**) is assessed as having a medium sensitivity. The Project passes through the centre of the LCA and collectively the construction works involving the underground pipeline, the construction access routes, five trenchless crossing compounds and three material storage areas would represent a localised but high magnitude of change in the vicinity of the pipeline corridor, resulting in **Major/Moderate** and **Significant** effects. However, the overall effect from the majority of this extensive LCA, including the construction of the East Corridor Block Valves (Options EBV 1, 2 and 3), would be a low to zero magnitude resulting in a Minor effect that would be Not Significant to No Effect.
- 8.10.45 The 10a Lower Bollin LCA (**Table 8C.59 in Appendix 8C**) is assessed as having a medium sensitivity. The Project passes through the far western fringes of the LCA and collectively the construction works comprising the underground pipeline, construction access routes and the Warburton HAGI construction compound and material storage areas to the north, beyond the LCA's boundary would represent a

localised and up to a high magnitude of change in the vicinity of the pipeline corridor, particularly where it crosses the River Bollin and Agden Brook, resulting in **Major/Moderate** and **Significant** effects. The overall effect from the majority of this extensive LCA, would be a low to zero magnitude resulting in a Minor effect that would be Not Significant to No Effect.

South Corridor

- 8.10.46 The 5b Frodsham to Northwich LCA (**Table 8C.5 in Appendix 8C**) is assessed as having a medium sensitivity and the magnitude of change would be high as a result of construction works involving the underground pipeline (including Options SP1 and SP4), South Corridor Block Valves (Options SBV 1, 2, 3 and 4), temporary construction and storage compounds and 13 separate temporary construction and operational access options. The high magnitude of change would be localised affecting the LCA where directly impacted by the Project and in close vicinity, resulting in **Major/Moderate** and **Significant** effects. The overall effect from the majority of the LCA, including the construction of the Central Hub HAGI, would be a low to zero magnitude resulting in a Minor effect that would be Not Significant to No Effect.
- 8.10.47 The 5a Norley LCA (**Table 8C.6 in Appendix 8C**) has a medium sensitivity and at its nearest point the South Corridor would pass approximately 650m to the northeast of the LCA. The LCA would experience no direct effects as a result of the Project and there would only be very restricted views of construction compounds to facilitate the trenchless crossing of the A49. This would result in a very low magnitude and a Negligible Effect that would be Not Significant, but more typically zero from the remainder of the LCA with No Effect.
- 8.10.48 The 1a Delamere LCA (**Table 8C.7 in Appendix 8C**) has a medium sensitivity and the Project passes along the eastern boundary of the LCA. Collectively the construction works involving the underground pipeline, South Corridor Block Valve (Options SBV 1, 2, 3 and 4), temporary construction compounds and material storage areas and construction access would result in localised areas close to this activity experiencing up to a high magnitude of change and a Major/Moderate and Significant effect. However, the magnitude of change on the wider LCA would be low to zero, resulting in a Minor effect that is Not Significant to No Effect.
- 8.10.49 The Project passes through the centre of 15b Mid Weaver Valley LCA (**Table 8C.8 in Appendix 8C**) that has a high to medium sensitivity, with the majority of the LCA lying within the Weaver Valley ASCV local landscape designation. The scale and geographical extent of construction activities (accounting for all four alternative routes under options SP1 to SP4) would be Medium-High when experienced locally to the construction works, reducing to Medium-Low or less from the wider LCA, where the pipeline corridor and associated construction compounds, including the South Corridor Block Valve (Options SBV 1, 2, 3 and 4) would be less visible due to distance and roadside and field boundary vegetation. The overall effect would be **Major** and **Significant** for Option SP4 due to the potential removal of mature clough woodland and **Major/Moderate** and **Significant** for Options SP1, SP2 and SP3.

- 8.10.50 The 5c Eaton, Marton & Over LCA (**Table 8C.19** in **Appendix 8C**) has a medium sensitivity and the Project (Option SP4 route corridor) passes along part of the eastern boundary of the LCA. Collectively the construction works involving the underground pipeline, temporary construction compounds and construction access would result in localised areas close to this activity experiencing up to a high magnitude of change and a **Major/Moderate** and **Significant** effect, however the magnitude of change on the wider LCA, including construction of the South Corridor Block Valve (Options SBV 1, 2, 3 and 4), would be low to zero, resulting in a Minor effect that is Not Significant to No Effect.
- 8.10.51 The 5e East Winsford LCA (**Table 8C.10** in **Appendix 8C**) has a high to medium sensitivity with the northern and western parts of the LCA lying within the Weaver Valley ASCV local landscape designation. Three Pipeline Options (SP2, 3 and 4) pass through the northern end of the LCA and with all options crossing the railway with compounds both sides, some level of tree loss is likely to occur (the extent to be determined following arboricultural surveys later in 2022). The preliminary assessment is that all three pipeline options would have a similar adverse impact upon landscape character. Collectively the construction works involving the underground pipeline (all options), Southern Block Valve (Option SBV5), temporary construction compounds and construction access would result in localised areas close to this activity, experiencing up to a high magnitude of change and a **Major to Major/Moderate** and **Significant** effect. However, the magnitude of change further to the south within the LCA in the vicinity of Bostock Road would be low to zero, resulting in a Minor effect that is Not Significant to No Effect.
- 8.10.52 The Project passes through the centre of 10b Stublach Plain LCA (**Table 8C.17** in **Appendix 8C**) that has a medium sensitivity. Collectively the construction works involving the underground pipeline, Hydrogen Storage Facility HAGI, temporary construction compounds, material storage areas and construction access would result in localised areas close to this construction activity experiencing up to a high magnitude of change and a **Major/Moderate** and **Significant** effect. However, the magnitude of change on the wider LCA, due to intervening hedgerow and tree screening would be low to zero, resulting in a Minor effect that is Not Significant to No Effect.
- 8.10.53 The Project passes through the centre of LCA 15e Dane Valley (**Table 8C.18** in **Appendix 8C**) that has an overall medium sensitivity. The magnitude of change from the pipeline corridor including access and construction compounds would range from high (in respect of landscape elements and LCA within and adjacent to the pipeline corridor and trenchless crossing construction compounds) to low to zero elsewhere within the LCA. These changes would result in Minor and Not Significant to No Effect for the majority of the LCA, with localised areas of **Major/Moderate** and **Significant** effects close to the pipeline corridor and construction compounds.

Operation Year 1 Phase

- 8.10.54 Evolution of the project design, informed by arboricultural and ecology surveys will enable any losses (or cutting back) of structural vegetation to be more accurately determined, informing the final assessment of effects upon landscape receptors in

the ES (**PINS ID 3.30 Ref 3.4.1 in Table 8.4**). On the basis of the preliminary Pproject design it is assumed that the majority of planting removed in the construction phase to accommodate temporary construction compounds, material storage areas, construction access (including visibility splays) would be reinstated, recognising that it would take a number of years for this planting to become mature. The majority of planting within the pipeline corridor, accounting for easements could be reinstated, noting that it is unlikely there would need to be breaks in hedgerows. The exception to this removal and reinstatement strategy is the mature clough woodland loss that would result from Pipeline Option SP4 of the Southern Corridor. In this location mature woodland losses cannot be reinstated over the pipeline easement, resulting in the potential for sustained significant effects upon landscape elements and landscape character throughout the operational phase of the Project.

- 8.10.55 The assessment of operational effects set out below relates to the impact of the completed HAGI and/or Block Valve installations and preliminary estimates of the typically modest localised losses of structural vegetation predicted to occur elsewhere, where at Operation Year 1, reinstatement planting may have been implemented but has not matured.

West Corridor

- 8.10.56 The 4a Frodsham, Helsby & Lordship Marshes LCA (**Table 8C.1 in Appendix 8C**) of medium to low sensitivity would experience a medium magnitude of change as a result of the localised effects of the Rocksavage HAGI (Option RSH1) that would be Minor and Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.57 The 9a Dunham to Tarvin Plain LCA (**Table 8C.2 in Appendix 8C**) of medium sensitivity would experience a very low magnitude of change as a result of the localised effects of the HPP HAGI at Stanlow on a brownfield site that would be Minor/Negligible and Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.58 The 8a Aston LCA (**Table 8C.3 in Appendix 8C**) of high-medium sensitivity would experience a low to zero magnitude of change as a result of the Rocksavage Option RSH1, and Runcorn HAGIs that would all be located outside the LCA but would have an indirect effect resulting in a Moderate effect that would be Not Significant to No Effect across the majority of the LCA.
- 8.10.59 The 15c Lower Weaver Valley LCA (**Table 8C.4 in Appendix 8C**) of high-medium sensitivity would experience a low magnitude of change as a result of the Rocksavage Option RSH1 and Runcorn HAGIs that both be located outside the LCA but would have an indirect effect resulting a Minor to Minor/Negligible effect that would be Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.60 The Runcorn Hill and Heath Parkland LCA (**Table 8C.20 in Appendix 8C**) of high-medium sensitivity would experience a low magnitude of change as a result of the localised effects of the Runcorn HAGI with larger existing industrial development in the vicinity that would result in a Minor effect that would be Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.

North Corridor and St Helen's Spur

- 8.10.61 The Daresbury Sandstone Escarpment LCA (**Table 8C.23 in Appendix 8C**) of medium sensitivity would experience a very low to zero magnitude of change as a result of the Higher Walton HAGI options HWH1 and HWH2 that would be located outside the LCA but would have potential indirect effects, resulting in a Minor effect that would be Not Significant to No Effect.
- 8.10.62 The Moore Village and Keckwick Brook Valley (**Table 8C.24 in Appendix 8C**) of medium sensitivity would experience a very low to zero magnitude of change as a result of the Higher Walton HAGI options HWH1 and HWH2 that would be located outside the LCA but would have potential indirect effects, resulting in a Minor/Negligible effect that would be Not Significant to No Effect.
- 8.10.63 No visibility of the Clock Face HAGI is predicted from the following LCAs resulting in a zero magnitude of change and No Effect:
- BRS5 Rainhill Slopes LCA (**Table 8C.27 in Appendix 8C**);
 - RSH1 Sutton Manor LCA (**Table 8C.29 in Appendix 8C**); and
 - SS6 Rainhill LCA (**Table 8C.36 in Appendix 8C**).
- 8.10.64 No visibility of the St. Helens HAGI is predicted from the following LCAs resulting in a zero magnitude and No Effect:
- UG2 Sherdley Park LCA (**Table 8C.38 in Appendix 8C**);
 - SLV1 St Helens Historic Core (**Table 8C.43 in Appendix 8C**);
 - SLV2 St Helens Retail Ring (**Table 8C.44 in Appendix 8C**); and
 - SLV3 St Helens Terraces (**Table 8C.45 in Appendix 8C**).
- 8.10.65 Very limited visibility of the St. Helens HAGI is predicted from the following LCAs, all of medium to low sensitivity, resulting in a low to zero magnitude and a Minor to Negligible Effect that is Not Significant to No Effect:
- RVI1 Thatto Heath LCA (**Table 8C.39 in Appendix 8C**);
 - UIV3 Ravenhead (**Table 8C.42 in Appendix 8C**); and
 - UIV2 Sutton Brook (**Table 8C.46 in Appendix 8C**).
- 8.10.66 The FF2 Sutton Manor Fringe LCA (**Table 8C.28 in Appendix 8C**) of medium to low sensitivity would experience a very low to zero magnitude of change, as a result of the Clock Face HAGI that would be located outside the LCA but would have potential indirect effects, resulting in a Minor/Negligible effect that would be Not Significant to No Effect.
- 8.10.67 The FF4 Bold Heath LCA (**Table 8C.30 in Appendix 8C**) of medium to low sensitivity would experience a medium magnitude of change as a result of the Clock Face HAGI that is located within the LCA, resulting in a Minor localised effect that would be Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.

- 8.10.68 The RSF4 Sutton LCA (**Table 8C.33 in Appendix 8C**) of medium sensitivity would experience a zero magnitude of change as a result of the Clock Face HAGI that would be located outside the LCA but would have potential indirect effects, resulting in a Minor/Negligible effect that would be Not Significant to No Effect.
- 8.10.69 The 5a River Mersey/Bollin (West) LCA (**Table 8C.53 in Appendix 8C**) of medium sensitivity would experience a medium local magnitude of change and a Moderate effect that is **Not Significant** as a result of the Higher Walton HWH1 HAGI and a there would be a localised Low magnitude and a Minor effect that is Not Significant as a result of the Higher Walton HWH2 HAGI. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.70 The 3a Appleton Park and Grappenhall LCA (**Table 8C.56 in Appendix 8C**) of medium sensitivity would experience a very low to zero magnitude of change because of the Higher Walton HAGI Options HWH1 and HWH2 that would be located outside the LCA but would have potential very limited visibility, resulting in a Minor/Negligible effect that would be Not Significant to No Effect.
- 8.10.71 The 6a Victoria Park to Fiddlers Ferry LCA (**Table 8C.57 in Appendix 8C**) would experience a Zero magnitude of change and No Effect.

East Corridor

- 8.10.72 The 5d Whitley and Comberbach LCA (**Table 8C.12 in Appendix 8C**) of medium sensitivity would experience a low to zero magnitude of change because of the Central Hub HAGI - CHH1 and CHH2 Options) that would be located within the LCA. Both HAGI Options would have a localised landscape influence and limited visibility from the LCA surrounding the HAGI due to topography and retained existing vegetation resulting in a localised Moderate effect that would be Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.73 The Mossland LCA (**Table 8C.47 in Appendix 8C**) of medium sensitivity would experience a low magnitude of change because of the Partington HAGI that would be located within the LCA on brownfield land. The HAGI would have a very localised landscape influence and limited visibility from the LCA surrounding the HAGI due to topography and retained existing vegetation resulting in a localised Minor effect that would be Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.74 The Settled Sandlands LCA (**Table 8C.48 in Appendix 8C**) of medium sensitivity would experience a localised medium magnitude of change because of the Warburton HAGI that would be located on agricultural land within the LCA, close to an existing substation but largely visually separate from it. The HAGI would have a localised landscape influence but limited visibility from the wider LCA due to topography and retained existing vegetation, however the localised effect in the vicinity of the HAGI would be **Moderate** and **Potentially Significant**. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.75 The Urban River Valley LCA (**Table 8C.49 in Appendix 8C**) of medium sensitivity would experience a localised very low to zero magnitude of change, primarily

because of the Partington HAGI in the adjoining LCA, resulting in a Negligible and Not Significant Effect to No Effect.

- 8.10.76 The River Meadowlands LCA (**Table 8C.50 in Appendix 8C**) and Wooded Estatelands LCA (**Table 8C.51 in Appendix 8C**), both of medium sensitivity would experience indirect effects, primarily because of the Warburton HAGI, resulting in a Very Low magnitude of change and Minor/Negligible Effects that are Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.77 The 7a Arley LCA (**Table 8C.58 in Appendix 8C**) of medium sensitivity would experience indirect effects, primarily as a result of the East Corridor Block Valve (Option EBV1, 2 and 3), resulting in a low magnitude of change, including close to the Block Valve compound and Minor Effects that are Not Significant. The majority of the LCA would experience a zero magnitude and No Effect.
- 8.10.78 The 10a Lower Bollin LCA (**Table 8C.59 in Appendix 8C**), of medium sensitivity would experience indirect effects, primarily as a result of the very limited visibility of the Warburton HAGI, resulting in a very low to zero magnitude of change and Minor/Negligible Effects that are Not Significant to No Effect.

South Corridor

- 8.10.79 The 5b Frodsham to Northwich LCA (**Table 8C.5 in Appendix 8C**) of medium sensitivity would experience a localised very low magnitude of change, primarily because of the South Corridor Block Valve (Options SBV1,2,3 or 4), resulting in a Minor and Not Significant Effect reducing to Negligible or No Effect less further away from the compounds within wider LCA where the structures would be fully screened from view by multiple layers of intervening hedgerows.
- 8.10.80 The 1a Delamere LCA (**Table 8C.7 in Appendix 8C**) of medium sensitivity would experience a localised low magnitude of change, primarily because of the South Corridor Block Valve (Option SBV4 located in LCA and Options SBV1, 2 and 3 nearby in the adjoining LCA). The direct (Option SBV4) and indirect effects (Options SBV1-3) would result in a Minor Effect that is Not Significant reducing to Negligible or No Effect less further away from the compounds within wider LCA where the structures would be fully screened from view by multiple layers of intervening hedgerows.
- 8.10.81 The 15b Mid Weaver Valley (**Table 8C.8 in Appendix 8C**) of medium sensitivity would continue to experience a localised high magnitude of change because of loss of parts of the clough woodlands from open cut trenching required as part of pipeline Option SP4, noting replacement planting cannot occur due to pipeline easements. The South Corridor Block Valve (all five options located in adjoining LCAs) are not predicted to be visible due to intervening landform and vegetation. The highest magnitude for Option SBV4 would result in **Major/Moderate and Significant** direct effects upon the clough woodland elements and landscape character. The magnitude for Options SBV1-3 would be a low magnitude and a Minor effect that is Not Significant as a result of the vegetation loss from the construction phase where new reinstatement planting has yet to mature. The majority of the LCA would experience a zero magnitude and No Effect.

- 8.10.82 The 5e East Winsford LCA (**Table 8C.10 in Appendix 8C**) of high-medium sensitivity would experience a localised low magnitude of change, primarily as a result of the direct effects South Corridor Block Valve (SBV Option 5) resulting in a localised Moderate effect that is Not Significant reducing to Negligible Effect or less further away from the installation, where within the wider LCA the Block Valve installation would be fully screened from view by multiple layers of intervening hedgerows.
- 8.10.83 The 10b Stublach Plain LCA (**Table 8C.17 in Appendix 8C**) of medium sensitivity would experience a localised low to medium magnitude of change, primarily as a result of the direct effects of the Hydrogen Storage Facility HAGI resulting in a localised Minor effect that is Not Significant reducing to Negligible Effect or No Effect further away from the installation, where within the wider LCA the HAGI would be fully screened from view by multiple layers of intervening hedgerows and hedgerow trees.
- 8.10.84 The 5c Eaton, Marton & Over LCA (**Table 8C.19 in Appendix 8C**) of medium sensitivity would experience a zero magnitude of change, noting all 5 options of the Southern Block Valves would be located in adjoining LCAs and are not predicted to be visible due to intervening landform and vegetation. The LCA would experience No Effect.

8.11 Preliminary Assessment of Visual Effects: Settlements

- 8.11.1 All settlement receptors have been assessed as being of high sensitivity as set out in **Table 8D.1 of Appendix 8D**. The susceptibility of residents to change in their views has been assessed as high and the value of view ranges between medium and high to result in an overall high sensitivity.

Construction phase

West Corridor

- 8.11.2 Dwellings on the northern and northwestern edge of Hapsford with potential views towards the Project are either surrounded by mature tree cover and/or views would be restricted by barns and other non-residential buildings. A zero magnitude of change arising from the Project construction is predicted that would have No Effect upon existing views experienced by residents of this settlement.
- 8.11.3 Limited views of construction activity, including corridor Options WP1 and WP2, are predicted from localised parts of Thornton-le-Moors, Elton, Helsby and Clifton where views would be heavily restricted by a combination of built development, trees and hedges, restricting views of construction activity, including potential glimpses of the Runcorn HAGI under construction from the southern edge of Clifton. There would be a very low magnitude of change from localised parts of the settlements only resulting in a Minor and Not Significant Effect, with the majority of the settlement experiencing zero magnitude and No Effect.
- 8.11.4 A low magnitude of change is predicted from localised parts of Frodsham, Aston and Aston Heath that would result from partially restricted views of construction

activity along the West Corridor and the Rocksavage HAGI (Option 2 only) under construction, in the case of views from the northeastern edge of Frodsham along The Quay. The highest magnitude of change would be a low magnitude resulting in a **Moderate Effect** from localised parts of these settlements that would be **Significant**, however the majority of the settlement would experience zero magnitude and No Effect.

- 8.11.5 A medium magnitude of change is assessed from the southern edge of Sutton Weaver where unrestricted south facing views from ground and upper floor windows would be available, comprising construction activity along the pipeline corridor and views of a material storage area. A medium magnitude of change is also predicted from the southern edge of Runcorn Heath off Clifton Road and adjoining cul-de-sacs where properties back onto the Runcorn Golf course and construction activity, including views of a construction compound are predicted to be available. The highest magnitude of change from both Sutton Weaver and Runcorn would result in a **Major/Moderate Effect** that would be **Significant**, however the majority of both settlements would experience zero magnitude and No Effect.

North Corridor and Clock Face, Warrington, and St Helens Spurs

- 8.11.6 From the majority of the settlements along the North Corridor, a combination of landform, built-form, hedges and tree cover between the settlement and the Preliminary Order Limits, would fully restrict or heavily filter any views of construction activities. The construction of the Higher Walton (Options HWH1 and HWH2), Clock Face, and St Helen's HAGIs are not predicted to be visible from any settlements. The settlements where some very restricted visibility would be available comprise:

- Daresbury (North Corridor Option NP1 only);
- Hatton (North Corridor Options NP2 and 3 only);
- Widnes;
- Cuerdley Cross;
- Bold Heath; and
- Rainhill.

- 8.11.7 The magnitude of change from these settlements would be typically zero resulting in No Effect however from localised parts of each settlement, a very low magnitude of change and a Minor Effect that is Not Significant is assessed.

- 8.11.8 At Moore partially filtered views of construction activity along the corridor (Option NP4), including temporary construction compounds, are predicted from dwellings on the eastern edge of the village on Hobb Lane, and from the northern edge of the village on Moss Lane and Runcorn Road. The magnitude of change would be low to medium where partially restricted views of construction activity along the Pipeline Corridor, including construction compounds would be available. In addition, HGV construction traffic would pass through a localised part of the village along Runcorn Road. Views from the front of dwellings would vary from

unrestricted views, e.g., the terraced dwellings of Nos. 47-57 Runcorn Road, to views from other dwellings that are more restricted by garden planting. The preliminary assessment is that the magnitude of change would be low, however the increase in construction traffic compared with baseline levels will be determined and assessed in more detail at the ES stage. The overall effect upon the visual amenity of some dwellings on the edge on the northern and eastern edge of Moore would be **Major/Moderate** and **Significant** to **Moderate** and **potentially Significant**. More typically the magnitude of change from Moore would be zero resulting in No Effect.

- 8.11.9 At Higher Walton the magnitude from the majority of the settlement would be None with No Effect to very low with a Minor and Not Significant effect from the northwestern edge. At the southern end of the settlement a Low magnitude of change and a **Moderate** effect that is **potentially Significant** is predicted from dwellings on the southern edge of Park Lane where views south to the pipeline corridor (Options NP3 and NP5) would typically be heavily restricted by garden planting. From Thomasons Bridge Lane at the southwestern edge of the village, a medium magnitude would be experienced by several dwellings lying close to a construction compound, resulting in a localised **Major/Moderate** effect that is **Significant**. More typically the magnitude of change from Higher Walton, including views of the Higher Walton HAGI (Options HWH1 and HWH2) under construction would be zero resulting in No Effect.
- 8.11.10 At Lower Walton the magnitude from the majority of the settlement would be None with No Effect, however at the northwestern edge of the settlement construction traffic would use the A56, A5060, Eastford Road and Baronet Road with increased traffic relative to the baseline clearly visible from some dwellings that face onto these routes where there is no intervening planting or other screening features. The preliminary assessment is that the overall magnitude of change, including Option WSp1, would be low and the overall effect **Moderate** and **potentially Significant**. More typically the magnitude of change from Lower Walton would be zero resulting in No Effect.
- 8.11.11 At Warrington the magnitude from most of the settlement as a result of the pipeline corridor and Warrington Spur (Options WSp1 and WSp2) would be None with No Effect to Very Low with a Minor effect that is Not Significant. A greater magnitude of change may be experienced by HGV construction traffic using the A-road network including the A562, A57, A5060, A5061, A5080, B5156 but also minor residential streets including Liverpool Road, Gainsborough Road, Loushers Lane, Wash Lane, Thelwall Lane, Reynolds Street, Nook Lane and Longdin Street. The preliminary assessment is that increased HGV traffic relative to the baseline would be clearly visible from some dwellings that face onto these routes where there is no intervening planting or other screening features. The overall magnitude of change would be low and the overall effect **Moderate** and **potentially Significant**, noting the increase in construction traffic compared with baseline levels is to be determined and assessed in more detail at the ES stage. More typically from Warrington the magnitude of change would be zero resulting in No Effect.
- 8.11.12 At St. Helens HGV construction traffic would use the local road network, with potential views of increased traffic relative to the baseline most likely to be experienced from dwellings that face onto the B5204 Elton Head Road and

Sherdley Road in locations where there is limited intervening planting. Direct views of the pipeline corridor crossing open agricultural land would also be available from the southern edge of the suburb of Thatto Heath, noting these would be largely restricted to upper floor views, assumed not to be main living space with ground floor views typically restricted by fences, walls, planting and/or outbuildings. The maximum magnitude of change from parts of St. Helens would be low and the overall effect **Moderate** and **potentially Significant**, noting the increase in construction traffic compared with baseline levels is to be determined and assessed in more detail at the ES stage. More typically from St. Helens the magnitude of change, including views of the construction of the St. Helens HAGI, would be zero resulting in No Effect.

East Corridor

- 8.11.13 Residents at the western edge of Arley fall within the LVIA study Area although any with potential views towards construction activity within the pipeline corridor fully screened by multiple layers off hedgerows with hedgerow trees. A zero magnitude is predicted that would have No Effect.
- 8.11.14 Residents in the settlements of Frandley and Antrobus would typically have no views of construction activity due to intervening buildings and hedgerows and trees close to the settlement and consequently there would be zero magnitude and No Effect for most residents. On the western and northwestern edge of both settlements there would be the potential for limited views of construction activity along the pipeline corridor, including construction compounds and material storage areas although at more than 0.5km distant the construction activity would form a very minor elements in the wider views and frequently restricted by garden planting and intervening hedgerows. The maximum magnitude of change would be very low and the overall effect Minor and Not Significant.
- 8.11.15 Residents living in Higher Whitley, Lower Whitley, High Legh, Broomedge, Sinderland Green and Partington would typically experience a zero magnitude of change and No Effect from the Project construction works. Some residents in localised parts of all these settlements do however have the potential to experience a low magnitude of change and a **Moderate** effect that is **potentially Significant**, as a result of views of construction activity as follows:
- Higher Whitley: Residents in scattered dwellings at the eastern end of the village off Norman's Lane, Old Mill Lane and Well Lane have potential views of construction activity within the pipeline corridor and of the temporary material storage areas. Views are often heavily filtered by mature garden planting and hedgerows along road corridors, although construction activity across the open arable fields will be visible where occasional, less restricted views are available.
 - Lower Whitley: Views from the rear of properties on the northeastern edge of the settlement would be available of construction activity within the pipeline corridor, typically more restricted at ground floor level where garden planting often partially restricts views towards the Project.
 - High Legh: HGV activity associated with the Project would be visible from dwellings overlooking the B5159 West Lane. There would be partially restricted

views from western edge of settlement from dwellings along West Lane to pipeline corridor and Eastern Block Valves (EBV2 and EBV3) heavily filtered by garden hedgerows and mature hedgerows with trees alongside West Lane. Views of construction activity would be predominantly restricted to upper floor rooms, assumed not to be main living space.

- Broomedge: Restricted views towards the pipeline corridor from localised parts of the settlement are predicted to include east facing views from dwellings on Agden Park Lane and more restricted east facing views from the rear of dwellings on West Lane.
- Sinderland Green: Views from scattered dwellings along Red House Lane and Sinderland Lane are often restricted by tall garden hedgerows, however some dwellings are predicted to have west facing views towards the pipeline corridor that are only partially restricted by garden planting, roadside hedgerows and/or additional intervening field boundary.
- Partington: Views from the easternmost part of the settlement that comprises the housing estate under construction off Heath Farm Lane. Future residents have the potential for restricted views of the pipeline corridor under construction to the east depending on the extent of hedgerow and tree removal along Sinderland Road and the nature of planting in open space that would form a buffer between the new housing and the pipeline corridor.

8.11.16 Residents in Dunham Woodhouses along Dunham Road and Cargreen Lane would experience views of the Warburton HAGI under construction and/or construction compound, restricted in places by dwelling orientation and intervening planting. Residents facing the B5160 in the settlement would also experience views of HGV activity, although this would only be related to the Warburton HAGI construction. There would also be relatively open views of the pipeline corridor construction from dwellings on Barn Lane. The magnitude of change would be up to medium with a **Major/Moderate** effect that is **Significant**.

South Corridor including Northwich Spur

- 8.11.17 Residents in Weaverham and Whitegate fall within the LVIA Study Area although views towards construction activity within the pipeline corridor would be fully screened by multiple layers of tree belts, woodland, and hedgerows with hedgerow trees. A zero magnitude is predicted that would have No Effect.
- 8.11.18 Views from Sandiway within the LVIA study area are predominantly prevented by intervening dwellings and mature tree cover along the settlement edge. There is the potential for heavily filtered views from properties overlooking Norley Road where glimpses of the pipeline corridor and material storage area may be visible over 0.5km distant across the Forest Hill Quarry. The magnitude of change would be very low with a Minor effect that is Not Significant.
- 8.11.19 Residents living in Hartford, Bartington, Gorstage, Cuddington, Winsford and Bostock Green would typically experience a zero magnitude of change and No Effect from the project construction works. Some residents in localised parts of all these settlements do however have the potential to experience a low magnitude of

change and a **Moderate** effect that is **potentially Significant** as a result of views of construction activity as follows:

- Views from the southern edge of Hartford towards the Project would be heavily filtered by tree belts along the A556, noting the potential for views from the southwestern end of the settlement on Littledales Lane and Chester Road where visibility would be typically heavily restricted by mature garden trees and shrubs, with potential glimpses of construction activity along the pipeline corridor, material storage areas and the construction of the South Corridor Block Valve (SBV1).
- At Bartington views towards the Pipeline Corridor to the west would be typically restricted by mature tree cover, with less restricted views predicted from The Old Granary and The Malthouse at Bartington Hall. The trenchless crossing compounds would be largely screened by mature tree cover outside the site boundary with potential restricted views of a small part of the compound (enclosed by fencing but containing temporary buildings up to 2 storeys high) available from properties at the southern end of Martinsfield and The Weaver Houses overlooking the Weaver Navigation. Temporary connections to the A49 at the northern and southern edge of the hamlet would be required for accommodate HGV construction traffic. The magnitude of change for residents would be up to Medium for dwellings with south facing views off Martinsfield that have relatively unrestricted views across small-scale fields north of the Weaver Navigation, noting that some visible vegetation removal and/or trimming back is likely to be required.
- Views from Gorstage include the rear of properties on Hall View Close and Hefferston Rise partially filtered and restricted in horizontal extent by occasional mature trees and in places garden shrub cover. The trenchless crossing compound theoretically visible from the northern edge of the Village would be predominantly screened by intervening hedgerows and mature tree cover outside the site boundary with potential restricted views of a small part of the compound available from converted barns north of Hefferston Hall. Grange Lane to the south of the village would be used construction traffic and in views from the village would be screened by a tree belt along the route.
- Views from the northern edge of Cuddington including Cuddington Lane and the cul-de-sac housing estate of Bryn would incorporate potential visibility of construction activity along the Pipeline Corridor, trenchless compounds and material storage area. Views would be heavily restricted by intervening farm buildings and multiple layers of mature tree cover close to dwellings and along the intervening field boundaries between the dwellings and the site boundary. There is the potential for limited first floor views of the compounds from north and northeast facing windows and also activity along the Pipeline Corridor. HGV movements associated with the construction phase along the busy A49 Warrington Road that passes through the Village would be visible to many dwellings that face onto this route;
- From Winsford no views of construction activity within the pipeline corridor are predicted due to mature woodland to the northwest of the settlement and tree cover and industrial buildings to the northeast. There would however be views

of HGV construction traffic for residents overlooking Weaver Valley Road and for upper floor views from several dwellings on Hartwell Grove that back onto Shaw Lane; and

- At Bostock Green there would be oblique and partially restricted views to the Pipeline Corridor from dwellings at the southern end of the settlement, with construction compounds and a material storage area more distant and largely screened by intervening planting and/or farm buildings.

8.11.20 Residents living in Acton Bridge, Davenham, and Moulton would typically experience a zero magnitude of change and No Effect from the Project construction works. However, some residents in localised parts of all three settlements do have the potential to experience a medium magnitude of change and a **Major/Moderate** effect that is **Significant** because of views of construction activity as follows:

- From Acton Bridge narrow and partial views of the Pipeline Corridor are predicted from the rear of dwellings facing north and northeast on Strawberry Lane, Cliff Road, Wall Hill Way. Nos. 1-19 Warrington Road would have views from the front of the dwellings across the A49 to a proposed material storage areas compound on rising ground set above a clipped boundary hedgerow;
- Residents of Davenham would experience views of HGV traffic along Hartford Road and Eaton Lane resulting on the potential for Significant effects with properties along the southwestern edge of the village also experiencing views of the construction activity along the pipeline corridor over 0.6km distant that would be barely discernible at this range and heavily filtered by intervening tree cover; and
- Residents at the western edge of Moulton would frequently have unrestricted views across open arable farmland to the pipeline corridor on gently sloping land. Temporary construction compounds are located to the north and south of the village and together with the South Corridor Block Valve (Option SBV 5) construction would have very limited visibility from the settlement.

Operation Year 1 Phase

8.11.21 Preliminary assessment indicates there is unlikely to be clearance of trees or hedgerows to the extent that views from settlements would result in a magnitude of change greater than very low at Operation year 1. The typically localised and limited loss of structural vegetation to accommodate the pipeline corridor, construction compounds, construction access and material storage areas is to be determined and reported on in detail at ES Stage, informed by more advanced scheme design, arboricultural and ecology surveys. Where any loss of trees and hedgerows could result in potentially Significant effects, the magnitude of change in views from settlements would need to exceed the very low level that is indicated by the preliminary assessment.

West Corridor

8.11.22 No views of any above ground installations are predicted from settlements within the LVIA Study Area close to the West Corridor with the exception of the

northeastern edge of Frodsham along The Quay. At this specific location the magnitude of change would be very low due to predicted partial views of the Rocksavage HAGI (Option RSH2 only) resulting in a Minor Effect that is Not Significant. Elsewhere from the settlement the magnitude would be zero with No Effect.

North Corridor including Clock Face, Warrington and St Helens Spurs

- 8.11.23 No views of any above ground installations are predicted from settlements within the LVIA Study Area close to the North Corridor and associated spurs with the exception of a non-residential part of St. Helens on Burtonhead Road and the Ravenhead Retail Park where sensitivity to change would be reduced. At this specific location, the magnitude of change would be very low due to localised views of the St. Helens HAGI from Burtonhead Road and the Ravenhead Retail Park resulting in a Minor Effect or less that is Not Significant. Elsewhere from the settlement the magnitude would be zero with No Effect.

East Corridor

- 8.11.24 No views of any above ground installations are predicted from settlements within the LVIA Study Area along the East Corridor with the exception of the northwestern edge of Dunham Woodhouses, where views of the Warburton HAGI from some dwellings would represent a low magnitude of change that would be **Moderate** and **Significant**.

South Corridor including Northwich Spur

- 8.11.25 No views of any above ground installations are predicted from settlements within the LVIA Study Area along the South Corridor apart from potential very limited views of the South Corridor Block Valve (SBV1) from Speedwell Bungalow, the westernmost dwelling in the village off Chester Road, where views would be heavily restricted by garden planting and the magnitude of change would be Very Low with a Minor effect that is Not Significant.

8.12 Preliminary Assessment of Visual Effects: Recreational Walking and Cycling Routes

- 8.12.1 All recreational and walking routes have been assessed as being of high sensitivity as set out in **Table 8D.2 of Appendix 8D**. The susceptibility of walkers and cyclists to changes in their views has been assessed as high in accordance with **Table A8.6 of Appendix 8A**, and the value of view ranges between medium and high to result in an overall high sensitivity.
- 8.12.2 Many of these long-distance promoted route's pass within multiple pipeline corridors within the LVIA Study Area. For ease of reference the report order of West, North, East, and South Corridor has been maintained and it is identified if the route passes by more than one corridor.
- 8.12.3 Beyond the national and regional cycle routes and long-distance footpaths, there is a wider public rights of way network that in places coincides with these

promoted routes but also includes routes that are not specifically promoted and form part of the local public rights of way network including footpaths, bridleways, and byways. It is intended that these routes will be covered at ES stage.

Construction phase

West Corridor

- 8.12.4 The Eddisbury Way long distance footpath falls within the LVIA Study Area on the eastern edge of Frodsham, south of the junction with the A56. Views towards construction activity as part of the Project would be fully screened by intervening vegetation and built development. A zero magnitude is predicted that would have No Effect.
- 8.12.5 Walkers on the Sandstone Trail long distance footpath enter the LVIA Study Area within the built-up area of Frodsham and would have potential glimpses of the construction activity beyond the M56 from the route elevated parts of the settlement, largely screened by intervening built development and vegetation cover. The magnitude of change would be very low to zero with a Minor Effect that is Not Significant to No Effect.
- 8.12.6 Views of the Project from the Longster Trail would be available from ~0.1 to 0.2km section of the route around Helsby Hill, including the summit where there would be elevated, open views of the construction works associated with the West Corridor pipeline including fencing, the trench cutting, construction machinery and equipment and construction traffic. These views would be seen in panoramic views beyond the settlement of Helsby and the M56. The magnitude of change would be very low to zero with a Minor Effect that is Not Significant to No Effect.
- 8.12.7 Views of the Project would be available to cyclists from NCR 5, NCR 562 and several long-distance footpaths comprising the North Cheshire Way 3, the Trent and Mersey Canal Walk, The Weaver Way and The Cheshire Ring Canal Walk. For localised sections along each of these routes, a high to medium magnitude of change would be experienced resulting in a **Major to Major/Moderate Effect** that is **Significant**, however from the majority of the routes within the LVIA Study Area the magnitude would be zero due to screening by intervening landform, vegetation and built form with No Effect. The location and visibility of Project elements resulting in **Significant** effects from each of these routes is summarised as follows:
- Cyclists along NCR 5 have the potential to experience **Significant** views of construction activity from a ~0.5km off-road section along the bank of the River Weaver east of Dutton Locks and a ~0.4km off road section at Longacre Brook both located within the Weaver Valley ASCV where there would be opportunities for clear views of construction activity along the West Corridor including trenchless compounds with intermittent screening from interlying planting. Views of construction activity and compounds would also be available along the South corridor including a ~0.8km off-road route section along the bank of the River Weaver east of Meadow Bank, a ~2.9km section within or close to the route corridor between Niddries Lane and the southern end of Eaton Lane, a 0.7km section along the A49 Warrington Road and a

0.6km section south of Bartington along the River Weaver. Fleeting views would also be available of the Rocksavage HAGI (option RSH2) and the HPP HAGI under construction.

- Cyclists along the NCR 562 have the potential for **Significant** views of construction activity from a ~0.5 to 0.6km section along Aston Lane south of the railway line between Aston and Aston Heath (including a crossing point) where there would be open views of the construction works associated with the pipeline corridor crossing agricultural fields including fencing, the trench cutting, construction machinery and equipment and construction traffic. Temporary construction access would be off Aston Lane and for 0.15km localised vegetation removal and movement of construction vehicles and equipment would be available;
- Walkers using The Weaver Way would have **Significant** views of construction activity from a ~0.5km section from the bridge east of Dutton Locks along the River Weaver associated with construction works along the West Corridor pipeline. Views would also be available from ~0.3km section south of Bartington, ~0.15km and ~0.2km at Vale Royal Locks, ~0.35km at Valeroyal Cut and ~0.6-0.7km Meadowbank/Salt Works, and ~0.2km as a result of Northwich Spur part of the South Corridor pipeline;
- The North Cheshire Way 3 overlaps with the Weaver Way for the majority of its length within the study area between east of Frodsham and Barnton / Anderton and is therefore assessed above as part of the Weaver Way above. The remainder of the route, which does not follow the Weaver Way would have no view of the pipeline corridor, access routes or any HAGIs due to screening from intervening vegetation and/or built-form;
- People using the Trent and Mersey Canal Walk would experience **Significant** effects from ~0.8km of route south of Dutton Hall as a result of the construction of the west pipeline corridor and ~0.8km section north of Bartington and ~0.2-0.4km south of Whatcroft, and ~0.25km as a result of Northwich Spur – winter, part of the south corridor pipeline; and
- People using The Cheshire Ring Canal Walk would experience **Significant** effects as a result of the construction for ~0.8km of route south of Dutton Hall as a result of the construction of the West Corridor pipeline and ~0.8km section north of Bartington and a ~0.2-0.4km south of Whatcroft, and ~0.25km as a result of Northwich Spur – winter, part of the South Corridor pipeline.

North Corridor

8.12.8

Views of the Project would be available to cyclists using the NCR 62, and several long-distance footpaths comprising the E8, Delamere Way, Timberland Trail, Mersey Way, Trans Pennine Trail, Bridgwater Way and Palantine Plod. For localised sections along each of these routes, a high to medium magnitude of change would be experienced resulting in a **Major to Major/Moderate Effect** that is **Significant**, however from the majority of the routes within the LVIA Study Area the magnitude would be zero due to screening by intervening landform, vegetation and built form with No Effect. The location and visibility of Project elements

resulting in **Significant** effects from each of these routes is summarised as follows:

- Cyclists using NCR 62 would have **Significant** views of construction activity for ~0.5-0.6km of route south of Fiddler's Ferry, ~0.5km near the junction of River Mersey and Runcorn and Latchford Canal, ~0.4km north of Morley Common, Knutsford Road north of Latchford Swing Bridge and ~0.8km Manchester Ship Canal as a result of the construction of the north pipeline corridor and where the east pipeline corridor crosses the route north of Dunham Woodhouses;
- Walkers using E8 would have **Significant** views of construction activity as reported above for NCR 62 as it overlaps with this route within the study area;
- Walkers on the Delamere Way would have **Significant** views of construction activity for ~0.4km section to the east of Dutton Park Farm and south of Dutton Lodge Farm as a result of the construction of the West Corridor pipeline and ~0.8-0.9km section east of Lightwood Farm and Marsh Lane as a result of North Corridor pipeline. There would also be significant visual effects on Marsh Lane due to the temporary construction access;
- Walkers on the Timberland Trail would have **Significant** views of construction activity for ~0.3km along Daresbury Lane east of Daresbury Hall, ~0.4km between Outer Wood and Row's Wood and ~0.9-1km along Warrington Road and further east along the off-road route as a result of north corridor pipeline. There would also be significant visual effects on Daresbury Lane due to the temporary construction access;
- People using the Mersey Way would have views of construction works and activity that would be **Significant** for ~0.5-0.6km of route south of Fiddler's Ferry, ~0.5km near the junction of River Mersey and Runcorn and Latchford Canal, ~0.4km north of Morley Common, ~0.2km along the A5060 at Wilderspool as a result of the construction of the North Corridor pipeline and Warrington Spur;
- Walkers using the Trans Pennine Trail would have **Significant** views of construction activity as reported above for NCR 62 as it overlaps with this route within the study area;
- People using the Bridgwater Way would experience views of construction activity that would be **Significant** (particularly in the winter) for ~0.5km of route east of Moore, ~0.4km west of Higher Walton and north of Hollyhedge Farm because of the construction of the North Corridor pipeline and ~0.4km at Agden Bridge in relation to the East Corridor pipeline; and
- Walkers using the Palatine Plod would have views of construction works that would be **Significant** for ~0.5-0.6km of route south of Fiddler's Ferry because of the construction of the North Corridor pipeline.

East Corridor

8.12.9

The Salford Trail long distance footpath falls within the LVIA Study Area. Views towards construction activity as part of the Project would be fully screened by

intervening vegetation and built development. A zero magnitude is predicted that would have No Effect.

8.12.10

Views of the Project would be available to cyclists on RCR 70, and the Dane Valley Way and Bollin Valley Way long distance footpaths. For localised sections along each of these routes, a high to medium magnitude of change would be experienced resulting in a **Major to Major/Moderate Effect** that is **Significant**, however from the majority of the routes within the LVIA Study Area the magnitude would be zero due to screening by intervening landform, vegetation and built form with No Effect. The location and visibility of Project elements resulting in **Significant** effects from each of these routes is summarised as follows:

- Cyclists using RCR 70 would experience **Significant** visual effects because of construction activity for ~0.5km of the route along Shutley Lane and ~0.3km along Acton Lane because of the construction of the East Corridor pipeline and the temporary construction access;
- Walkers using the Bollin Valley Way would experience **Significant** visual effects because of construction activity for ~0.6-0.7km section on this route along and off Carrgreen and Barns Lanes because of the construction of the east pipeline corridor including a material storage area; and
- The Dane Valley Way overlaps with the Trent and Mersey Canal Walk for the majority of its length within the study area at Whatcroft and **Significant** effects are therefore summarised above as part of the Trent and Mersey Canal Walk.

South Corridor

8.12.11

NCR 573 falls within the LVIA Study Area. Views towards construction activity as part of the Project, including the construction of the Hydrogen Storage Facility HAGI would be fully screened by intervening vegetation and built development. A zero magnitude is predicted that would have No Effect.

Operation Year 1 Phase

8.12.12

The assessment of operational effects upon views and visual amenity has been restricted to those recreational destinations within 1km radius of the HAGI and Block Valve installations as they comprise the only above ground and visible infrastructure. This corresponds with the approach taken with regard to the assessment of effects on landscape character as set out in **Section 8.10**.

West Corridor

8.12.13

Views from NCR 5 would not include any above ground infrastructure apart from fleeting oblique glimpses of Rocksavage HAGI (Option RSH2) from ~0.2km of the route northeast of Frodsham and potential glimpses of the HPP HAGI from the pipeline corridor point on the A5117, assuming that the existing tree belt is retained the HAGI would only be discernible in winter and heavily filtered. The magnitude of change from both locations would be very low and there would be a Minor Effect that is Not Significant.

- 8.12.14 Views from NCR 562 would not include any above ground infrastructure including the Runcorn HAGI due to screening from built-form and/or vegetation. The magnitude of change would be zero and there would be No Effect.
- 8.12.15 Views from the Weaver Way would not include any above ground infrastructure including the Rocksavage HAGI (all 3 options) due to screening from built-form and/or vegetation. The magnitude of change would be zero and there would be No Effect.
- 8.12.16 Views from the Cheshire Ring Canal Walk would not include any above ground infrastructure including the Higher Walton HAGI due to screening from built-form and/or vegetation. The magnitude of change would be zero and there would be No Effect.

North Corridor

- 8.12.17 Views from the E8 Walk and Trans Pennine Trail that overlap in the Study Area would include very limited components of the Warburton HAGI would be visible from this route due to the heavily vegetated section of the route to the south. The magnitude of change would Very Low with a Minor Effect that would be Not Significant.
- 8.12.18 Views from the Bridgwater Way would not include any above ground installations including the Higher Walton HAGI due to screening from built-form and/or vegetation. The magnitude of change would be zero and there would be No Effect.

East Corridor

- 8.12.19 Views from the RCR 70/Cheshire Cycleway would not include any above ground installations including the East Corridor Block Valves due to screening from built-form and/or vegetation. The magnitude of change would be zero and there would be No Effect.
- 8.12.20 Views from the Bollin Valley Way may include filtered views of the Warburton HAGI from a small section of the route between the NCR 62 and Barns Lane through intervening vegetation, mainly in the winter. The magnitude of change would be very low to zero with a Minor Effect that is Not Significant to No Effect.

South Corridor

- 8.12.21 There are no routes with any views of above ground installations.

8.13 Preliminary Assessment of Visual Effects: Recreational Canal and River Users

Construction Phase

West Corridor and Runcorn Spur

- 8.13.1 The Manchester Ship Canal coincides with the LVIA study area for the western corridor of the pipeline to the east of Stanlow. Embankments along the southern

bank of the Canal and intervening vegetation and buildings beyond the Canal screen and filter views. As a consequence, there would be no visibility of the West Corridor from vessels using this section of the Canal resulting in a Zero Magnitude and No Effect.

8.13.2

Recreational receptors navigating the Weaver Navigation Canal are of High sensitivity to visual change as assessed in **Table 8D.3 of Appendix 8D**. Trees and hedges together with built-form and industrial estates adjacent to the Canal filter the majority of views towards the construction corridor along the Canal with a corresponding Minor and Not Significant to No Effect. The following sections of Canal are exceptions to this conclusion:

- A ~0.9km section between Rocksavage/Frodsham Substation and the M56 overbridge where there would be generally open views of the construction works associated with the West Corridor pipeline including two trenchless crossing compounds and Runcorn HAGI located adjacent to the Canal. Effects would be transient, **Major** to **Major/Moderate** and **Significant**.
- A ~0.5km section of the Canal from the railway line overbridge at Ashville Industrial Estate and east of the A56 overbridge from where effects would be transient, **Major** to **Major/Moderate** and **Significant** as a consequence of generally open views of the construction works associated with the West Corridor pipeline, including three trenchless crossing compounds either side of the Canal and the potential temporary loss of vegetation from along the Canal.

8.13.3

The River Weaver coincides with the LVIA study area for the West Corridor and recreational receptors navigating this waterway are assessed as being of high sensitivity in **Table 8D.3 of Appendix 8D**. Views towards construction activities from along the majority of the river would be limited as a consequence of trees, hedges and built-form adjacent to the river corridor with No Effect. The only exception relates to a ~0.5km section of river from the bridge east of Dutton Locks which continues until vegetation and local landform restricts views. Effects here would be **Major/Moderate** and **Significant**.

North Corridor including Warrington Spur

8.13.4

Recreational receptors using the 58 km long Manchester Ship Canal are of High sensitivity to visual change as assessed in **Table 8D.3 of Appendix 8D**. A combination of trees, hedgerows and built-form adjacent to the canal filter the majority of views from boats and vessels using the canal with a corresponding Zero magnitude of change and No Effect with the exception of three sections from which users would experience views of the pipeline corridor and potentially traffic using temporary construction access routes as follows:

- A ~0.5km section between The Promenade Park caravan park and Moore Lane Swing Bridge where there would be intermittent and filtered views of the construction works associated with the North Corridor pipeline including two trenchless crossing compounds either side of the Canal. Some vegetation may also be temporarily lost, and effects would range from **Major** and **Significant** to Moderate and Not Significant along this section of canal.

- A ~0.3km section to the west of Acton Grange Viaduct where there would be intermittent and filtered views of the construction works associated with the North Corridor pipeline including one trenchless crossing compound and the High Walton HAGI and some potential temporary vegetation loss. Effects would range from **Major** and **Significant** to Moderate and Not Significant.
- A ~1km section of canal between Latchford Swing Bridge and Latchford Locks where there would be filtered views of the Warrington Spur construction works beyond vegetation along the Canal, mainly in the winter. Effects would be Moderate and Not Significant.

8.13.5 Recreational receptors in boats using the River Mersey are of High sensitivity to visual change as assessed in **Table 8D.3 of Appendix 8D**. From the majority of the River, where it coincides with the LVIA study area for the Project, a combination of riverside embankments, trees, hedges and built-form adjacent to the route would filter the views of construction activities, including the construction of the Higher Walton HAGI options (HWH1 and HWH2), with a corresponding Zero magnitude and No Effect. The exceptions to this conclusion are as follows:

- A ~0.5 to 0.6km section south of Fiddler's Ferry woodland/golf course and railway line where there would be relatively open views of the construction works associated with the North Corridor pipeline to the south including a trenchless crossing compound close to the southern banks of the River Mersey south of Fiddler's Ferry Sailing Club. Effects would be transient, **Major** and **Significant**.
- A ~0.5km section near the junction of River Mersey and the disused Runcorn and Latchford Canal from where there would be open views of the construction works associated with the North Corridor pipeline including a trenchless crossing compound. Effects would be transient, **Major** and **Significant**.
- A ~0.4km section north of Morley Common where there would be open views of the construction works associated with the North Corridor pipeline (Novellis Latchford Spur), including a trenchless crossing compounds close to the banks of the river. Effects would be transient, **Major** and **Significant**.

East Corridor

8.13.6 The Manchester Ship Canal coincides with the LVIA study area for the eastern corridor of the pipeline close to Partington. Trees, hedgerows and built-form within the settlement of Partington adjacent to and beyond the canal screen and filter views. As a consequence, there would be no visibility of the East Corridor from vessels using this section of the canal resulting in a Zero Magnitude and No Effect.

8.13.7 Recreational receptors navigating the River Bollin are of High sensitivity to visual change as assessed in **Table 8D.3 of Appendix 8D**. Trees and hedges adjacent to and beyond the river corridor filter the majority of views towards construction activities within the East Corridor and Warburton HAGI from along the river giving rise to Moderate and Not Significant to No Effect. The exception relates that a ~0.4 to 0.5km section along the river from north-east of Heatley Farm and west of Dunham Woodhouses where effects would be **Major** and **Significant**.

South Corridor

8.13.8 Recreational receptors navigating the River Weaver are of high sensitivity to visual change as assessed in **Table 8D.3 of Appendix 8D**. Intervening vegetation and built form filter the majority of views towards construction activities from the river with a corresponding Moderate and Not Significant to No Effect. The exceptions to this conclusion are as follows:

- A ~0.3km section of the River Weaver to the south of Bartington where there would be intermittent views of the construction works associated with the South Corridor pipeline including trenchless crossing compounds on either side of the river. Where visible, effects would be transient, **Major** and **Significant**.
- A ~0.15km section of the River Weaver near the Vale Royal Viaduct from where there would be intermittent views through gaps in vegetation of the construction works associated with the South Corridor pipeline including trenchless crossing compounds on either side of the River. Where visible, effects would be transient, **Major** and **Significant**.
- A ~0.35km section at Vale Royal Cut where there would be open views of the construction works associated with the South Corridor pipeline including a trenchless crossing compound. Where visible, effects would be transient, **Major** and **Significant**.
- A ~0.6 to 0.7km section opposite the Meadowbank and the Salt Works where there would be open views of the construction works including a large trenchless crossing compound. Where visible, effects would be transient, **Major** and **Significant** to Moderate and Not Significant in relation to the second trenchless crossing compound across the River due to limited visibility.
- A ~0.2km section near Anderton Nature Park where there would be open views of the construction works associated with the South Corridor pipeline – Northwich Spur including a trenchless crossing compound. Where visible, effects would be transient, **Major** and **Significant**.

Operation Year 1 Phase

8.13.9 The assessment of operational effects upon views and visual amenity has been restricted to those recreational canals and rivers within 1km radius of the HAGI and Block Valve installations as they comprise the only above ground and visible infrastructure. This corresponds with the approach taken with regard to the assessment of effects on landscape character as set out in Section 8.10.

West Corridor

8.13.10 The Weaver Navigation Canal passes to the south of the Runcorn HAGI and recreational receptors navigating this waterway are of high sensitivity (**Table 8D.4 of Appendix 8D**). Views of the operational HAGI would typically be limited by built form, vegetation and embankments along the Canal with Minor and Not Significant to No Effect with localised, short sections of canal from which effects would be **Major** to **Major/Moderate** and **Significant**. Views towards the Rocksavage HAGI options (RSH1, RSH2 and RSH3) would be limited by a combination of separation

distance and woodland/vegetation cover and effects would be Minor and Not Significant.

- 8.13.11 Views towards the Rocksavage HAGI options (RSH1, RSH2 and RSH3) available to recreational receptors navigating the River Weaver would be limited from the majority of the waterway by a combination of separation distance, built form, embankments, and woodland/vegetation cover. Effects would be Minor and Not Significant. The exception relates to a short section of the River Weaver to the south of Frodsham Substation from where effects would be Moderate and Not Significant.

North Corridor

- 8.13.12 Recreation receptors navigating a section of the Manchester Ship Canal, and which are of high sensitivity (**Table 8D.4 of Appendix 8D**) would experience localised **Major** to **Major/Moderate** and **Significant** effects from sections of the waterway adjacent to the Higher Walton HAGI options (HWH1 and HWH2) to the west of Acton Grange Viaduct. Effects from the remainder of the Canal would be Not Significant.
- 8.13.13 The study areas for the Higher Walton HAGI options (HWH1 and HWH2) coincide with the River Mersey where recreational receptor navigating the waterway are of high sensitivity to visual change. Effects would be Minor and Not Significant due to high levels of intervening vegetation including woodland to the north of the HAGI locations.

East Corridor

- 8.13.14 Recreation receptors navigating a section of the River Bollin and which are of high sensitivity (**Table 8D.4 of Appendix 8D**) would experience a localised Minor and Not Significant effect as a result of the Warburton HAGI that would potentially be visible in heavily filtered northerly views.

8.14 Preliminary Assessment of Visual Effects: Recreational Destinations

Construction phase

West Corridor

- 8.14.1 The Sutton Hall Golf Course was identified as coinciding with the LVIA study area for the West Corridor. However, this destination has now closed (permanently) and the visual effects on its users have therefore not been assessed as part of the LVIA.

North Corridor and Clockface and St Helens

- 8.14.2 Users of Fiddlers Ferry Golf Course are assessed as being of medium sensitivity to visual change in **Table 8D.4 of Appendix 8D**. There would be very limited visibility from the northern parts of the golf course due to the surrounding

vegetation with a corresponding Minor and Not Significant visual effect to No Effect. More open views would be available from the southern end of the Fiddlers Ferry Golf Course where the construction works associated with the East Corridor pipeline would cross this recreational destination and would include views of a trenchless crossing compound. The effects here would be **Major/Moderate** and **Significant**.

- 8.14.3 Users of the Walton Hall Golf Club are also assessed as being of medium sensitivity to visual change in **Table 8D.4** of **Appendix 8D**. There would be very limited visibility from the majority of the golf course due to the surrounding vegetation. However, there would be intermittent views from the south-western edge of the Walton Hall Golf Club through gaps in vegetation of the construction works associated with the North Corridor pipeline. The effects would range from localised Minor and Not Significant to No Effect.
- 8.14.4 No visibility with the Higher Walton to Clock Face section of the northern corridor would be available to users of the Mersey Valley Golf and Country Club. Similarly, there would be no views of the Clock Face to St Helens section of the North Corridor and St Helens HAGI available to users of the Sherdley Park Golf Course due to intervening mature trees and hedgerows surrounding the golf course.

Runcorn Spur

- 8.14.5 The Runcorn Spur passes through the Runcorn Golf Club and its users are assessed as being of medium sensitivity to visual change in **Table 8D.4** of **Appendix 8D**. Visual effects would range from **Major/Moderate** and **Significant** within the southern part of golf course where there would be open, close distance views of the construction works associated with the Runcorn Spur as it crosses this part of the golf course, including views of a trenchless crossing compound, to Minor and Not Significant to No Effect within the northern end of golf course.

East Corridor

- 8.14.6 Users of the High Legh Par Golf Club are assessed as being of medium sensitivity to visual change in **Table 8D.4** of **Appendix 8D**. There would be very limited visibility from the majority of the golf course due to the surrounding vegetation, although there would be intermittent views from the northern and north-western edges through gaps in vegetation of the construction works associated with the East Corridor pipeline. The effects would range from localised Minor/Negligible and Not Significant to No Effect.
- 8.14.7 No visibility of the Eastern Corridor is predicted from the following recreational destinations due to screening from intervening mature trees and other vegetation / woodland resulting in a zero magnitude and No Effect, even during the winter months when vegetative screening is reduced:
- Marbury Country Park; and
 - Antrobus Golf Club.

South Corridor

- 8.14.8 The Project passes to the north of the Vale Royal Abbey Golf Academy and its users would be of medium sensitivity to visual change as assessed in **Table 8D.4 of Appendix 8D**. There would be limited visibility from the majority of the golf course due to the surrounding vegetation with a corresponding Minor and Not Significant to No Effect. However, there would be more open views from the north-eastern and north-western edges of the golf course and car parking area where the construction works associated with the South Corridor pipeline would be visible including views of a trenchless crossing compound. From within these localised peripheral areas, visual effects would be **Major/Moderate** and **Significant**.
- 8.14.9 Sandiway Golf Club lies to the west and south of the South Corridor. Its users are assessed as being of High sensitivity to visual change in **Table 8D.4 of Appendix 8D**. There would be limited visibility from the majority of the golf course due to the surrounding vegetation, however, there would be filtered views from the eastern side of the golf course, particularly in the winter, where the construction works associated with the South Corridor pipeline would be visible including a trenchless crossing compound. Effects would range from **Moderate** and **Significant** within the eastern side of the Sandiway Golf Club to Minor/Negligible and Not Significant to No Effect from within the remainder of golf course.

Operation Year 1 Phase

- 8.14.10 The assessment of operational effects upon views and visual amenity has been restricted to those recreational destinations within 1km radius of the HAGI and Block Valve installations as they comprise the only above ground and visible infrastructure. This corresponds with the approach taken with regard to the assessment of effects on landscape character as set out in Section 8.10.

North Corridor

- 8.14.11 There would be no visibility of the St Helens HAGI from within the Sherdley Park Golf Course as a consequence of vegetation within the golf course and along the intervening A570 road corridor resulting in a zero magnitude and No Effect.

Runcorn Spur

- 8.14.12 There would be no visibility of the Runcorn HAGI from within the Runcorn Golf Course due to intervening vegetation resulting in a zero magnitude and No Effect.

South Corridor

Recreation receptors within the north-eastern corner of the Sandiway Golf Club (**Table 8D.4 in Appendix 8D**) and which are of medium sensitivity would experience a very low magnitude of change as a result of the small compounds associated with Block Valve options SBV1 and SBV2 that would potentially be seen in heavily filter northerly or easterly views. This would result in a localised Minor/Negligible effect that would be Not Significant.

8.15 Preliminary Significance Conclusions

- 8.15.1 A summary of the results of the preliminary landscape assessment is provided in **Table 8.16** and the visual assessment at **Table 8.17**, which reflects the assessment set in detail at **Appendices 8C** and **8D** respectively.
- 8.15.2 Where a range of effects for an individual receptor have been recorded this relates to a range of magnitude of change recorded as a result of the Project. For example, there may be a localised significant short term adverse effect during the Construction Phase upon a landscape character area where the construction of the pipeline corridor has a direct but temporary impact on localised part of that character area, however further from the pipeline corridor and within the same landscape character area, no changes as a result of the Project may be perceptible i.e. No Effect. Similarly, along a route receptor such as a long-distance footpath there may be a variety of views of the Project ranging from close range views from a section of the route close to the Project that could result in a high magnitude of change and significant effect to other views from the route where the Project would not be visible.

Table 8.17 Preliminary summary of significance of landscape effects

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Landscape Character Area Receptors			
4a Frodsham, Helsby & Lordship Marshes Type: Construction	Medium-Low	High to Zero	Moderate and Significant to No Effect
4a Frodsham, Helsby & Lordship Marshes Type: Operation year 1	Medium-Low	Medium to Zero	Minor and Not Significant to No Effect
9a Dunham to Tarvin Plain Type: Construction	Medium	High to Zero	Major / Moderate and Significant to No Effect
9a Dunham to Tarvin Plain Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
8a Aston Type: Construction	High-Medium	High to Zero	Major to Major/Moderate and Significant to Not Significant
8a Aston Type: Operation year 1	High-Medium	Low to Zero	Moderate and Not Significant to No Effect
15c Lower Weaver Valley Type: Construction	High-Medium	High to Zero	Major to Major/Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
15c Lower Weaver Valley Type: Operation year 1	High-Medium	Low to Zero	Minor to Minor/Negligible and Not Significant
5b Frodsham to Northwich Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
5b Frodsham to Northwich Type: Operation year 1	Medium	Low to Zero	Minor to Negligible and Not Significant, to No Effect
5a Norley Type: Construction	Medium	Very Low to Zero	Negligible and Not Significant to No Effect
5a Norley Type: Operation year 1	Medium	Very Low to Zero	Negligible and Not Significant to No Effect
2a Frodsham Sandstone Ridge Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
2a Frodsham Sandstone Ridge Type: Operation year 1	High	Zero	No Effect
2b Helsby Hill Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
2b Helsby Hill Type: Operation year 1	High	Zero	No Effect
5f Helsby to Frodsham Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
5f Helsby to Frodsham Type: Operation year 1	High	Zero	No Effect
1a Delamere Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
1a Delamere Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
15b Mid Weaver Valley Type: Construction	High-Medium	High to Zero	Major to Major/Moderate and Significant to No Effect
15b Mid Weaver Valley Type: Operation year 1	High-Medium	High to Zero	Major/Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
5c Eaton, Marton & Over Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
5c Eaton, Marton & Over Type: Operation year 1	Medium	Very Low to Zero	Negligible and Not Significant to No Effect
5e East Winsford Type: Construction	High-Medium	High to Zero	Major to Major/Moderate and Significant to No Effect
5e East Winsford Type: Operation year 1	High-Medium	Medium-Low to Zero	Moderate and Not Significant to No Effect
13b Arley West Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
13b Arley West Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
5d Whitley and Comberbach Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
5d Whitley and Comberbach Type: Operation year 1	Medium	Medium to Zero	Moderate and Not Significant to No Effect
14a Northwich Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
14a Northwich Type: Operation year 1	Medium	Medium to Zero	Moderate and Not Significant to No Effect
10b Stublach Plain Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
10b Stublach Plain Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
15e Dane Valley Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
15e Dane Valley Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
Runcorn Hill and Heath Parkland Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Runcorn Hill and Heath Parkland Type: Operation year 1	Medium	Low to Zero	Minor and Not Significant to No Effect
North Widnes Farmland Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
North Widnes Farmland Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
Norton Wooded Parkland Type: Construction	Low	Very Low to Zero	Negligible and Not Significant to No Effect
Norton Wooded Parkland Type: Operation year 1	Medium	Zero	No Effect
Daresbury Sandstone Escarpment Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Daresbury Sandstone Escarpment Type: Operation year 1	Medium	Very Low to Zero	Minor and Not Significant to No Effect
Moore Village and Keckwick Brook Valley Type: Construction	Medium	Medium to Zero	Moderate and Potentially Significant to No Effect
Moore Village and Keckwick Brook Valley Type: Operation year 1	Medium	Very Low to Zero	Minor / Negligible and Not Significant to No Effect
Preston on the Hill Undulating Enclosed Farmland Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Preston on the Hill Undulating Enclosed Farmland Type: Operation year 1	Medium	Very Low to Zero	Minor / Negligible and Not Significant to No Effect
Cronton and Pex Hill	Low	Very Low to Zero	Negligible and Not Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Type: Construction and Operation year 1			
BRS5 Rainhill Slopes Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect.
BRS5 Rainhill Slopes Type: Operation year 1	Medium	Zero	No Effect
FF2 Sutton Manor Fringe Type: Construction	Medium-Low	High to Zero	Major/Moderate to Moderate and Significant to No Effect
FF2 Sutton Manor Fringe Type: Operation year 1	Medium-Low	Very Low to Zero	Minor/Negligible to No Effect
RSH1 Sutton Manor Type: Construction	High-Medium	Very Low to Zero	Minor and Not Significant to No Effect
RSH1 Sutton Manor Type: Operation year 1	High-Medium	Zero	No Effect
FF4 Bold Heath Type: Construction	Medium-Low	High to Zero	Major/Moderate to Moderate and Significant to No Effect
FF4 Bold Heath Type: Operation year 1	Medium-Low	Medium to Zero	Minor and Not Significant to No Effect
WFE4 Bold Hall Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
WFE4 Bold Hall Type: Operation Year 1	Medium	Zero	No Effect
FF3 Clock Face Farming Type: Construction	Medium-Low	Very Low to Zero	Negligible and Not Significant. To No Effect
FF3 Clock Face Farming Type: Operation year 1	Medium-Low	Zero	No Effect
RSF4 Sutton Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
RSF4 Sutton Type: Operation year 1	Medium	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
RSH4 Lea Green Type: Construction	Low	Very Low to Zero	Negligible and Not Significant to No Effect
RSH4 Lea Green Type: Operation year 1	Low	Zero	No Effect
IF1 Link Road Type: Construction	Low	High-Medium to Zero	Moderate and Significant to No Effect
IF1 Link Road Type: Operation year 1	Low	Very Low to Zero	Negligible and Not Significant to No Effect
SS6 Rainhill Type: Construction	Medium	Low to Zero	Minor and Not Significant to No Effect
SS6 Rainhill Type: Operation year 1	Medium	Zero	No Effect
EF1 Elton Head Hall Farm Type: Construction	Medium-Low	High to Zero	Major/Moderate to Moderate and Significant to No Effect
EF1 Elton Head Hall Farm Type: Operation year 1	Medium-Low	Very Low to Zero	Negligible and Not Significant to No Effect
UG2 Sherdley Park Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
UG2 Sherdley Park Type: Operation year 1	Medium	Zero	No Effect
RVI1 Thatto Heath Type: Construction	Medium-Low	High Medium to Zero	Major/Moderate to Moderate and Significant to No Effect
RVI1 Thatto Heath Type: Operation year 1	Medium-Low	Very Low to Zero	Negligible and Not Significant to No Effect
UG3 Rainhill Golf Course Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
UG3 Rainhill Golf Course Type: Operation year 1	Medium	Zero	No Effect
RFS1 Grange Park Type: Construction	Medium	High-Medium to Zero	Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
RFS1 Grange Park Type: Operation year 1	Medium	Very Low to Zero	Minor and Not Significant to No Effect
UIV3 Ravenhead Type: Construction	Medium-Low	High to Zero	Major/Moderate to Moderate and Significant to Minor to Negligible and Not Significant to No Effect
UIV3 Ravenhead Type: Operation year 1	Medium-Low	Very Low to Zero	Negligible and Not Significant to No Effect
SLV1 St Helens Historic Core Type: Construction and Operation year 1	Medium	Zero	No Effect
SLV2 St Helens Retail Ring Type: Construction	Medium	Very Low to Zero	Minor/Negligible to No Effect
SLV2 St Helens Retail Ring Type: Operation year 1	Medium	Zero	No Effect
SLV3 St Helens Terraces Type: Construction and Operation year 1	Medium	Zero	No Effect
UIV2 Sutton Brook Type: Construction	Medium-Low	High-Medium to Zero	Moderate and Significant to No Effect
UIV2 Sutton Brook Type: Operation year 1	Medium-Low	Very Low to Zero	Negligible and Not Significant to no Effect
Mossland Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect.
Mossland Type: Operation year 1	Medium	Low to Zero	Minor and Not Significant to No Effect
Settled Sandlands Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Settled Sandlands Type: Operation year 1	Medium	Medium to Zero	Moderate and potentially Significant to No Effect
Urban River Valley Type: Construction	Low	Medium to Zero	Minor to Negligible and Not Significant

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Urban River Valley Type: Operation year 1	Low	Very Low to Zero	Negligible and Not Significant to No Effect
River Meadowland Type: Construction	Medium	Medium to Zero	Moderate and Significant to No Effect
River Meadowland Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect.
Wooded Estatelands Type: Construction	Medium	Low to Zero	Minor and Not Significant to No Effect
Wooded Estatelands Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
3c Lymm Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
3c Lymm Type: Operation year 1	Medium	Zero	No Effect
5a River Mersey/Bollin (East) Type: Construction	Medium	High to Very Low	Major/Moderate and Significant to No Effect
5a River Mersey/Bollin (East) Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
5a River Mersey/Bollin (West) Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
5a River Mersey/Bollin (West) Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
1f Penketh & Cuerdley Type: Construction	Low	High to Zero	Moderate and Significant to No Effect
1f Penketh & Cuerdley Type: Operation year 1	Low	Very Low to Zero	Negligible and Not Significant to No Effect
1a Stretton & Hatton Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
1a Stretton & Hatton Type: Operation year 1	Medium	Very Low to Zero	Minor / Negligible and Not Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
3a Appleton Park & Grappenhall Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
3a Appleton Park & Grappenhall Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
6a Victoria Park to Fiddlers Ferry Type: Construction	Medium	Medium to None	Moderate and potentially Significant to No Effect
6a Victoria Park to Fiddlers Ferry Type: Operation year 1	Medium	Zero	No Effect
7a Arley Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
7a Arley Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect
10a Lower Bollin Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
10a Lower Bollin Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect

Table 8.18 Preliminary summary of significance of visual effects

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Settlements			
Thornton-le-Moors Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Thornton-le-Moors Type: Operation year 1	High	Zero	No Effect
Elton Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Elton Type: Operation year 1	High	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Hapsford Type: Construction and Operation year 1	High	Zero	No Effect
Helsby Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Helsby Type: Operation year 1	High	Zero	No Effect
Frodsham Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Frodsham Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
Runcorn Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Runcorn Type: Operation year 1	High	Zero	No Effect
Clifton Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Clifton Type: Operation year 1	High	Zero	No Effect
Sutton Weaver Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Sutton Weaver Type: Operation year 1	High	Zero	No Effect
Aston Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Aston Type: Operation year 1	High	Zero	No Effect
Aston Heath Type: Construction	High	Low	Moderate and Significant to No Effect
Aston Heath Type: Operation year 1	High	Zero	No Effect
Dones Green Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Dones Green Type: Operation year 1	High	Low to Zero	Moderate and Significant to No Effect
Little Leigh Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect.
Little Leigh Type: Operation year 1	High	Zero	No Effect
Barnton Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect.
Barnton Type: Operation year 1	High	Zero	No Effect
Anderton Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Anderton Type: Operation year 1	High	Zero	No Effect
Northwich (Winnigton) Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Northwich (Winnigton) Type: Operation year 1	High	Zero	No Effect
Bartington Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Bartington Type: Operation year 1	High	Zero	No Effect
Acton Bridge Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Acton Bridge Type: Operation year 1	High	Zero	No Effect
Weaverham Type: Construction and Operation year 1	High	Zero	No Effect
Gorstage Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Gorstage	High	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Type: Operation year 1			
Cuddington Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Cuddington Type: Operation year 1	High	Zero	No Effect
Sandiway Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Sandiway Type: Operation year 1	High	Zero	No Effect
Hartford Type: Construction	High	Low to Zero	Moderate and Potentially Significant to No Effect
Hartford Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
Whitegate Type: Construction and Operation Year 1	High	Zero	No Effect
Davenham Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Davenham Type: Operation year 1	High	Zero	No Effect
Moulton Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Moulton Type: Operation year 1	High	Zero	No Effect
Winsford Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Winsford Type: Operation year 1	High	Zero	No Effect
Bostock Green Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
Bostock Green Type: Operation year 1	High	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Lower Whitley Type: Construction	High	Low to Zero	Moderate and Potentially Significant to No Effect
Lower Whitley Type: Operation year 1	High	Zero	No Effect
Higher Whitley Type: Construction	High	Low to Zero	Moderate and Potentially Significant to No Effect
Higher Whitley Type: Operation year 1	High	Zero	No Effect
Frandleigh Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Frandleigh Type: Operation year 1	High	Zero	No Effect
Antrobus Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Antrobus Type: Operation year 1	High	Zero	No Effect
Arley Type: Construction and Operation year 1	High	Zero	No Effect
High Legh Type: Construction	High	Low to Zero	Moderate and Potentially Significant to No Effect
High Legh Type: Operation Year 1	High	Very Low	Minor and Not Significant to No Effect
Broomedale Type: Operation year 1	High	Medium to Zero	Major/Moderate and Significant to No Effect
Broomedale Type: Operation year 1	High	Zero	No Effect
Dunham Woodhouses Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Dunham Woodhouses Type: Operation year 1	High	Low to Zero	Moderate and Significant to No Effect
Sinderland Green Type: Construction	High	Low to Zero	Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Sinderland Green Type: Operation year 1	High	Zero	No Effect
Partington Type: Construction	High	Low to Zero	Moderate and Potentially Significant to No Effect
Partington Type: Operation year 1	High	Zero	No Effect
Daresbury Type: Construction	High	Low to Zero	Moderate and Not Significant to No Effect
Daresbury Type: Operation year 1	High	Zero	No Effect
Hatton Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Hatton Type: Operation year 1	High	Zero	No Effect
Moore Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Moore Type: Operation year 1	High	Zero	No Effect
Higher Walton Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
Higher Walton Type: Operation year 1	High	Zero	No Effect
Lower Walton Type: Construction	High	Low to Zero	Minor and Not Significant to No Effect
Lower Walton Type: Operation year 1	High	Zero	No Effect
Warrington Type: Construction	High	Low to Zero	Moderate and Not Significant to No Effect
Warrington Type: Operation year 1	High	Zero	No Effect
Widnes Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Widnes	High	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Type: Operation year 1			
Cuerdley Cross Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Cuerdley Cross Type: Operation year 1	High	Zero	No Effect
Bold Heath Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Bold Heath Type: Operation year 1	High	Zero	No Effect
Rainhill Type: Construction	High	Low to Zero	Moderate and Not Significant to No Effect
Rainhill Type: Operation year 1	High	Zero	No Effect
St Helens Type: Construction	High	Low to Zero	Moderate and Significant to No Effect
St Helens Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
National cycle routes			
NCR 5 Type: Construction	High	High to Medium to Zero	Major to Moderate and Significant to No Effect
NCR 5 Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
NCR 562 Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
NCR 562 Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
RCR 70 Type: Construction	High	High to Zero	Major to Major/Moderate and Significant to No Effect
RCR 70 Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
NCR 573 Type: Construction and Operation year 1	High	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
NCR 62 Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
NCR 62 Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Long distance footpaths			
Weaver Way and North Cheshire Way 3 Type: Construction	High	High to Zero	Major and Significant to No Effect.
Weaver Way and North Cheshire Way 3 Type: Operation year 1	High	Very Low	Minor and Not Significant
Trent and Mersey Canal Walk, Dane Valley Way and E8 Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
Trent and Mersey Canal Walk, Dane Valley Way and E8 Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Delamere Way Type: Construction	High	High to Zero	Major and Significant to No Effect
Delamere Way Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Bollin Valley Way Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
Bollin Valley Way Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
Timberland Trail Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
Timberland Trail Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Mersey Way and Weaver Way Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Mersey Way and Weaver Way Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
Trans Pennine Trail Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
Trans Pennine Trail Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Bridgwater Way and Cheshire Ring Canal Walk Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect
Bridgwater Way and Cheshire Ring Canal Walk Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect.
Palatine Plod Type: Construction	High	High to Zero	Major and Significant to No Effect
Palatine Plod Type: Operation year 1	High	Low to Zero	Moderate and Not Significant to No Effect.
Longster Trail Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Longster Trail Type: Operation year 1	High	Zero	No Effect
Sandstone Trail Type: Construction	High	Very Low to Zero	Minor and Not Significant to No Effect
Sandstone Trail Type: Operation year 1	High	Zero	No Effect
Eddisbury Way Type: Construction and Operation year 1	High	Zero	No Effect
Salford Trail Type: Construction and Operation year 1	High	Zero	No Effect
Canals and Rivers			

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Manchester Ship Canal Type: Construction	High	High to Zero	Major and Significant to No Effect
Manchester Ship Canal Type: Operation year 1	High	High to Medium to Zero	Major to Major / Moderate and Significant to No Effect
Weaver Navigation Type: Construction	High	High to Medium to Zero	Major to Major/Moderate and Significant to No Effect.
Weaver Navigation Type: Operation year 1	High	Low to Zero	Moderate and Not Significant to No Effect.
River Weaver Type: Construction	High	Medium to Zero	Major/Moderate and Significant to No Effect
River Weaver Type: Operation year 1	High	Low to Zero	Moderate and Not Significant to No Effect.
River Mersey Type: Construction	High	High to Zero	Major and Significant to No Effect
River Mersey Type: Operation year 1	High	Very Low to Zero	Minor and Not Significant to No Effect
River Bollin Type: Construction	High	High to Zero	Major and Significant to No Effect
River Bollin Type: Operation year 1	High	Low to Zero	Moderate and Not Significant to No Effect
Recreational Destinations			
Country Parks			
Marbury Country Park Type: Construction and Operation year 1	High	Zero	No Effect
Golf Courses			
High Legh Par Golf Club Type: Construction	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect.
High Legh Par Golf Club Type: Operation year 1	Medium	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Fiddlers Ferry Golf Course Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Fiddlers Ferry Golf Course Type: Operation year 1	Medium	Low to Zero	Minor and Not Significant to No Effect.
Walton Hall Golf Club Type: Construction	Medium	Low to Zero	Minor and Not Significant to No Effect.
Walton Hall Golf Club Type: Operation year 1	Medium	Zero	No Effect
Mersey Valley Golf and country club Type: Construction and Operation year 1	Medium	Zero	No Effect
Runcorn Golf Club Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Runcorn Golf Club Type: Operation year 1	Medium	Low to Zero	Minor and Not Significant to No Effect.
Vale Royal Abbey Golf Academy Type: Construction	Medium	High to Zero	Major/Moderate and Significant to No Effect
Vale Royal Abbey Golf Academy Type: Operation year 1	Medium	Low to Zero	Minor and Not Significant to No Effect.
Sherdley Park Golf Course Type: Construction and Operation year 1	Medium	Zero	No Effect
Sandiway Golf Club Type: Construction	Medium	Medium to Zero	Moderate and Significant to No Effect
Sandiway Golf Club Type: Operation year 1	Medium	Very Low to Zero	Minor/Negligible and Not Significant to No Effect.
Antrobus Golf Club	Medium	Zero	No Effect

Receptor	Sensitivity ¹	Magnitude of change ²	Significance ³
Type: Construction and Operation year 1			

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Section 8.9** and is defined as low, medium and high.
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Section 8.9** and is defined as very low, low, medium and high.
3. The significance of the environmental effects is based on the combination of the sensitivity of a receptor and the magnitude of change and is expressed as major (significant), moderate (potentially significant), minor (not significant) or negligible (not significant), subject to the evaluation methodology outlined in **Section 8.9**. The range presented is the maximum and minimum recorded for the receptor e.g., it is likely that if a Significant Effect is recorded and No Effect is recorded then there will also be an interim Effect that is Not Significant as set out in detail in **Appendices 8B and 8C**.

8.16 Further work to be undertaken

- 8.16.1 The information provided in this PEIR is preliminary, the final assessment of likely Significant effects will be reported in the ES. This section describes the further work to be undertaken to support the LVIA presented in the ES.

Baseline

- 8.16.2 The Arboricultural survey to BS 5837 (2012) and ecology surveys will indicate the baseline quality of trees, hedgerows and scrub that could be affected by the Project.

Assessment

- 8.16.3 Updated ZTVs will be prepared if required based on the refined HAGI and Block Valve installations for the application.
- 8.16.4 A more detailed understanding of likely construction traffic volumes and any associated removal of vegetation e.g., for visibility splays, will be reflected in the updated assessment of landscape and visual receptors in the ES.
- 8.16.5 The impact of wider vegetation losses (informed by the arboricultural and ecology surveys) and the reinstatement proposals will inform an updated assessment of impacts upon landscape character receptors and visual receptors in the ES.
- 8.16.6 Photomontages of the final fixed permanent above-ground infrastructure proposals (HAGI and Block Valves) will be prepared from a selection of key viewpoints. A viewpoint appraisal will be carried out and presented in the ES with cross reference to the photomontages and annotated photoviews. The viewpoint

appraisal will assist in calibrating the updated assessment in the ES of the effects of the Project upon landscape and visual receptors.

- 8.16.7 A detailed assessment of the impact of the Project upon the Special Qualities of the Helsby and Frodsham Hills Area of Special County Value (ASCV), the Weaver Valley ASCV and the Macclesfield ASCV non-statutory local landscape designations, informed by environmental measures that will be developed between PEIR and ES stage.
- 8.16.8 A Year 15 assessment in the ES of the final Project effects upon landscape and visual receptors will reflect the environmental measures detailed below.
- 8.16.9 A cumulative effects assessment (CEA) will be undertaken for the Project in the Environmental Statement and it will consider the combined impacts with other developments on the same single receptor or resource (inter-project effects). The detailed method that will be followed in identifying and assessing potential cumulative effects is set out in **Section 3.9 of Chapter 3: Approach to Preparing the PEIR**.
- 8.16.10 It is likely that the Zone of Influence would extend at least 2km from the Order Limits boundary and may need to extend to a greater distance should large scale developments e.g., wind farms that would have the potential for significant effects at greater distances be identified in the initial search. A preliminary assessment of the effects upon the same receptors from different pathways e.g., noise, air quality and visual (intra-project effects) are set out in **Chapter 19: Intra-project effects**.

Environmental measures

- 8.16.11 Inputs into project design for local screening measures e.g., hedgerow or tree planting, associated with the HAGI and Block Valve installations and to be reflected on the Outline Landscape Mitigation Plans. The plans will indicate the location and type of planting proposed, with a schedule of suitable species, appropriate to the locality. The design will reflect the findings of the Arboricultural Impact Assessment, climate change considerations and where appropriate consideration of Biodiversity Net Gain and opportunities to provide enhancement of green infrastructure.

HyNet North West Hydrogen Pipeline

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