# Frodsham Solar

## Environmental Statement: Volume 1
## Chapter 6: Landscape and Visual Amenity

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## CONTENTS



## TABLES



## FIGURES

## APPENDICES

# 6.0 LANDSCAPE AND VISUAL AMENITY

## 6.1 Introduction

6.1.1 This chapter of the Environmental Statement (ES) presents the findings of an assessment of the likely significant effects on the landscape and upon views as a result of the Proposed Development. Along with the supporting **ES Volume 2 Appendices** [**EN010153/DR/6.2**] and **ES Volume 3 Figures** [**EN010153/DR/6.3**], it comprises the Landscape and Visual Impact Assessment (LVIA) of the Proposed Development.

6.1.2 For a detailed description of the Proposed Development, refer to **ES Volume 1 Chapter 2: The Proposed Development** [**EN010153/DR/6.1**].

6.1.3 This chapter is accompanied by the following appendices:

i) **Appendix 6-1: LVIA Methodology** [**EN010153/DR/6.2**].
ii) **Appendix 6-2: Visualisation Methodology** [**EN010153/DR/6.2**].
iii) **Appendix 6-3: TN01 Scope of LVIA – Agreement** [**EN010153/DR/6.2**].
iv) **Appendix 6-4: Residential Properties** [**EN010153/DR/6.2**].
v) **Appendix 6-5: Landscape Character Baseline** [**EN010153/DR/6.2**].
vi) **Appendix 6-6: Construction Phase Effects** [**EN010153/DR/6.2**].
vii) **Appendix 6-7: Effects on Landscape Character** [**EN010153/DR/6.2**].
viii) **Appendix 6-8: Effects on Viewpoints** [**EN010153/DR/6.2**].
ix) **Appendix 6-9: Effects on M56 Users** [**EN010153/DR/6.2**].
x) **Appendix 6-10: Influence of Lighting Conditions** [**EN010153/DR/6.2**].
xi) **Appendix 6-11: TN-02 Landscape and Visual Implications of Revised Layout** [**EN010153/DR/6.2**].

6.1.4 This chapter is also accompanied by the following figures:

i) **Figure 6-1: LVIA Study Area** [**EN010153/DR/6.3**].
ii) **Figure 6-2: Landform and Watercourses** [**EN010153/DR/6.3**].
iii) **Figure 6-3a-b: Landscape Character and Designations** [**EN010153/DR/6.3**].

iv) **Figure 6-4a-j: Zone of Theoretical Visibility** [**EN010153/DR/6.3**].
v) **Figure 6-5a-e: Viewpoint Locations** [**EN010153/DR/6.3**].
vi) **Figure 6-6 to 6-35 Baseline Photography** [**EN010153/DR/6.3**].
vii) **Figure 6-36 to 6-48 Photomontages** [**EN010153/DR/6.3**].

6.1.5 Reference to the following ES chapters may help the readers' understanding of potential key impact interactions between landscape and visual receptors and other disciplines:

i) **Chapter 7: Terrestrial Ecology** [**EN010153/DR/6.1**].
ii) **Chapter 8: Ornithology** [**EN010153/DR/6.1**].
iii) **Chapter 11: Cultural Heritage** [**EN010153/DR/6.1**].
iv) **Chapter 13: Tourism** [**EN010153/DR/6.1**].

6.1.6 The following sections of this chapter include:

i) a description of relevant legislation, planning policy and guidance which has informed the assessment.
ii) a summary of consultation with stakeholders.
iii) a description of the methodology for the assessment, including details of the study area and the approach to the assessment of effects.
iv) a review of baseline conditions.
v) details of the measures to avoid or reduce environmental effects, including mitigation and design measures that form part of the Proposed Development.
vi) an assessment of the likely significant effects on landscape and visual amenity receptors during the construction, operation and decommissioning phases of the Proposed Development, taking into account the incorporated measures proposed to avoid or reduce environmental effects.
vii) identification of any further mitigation measures or monitoring required in relation to likely significant effects.

viii) a summary of the residual effects of the Proposed Development on landscape and visual amenity receptors.

ix) consideration of any cumulative effects with other consented and proposed developments.

### *Summary of Competency*

6.1.7 Drawing on published standards and guidance, LVIA relies on an element of reasoned professional judgement. This assessment has been undertaken by Chartered Members of the Landscape Institute (CMLI) with experience of assessing the landscape and visual effects of large-scale infrastructure developments.

6.1.8 The LVIA has been undertaken by Andy Martin, a landscape competent expert with a master's degree in landscape planning and management and with CMLI status, with over 20 years' experience in the landscape and visual assessment of major infrastructure projects. The LVIA has been directed by Jon Mason, a second landscape competent expert with over 25 years' similar professional experience, and with experience of providing expert witness relating to landscape visual matters at a number of public inquiries.

## 6.2 Legislation, Policy and Guidance

### *Legislation*

6.2.1 The UK Government is a signatory of the European Landscape Convention (ELC), which became binding in March 2007. The Convention is aimed at the protection, management and planning of all landscapes and raising awareness of the value of a living landscape. It relates chiefly to public bodies and to the policies, plans and programmes produced by these.

6.2.2 The LVIA is a development specific process which accords with Article 6C of the ELC. The LVIA is informed by extant Landscape Character Assessment studies (described in **Section 6.6** below), which more directly relate to the provisions of Article 6C.

6.2.3 As discussed in greater detail in **Sections 6.4** and **6.6**, in 2021 the Cheshire Sandstone Ridge was shortlisted for potential designation as an Area of Outstanding Natural Beauty (AONB). AONBs were renamed as National Landscapes in 2023.

6.2.4 National Landscapes are designated under the Countryside and Rights of Way Act 2000 (CRoW Act 2000). Their purpose as set out in the CRoW Act 2000 is to '*conserve and enhance the natural beauty*'. The CRoW Act 2000 (as amended by the Levelling Up and Regeneration Act 2023) also requires that decision makers seek to further this purpose when carrying out their functions (such as the Secretary of State determining the Application).

### *National Planning Policy*

6.2.5 National level planning policy for NSIPs is set out in a series of National Policy Statements (NPSs). Those of relevance to the Proposed Development are:

i) *Overarching National Policy Statement for Energy (EN-1)*[i] (2024) (NPS EN-1).
ii) *National Policy Statement for Renewable Energy Infrastructure (EN-3)*[ii] (2024) (NPS EN-3).

iii) *National Policy Statement for Electricity Networks Infrastructure (EN-5)*[iii] (2024) (NPS EN-5).

6.2.6 The *National Planning Policy Framework*[iv] (2025) (NPPF) and the accompanying online *Planning Practice Guidance*[v] (PPG) are also important and relevant considerations.

6.2.7 Relevant policies from the above documents are summarised in Table 6-1.

**Table 6-1 – Summary of National Planning Policy**

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| NPS EN-1 | 4.2.10-4.2.12 | Requirement for applicants to apply the mitigation hierarchy and demonstrate that is has been applied as part of their application. Applicants should also demonstrate how any residual effects would be compensated for as far as possible | See **Section 6.7** for details of landscape and visual mitigation. **Section 6.9** discusses the need for further mitigation in relation to residual effects<br>See **ES Chapter 4: Methodology** [**EN010153/DR/6.1**] for more general discussion of the mitigation hierarchy and Section 8.4 of the Planning Statement [EN010153/DR/5.6] where the application of the mitigation hierarchy in relation to landscape effects is discussed. |
| | Section 4.6.1 – 4.6.2 | In addition to avoiding, mitigating and compensating harm, the project should also consider opportunities for enhancement. Net gains for biodiversity and the wider environment should be provided where possible | See **Section 6.7** for details of landscape and visual enhancement measures |
| | Section 4.7 | Discusses the criteria for good design for energy infrastructure | See the **Design Approach Document** (‘**DAD**’) [**EN010153/DR/5.8**] for details of the approach taken to achieving good design, which incorporates the landscape mitigation |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| | | | and enhancement measures set out in **Sections 6.7** and **6.9** |
| | 5.10.8 | Notes that the duty to seek to further the purposes of nationally designated landscapes applies to developments outside the boundaries of such areas, but which may affect land within them | See **Section 6.6** for a discussion of the approach taken to the potential Cheshire Sandstone Ridge National Landscape |
| | 5.10.12 | Notes that local development document policies based on landscape or waterscape character assessment should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development. | See **Table 6-2** for a summary of local planning policies, and **Section 6.6** for details of local landscape designations. |
| | 5.10.16-5.10.25 | LVIA should include:<br>○ Reference to landscape character assessment/seascape character assessment and associated studies<br>○ Consider landscape and visual matters from an early stage, feeding into the design process and opportunities for mitigation/enhancement<br>○ Assess landscape and visual effects during construction/operation, including the effects of any proposed lighting<br>○ Consider how landscapes can be enhanced using landscape management plans. | Landscape/seascape character assessment and associated studies are discussed in **Section 6.6**.<br>The **DAD** [**EN010153/DR/5.8**] discusses how landscape and visual matters have influenced the design evolution of the Proposed Development.<br>**Section 6.8** includes an assessment of landscape and visual effects during the construction and operational phases.<br>**Sections 6.7** and **6.9** describe the provisions made for landscape management. |
| | 5.10.27 | Notes that adverse landscape and visual effects can be minimised through appropriate siting of infrastructure within the development site and the wider setting | See the **DAD** [**EN010153/DR/5.8**] for details of the approach taken to achieving good design, which incorporates the mitigation and enhancement measures set out in **Sections 6.7** and **6.9** |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| NPS EN-3 | 2.10.42-44 | Encourages applicants to design solar schemes in such a way as to ensure that recreational use of public rights of way continues, where possible during construction, and in particular during operation of the Proposed Development. Applicants are also encouraged where possible to minimise the visual effects of development upon public rights of way users, and to consider and maximise opportunities to facilitate enhancements to public rights of way, and the adoption of new rights of way through site layout and design of access | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], to the **DAD** [**EN010153/DR/5.8**] and to the **outline Landscape and Ecology Management Plan** [**EN010153/DR/7.13**] ('**oLEMP**') for details regarding design and mitigation, including in relation to public rights of way, and to new permissive routes |
| | 2.10.46-2.10.48 | Require that applicants should assess and seek to minimise the landscape and visual impacts of security measures, including intrusion from fencing, CCTV and light pollution in the vicinity of the Site | The assessment set out in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**] assesses the effects of security measures. Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details regarding design and mitigation. One of the Project Design Principles is to develop all elements of the proposals (i.e. including security measures) so that they do not adversely affect the amenity of safety of residents or user of public rights of way. An assessment of the landscape and visual effects of lighting has been scoped out of the ES. See **Appendices 4-1** and **4-2** [**EN010153/DR/6.2**] |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| | 2.10.100-2.10.101 | Highlights the need to take account of the growth of retained and proposed vegetation along site boundaries as part of design and management proposals. The effects of a development upon existing trees and hedges should be informed by an arboricultural assessment | The measures set out in **Section 6.7** and in the **DAD** [**EN010153/DR/5.8**] reflect the potential for future growth of retained and proposed vegetation. **Sections 6.7** and **6.9** describe the provisions made for landscape management. Further details of landscape management are set out in the **oLEMP** [**EN010153/DR/7.13**]. An arboricultural assessment [**EN010153/DR/7.17**] has been provided in support of the DCO application. |
| | 2.10.103 | Advises that the effects of glint and glare from proposed solar PV modules should be assessed | **ES Volume 2 Appendix 4-3** [**EN010153/DR/6.2**] includes a glint and glare assessment, the conclusions of which are summarised in **Section 6.8** |
| | 2.10.131-2.10.135 | Recommended mitigation measures include:<br>○ Screening with native trees, hedges and woodland;<br>○ Minimising the height of security fencing and using existing features to assist in site security (or to screen security fencing);<br>○ Minimising the use of security lighting, with infra-red lighting preferred;<br>○ Consider the use of anti-glare/anti-reflective coatings on solar PV modules<br>○ Consider use of screening between solar PV modules and receptors with potential to be affected by glint and glare.<br>○ Consider using screening between potentially affected | See **Section 6.7** for details of landscape and visual mitigation. |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| | | receptors and the reflecting panels to mitigate the effects | |
| NPS EN-5 | 2.9.16-2.9.17 | Summarises the Holford Rules in relation to design of overhead line routes | The landscape and visual effects of the proposed overhead line connection are assessed in **Section 6.8**. Given the location, context and short length of the proposed overhead length connection, and the demonstrable lack of significant landscape and visual effects, the Holford Rules have very limited applicability to the design of the Proposed Development. The most direct route for the overhead line has been used to minimise impacts, and wooden poles have been selected to reduce visual impact. Refer to the **DAD** [**EN010153/DR/5.8**] for details of the approach followed in determining the two potential locations for the Frodsham Solar Substation, and how this has resulted in potentially adverse landscape and visual effects being minimised. |
| | 2.9.18-2.9.19 | Summarises the Horlock Rules in relation to the design of overhead line infrastructure | |
| | Section 2.10.5-2.10.8 | Identifies further potential landscape and visual mitigation measures | |
| NPPF | 135 | Sets out design criteria, including that development should<br>○ function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development.<br>○ be visually attractive as a result of good layout and appropriate and effective landscaping.<br>○ be sympathetic to local character and history, including | See the **DAD** [**EN010153/DR/5.8**] for details of the approach taken to achieving good design, which incorporates the mitigation and enhancement measures set out in **Sections 6.7** and **6.9** |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES / Application |
|---|---|---|---|
| | | the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change.<br>○ establish or maintain a strong sense of place.<br>○ optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space).<br>○ create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users. | |
| PPG | Green Belt (updated February 2025) | Notes the visual impact of development may be relevant when considering effects on the openness of the Green Belt | **Section 6.8** describes how the visual effects of the Proposed Development would affect the perceived openness of the Green Belt. |
| | Renewable and low carbon energy (2023) | Factors to be considered include:<br>○ Visual effects<br>○ Glint and glare effects<br>○ Impact of security measures<br>○ Potential to mitigate landscape and visual effects through, for example, screening with native hedges | The assessment of landscape and visual effects set out in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**] considers the visual effects of the Proposed Development, glint and glare effects and the effects of security measures.<br>The mitigation measures described in **Section 6.7** include retention and enhancement of existing hedgerows, and the provision of new hedgerows in order to provide visual screening |

### *Local Planning Policy*

#### *Cheshire West and Chester Council*

6.2.8 The following local planning documents for the Cheshire West and Chester Council (CWaCC) area are considered to be relevant to the LVIA:

i) *Cheshire West and Chester Local Plan (Part One) Strategic Policies*[vi] ('Local Plan Part One') (2015).
ii) *Cheshire West and Chester Local Plan (Part Two) Land Allocations and Detailed Policies*[vii] ('Local Plan Part Two') (2019).
iii) *Ince Neighbourhood Plan*[viii] (INP) (2023).
iv) *Frodsham Neighbourhood Plan*[ix] (FNP) (2024).

6.2.9 Relevant policies from the above documents are summarised in Table 6-2.

**Table 6-2 – Summary of Local Planning Policy**

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| Local Plan Part One | STRAT 9 | Sets out CWaCC's intention to protect the intrinsic character and beauty of the countryside, and notes that development must be of an appropriate scale and design to avoid harm to character | The landscape and visual effects of the Proposed Development are assessed in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**] |
| | STRAT 10 | Notes that opportunities will be sought to extend and improve access to local footpath and cycle networks, including greenways, canal towpaths and the Public Rights of Way network | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details of access enhancements |
| | STRAT 11 | States that the provision of appropriate new infrastructure intended to mitigate and adapt to climate change will be supported where this would have no significant adverse impact upon recognised environmental assets | The landscape and visual effects of the Proposed Development are assessed in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**]. This includes consideration of effects upon local landscape designations. |
| | SOC 6 | States CWaCC's support for proposals that provide innovative solutions to improving the network of | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| | | existing open spaces, increase accessibility to green corridors, and enhance biodiversity | [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details of proposed access and green infrastructure improvements. Refer to **ES Volume 1 Chapters 7: Terrestrial Ecology** and **8: Ornithology** [**EN010153/DR/6.1**] for details of biodiversity enhancements. |
| | ENV 2 | States CWaCC's intention to protect and wherever possible enhance landscape character and local distinctiveness. Development proposals should take account of the characteristics of the Site, its relationship with its surroundings and views into over and out of the Site. Features of landscape quality should be recognised, retained and incorporated into the design | **Section 6.8** and **ES Volume 2 Appendices 6-6** and **6-7** [**EN010153/DR/6.2**] describe and assess the effects of the Proposed Development on landscape character.<br>Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details of how the design of the Proposed Development, including mitigation and enhancement measures has been developed with regard to landscape character and landscape features. |
| | ENV 3 | States that CWaCC will support the creation, enhancement, protection and management of a high quality, multi-functional Green Infrastructure network | Work No. 6a relates to green infrastructure<br>Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], to the **DAD** [**EN010153/DR/5.8**], and to the **oLEMP** [**EN010153/DR/7.13**] for details of proposed green infrastructure improvements |
| | ENV 6 | Notes that development should promote a variety of design considerations, such as: respecting local character and achieving a sense of place; being sympathetic to local heritage, environmental and landscape assets; ensuring ease of movement and legibility with priority for pedestrians and cyclists; and promoting safe, secure environments and access routes | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details regarding design and mitigation, including how the design of the Proposed Development has responded to the factors set out in the policy. |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| | ENV 7 | States that CWaCC will support renewable and low carbon energy proposals where there are no unacceptable impacts in several topic areas, including landscape, visual and residential amenity | The landscape and visual effects of the Proposed Development are assessed in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**]. Refer to **Sections 6.4** and **6.5**, and to **ES Volume 2 Appendices 6-3** and **6-4** [**EN010153/DR/6.2**] for discussion of effects on the visual component of residential visual amenity The **Planning Statement** [**EN010153/DR/5.6**] discusses the acceptability or otherwise of the environmental effects of the Proposed Development. |
| Local Plan Part Two | GBC 2 | Reiterates the protection of the countryside set out in Local Plan Part One Policy STRAT 9. Additionally, the policy notes that development affecting the setting of an Area of Special County Value (ASCV) must preserve the special landscape character and scenic value of the designation, enhance landscape quality, character and appearance wherever possible, and make suitable provision for improving public access to and enjoyment of the landscape where appropriate | The landscape and visual effects of the Proposed Development are assessed in **Section 6.8** and in **ES Volume 2 Appendices 6-6, 6-7**, and **6-8** [**EN010153/DR/6.2**]. This includes consideration of effects upon ASCV designations within the LVIA Study Area. |
| | DM 2 | Notes that development will only be supported where it does not result in a significant adverse impact upon the residential amenity of occupiers of existing properties, including in respect of outlook | Refer to **Sections 6.4** and **6.5**, and to **ES Volume 2 Appendices 6-3** and **6-4** [**EN010153/DR/6.2**] for discussion of effects on the visual component of residential visual amenity |
| | DM 3 | Expects that development achieves a high standard of design which respects character and protects visual amenity. Design solutions will be supported that (amongst other factors): contribute positively to the character of the area; respect and where appropriate enhance the prevailing landscape; and are sympathetic to the characteristics of the Site, its relationship with its | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details regarding design and mitigation and how this responds to the local landscape character. |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| | | surroundings and views into, over and out of the Site | |
| | DM 37 | Requires that development should protect and where possible enhance and extend: public rights of way; footpaths/bridleways; cycle routes; and canals and waterways | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], to the **DAD** [**EN010153/DR/5.8**], to the **outline Public Rights of Way Management Plan** [**EN010153/DR/7.9**] ('**oPRWMP**') and to the **oLEMP** [**EN010153/DR/7.13**] for details of access enhancements |
| | DM 45 | States that development will be supported where it conserves, manages and where possible enhances existing trees, woodlands and hedgerows. If integration into a scheme is not possible, then proposals must: include replacement trees, woodlands and hedgerows, include replacement planting at a ratio of at least 2:1; and use locally native species where appropriate. Proposals should support the aims and policies of the Mersey Forest Plan, where relevant | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details regarding design and mitigation.<br>Refer to **Section 6.8** for an assessment of effects on landscape fabric, including approximate extents of vegetation lost and new vegetation created, which exceed the ratio stated in the policy.<br>Refer to **Section 6.6** for discussion of Mersey Forest Plan policies that are relevant to the Order Limits<br>Indicative species mixes for new vegetation are set out in the **oLEMP** [**EN010153/DR/7.13**] |
| | DM 52 | States that CWaCC will support proposals for solar energy development where they meet a series of criteria including:<br>○ having regard to CWaCC's Landscape Sensitivity Study;<br>○ being accompanied by LVIA (with scope agreed with CWaCC), and<br>○ with cumulative impacts considered carefully; demonstrating how adverse impacts on the landscape would be mitigated.<br>Where possible hedgerows, trees, field patterns and strong boundary | The Chapter of the ES, along with the accompanying Figures and Appendices comprise the LVIA of the Proposed Development. As set out in **Section 6.4** and **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**], the scope of the LVIA was agreed with CWaCC<br>Refer to **Section 6.6** for discussion of the CWaCC Landscape Sensitivity Study.<br>The mitigation measures described in **Section 6.7** |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| | | features should be used to mitigate visual impact; and associated development should be designed to minimise its visual impact | include retention and enhancement of existing vegetation, and the provision of new planting in order to provide visual screening. |
| INP | NAT2 | Requires that development in the Green Belt and in the open countryside must where appropriate, respect and enhance the landscape character of the area. Specifically, development should: conserve the remaining open undeveloped areas of the marshes; respect the open, expansive and visually sensitive landscape of the estuary; and ensure that new boundary treatments and surfacing respect and respond where possible to the traditional vernacular of existing landscape elements | **Section 6.8** and **ES Volume 2 Appendices 6-6** and **6-7** [**EN010153/DR/6.2**] describe and assess the effects of the Proposed Development on landscape character.<br>Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details of how the design of the Proposed Development, including mitigation and enhancement measures has been developed with regard to the landscape character and landscape features of the Frodsham Marshes. |
| | NAT5 | States that development that results in the loss of, or deterioration in the quality or setting of trees and hedgerows will not normally be permitted. Where loss is unavoidable, replacement provision should be at a 2:1 ratio for trees and a 3:1 ratio for hedgerows | Refer to **Section 6.7**, to **ES Chapter 2: Proposed Development** [**EN010153/DR/6.1**], and to the **DAD** [**EN010153/DR/5.8**] for details regarding design and mitigation.<br>Refer to **Section 6.8** for an assessment of effects on landscape fabric, including approximate extents of vegetation lost and new vegetation created, which exceed the ratio stated in the policy.<br>Indicative species mixes for new vegetation are set out in the **oLEMP** [**EN010153/DR/7.13**] |
| FNP | GSRL4 | Encourages development that creates or develops additional green community/recreational spaces | Refer to the **DAD** [**EN010153/DR/5.8**] and to the **oLEMP** [**EN010153/DR/7.13**] for details of enhancements to access within the Order Limits, which will provide an enhanced recreational space |

| Document | Policy / Paragraph Reference | Summary of Policy / Paragraph | Where addressed in the ES |
|---|---|---|---|
| | GSRL5 | Encourages developments that maximise opportunities for enhancing recreation | Refer to the **DAD** [**EN010153/DR/5.8**] and to the **oLEMP** [**EN010153/DR/7.13**] for details of enhancements to access within the Order Limits, which will provide an enhanced recreational space |

### *Guidance*

6.2.10 The LVIA has been undertaken with regard to the following guidance documents:

i) Landscape Institute and Institute of Environmental Assessment and Management (2013) *Guidelines for Landscape and Visual Impact Assessment*[x] ('the GLVIA').

ii) Natural England (2014) *An Approach to Landscape Character Assessment*[xi].

iii) Natural England (2019) *An Approach to Landscape Sensitivity Assessment – to inform spatial planning and land management*[xii].

iv) Landscape Institute (2019) *Residential Visual Amenity Assessment (RVAA). Technical Guidance Note 2/19*[xiii] ('TGN 2/19').

v) Landscape Institute (2019) *Visual Representation of Development Proposals. Technical Guidance Note 06/19*[xiv]('TGN 06/19').

vi) Landscape Institute (2020) *Infrastructure: Technical Guidance Note 04/2020*[xv] ('TGN 04/20').

vii) Landscape Institute (2021) *Assessing landscape value outside national designations. Technical Guidance Note 02/21*[xvi] ('TGN 02/21').

viii) Landscape Institute (2024) *Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3)*[xvii] ('LITGN-2024-01').

ix) Institute for Environmental Management and Assessment (2024) *Implementing the Mitigation Hierarchy from Concept to Construction*[xviii] ('IMHCC')

6.2.11 The GLVIA is the principal document setting out good practice guidelines in LVIA. The other documents listed above play a supplementary role and give further guidance on particular aspects of LVIA.

6.2.12 The detailed methodology followed in undertaking the LVIA is set out in **ES Volume 2 Appendix 6-1** [**EN010153/DR/6.2**]. The methodology followed in the production of visualisation materials included in the LVIA is set out in **ES Volume 2 Appendix 6-2** [**EN010153/DR/6.2**].

## 6.3 Assumptions and Limitations

### *Proposed Development Parameters*

6.3.1 In order to reflect a reasonable worst-case scenario, the LVIA has been prepared based upon the maximum development parameters set out in the Design Parameters Document [**EN010153/DR/7.1**]**.**

i) Works No. 1: Solar Array Development Areas:
   a) Within Solar PV Areas A01 – A06[1]. the maximum height of the Solar PV Modules would be 3.5m above ground level.
   b) Within Solar PV Areas B01 – B18 and C01 – C06, the maximum height of the Solar PV Modules would be 4m above ground level.
   c) Within Solar PV Areas A01 – A06, the maximum height of String Inverters, Standalone Transformer Stations, and Power Conversion Units would be 3.5m above ground level.
   d) Within Solar PV Areas B01 – B18 and C01 – C06, the String Inverters, Standalone Transformer Stations, and Power Conversion Units would have a base height of 6.52m AOD[2] (approx. 2m above ground level), and their maximum height would 4.0m above ground level.
   e) The Solar PV Modules have been assumed to be black in colour to provide a worst-case in regards to potential visual impacts.
   f) Panels installed at varying azimuth angles as per the mitigation requirements for glint and glare.

ii) Works No. 2: Battery Energy Storage System (BESS):
   a) Maximum height of structures 4.5m.
   b) Both potential BESS locations are considered in the LVIA.

[1] Refer to **ES Vol 3 Figure 2-1: Indicative Construction Site Layout** [**EN010153/DR/6.3**] for the location of individual Solar PV Areas.
[2] The base height has been set as relative to Ordnance Datum to reflect the findings of the flood risk modelling – refer to **ES Vol 1 Chapter 2.0: Proposed Development [EN010153/DR/6.1]** and **ES Vol 2 Appendix 9-1: Flood Risk Assessment [EN010153/DR/6.2]**. As the site is relatively level this equates to an approximate height above ground level, which has also been stated.

iii) Works No. 3: Frodsham Solar Substation:
   a) Maximum height of ancillary buildings 8m.
   b) Maximum height of electrical infrastructure 13m.
   c) Both potential Substation locations are considered in the LVIA.

iv) Works No. 4: Electrical cables:
   a) Maximum height of pylons 15m.

v) Ancillary works to facilitate the construction and operation of the Proposed Development.
   a) Maximum height of fencing 2.4m.
   b) Maximum height of CCTV towers 4m.
   c) Maximum height of lighting towers 4m.

### *Survey Assumptions and Limitations*

6.3.2 The assessment baseline has been ascertained in part from review of a series of published documents. These documents have been assumed to be accurate at the date of their publication but may not necessarily reflect more recent changes in the landscape or take account of more recent changes in policy or in best practice. Where relevant, any post-publication changes are described in the LVIA.

6.3.3 Assessment work reflects the level of vegetation cover present at the time of the field visits to the Study Area (July 2022, April 2023, March 2024, July 2024 and February 2025). Where relevant to its conclusions, the LVIA makes assumptions as to the likely visibility of the Proposed Development at other times of year.

6.3.4 Fieldwork has been undertaken from publicly accessible areas, and from private land along the Weaver Navigation which was accessed with the permission of the Canal and River Trust (CRT). Professional judgement has been used to assess any impacts experienced from private properties. This has been aided by fieldwork observations made from the surrounding area and via analysis of online aerial imagery.

6.3.5 Where distances and measurements are given, these are approximate and generally calculated from the nearest point of the Order Limits and/or the Solar Array Development Area (or as otherwise stated) to the feature in question.

### *Assessment Assumptions*

#### *Visualisations*

6.3.6 Visualisation materials are tools to assist the assessment process and are inherently dependent upon the accuracy of the data used to create them. Details of the data used, any limitations inherent to the production of visualisation material, and any assumptions made in producing this material are set out in **ES Volume 2 Appendix 6-2** [**EN010153/DR/6.2**].

6.3.7 The ZTVs presented on **ES Volume 3 Figures 6-4a to 6-4j** [**EN010153/DR/6.3**] have been prepared to reflect the maximum height of structures as set out at 6.3.1 above. The ZTV for the two BESS and Substation Options (**ES Volume 3 Figures 6-4e to 6-4h** [**EN010153/DR/6.3**]) reflects the theoretical visibility of the proposed lighting columns (max. height 4m) that would be located within these areas (lighting is not proposed anywhere else within the Order Limits).

6.3.8 In relation to the photomontages that are presented on **ES Volume 3 Figures 6-36 to 6-48** [**EN010153/DR/6.3**], these include computer generated images showing a realistic impression of how the Proposed Development might appear when first operational (Year 0) and then once proposed landscape mitigation has established (Year 10). The latter assumes growth rates for proposed planting as follows:

i) Planted height for majority of trees and shrubs to be approximately 0.6m.
ii) Assumed growth rates for new planting of approximately 0.5m per annum.
iii) New tree planting to have reached a height of approximately 5.5m approximately ten years after planting.
iv) New and existing hedgerows to typically be managed at a height of approximately 2.5m-3m, noting that in some locations lower managed heights may be set to preserve views of the wider landscape, and that in some locations where existing hedges are taller than 2.5-3m, they would be maintained at their existing heights.

6.3.9 It has been assumed that ten years growth of proposed planting is sufficient to provide adequate mitigation against the likely significant adverse landscape and visual effects of the Proposed Development. The majority of the proposed new structures are relatively low in height, and the growth rates set out above would provide effective visual screening by Year 10.

6.3.10 Additionally, the Solar PV Modules are illustrated as being black in colour on each of the photomontages to provide a worst-case of potential visual impact.

*Solar Array Development Area*

6.3.11 The ZTV for the Solar Array Development reflects the different maximum heights of structures within Solar PV Areas A01 – A06, and B01 – B18 and C01 – C06 as set out above.

6.3.12 Within Solar PV Areas B01 – B18 and C01 – C06, ground elevation varies between approximately 4.5m AOD and approximately 5m AOD. For the purposes of producing the ZTV of the String Inverters, Standalone Transformer Stations, and Power Conversion Units within these areas, structure height has been assumed to be 5.53m above ground level (to give the maximum height of 10.02m AOD).

*BESS/Substation Options*

6.3.13 As set out in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**], there are two potential options for the BESS and Frodsham Solar Substation, with solar PV modules extending across the location of the option that is not ultimately progressed. The LVIA considers the effects of introducing a BESS and Substation located at each of the proposed options, and also considers the effects of introducing the solar PV panels in place of each option, as follows:

i) BESS and Substation Option 1 progressed (Solar Array Development extends across Option 2).

ii) BESS and Substation Option 2 progressed (Solar Array Development extends across Option 1).

6.3.14 The LVIA also considers the presence of the proposed overhead line connection to the SPEN Frodsham Substation. Whilst **ES Volume 3 Figure 2-2** [**EN010153/DR/6.3**] illustrates a precise cable route, it could be located within a 100m wide corridor as shown by the limits of deviation on the **Works Plans [EN010153/DR/2.3**]. As such the assessment presented in this chapter considers the impacts associated with a cable located anywhere within this 100m wide corridor.

6.3.15 Visualisation materials have been prepared on the following basis:

i) ZTVs
   a) The ZTV for the Solar Array Development Area assumes the 3.5m high Solar PV Modules would extend across both BESS/Substation Option areas, i.e. both would form part of the Solar Array Development
   b) Separate ZTVs have been prepared for BESS/Substation Option 1 and Option 2

ii) Photomontages.
   a) Photomontages have been prepared reflecting BESS/Substation Option 1 only and the cable route associated with Option 1. Given the relatively close proximity, nature and scale of the two BESS/Substation options it is considered the photomontages provide a sufficiently informative representative view to inform an assessment of both options from the viewpoints where these would be visible.

*Non Breeding Bird Mitigation Area and Skylark Mitigation Area*

6.3.16 No built structures would be introduced within either the Non Breeding Bird Mitigation Area (NBBMA) or the Skylark Mitigation Area. Details of the environmental enhancements that would occur within these areas are set out in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**], and the LVIA has been undertaken on this basis.

*Design and Management*

6.3.17 The LVIA has been undertaken on the basis that the design, construction, operation and decommissioning of the Proposed Development would be guided by the suite of documents that are described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]. These include:

i) **Design Parameters Document** [**EN010153/DR/7.1**].
ii) **Design Approach Document** ('**DAD**') [**EN010153/DR/5.8**].
iii) **Works Plans** [**EN010153/DR/2.3**].
iv) **Outline Construction Environmental Management Plan** ('**oCEMP**') [**EN010153/DR/7.5**].
v) **Outline Operational Environmental Management Plan** ('**oOEMP**') [**EN010153/DR/7.6**].
vi) **Outline Decommissioning Environmental Management Plan** ('**oDEMP**') [**EN010153/DR/7.7**].
vii) **Outline Public Rights of Way Management Plan** [**EN010153/DR/7.9**].
viii) **Outline Landscape and Ecology Management Plan** ('**oLEMP**') [**EN010153/DR/7.13**].

6.3.18 Post-consent, these outline plans will be developed into full plans which must be in substantial accordance with the outline, and the Proposed Development must be undertaken in accordance with that full plan. The preparation and approval of the full plans is secured via a Requirement in Schedule 2 of the draft DCO.

*Construction*

6.3.19 Landscape and visual effects during the construction stage have been assessed based upon the programme and phasing set out in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]**.** These indicate that it is anticipated that construction will last for a period of approximately 30 months prior to the Operational phase commencing.

## 6.4 Consultation and Engagement

6.4.1 A scoping exercise was undertaken in order to establish the content of the assessment and the approach and methods to be followed within this ES.

6.4.2 A Scoping Report (**ES Volume 2 Appendix 4-1** [**EN010153/DR/6.2**]) was submitted to PINS on the 30 May 2023. The report sets out the findings of the scoping exercise and details the technical guidance, standards, best practice and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Proposed Development.

6.4.3 A Scoping Opinion was received on 10 July 2023 (**ES Volume 2 Appendix 4-2** [**EN010153/DR/6.3**]). The feedback received from PINS and stakeholders within the Scoping Opinion, and the Applicant's responses are presented in **ES Volume 2 Appendix 4-3** [**EN010153/DR/6.3**]. The points relating to the LVIA are summarised in **Table 6-3** below.

6.4.4 The Preliminary Environmental Information Report ('PEIR') was provided as part of the statutory pre-application consultation in late 2024. The feedback received from consultees relevant to the LVIA are summarised in **Table 6-4** below.

6.4.5 Other engagement and consultation undertaken in relation to the LVIA is summarised in **Table 6-5** below. Details of post-scoping consultation with CWaCC are set out in a Technical Note prepared to agree the scope of the LVIA (**ES Volume 2 Appendix 6-3** [**EN010153/DR/6.3**]).

**Table 6-3 – Scoping Responses**

| Consultee | Comment | Response |
|---|---|---|
| PINS (ID 3.1.2) | Consideration of effects on National Character Areas should be included in the ES | It was agreed as part of post-scoping consultation with CWaCC (see **Table 6-2** and **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]) that the local character areas in CWaCC's own character assessment were a more suitable scale to assess the effects of the Proposed Development, and that given the larger size and scale of the NCAs that effects upon these would inevitably be less than upon the local character areas. Reference to the NCAs has been made in **Section 6.6** in order to provide context. |
| PINS (ID 3.1.3) | The Inspectorate requires that the ES includes a detailed description of the lighting design and measures taken to avoid or minimise effects on human and ecological receptors. | The lighting design is described in **ES Volume 1 Chapter 2:**, which includes details of measures to avoid effects on human receptors. Details of ecological mitigation measures are set out in **ES Volume 1 Chapter 7** and in **ES Volume 1 Chapter 8** |
| PINS (ID 3.1.4) | Residential Visual Amenity Assessment should be included in the ES, subject to agreement with consultees | This was discussed as part of post-scoping consultation with CWaCC (see **Table 6-2** and **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]). The Glint and Glare Assessment included in the Scoping Report was based on a bare earth analysis that did not reflect the presence of vegetation. Photography demonstrating the limited visibility towards the Order Limits from properties at the edge of Frodsham is appended to **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**]. As such it is very unlikely that the threshold upon which effects on residential visual amenity would occur would be exceeded by the Proposed Development. As agreed with CWaCC, the LVIA includes justification as to why residential visual amenity assessment is not required with reference to TGN 2/19 published by the Landscape Institute (refer to **Section 6.5** and **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**]). |
| PINS (ID 3.1.5) | ZTVs should reflect a worst-case scenario reflecting the maximum parameters of all proposed infrastructure | The ZTVs included in the LVIA reflect the parameters set out in **Section 6.3** and reflect the presence of above ground infrastructure, reflecting the assumptions set out in **Section 6.3** |

| Consultee | Comment | Response |
|---|---|---|
| PINS (ID 3.1.6) | The study area should be informed by the extent of likely effects rather than an arbitrary boundary. The study area does not include the access roads or the private wire connection. The ES should evidence how it has been derived and should be agreed with consultees | The Study Area is not determined by an arbitrary boundary. Refer to **Section 6.5** for details of how the Study Area has been determined. The Study Area includes the entirety of the Order Limits and all components of the Proposed Development<br>The extent of the Study Area was agreed with CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]) |
| PINS (ID 3.1.7) | The LVIA should consider the potential for visual effects on receptors navigating waterways | The LVIA considers effects on waterborne receptors |
| PINS (ID 3.1.8) | Receptors and the sensitivity assigned to them should be agreed with consultees | This was discussed as part of post-scoping consultation with CWaCC (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]).<br>The proposed methodology for the LVIA was appended to the Scoping Report which set out how sensitivity would be determined. CWaCC agreed that no further detail needed to be agreed.<br>Waterborne receptors have been included in the LVIA reflecting comments from the Canal and Rivers Trust |
| PINS (ID 3.1.9) | The process used to determine viewpoint locations should be explained in the ES, taking into account topography, long-distance view and the setting of heritage receptors. | Viewpoint photography was forwarded to CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]).<br>CWaCC confirmed their agreement with the locations selected, and requested the inclusion of one further viewpoint from the public open space close to St Laurence's Church, Frodsham (Viewpoint 26)<br>The inclusion of further additional viewpoints from along the Weaver Navigation has been agreed with the Canal and Rivers Trust. |
| PINS (ID 3.1.10) | The applicant should justify the location of photomontages and agree with consultees. Photomontages should show all components of the Proposed Development | Details of photomontage locations were agreed with CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**] and to **Table 6-3**). The photomontages that are included in the LVIA show all components of the Proposed Development that are visible from the respective viewpoints. |

| Consultee | Comment | Response |
|---|---|---|
| PINS (ID 3.1.10) | Cumulative landscape visual effects should be considered. The Applicant should consider illustrating potential cumulative effects through visualisations to indicate the changing views and visual amenity compared with the visual impacts of the project being assessed on its own. | The LVIA includes an assessment of cumulative landscape and visual effects (refer to **Section 6.11**).<br>As likely significant cumulative landscape and visual effects have not been identified from any Viewpoint, cumulative schemes have not been added to the photomontages. |
| PINS (ID 3.1.11) | The implications of the potential future designation of the Cheshire Sandstone Ridge as an Area of Outstanding Natural Beauty should be considered. | This was discussed with CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]). CWaCC were clear that the proposals to designate were at an early stage and that there were no draft special qualities or draft management plan available. It was agreed that the LVIA would not require a specific assessment in relation to the draft AONB/National Landscape, but the sensitivity of the area should be recognised within the LVIA.<br><br>This was also discussed with Natural England as part of post-scoping consultation. Natural England confirmed that they were happy with the approach suggested by CWaCC. |
| CWaCC (ID 7.1.2) | Impacts upon the openness of the Green Belt should be addressed | See **Section 6.8** for a consideration of how the visual effects of the Proposed Development would affect the openness of the Green Belt. |
| CWaCC (ID 7.1.3) | An assessment of landscape effects should be included taking into account relevant planning policies and the Landscape Sensitivity Study. The nature of the landform providing elevated view from Frodsham and Helsby Hill and its significance in recreational terms should be given appropriate weight. | The LVIA includes an assessment of effects on landscape character. Existing characterisation and sensitivity studies inform the baseline for this and any conclusions made will have regards to their contents.<br>Views from Frodsham and Helsby Hill are considered high sensitivity (except where there are mitigating factors in relation to some of the viewpoints from within Frodsham). All judgements regarding the sensitivity of Viewpoints are set out in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**]. |
| CWaCC (ID 7.1.4) | The ES needs to refer to the Green Belt sections of policy as well as countryside:<br>LP1 Strategic Objective (S010): Protect the environmental quality and character of Cheshire West and Chester through maintaining the | See **Section 6.8** for a consideration of how the visual effects of the Proposed Development would affect the openness of the Green Belt. |

| Consultee | Comment | Response |
|---|---|---|
| | general extent and character of the North Cheshire Green Belt and Cheshire countryside.<br>The Green Belt aspects under STRAT9 of LP1 need consideration. The SR does not address the Site's location within Green Belt and that solar farms are generally considered to be inappropriate development. While the DCO application is expected to address this with a statement addressing very special circumstances (VSC) impact on the Green Belt (in particular openness) should be included in the ES | For a wider consideration of how the Proposed Development would affect the Green Belt, refer to the **Planning Statement** [**EN010153/DR/5.6**] |
| CWaCC (ID 7.1.5) | The ES needs to appraise the impact of the Proposed Development upon the connectivity of the public rights of way network. | Users of public rights of way and other routes with public access are among the receptor types considered in the visual assessment, and several of the proposed viewpoints reflect the views from these routes |
| CWaCC (ID 7.1.6) | The ES should consider effects on properties at the caravan sites located off Brook Furlong, Frodsham. | The two caravan sites adjacent to the Site have been developed without planning permission. CWaCC has undertaken enforcement action on one of the sites requiring the removal of the caravans. An appeal against this was made by the occupants. The appeal was not successful and the decision by PINS requires the occupants to have vacated the site by July 2025. There is no record of enforcement or an appeal against the adjacent, second, travellers site but it is assumed that the Council would take a similar planning stance against this site. As a precautionary approach, both sites have been considered as visual receptors in the LVIA. |
| CWaCC (ID 7.1.7) | The ES should balance the description of the surroundings with acknowledgement of the expansive areas of openness, and the role that the marshes have in terms of providing one of the few large expanses of open, relatively undeveloped areas along the Mersey Estuary. | The Order Limits and their surroundings are described in the LVIA. The availability of a variety of landscape experiences including areas with open expansive views towards the Sandstone ridge and the Estuary and more enclosed corridors is recognised. |
| CWaCC (ID 7.1.8) | The implications of the potential future designation of the Cheshire Sandstone Ridge as an Area of Outstanding Natural Beauty should be considered. | This was discussed with CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]). CWaCC were clear that the proposals to designate were at an early stage and that there were no draft special qualities or draft management plan available. It was |

| Consultee | Comment | Response |
|---|---|---|
| | | agreed that the LVIA would not require a specific assessment in relation to the draft AONB/National Landscape but the sensitivity of the area should be recognised within the LVIA.<br><br>This was also discussed with Natural England as part of post-scoping consultation. Natural England confirmed that they were happy with the approach suggested by CWaCC. |
| CWaCC (ID 7.1.9) | The ES should address that the two ASCV's include areas that show relatively high levels of theoretical visibility of the proposed development The Site is adjacent to Helsby & Frodsham Hills ASCV and Weaver Valley ASCV. Views from higher ground should be considered, including views from footpaths, Helsby Hill, Frodsham Hill and Frodsham War memorial | The LVIA considers effects upon these designations.<br>The Order Limits are not adjacent to any ASCV, and theoretical visibility from within the ASCVs is localised<br>There are four viewpoints within Helsby & Frodsham Hills ASCV, including the locations highlighted by CWaCC<br>There is one Viewpoint at the boundary of the Weaver Valley ASCV, and few publicly accessible locations that fall within both the designation boundary and the ZTV<br>Views from footpaths and high ground, including Helsby Hill, Frodsham Hill and Frodsham War Memorial are included. |
| CWaCC (ID 7.1.10) | The scoping out of effects on National Character Areas requires further justification | It was agreed as part of post-scoping consultation with CWaCC (*see* **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]) that the local character areas in CWaCC's own character assessment were a more suitable scale to assess the effects of the Proposed Development, and that given the larger size and scale of the NCAs that effects upon these would inevitably be less than upon the local character areas. Reference to the NCAs has been made in **Section 6.6** in order to provide context. |
| CWaCC (ID 7.1.11) | The ES should consider the impacts of the Proposed Development in relation to the overall management strategy for the LCA 4a Frodsham, Helsby and Lordship Marshes.<br>The overall management strategy for this landscape should be to enhance and restore the condition of habitats and features of the marshes whilst safeguarding its open character | The design of the Proposed Development, including the landscape proposals]), as described in the **oLEMP** [**EN010153/DR/7.13**] have regard to the extant management strategy for LCA4a |
| CWaCC (ID7.1.12) | The sense of naturalness of the marsh is diluted by man-made features and development. However, the open character means there is little opportunity for screening any large scale elements or for | Refer to **Section 6.7** and **Section 6.9**, and to the **DAD** [**EN010153/DR/5.8**] for details of how the design of the Proposed Development, including mitigation and enhancement |

| Consultee | Comment | Response |
|---|---|---|
| | mitigating visual impact without the mitigation measures in themselves being highly visible; making it a visually sensitive landscape | measures has been developed with regard to landscape character and visual amenity. |
| CWaCC (ID 7.1.13) | The ES should provide confirmation as to whether the work and assessment of the Landscape Sensitivity Study (CWaCC) (2016) is being adopted as a baseline for assessment, and that the ES will address the key landscape effects of solar PV development identified in the study.<br>The size of the development is extremely large and likely to generate significant landscape and visual impacts | The Landscape Sensitivity Study informs the baseline for the LVIA (refer to **Section 6.6**). Refer to **Section 6.7** and **Section 6.9**, and to the **DAD** [**EN010153/DR/5.8**] for details of how the design of the Proposed Development, including mitigation and enhancement measures has been developed with regard to landscape character and visual amenity |
| CWaCC (ID 7.1.14) | The ES should address that LCT 4 Drained Marsh is particularly sensitive to a medium, large or very large solar farm development. | Existing characterisation and sensitivity studies inform the baseline for the LVIA and any conclusions made have regards to their contents |
| CWaCC (ID 7.1.15) | The ES should be accompanied by an arboricultural / hedgerow assessment (to assist with biodiversity as well as landscape assessment). | Ecology surveys include the tree and hedgerow vegetation within the Order Limits (refer to **ES Volume 1 Chapter 7** and **Chapter 8**) |
| CWaCC (ID 7.1.16) | With regard to the provisional list of viewpoints, it is requested that the Applicant liaise further with the Council's Landscape Officer to agree a final list of viewpoints and photomontages for the ES. | Viewpoint photography was forwarded to CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]).<br>CWaCC confirmed their agreement with the locations selected, and requested the inclusion of one further viewpoint from the public open space close to St Laurence's Church, Frodsham (Viewpoint 26)<br>The inclusion of further additional viewpoints from along the Weaver Navigation was agreed with the Canal and Rivers Trust.<br>Details of photomontage locations were agreed with CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]).<br>The photomontages that are included in the LVIA show all components of the Proposed Development that are visible from the respective viewpoints and are deemed sufficient to enable a robust environmental assessment to be conducted. |
| CWaCC (ID 7.1.17) | Whilst a matter for Halton Borough Council (HBC), it is noted that no viewpoint is currently shown on the north side of the Site from Runcorn. **PEIR Volume 3 Figure 7.3** indicates areas of | Noted. The ZTVs illustrated on **ES Volume 3 Figures 6-4a-j** [**EN010153/DR/6.3**] indicate that views from Runcorn would be very localised and limited to a narrow belt of land at the southern |

| Consultee | Comment | Response |
|---|---|---|
| | development with relatively high theoretical visibility (although it is likely that in practice the existing industrial complex at Rocksavage would screen out much of the views). | edge of town. Additionally any visibility from Runcorn would be in the context of the extensive belt of industrial development located at the edge of town along the northern side of the River Weaver and Weaver Navigation.<br>No comments were made by HBC regarding the scope of the LVIA. |
| CWaCC (ID 7.1.18) | Views from footpaths on Sandstone ridges close to Frodsham FP 23, 27, 40 and FP 43 should be including along with views from the Sandstone Trail. | Most of the length of these routes, including the Sandstone Trail are outside the ZTV, with some visibility anticipated from very short sections (including close to the northern end of the Sandstone Trail, e.g. at Frodsham Hill War Memorial).<br>The ZTVs presented on **ES Volume 3 Figures 6-4a-j** [**EN010153/DR/6.3**] illustrate the route of the Sandstone Trail, and the lack of predicted visibility from the great majority of it. |
| CWaCC (ID 7.1.19) | The ES/LVIA should include both winter and summer views. | Viewpoint photography was forwarded to CWaCC as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]). CWaCC confirmed they were happy with the photography taken and that winter photography was key to ensure a worst-case scenario of visibility with deciduous foliage absent. |
| CWaCC (ID 7.1.20) | The ES/LVIA should include some section views to demonstrate the levels of the Site and surrounding landscape features. | This was discussed with CWaCC as part of post-scoping consultation. It was agreed that a series of cross-sections through the Solar Array Development Array would be included in the LVIA (and / or elsewhere in the application submission). These will assist CWaCC in understanding existing variation in ground level and how the development would relate to this. They will also help in giving an understanding of the character of the Order Limits. The Illustrative Environmental Masterplan presented on **ES Volume 3 Figures 2-3a-e** [**EN010153/DR/6.3**] includes these cross-sections through the Proposed Development which illustrate how the proposed new structures relate to their surroundings. |

| Consultee | Comment | Response |
|---|---|---|
| CWaCC (ID 7.1.21) | The ES should include assessment of cumulative landscape and visual impacts. | The LVIA includes consideration of cumulative landscape and visual effects (refer to **Section 6.11**) |
| CWaCC (ID 7.1.22- ID 7.1.23) | Impacts on the PROW network and users should be scoped in; visuals from the restricted byways to include pedestrian users and cyclists. Horseriders and carts also have a right to use the route, and it would be helpful to see those views i.e. at different heights.<br>The ES/LVIA should consider/make visual representations to assist in assessing the impact for users of the PROW network (particularly within the SADA) to appreciate the impact for pedestrians moving through the areas of solar array. | It was never proposed to scope effects on these receptors out of the LVIA. Effects upon them are addressed in the LVIA.<br>It was agreed with CWaCC as part of post-scoping consultation that cross-sections will be used to give an understanding of how the development would affect different types of PRoW users (e.g. walkers, horse riders, cyclists etc), including those experiencing the landscape from different heights. The Illustrative Environmental Masterplan presented on **ES Volume 3 Figures 2-3a-e** [**EN010153/DR/6.3**] includes sections through the Proposed Development illustrating how the proposed new structures relate to the adjacent PRoWs.<br>Photomontage visualisations to illustrate the view experienced from horseback are not included noting that it is technically challenging to undertake photography to replicate a horse riders view (which would require positioning a camera on a tripod at rider eye height). The LVIA does nonetheless include consideration of the presence of receptors with an elevated viewing position. |
| CWaCC (ID 7.1.24) | Given the findings of the Glint and Glare assessment (the preliminary Glint and Glare Assessment is provided as an appendix to the Scoping Report [see **PEIR Volume 2 Appendix 1-1 Scoping Report**]) that potential glint and glare effects could impact on residential amenity, further information/justification is needed to justify scoping out, although it is acknowledged that mitigation in the form of screening may justify scoping out. In relation to scoping out residential visual amenity further assessment / visualisations from relevant viewpoints (particularly Viewpoint 3 (Ship Street, Frodsham) are needed to justify this. | This was discussed as part of post-scoping consultation with CWaCC. The Glint and Glare Assessment included in the Scoping Report was based on a bare earth analysis that did not reflect the presence of vegetation. Photography from Viewpoint 3 demonstrating the limited visibility towards the Order Limits from properties at the edge of Frodsham is appended to **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**]. New planting is proposed to mitigate against glint and glare effects, and the Solar PV Modules would use antireflective coating which would also reduce glint and glare effects.<br>As such it is considered very unlikely that the threshold upon which material effects on residential visual amenity would occur would be exceeded by the Proposed Development. The LVIA |

| Consultee | Comment | Response |
|---|---|---|
| | | includes justification as to why residential visual amenity assessment is not considered to be required with reference to TGN 2/19 published by the Landscape Institute (refer to **Section 6.5** and **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**]). |
| CWaCC (ID 7.1.25) | The ES is expected to incorporate provision for a Public Rights of Way Management Plan (for construction, operational and decommissioning phases). | Details of the approach to managing Public Rights of Way at all stages of the Proposed Development are set out in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]. |
| CWaCC (ID 7.1.26) | The sense of naturalness of the marsh is diluted by man-made features and development. However, the open character means there is little opportunity for screening any large scale elements or for mitigating visual impact without the mitigation measures in themselves being highly visible; making it a visually sensitive landscape. | We note CWaCC's opinion that this is a visually sensitive landscape and recognise that this is a landscape where natural and man made elements co-exist and where there are positive qualities that ought to be preserved.<br>The design of the Proposed Development has been developed with these factors in mind. As viewed from outside, the Order Limits comprise a section of relatively flat coastal land, there are actually notable variations in elevation, largely a consequence of past land-uses including the creation of the deposit grounds. As such, users of the existing public rights of way network experience contrasting levels of relative exposure and enclosure, with some areas enclosed by hedgerows, tree belts and topography, and other areas experiencing open vistas across the estuary and inland towards the distinctive elevated topography of Frodsham Hill.<br>The design of the Proposed Development, including proposed landscape mitigation has been developed with a recognition of the value of these experiential qualities and aims to balance the preservation of this mix of experiences with amelioration of views of the proposed infrastructure. As such in some places, views of infrastructure will be less comprehensively screened than they might be in order to preserve wider landscape views.<br>It is noted also that the existing landscape experience consists of a very apparent juxtaposition of natural habitats and landscape elements with uncompromising elements of large-scale infrastructure including chemical works, wind turbines, large pylons and the M56 motorway. |

| Consultee | Comment | Response |
|---|---|---|
| CWaCC (ID 7.1.27) | The LVIA and Proposed Development layout should demonstrate an iterative design process. The LVIA should assess the solar farm in operation and include proposed mitigation measures as part of the assessment.<br>Any proposed development will need to demonstrate appropriate and considered mitigation to ensure that the mitigation in itself does not negatively impact on the features of the receiving landscape character area, which make it locally distinctive. | Refer to above response.<br>The iterative approach to the design of the Proposed Development is described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]<br>The LVIA assesses likely significant operational effects with incorporated mitigation present |
| CWaCC (ID 7.1.28) | The Proposed Development should aim to minimise the use and height of security fencing. Where possible existing features, such as hedges or landscaping, should be utilised to assist in site security or screen security fencing. | Noted. Refer to **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] for details of the design of the Proposed Development. Paragraphs 2.4.152-2.4.157 discuss the proposed fencing, which would typically be 2.0m high wire-mesh deer fencing. |
| CWaCC (ID 7.1.29) | The ES should consider natural surveillance and public safety in regard to impacts on footpaths and the proposed buffer corridors as mitigation. | Noted. Refer to **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] for details of the design of the Proposed Development |
| CWaCC (ID 7.1.30) | The ES is expected to incorporate provision for a landscape management and maintenance plan as part of the mitigation. | Noted. Details of the approach taken to management and maintenance will be covered within the **outline Landscape and Ecology Management Plan** [**EN010153/DR/7.13**] ('**oLEMP**') is be submitted as part of the DCO application. |
| CWaCC (ID 7.1.31) | The ES should include provision for a decommissioning plan. | Noted. An **outline Decommissioning Management Plan** [**EN010153/DR/7.7**] ('**oDEMP**') has been included with the DCO application. |
| Canal and Rivers Trust | Potentially significant effects upon the character of the Weaver navigation and the experience of its users. A viewpoint from the Weaver Navigation should be included in the ES. Boaters should be included as receptors in the ES. There are opportunities to mitigate visual impacts via design. The landscape and visual effects of any above ground cable crossing should be considered in the ES. Consideration should be given to glint and glare effects on canal users. | Consideration of effects on waterborne receptors have been included in the LVIA. Refer to **ES Volume 2 Appendix 4-3** [**EN010153/DR/6.2**] for the Glint and Glare Assessment<br>A principal concern of CRT was the cable crossing over the Weaver Navigation and the associated pylon. These elements no longer form part of the Proposed Development. As such any visual effects upon users of the Weaver Navigation would be very limited, and no mitigation is considered necessary. |

**Table 6-4 – PEIR Consultation Response**

| Consultee / Respondent | Comment | Response |
|---|---|---|
| CPRE Cheshire | The area of the proposed development is overlooked by the Helsby and Frodsham Hills Area of Special County Value (ASCV) as identified in Policy GBC2 of the Cheshire West and Chester Local Plan (Part Two) Land Allocations and Detailed Policies.<br>Whilst the landscape setting of the application site is already affected by nearby development such as the M56, Frodsham wind farm and various industrial sites, the proposals would cause further industrialisation of this landscape.<br>This impact would arise from the very large scale and visual massing of the proposals and the possibility that the large masses of solar arrays would reflect sun towards the hills.<br>These effects would be particularly noticeable for example in the prominent views towards the site from Frodsham War Memorial and the adjacent parts of the Sandstone Ridge.<br>The proposals would therefore have a noticeable effect on the setting of the ASCV.<br>It should also be noted that the Cheshire West and Chester Landscape Sensitivity Study4 (correctly in CPRE Cheshire's view) identifies the application site as falling within an area of high sensitivity to harm from very large-scale solar farms exceeding 25 hectares.<br>The proposal would therefore conflict with Policy DM52 of the Cheshire West and Chester Local Plan (Part Two) Land Allocations and Detailed Policies, clause 3 of which states that "Proposals in areas which have been assessed as having high sensitivity to the scale of development proposed will not be permitted".<br>As noted in the consultation documents, the Cheshire Sandstone Ridge was shortlisted for potential designation as a National Landscape in 2021.<br>Whilst this designation has not been confirmed at present and the boundaries of any future designation remain uncertain, at the time of | Effects upon the Helsby and Frodsham Hills ASCV are assessed in **Section 6.8**.<br>Visual effects from Frodsham Memorial (Viewpoint 9) are assessed in **Section 6.8** and **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**].<br>The conclusions of the Cheshire West and Chester Landscape Sensitivity Study are discussed in **Section 6.6**.<br>**The** potential for designation of the Cheshire Sandstone Ridge as a National Landscape is discussed in **Table 6.3**, in **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**] and in **Section 6.6**. It was agreed with both CWaCC and Natural England that the LVIA would not require a specific assessment in relation to the draft AONB/National Landscape, but the sensitivity of the area should be recognised within the LVIA.<br><br>An appraisal of how the Proposed Development would sit in relation to local planning policy is provided in the **Planning Statement [EN010153/DR/5.6]** |

| Consultee / Respondent | Comment | Response |
|---|---|---|
| | writing it is still possible that such a designation could be made. | |
| CPRE Cheshire | Due to the landscape impacts referred to above, the proposals would also affect views for walkers using Frodsham Hill and nearby parts of the Sandstone Ridge, which constitute a much-valued amenity for local residents and visitors from a large radius in the surrounding area. We also note that the scheme includes enhanced access to the site itself via a network of permissive paths and a car park.<br>. | Visual effects from Frodsham Memorial (Viewpoint 9) and upon users of the Sandstone Trail (which runs along the Sandstone Ridge) are assessed in **Section 6.8**. Visual effects from Viewpoint 9 are also assessed in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**] |
| Environment Agency | Tree Planting (Figures 2-3 Illustrative Environmental Masterplan Sheets a, b, c, d and e) Issue Planting trees within easements of both tidal (8m) and fluvial (16m) flood assets.<br>Impact The roots of these trees have the potential to undermine the stability of flood defence assets.<br>Solution Assets will require root protection. | The easements are 8m for fluvial assets and 16m for tidal assets (i.e. the opposite of what is set out in the comment).<br>Proposed planting is shown indicatively on the **Illustrative Environmental Masterplan [EN010153/DR/6.3]** and has been kept to a minimum within the easements.<br>Where planting is required within the flood asset easements, root protection barriers will be installed, and this is set out in the **DAD** [**EN010153/DR/5.8**], in the **oLEMP [EN010153/DR/7.13]** and included within the **Outline Design Parameters [EN010153/DR/7.1]** |
| Liverpool Bay CCS | Given that the HyNet Carbon Dioxide Pipeline DCO is not anticipated to be operational prior to the commencement of the Frodsham Solar project, as outlined in Chapter 6: Landscape and Visual Amenity, LBCCS Ltd would request that the project be evaluated within the context of cumulative landscape effects | **The** HyNet Carbon Dioxide Pipeline DCO is included in the cumulative landscape and visual assessment set out in **Section 6.11**. |
| CWaCC | Consideration of landscape and visual impact<br>It is considered that the scale and size of the development will represent a significant change in local landscape character.<br>There is also considered to be a significant impact on the view from Frodsham Hill War Memorial (Viewpoint 9); a highly sensitive viewpoint locally. | The assessment of landscape and visual effects is set out in **Section 6.8,** in **ES Volume 2 Appendix 6-7** [**EN010153/DR/6.2**], and in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**] |
| CWaCC | Consideration of Green Belt policy<br>Whilst noting that under EN-1 (4.2.17) the starting point is that CNP Infrastructure will meet the test of very special circumstances to justify development in the Green Belt, the assessment of the impact of the | The Applicant notes this comment and a full assessment of impacts in relation to Green Belt planning policy, including openness, is provided in the **Planning Statement** |

| Consultee / Respondent | Comment | Response |
|---|---|---|
| | development on the openness and purposes of the Green Belt should be given full consideration.<br>Development of Frodsham Solar will be semi-permanent extending over a 40-year operational life, long after the end of the 25 year period for Frodsham windfarm, which ends on 14th February 2042 (17/00805/DIS).<br>Frodsham Solar effectively covers the major open areas between Runcorn and Frodsham.<br>The PEIR assessment is considered to underplay the effects of the proposed development in terms of Green Belt (e.g. Appendix 3-1 Table 2.1 Review of Option Areas etc.) | **[EN010153/DR/5.6]**. |
| CWaCC | 2.4.4 Comment on Design Objectives:<br>With reference to the Design Objectives, CWCC commented (e-mail 8 August 2024) on the Draft Design Objectives (March 2024), and Objective 2: Landscape and Views.<br>"An additional landscape design objectives is suggested: Mitigation - Consider, and seek to mitigate where possible, impact on the open character of the marshes and existing views within and across the marshland and wider landscape character (estuary/weaver and hills). The mitigation measures should not in itself result in landscape and visual adverse effects.<br>Consider potential impacts on the value of the landscape.<br>Consider potential cumulative landscape and visual impacts.<br>This should include an assessment of the capacity to accept change.<br>It would also be beneficial to cross reference with the Landscape Strategy for Cheshire West and Chester Borough (2016) with particular refence to LCT 2: Sandstone Ridge LCA 2a: Frodsham, and the Overall Landscape Management Strategy for LCA 2a: Frodsham Sandstone Ridge, the overall management strategy for this landscape should be to conserve the strong, prominent and simple skyline and panoramic views from the ridge.<br>Some key points are: Protect views to and from the War Memorial on Frodsham Hill, and hillforts. Maintain panoramic views from the ridge – consider opportunities to create additional viewpoints and increased opportunities for public views" | The Project Design Principles (previously referred to as Design Objectives) are set out in the **DAD [EN010153/DR/5/8].** These have been amended to reflect the first two changes suggested by CWaCC.<br><br>The third suggestion relates to assessment and not design (and thus cannot be a Project Design Principle). An assessment of cumulative landscape and visual effects is included in **Section 6.11**. A landscape capacity assessment is included in the document *Landscape Sensitivity Study and Guidance on Wind and Solar Photovoltaic Developments* published by CWaCC in 2016. This document is discussed in **Section 6.6**.<br><br>The *Landscape Strategy for Cheshire West and Chester Borough* is discussed in **Section 6.6**, including making specific reference to the stated management strategy for LCA4a where the Proposed development would be located. |

| Consultee / Respondent | Comment | Response |
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| CWaCC | "Submitted Information<br>The submitted information includes for a proposed layout plan, agreed viewpoints including several photomontages, methodology and assessment of landscape and visual impacts.<br>As noted in the documents, there has been dialogue on the application design development between CWaC and the applicants agents planning representatives, including their Landscape consultants.<br>Please see initial Landscape Scoping response attached.<br>(See Appendix 2 – Landscape Officers response to Scoping Request). | The Applicant notes this comment. The Applicant has addressed comments made in the the CWaCC Landscape scoping response as reported in **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**] |
| CWaCC | Impacts on Landscape Character<br>The solar farm development is located within CWaC LCA4a: Frodsham, Helsby and Lordship Marshes.<br>There is agreement that development would represent a moderate to major adverse effect upon landscape character during the construction phase, for which the effects would be significant.<br>There is also agreement that the impacts on the landscape character are reversible, however the proposed 40 year development period cannot be considered temporary.<br>In regard to existing landscape features and proposed mitigation, such as trees, hedges, ditches and ponds, it is understood that these features will be largely retained and enhanced, however the scale and size of the development will represent a significant change in local landscape character. | The Applicant notes this comment |
| CWaCC | Visual impacts<br>29 viewpoints have been submitted in support of the application which include views from within the site and surrounding to the site.<br>5 viewpoints include for photomontages which are very helpful in understanding the magnitude of change. | The Applicant notes this comment |
| CWaCC | Viewpoint Nr 9: Frodsham Hill War Memorial.<br>The assessment is considered to underplay the effects of the proposed development. There is agreement that the sensitivity is high for which the views available will be amongst the main reasons for any visit to the listed monument. There is also agreement that the view is expansive and that the existing view is influenced by industry and infrastructure. Furthermore, from viewing the proposed photomontage, the nature of the solar development in context to the Mersey Estuary could be considered to visually correlate and represent a visual extension of the Estuary.<br>The view from this location is panoramic; however, the size and scale | Visual effects from each LVIA Viewpoint are assessed in **Section 6.8 [EN010153/DR/6.1]** and in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**].<br>We are content that the conclusions made in respect of visual effects at Viewpoint 9 are robust and stand up to scrutiny. Viewpoint 9 has not been underplayed. The quite unique nature of this viewpoint needs to be taken into account – adynamic and exhilarating prospect point that is similar in some ways to a mountain summit, but which is close to the town and easily reached by a short walk from a carpark. The 'birds eye' view that the viewpoint provides looks down on the people of the region |

| Consultee / Respondent | Comment | Response |
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| | of the visual impacts cannot be considered small to medium, nor can they be fully mitigated. Albeit reversable, the duration of 40 years is long term, the angle, distance and the extent of the impacted view is direct from the listed monument.<br>As such the magnitude of change cannot be considered small to medium. Given the high sensitivity of this viewpoint, the high local value, the high magnitude of change, the assessment evaluation of Moderate/ Non-significant is considered to underplay the level of significance of effect. Irrespective of any correlation to the Mersey Estuary, the impact from this highly valued viewpoint is considered significant.<br>In assessment of our findings, I have referred to the Methodology Chapter 6 Appendix 6.1, Figure 2 – Level of Effect Matrix (indicative). In regards to viewpoints from within the site, there is agreement that for viewpoints 17,18,20,21,23 and 25 the impacts will be significantly adverse at construction stage. There are concerns in regards to views from year 10, and how the mitigation planting will affect the viewpoint as demonstrated on photomontage Nr 25, whereby the mitigation will in itself enclose and screen any long distance views, including views towards the sandstone ridge.<br>For the viewpoints Nr 6 and 26 taken from the park near St Laurence Church, the assessment of moderate/ non-significant is considered underplayed.<br>I look forward to receiving the photomontage from VP 26, which is positioned on higher ground from within the park. Finally, it appears unusual that the LVIA conclusion (6.12) makes no reference to the impacts from the Frodsham War Memorial.<br>Given the local value and sensitivity of this viewpoint, this is considered both disconcerting and misleading in regard to providing an assessment of the Landscape and Visual Impacts." | going about their lives – in planes, trains and automobiles and in the houses in the suburbs of Frodsham. The estuary and wider landscape are visible alongside strongly expressed industry and infrastructure. It is this composition of elements which we say will only be subject to a small to medium degree of change as a result of adding the Proposed Development. Whilst it is true to say that the appearance of part of the view would change as a result of adding the proposed solar arrays, the reality is that the nature of the landscape experienced in the view would remain essentially the same.<br><br>The **DAD [EN010153/DR/5.8]** and the **oLEMP [EN010153/DR/7.13]** state that the proposed tree and shrub belts will includes gaps and areas of less dense planting in order to maintain longer range views. The photomontages produced from Viewpoint 25 reflect this.<br><br>**Section 6.12** has been amended to make reference to views from Frodsham War Memorial. |
| CWaCC | Other additional viewpoint information In addition to the Landscape Officers comments above, clarification would be welcome that the photomontage views (especially Figure 6-37ii Viewpoint 9: Frodsham Hill War Memorial is illustrative of the 'worst case' solar panel colour (2.4.26 – typically dark blue, dark grey or black).<br>An as built photograph of a comparable solar farm using black solar panels from an equivalent long-range viewpoint would assist.<br>It would also be beneficial to add a couple of new viewpoints along | The LVIA has been undertaken to reflect a worst case basis, assuming black panels. The **ES** includes information regarding the landscape and visual implications of different panel colours.<br><br>Additional assessment of effects on users of the M56 is set out in **Section 6.9** and **ES Volume 2 Appendix 6-9** Section 6.8 **and** [**EN010153/DR/6.2**]. The approach to this was agreed with CWaCC by exchange of emails in January 2025. |

| Consultee / Respondent | Comment | Response |
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| | the motorway as part of the assessment.<br>One from travelling in each direction. | |

**Table 6-5 – Other Engagement Activities**

| Consultee | Comment | Response |
|---|---|---|
| CWaCC | A meeting was held with CWaCC officers in September 2023 which included discussion of the LVIA and the landscape design of the Proposed Development, followed by submission to CWaCC of a Technical Note (**ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]) and proposed viewpoint photography. The purpose of the meeting was to discuss matters raised by CWaCC in their scoping response, and to introduce the masterplan for the Proposed Development | Various matters were agreed verbally, with the intention that CWaCC would provide a formal written response to the Technical Note.<br>CWaCC confirmed agreement of viewpoint locations proposed, and requested one further location from the public open space close to St Laurence's Church, Frodsham. |
| CWaCC | A further meeting was held with CWaCC officers in April 2024, which focussed principally on landscape design issues. An updated Technical Note (**ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]) was submitted to CWaCC following the meeting. | An informal written response to the Technical Note was received from CWaCC in August 2024. This forms the basis of **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**] (with some minor edits to reflect the context of the ES Volume 2 Appendix as an ES document) |
| CWaCC | A design workshop meeting was held with CWaCC officers in January 2025. Matters relating to access, signage to discourage antisocial behaviour, solar panel colour and maintenance were discussed. | Matters raised in the meeting have been addressed within the design where possible. The approach to the design is described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] and the **DAD** [**EN010153/DR/5.8**].<br>The visual effects of the solar panels have been assessed on the basis that they would be black in colour as a worst case. |
| CWaCC | A Technical Note was submitted to CWaCC in February 2025 to seek agreement that the proposed increase in height of the solar PV modules from 3.5m to 4m did not result in any material difference to conclusions made in the PEIR regarding the landscape and visual effects of the Proposed Development. | The Technical Note is included as **ES Volume 2 Appendix 6-11** [**EN010153/DR/6.2**].<br>CWaCC confirmed in an email dated 05 Mar 2025 that they were happy that the changes would have no material effect upon conclusions made regarding landscape and visual effects. |
| CWaCC | CWaCC requested that the assessment of cumulative landscape and visual effects give consideration to the EIA Screening stage solar proposal at Gowy Landfill. | This scheme is considered in **Section 6.11** |
| Natural England | Agreement was sought with Natural England to confirm the approach to addressing the potential future designation of the Cheshire Sandstone Ridge as an AONB/National Landscape | Natural England confirmed that they were happy with the proposed approach. |
| Canal and Rivers Trust | Agreement was sought with the Canal and Rivers Trust as to how the LVIA would address effects upon the Weaver Navigation and its users, and particularly to agree viewpoint locations along the canal corridor | Three viewpoints located along the canal corridor were identified for inclusion in the LVIA, to act as proxies for boat users along the canal itself (Viewpoints 27-29). |

## 6.5 Assessment Methodology

### *Study Area*

6.5.1 The curvature of the earth and the refraction of light through the atmosphere influence what can be seen from any given location. Guidance produced by NatureScot (formerly Scottish Natural Heritage)[xix] in relation to wind farm visualisations, includes a formula that can be used to determine visibility in a flat landscape, as follows:

$$h = \frac{c^2(1-2\mathrm{k})}{2\mathrm{r}}$$

where: *h* is the height correction in metres;

*c* is the distance to the object in metres;

*k* is the refraction coefficient (NatureScot state 0.075 as a reasonable average);

*r* is the radius of the Earth in m (NatureScot state 6,367,000 m).

6.5.2 Using the formula above, it can be determined that in a flat landscape a 3.5 m high solar panel would not be theoretically visible beyond approximately 7.24 km when viewed from a similar elevation, although they may potentially be visible when viewed from different elevations.

6.5.3 The nature of the landform surrounding the Solar Array Development Area is such that elevated views are available from locations to the south, including from Frodsham Hill and Helsby Hill. The nature of the elevated landform to the south is such that it prevents any views from points further to the south.

6.5.4 Further analysis was undertaken of the context into which the Proposed Development would be introduced, informed by desktop review, field visits undertaken in 2022, 2023, 2024 and 2025, the assessor's experience of other solar farm development proposals in other parts of the UK, and the assessor's experience of other development proposals located on Frodsham and Helsby Marshes.

6.5.5 Given the pattern of surrounding landform, which encloses Frodsham and Helsby Marshes to the south, and the presence of extensive built development, including a series of major infrastructure developments (refer to **Section 6.6** for a description of the surrounding context into the which the Proposed Development would be introduced), it is clear that more distant views of the Proposed Development would be very unlikely to give rise to significant landscape and visual effects.

6.5.6 As such, the Study Area for the LVIA extends for approximately 5km from the Solar Array Development Area (extended slightly to include the entire length of the Main Site Access – which is an existing feature) and is illustrated on **ES Volume 3 Figures 6-1 to 6-4j** [**EN010153/DR/6.3**]. The Study Area includes all the elements that would make up the Proposed Development and is considered sufficient to capture all likely significant landscape and visual effects that may arise from their presence.

6.5.7 The ZTVs shown on **ES Volume 3 Figures 6-4a to 6.4j** [**EN010153/DR/6.3**] extend beyond the extent of the Study Area, illustrating areas which may experience a visual effect that is not significant, reflecting good practice in the presentation of such information.

### *Scope of Assessment*

#### *General*

6.5.8 The scope of the LVIA reflects that proposed in the Scoping Report, modified as necessary to take into account the outcomes of the post-scoping consultation reported in **Section 6.4**.

6.5.9 The LVIA assesses the landscape and visual effects which could arise from the following:

i) the introduction of new solar PV modules and frames, the BESS, the Frodsham Solar Substation, the SPEN Grid Connection, the Main Site Access, the NBBMA, the Skylark Mitigation Area, and associated

infrastructure, which would result in direct change to the physical landscape fabric of the Order Limits.

ii) views of these elements from the surrounding area, effects on the visual amenity of local residents in their properties, users of the public rights of way network (including where routes run through the Order Limits), road users, and waterborne receptors including users of the Weaver Navigation.

iii) the influence of these elements upon the character of the surrounding landscape, with potential changes in the characteristics of those LCAs where visibility is predicted.

iv) the influence of these elements upon the identified purposes/qualities of non-statutory landscape designations, with reference to the planning policies that underpin these and any further supporting studies.

v) the visual influence of these elements upon the openness of the Green Belt.

vi) the influence of glint and glare from the proposed solar PV modules.

vii) temporary activities associated with the construction of the Proposed Development, including temporary land take, any improvements required along the route of the Main Site Access, construction of the grid connection and the private wire connection, and the temporary presence of construction plant.

viii) temporary activities associated with the decommissioning of the Proposed Development.

6.5.10 As set out in the Scoping Report and/or as agreed during post-scoping consultation (as discussed in **Section 6.4**), the following matters have been scoped out of the LVIA.

i) Effects on statutory landscape designations.

ii) Effects on National Character Areas (NCA).

iii) Assessment of night-time landscape and visual effects.

iv) Residential visual amenity assessment (RVAA).

v) Effects on the potential future National Landscape on the Cheshire Sandstone Ridge.

*Glint and Glare*

6.5.11 A Glint and Glare Assessment is provided at **ES Volume 2 Appendix 4-3: Glint and Glare Assessment** [**EN010153/DR/6.2**]). The findings of this are reported in **Section 6.8**, and a conclusion made regarding any implications in relation to the visual effects of the Proposed Development.

6.5.12 Potential glint and glare effects are caused by the reflection of sunlight from Solar PV Modules and how this may affect receptors that have views of this. These effects can typically only affect receptors located in the direction that the Solar PV Modules are facing. As such, glint and glare effects would not affect receptors located to the north of the Solar Array Development Area who would not have views of the faces of the Solar PV Modules, and these receptors (including users of the Weaver Navigation) are not considered in **ES Volume 2 Appendix 1-1** [**EN010153/DR/6.2**].

*Residential Visual Amenity*

6.5.13 The purpose of RVAA is to consider how the change in view resulting from the presence of the Proposed Development would impact upon the visual component of residential amenity (as distinct from other aspects such as noise) of nearby properties and whether the likely significant effects would affect living conditions.

6.5.14 In the Scoping Opinion (**ES Volume 2 Appendix 1-2** [**EN010153/DR/6.2**]) a request was made by both PINS and CWaCC that RVAA should be included in the LVIA. CWACC's comment was based upon potential glint and glare effects, reflecting the initial Glint and Glare Assessment that formed part of the Scoping Report (**ES Volume 2 Appendix 1-1** [**EN010153/DR/6.2**]).

6.5.15 In relation to RVAA, as part of post-scoping consultation held with CWaCC, it was agreed that the LVIA should provide justification as to why this should be

scoped out of the assessment. This is discussed further below and in **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**].

6.5.16 Paragraph 6.17 of the GLVIA is clear that:

*"…Effects of development on private property are frequently dealt with mainly through 'residential amenity assessments'. These are separate from LVIA although visual effects assessments may sometimes be carried out as part of a residential amenity assessment in which case this will supplement and form part of the normal LVIA for a project…"*

6.5.17 The key consideration in relation to RVAA is set out in paragraph 2.1 of TGN 02/19, derived from the judgements reached at a number of public inquiries and reflecting the factors needing to be weighed in the planning balance when considering the difference between significant visual effects and unacceptable effects on residential amenity. The key consideration is:

*"Is the effect of the development on Residential Visual Amenity of such nature and/ or magnitude that it potentially affects living conditions' or Residential Amenity?"*

6.5.18 This is referred to as the Residential Visual Amenity Threshold (RVAT).

6.5.19 The relevant consideration for the LVIA is whether or not the RVAT would be exceeded at any property as a result of the Proposed Development.

6.5.20 In relation to the Proposed Development, the new structures proposed would be relatively low in height, would be separated from most of the nearby residential properties by a busy motorway, by a line of large electricity pylons and by vegetation cover which extends (with gaps) across the land between the motorway and the edge of Frodsham.

6.5.21 Two residential caravan sites are also located off Brook Furlong to the north-west of Frodsham (north of the M56). These lie adjacent to the Order Limits. Both sites have been developed without planning permission. In September 2022 CWaCC took enforcement action against the southerly of the two sites,

requiring the cessation of the residential use of the Site, and that all unauthorised development is removed and the area restored to grassland. At the same time planning applications for the two sites were submitted to CWaCC (ref 22/03308/FUL & 22/02292/FUL) for change of use of the land to a residential caravan site. An appeal against the enforcement notice was submitted by the occupants of the Site. On 26th July 2024 the Inspector appointed for the appeal upheld the enforcement notice and planning permission 22/03308/FUL was refused. At the time of writing, both of the caravan sites remain in use. As a precautionary approach, the LVIA treats these two Sites as residential properties.

6.5.22 **ES Volume 2 Appendix 6-4** [**EN010153/DR/6.2**] includes plans and photographs illustrating the disposition of nearby properties, and/or the existing visual relationship between these and the Solar Array Development Area, and the limited potential for change in view to result in effects on amenity.

6.5.23 Any view of the Proposed Development from any nearby property south of the M56 would occur in a context where existing pylons and motorway traffic are already visible, and where some degree of screening by vegetation is typically present. Potential effects arising from glint and glare would be mitigated against via new planting and the use of antireflective coating on the Solar PV Modules.

6.5.24 The residential caravans on the northern site of the motorway are located between the pylons and the road and would also benefit from screening provided by existing vegetation.

6.5.25 In this context, whilst there may be views of the Proposed Development from some properties, it is clear that visual change would not occur to such a degree that the living conditions of residents would be affected to the degree that any property would become an unattractive and unsatisfactory place (but not necessarily uninhabitable) place to live. The RVAT would not therefore be breached.

6.5.26 As such, it is justifiable and reasonable that RVAA be scoped out of the LVIA, as proposed in the Scoping Report, and reflecting the approach subsequently agreed with CWaCC.

### *Assessment Methodology*

6.5.27 The overarching methodology followed in the ES is set out in **ES Volume 1 Chapter 5.0** [**EN010153/DR/6.1**].

6.5.28 LVIA is a tool used to systematically identify and assess the nature and significance of the effects of a proposed development upon the landscape and upon views and visual amenity. The purpose of the LVIA is to identify the level and nature of effect arising from a proposed development and if necessary, through an iterative design process, to inform changes to the development and evolution of mitigation strategies which minimise effects wherever possible.

6.5.29 As noted in **Section 6.2**, this LVIA has followed a methodology which has been developed using the published good practice guidelines set out in the GLVIA. The detailed methodology followed in undertaking the LVIA is set out in **ES Volume 2 Appendix 6-1** [**EN010153/DR/6.2**]. The methodology set out in **ES Volume 2 Appendix 6-1** [**EN010153/DR/6.2**] has been amended from that included in the Scoping Report to incorporate guidance set out in *An Approach to Landscape Sensitivity Assessment – to inform spatial planning and land management* and in TGN 02/21 relating to the factors affecting the susceptibility of the landscape to change and landscape value, and also amended to provide clarity as to how the duration and reversibility of change have little bearing upon the likely significant operational effects of the Proposed Development.

6.5.30 The LVIA establishes the following:

i) A clear understanding of the Order Limits and their context, in respect of the physical and perceived landscape and of views and visual amenity.

ii) An understanding of the proposed development in terms of how this would relate to the existing landscape and views.
iii) An identification of the likely significant effects of the Proposed Development upon the landscape and upon views, throughout its life-cycle, including cumulative effects with other consented and proposed developments.
iv) Those mitigation measures necessary to reduce or eliminate any likely significant adverse effect on the landscape or views arising as a result of the Proposed Development.
v) A conclusion as to the residual likely significant effects of the Proposed Development.

6.5.31 In accordance with the requirements of GLVIA, the LVIA is proportionate to the likely significant effects of the Proposed Development.

6.5.32 Given the generally qualitative nature of landscape and visual effects, professional judgement is a very important part of the LVIA process at every stage of the assessment. This judgement is exercised within an assessment framework that transparently sets out the steps in the assessment process which have led to the overall conclusions.

6.5.33 To ensure the transparency of the assessment and judgements made, the LVIA process follows a standard approach, namely:

i) The establishment of the baseline conditions against which the effects of the Proposed Development will be assessed.
ii) The determination of the nature of the receptor likely to be affected, i.e. its sensitivity.
iii) The prediction of the nature of the effects likely to occur, i.e. the magnitude of impact/change.
iv) An assessment of whether a likely significant effect would be experienced by any receptor, by considering the predicted magnitude of change together with the sensitivity of the receptor, taking into account any proposed mitigation measures.

6.5.34 A separate methodology describing how visualisation material has been produced is set out in **ES Volume 2 Appendix 6-2** [**EN010153/DR/6.2**].

### *Assessment of Significance / Assessment Criteria*

6.5.35 As described above, the landscape and visual effects of the Proposed Development have been determined by consideration of the predicted magnitude of change together with the sensitivity of the receptor, taking into account any proposed mitigation measures. **ES Volume 2 Appendix 6-1** [**EN010153/DR/6.2**] includes details of the criteria used to determine the sensitivity of each receptor and the magnitude of change that would occur upon each receptor.

6.5.36 The purpose of Environmental Impact Assessment (EIA) is to determine the likely significant effects of a development proposal. Not all landscape and visual effects arising as a result of a particular proposal will be significant. It should be noted that there is no statutory definition of what constitutes a significant effect and there is often not a single, definitive answer as to whether an effect is significant or not. However, it is considered that a significant effect is one which is likely to be a material factor in the decision-making process. Professional judgement is used to determine whether an effect on a specific receptor is significant or not, and this reflects the circumstances of the receptor in question.

6.5.37 Where a significant effect is identified, this does not necessarily mean that such an effect is unacceptable to decision-makers. The acceptability or otherwise of effects is a matter to be weighed in the planning balance alongside other factors. What is important is that the likely effects of any proposal are transparently assessed and described in order that the relevant determining authority can bring a balanced and well-informed judgement to bear as part of the decision-making process.

6.5.38 The judgement for this LVIA is that greater than ‘moderate’ effects are more likely to be significant. This is because they would generally result from larger

magnitudes of change on higher sensitivity receptors. This does not preclude a 'moderate' effect or lower being significant or a greater than 'moderate' effect not being significant. This judgment will depend on the specific circumstances being considered. The methodology for the LVIA is informed by guidance contained within the GLVIA. Refer to **ES Volume 2 Appendix 6-1** [**EN010153/DR/6.2**] for further details regarding the assessment of significance of effect, and as to how judgements relating to significance have been made in this LVIA.

## 6.6 Baseline Conditions

### *Data Sources*

6.6.1 Baseline data for the LVIA has been gathered by both desk and field-based surveys. These have included review of extant landscape character assessment studies (see below) and field work to gain an understanding of the landscape and visual context of the Order Limits.

6.6.2 Field visits to the Order Limits and the surrounding area were made in July 2022, April 2023, March 2024, July 2024 and February 2025.

### *The Order Limits and its Surroundings*

6.6.3 The location of the Order Limits is illustrated on **ES Volume 3 Figure 1-1** [**EN010153/DR/6.3**] and on **ES Volume 3 Figures 6-1** *to* **6-5e** [**EN010153/DR/6.3**]. The majority of the Order Limits comprises the Solar Array Development Area, the location of which is also illustrated on **ES Volume 3 Figure 1-2** [**EN010153/DR/6.3**]. The surrounding area is described in more detail in **ES Volume 1 Chapter 1** [**EN010153/DR/6.1**].

6.6.4 In the eastern half of the Solar Array Development Area (i.e. to the east of Brook Furlong (refer to **ES Volume 3 Figure 1-4** [**EN010153/DR/6.3**] for location)), fields tend to be enclosed by dense hedgerows and tree belts. In the western half of the Solar Array Development Area, the landscape is more open and elevated and is in large part situated on man-made deposit grounds. The proposed Main Site Access follows existing private roads and tracks that run across the marshes from the west, sections of which are designated as public rights of way. The majority of the Main Site Access is also used as the access road for Frodsham Wind Farm. Turbines forming the eastern cluster of Frodsham Wind Farm are located within the Solar Array Development Area. Two overhead electricity lines (the SPEN 132kV OHL and the NG 400kV OHL) run through the Solar Array Development Area, and several pylons are located within the Order Limits.

6.6.5 The landform is relatively flat and low-lying, although with some locally notable variations in ground elevation. Engineered embankments are present at the northern boundary of the Solar Array Development Area, where this adjoins the River Weaver and the Manchester Ship Canal. Within the Solar Array Development Area, areas of raised ground are present at the Manchester Ship Canal Deposit Ground (where dredgings from the Manchester Ship Canal have been deposited). Immediately adjacent to the eastern part of the Solar Array Development Area, but outside of the Order Limits is another area of raised ground at the INEOS Inovyn Deposit Ground (where dredgings from the River Weaver have been deposited).

6.6.6 Several Public Rights of Way (PRoW) run through the Order Limits (refer to **ES Volume 3 Figure 1-5** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-5e** [**EN010153/DR/6.3**] for locations), connecting with the town of Frodsham to the south, and with the settlement of Ince and other parts of the marshes to the west. These routes are accessible from Frodsham via overbridges that cross the M56 motorway and from an underpass of the M56 alongside the River Weaver. The Frodsham Neighbourhood Plan (FNP) identifies local green spaces within Frodsham, including the Saltworks Play and Recreation Area ('the Saltworks'). In the FNP, the Saltworks is shown as extending along both sides of the M56 and overlaps with part of the easternmost extents of the Solar Array Development Area. However, all the play and recreation areas are on the southern side of the motorway and outside of the Site.

6.6.7 The nearest properties to the Solar Development Array Area are at two residential caravan sites located off Brook Furlong to the north-west of Frodsham (approximately 100m north of the M56). Both caravan sites sit immediately alongside the Order Limits, separated from it by established hedgerow vegetation. Electricity pylons and a telecommunications mast are located in close proximity to the caravan sites.

6.6.8 The next nearest properties to the Solar Development Array Area are at the edge of Frodsham, approximately 150m to the south at the closest point. The M56 motorway runs between Frodsham and the Solar Array Development

Area, approximately 25m from the nearest properties. Vegetation cover of varying height at the edge of town and along both sides of the motorway limits views northwards to varying degrees.

6.6.9 Frodsham is a largely north-facing settlement parts of which overlook the Mersey Estuary, and as such there are views towards the Order Limits from some parts of the town, notably from more elevated locations.

6.6.10 The town of Helsby, located further to the south-west is similarly situated on a north-facing hillside, with views towards the Order Limits from elevated locations also available from some areas.

6.6.11 Frodsham Hill and Helsby Hill are well known vantage points where expansive views over the Mersey Estuary are available.

6.6.12 The marshes alongside the Mersey Estuary, are influenced by a variety of different types of infrastructure development, both within the marshes themselves, and on the adjacent higher ground. The M56 motorway runs east to west along the edge of the rising ground at the southern edge of the marshes and is a dominant element which effectively severs the marshes from the land further south. Frodsham Wind Farm and a series of electricity pylons provide tall focal points. An extensive area of uncompromising industrial development occupies rising ground to the north and east of the River Weaver at the edge of Runcorn including the INEOS Inovyn Runcorn Site.

6.6.13 Further development in the marshes is located to the west of Frodsham Wind Farm and this includes large scale industrial and infrastructure development at Stanlow Oil Refinery, the former CF Fertilisers Plant, Encirc Glass, and a series of facilities at Protos (some existing, some under construction, with further development proposed), notably Ince Bio Power and the Protos

Energy Recovery Facility ('Protos ERF')[3], both of which include large scale buildings and tall stacks. The route of the Main Site Access for the Proposed Development follows existing access roads which already service some of this existing development (including Frodsham Wind Farm). The DCO for the HyNet Carbon Dioxide Pipeline has been approved, and this pipeline which would run west from the vicinity of Protos towards the Irish Sea is anticipated to be operational before construction work for the Proposed Development commences.

6.6.14 A series of long-distance paths and other recreational routes run through the Study Area (refer to **ES Volume 3 Figure 2-4** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-5e** [**EN010153/DR/6.3**]). National Cycle Route 5 (NCR5) runs through Frodsham Marshes, along a section of the Main Access Route and then skirts the Order Limits before running through the northern edge of Frodsham. Within the town, NCR5 connects to the Sandstone Trail and Eddisbury Way long-distance paths. The North Cheshire Way long-distance path runs across Frodsham Hill and connects with the Sandstone Trail. A route called the Cheshire Circuit follows existing public rights of way which run along the River Weaver before looping back through the Order Limits and into Frodsham. Each of these routes are far longer in total length than indicated on the **ES Volume 3 Figures** [**EN010153/DR/6.3**].

### *Designations*

#### *Statutory Landscape Designations*

6.6.15 The nearest statutory landscape designation to the Order Limits is the Clwydian Range and Dee Valley National Landscape, located over 26.5km to the south-west of the Order Limits. This is well outside the extents of the proposed Study Area for the LVIA, and the Proposed Development would not be visible from within the designation. As stated in **Section 6.5**, consideration

[3] The Protos ERF was in the later stages of construction at the time of writing, with the principal structures largely complete.

of effects on statutory landscape designations has been scoped out of the LVIA.

*Non-statutory Landscape Designations.*

6.6.16 CWaCC maintain a non-statutory Area of Special County Value (ASCV) designation, which is supported by local planning policy (see **Section 6.2** above).

6.6.17 The Weaver Valley ASCV is located approximately 930m south-east of the Solar Array Development Area at the closest point (with the Order Limits extending to the ASCV boundary along the access track to the SPEN Frodsham Substation).

6.6.18 The Helsby and Frodsham Hills ASCV is located approximately 1.06km south of the Order Limits at the closest point (and approximately 1.07km from the Solar Array Development Area). The locations of both ASCVs are illustrated on **ES Volume 3 Figures 6-3a** and **6-3b** [**EN010153/DR/6.3**].

6.6.19 *Local Landscape Designations: Areas of Special County Value in Cheshire West and Chester*[xx] (2017) is the document that underpins the ASCV designation and provides a Statement of Importance and details of landscape qualities for each ASCV.

6.6.20 The panoramic views across the Mersey Estuary from locations towards the northern edge of the Helsby and Frodsham Hills ASCV including Helsby Hill and the Frodsham War Memorial are cited and are of particular relevance to the LVIA. The document uses a photograph from Frodsham War Memorial looking over the Order Limits towards the industrial development at Runcorn to illustrate these views, which shows broadly the same view as that illustrated on **ES Volume 3 Figure 6-14**.

*Potential Future National Landscape*

6.6.21 In 2021, the Cheshire Sandstone Ridge was shortlisted for potential designation as an AONB. AONBs were renamed as National Landscapes in

2023. As reported in **Section 6.4**, post-scoping consultation held with CWaCC and Natural England confirmed that proposals to designate were at an early stage, with no draft special qualities or draft management plan available.

6.6.22 It was agreed that given the lack of formal designation and the absence of information regarding the details of potential designation that no assessment of effects upon the potential National Landscape needed to be included in the LVIA. However, the sensitivity of the Cheshire Sandstone Ridge would be recognised with all judgements in the LVIA made with an acknowledgment that the Cheshire Sandstone Ridge is a landscape that is potentially suitable for statutory protected status.

6.6.23 For the purposes of the LVIA it has been assumed that the extent of the potential designation is equivalent to that of the Helsby and Frodsham Hills ASCV (refer to **ES Volume 3 Figure 6-3b** [**EN010153/DR/6.3**] for location).

*Green Belt*

6.6.24 Much of the Study Area, including the Solar Array Development Area and much of the Main Site Access, lies within the Green Belt (refer to **ES Volume 3 Figures 6-3a** and **6-3b** [**EN010153/DR/6.3**] for location). Green Belt is not a landscape designation, but effects on the openness of the Green Belt (an important planning consideration) can be influenced by visual effects. As such, the visual effects upon the openness of the Green Belt are considered in the LVIA, in order to inform wider planning judgements.

*Mersey Forest*

6.6.25 The Mersey Forest is a Community Forest set up in 1991 to provide a network of woodland and green spaces across Merseyside and Cheshire. It covers the entirety of the Study Area illustrated on **ES Volume 3 Figures 6-1** to **6-4j** [**EN010153/DR/6.3**].

6.6.26 The *Mersey Forest Plan*[xxi] (2014) provides the long-term strategic guide to the work of the Mersey Forest team and their partners. It recommends that in the area that the Order Limits is located there should be no net change in woodland cover, noting on page 71:

*"Drained marshes, mudflats and saltmarshes of Frodsham Marsh, the Lache Eyes, Ince Banks and Dee Estuary: Woodland planting is inappropriate. Safeguard the open nature of these designated areas and manage hedgerows"*.

### *Landscape Character Assessment and related studies*

#### *National Landscape Character*

6.6.27 At a national level, 159 NCAs have been identified by the former Countryside Commission (now Natural England).

6.6.28 Most of the Order Limits is located within NCA60: Mersey Valley. The western end of the Main Site Access is located within NCA61: Shropshire, Cheshire and Staffordshire Plain. That part of the Study Area to the south and south-west of Frodsham and Helsby is located within NCA62: Cheshire Sandstone Ridge. Descriptions of each NCA are available on the Natural England website[xxii].

6.6.29 These NCAs provide background and context to more detailed landscape character assessments produced at county and district levels. Their broad geographic reach means that the key characteristics identified as typical of a particular NCA may not necessarily apply to a specific location within that NCA. **ES Volume 2 Appendix 6-5** [**EN010153/DR/6.3**] summarises the key characteristics and other relevant information for each NCA within the Study Area.

*Local Landscape Character*

*Cheshire West and Chester*

6.6.30 A *Landscape Strategy for Cheshire West and Chester Borough*[xxiii] (2016) ('CWaCC Landscape Strategy') describes and classifies the landscape of the CWaCC area. Urban areas are excluded. The Order Limits is located almost entirely within LCA 4a: Frodsham, Helsby and Lordship Marshes. The western end of the Main Site Access extends into LCA 9a: Dunham to Tarvin Plain.

6.6.31 A full list of CWaCC LCAs within the Study Area is set out below, with locations illustrated on **ES Volume 3 Figures 6-3a** and **6-3b** [**EN010153/DR/6.13**]. **ES Volume 2 Appendix 6-5** [**EN010153/DR/6.2**] summarises the key characteristics and other relevant information for each LCA:

i) 2a: Frodsham.
ii) 2b: Helsby Hill.
iii) 3a: Helsby to Tarporley Sandstone Fringe.
iv) 4a: Frodsham, Helsby and Lordship Marshes.
v) 5b: Frodsham to Northwich.
vi) 5f: Helsby to Frodsham.
vii) 8a: Aston.
viii) 9a: Dunham to Tarvin Plain.
ix) 15c: Lower Weaver Valley.
x) 16a: Stanlow and Ince Banks.

6.6.32 LCA4a is where direct post-construction change in the landscape would occur and hence is the most relevant LCA for the LVIA. The CWaCC Landscape Strategy identifies key characteristics, key sensitivities, qualities and values, forces for change and management guidelines for LCA4a. These are listed in full in **ES Volume 2 Appendix 6-5** [**EN010153/DR/6.3**].

6.6.33 Key perceptual/visual sensitives, qualities and values for LCA4a are:

i) The flat landform and long views contribute to the perception of a large scale, exposed landscape.
ii) Presence of man-made embankments foreshorten views to the north across the Mersey Estuary.
iii) Important views to and from the Frodsham Sandstone Ridge and Helsby Hill.
iv) The consistent field pattern through planned enclosure gives the perception of a reclaimed, tamed landscape.
v) Vegetation-fringed ditches and rough ground and lagoons provide texture in the landscape.
vi) Parts of the marsh are remote, but the presence of traffic on the M56 motorway brings noise and movement to the area; the presence of birds and proximity to John Lennon Airport also contribute to noise and movement.
vii) Sense of naturalness of the marsh is diluted by man-made features and development.
viii) No prominent skyline, but embankments, pylons and industrial development are visually prominent.
ix) The open character means there is little opportunity for screening any large-scale elements or for mitigating visual impact without the mitigation measures in themselves being highly visible - making it a visually sensitive landscape. There are relatively few sensitive visual receptors in the area, limited to a few residential properties and users of the PRoW network, but in adjacent areas overlooking the marsh there are views from Frodsham and Helsby as well as visitors to the viewpoints at the top of Helsby Hill and the War Memorial above Frodsham.

6.6.34 The landscape condition of LCA 4a is identified as follows:

"*Although much of the area is actively farmed, the degraded hedgerows and broken fencing shows this to be a landscape in need of improved management. Some land to north of Lordship Lane remains in use for canal dredgings and has undergone change as a result of the preliminary works for*

*the permitted windfarm. Wet grassland species have been lost and ditches are eutrophic as a result of the intensive agricultural use of the land*".

6.6.35 The overall management strategy for LCA4a is:

"…*to enhance and restore the conditions of habitats and features of the marshes whilst safeguarding its open character*"

6.6.36 More detailed guidelines for landscape management and for built development within LCA4a are:

i) Encourage recreational development as a means of managing some of the more derelict and degraded areas of the landscape. Encourage use of the area by walkers, cyclists, rowers and horse riders (including provision of picnic facilities and viewing opportunities) whilst safeguarding the nature conservation interest of the area, particularly its importance for birds.
ii) Maintain the distinctive field pattern that reveals the planned 19th century enclosure of the marsh.
iii) Seek to restore thorn hedgerows that are falling into decline.
iv) Maintain and ecologically enhance the ditch system and riparian habitats and land supporting breeding, over wintering and passage birds. Seek opportunities to re-create habitats such as species rich grassland and reed beds.
v) Increase the biodiversity of intensively managed grassland and arable land – create and link buffer strips along linear features such as hedgerows and ditches to create a continuous network of wildlife corridors.
vi) Improve water quality by encouraging less-intensive agricultural practices to reduce fertiliser run-off and nutrient levels in the ditches.
vii) Encourage restoration of derelict industrial land including re-creation of salt-marsh and reintroduction of grazing to maintain the open character of the marsh.
viii) Consider opportunities to create views across the Mersey Estuary.

ix) Conserve the 'remote' character of the marshes away from the main transport corridor of the M56.

x) Retain the open character of the marsh by restricting planting to low growing scrubby species typically found in the local landscape, taking into account the importance of the area for ground nesting birds and wintering/passage birds. Woodland planting /screening using tall or ornamental species is not appropriate in the open marsh.

xi) Conserve the remaining open, undeveloped areas of the marsh.

xii) Consider using native scrubby vegetation to screen views of traffic on the north side of the M56 motorway (taller species may be appropriate on the southern side of the motorway adjacent to the Helsby to Frodsham Undulating Enclosed Farmland).

xiii) Consider views to and from the Frodsham Sandstone Ridge and Helsby Hill when planning any change.

*Halton*

6.6.37 The *Halton Landscape Character Assessment*[xxiv] (2009) identifies LCAs within Halton. Those within the Study Area are set out below, with locations illustrated on **ES Volume 3 Figures 6-3a** and **6-3b** [**EN010153/DR/6.3**]. **ES Volume 2 Appendix 6-5** [**EN010153/DR/6.2**] summarises the key characteristics and other relevant information for each LCA within the Study Area:

i) 3: Moore Village and Keckwick Brook Valley.

ii) 4: Upper Mersey Estuary.

iii) 5: Norton Wooded Parkland.

iv) 6: Runcorn Heath and Hill Parkland.

v) 7: Hale Shore and Farmland.

*Sensitivity Study*

6.6.38 The *Landscape Sensitivity Study and Guidance on Wind and Solar Photovoltaic Developments*[xxv] (2016) ('the Sensitivity Study') identifies which landscapes within the CWaCC area are least sensitive to wind energy and solar energy development. Paragraphs 1.16 and 1.17 of the Sensitivity Study are clear that:

*"It is important to note that this sensitivity study does not define the precise limit of wind energy or ground mounted solar PV development that can be accommodated within CWaC, but gives an indication of the relative sensitivity of the different landscape types to these types of development, as defined in the study. It should not be interpreted as a definitive statement that a particular landscape is suitable or not suitable for a particular type of development – this report is not a substitute for detailed landscape and visual impact assessment of local development proposals or as part of wider environmental impact assessment*

*…although the study helps direct development to less sensitive locations it does not imply that development will be acceptable. Even an area rated as low-moderate sensitivity will comprise some key characteristics that are sensitive to development. If a development would adversely affect key characteristics, or the scale of development would create a high magnitude of change, effects on the character and appearance of an area could potentially be significant even if that area is rated as low-moderate sensitivity".*

6.6.39 The Sensitivity Study identifies landscape sensitivity based on a series of different development typologies. The Proposed Development would fall within the 'very large solar farm category', which is defined as covering an area greater than 25 hectares. A series of criteria are also set out against which the sensitivity of different LCAs can be assessed. Design guidance is also provided, and regard has been had to this when designing the Proposed Development.

6.6.40 LCA4a, where the Proposed Development would be located, is identified as having an overall high sensitivity to a 'very large solar farm'. Key conclusions made include that a medium, large or very large solar farm could potentially fit into LCA 4a, but being south-facing it would impact on important viewpoints from the Frodsham Sandstone Ridge and Helsby Hill looking northwards over the Mersey Estuary. As part of mitigation, opportunities should be sought to restore hedgerows. The Sensitivity Study notes that even a small scale development would be contrary to the management strategy identified in the CWaCC Landscape Strategy which is to conserve the open, undeveloped character of the drained marshland.

6.6.41 It should be noted that the Sensitivity Study identifies that every LCA within the CWaCC area has a high sensitivity to a 'very large solar farm'. The majority of the LCAs are also identified as having a high sensitivity to a 'large solar farm' (area 15-25 hectares). LCA 4a is one of the few LCAs that are identified as being less sensitive to a 'large solar farm'. Similarly, for smaller development typologies ('medium', 'small', and 'very small'), LCA 4a is identified as one the least sensitive LCAs. This implies quite strongly that that LCA 4a is in relative terms less sensitive to solar energy development than other parts of the CWaCC area.

### *Visual Baseline*

#### *ZTV*

6.6.42 The ZTV of the Proposed Development is presented on **ES Volume 3 Figures 6-4a** to **6-4j** [**EN010153/DR/6.3**]. The ZTVs reflect the theoretical visibility of proposed above ground infrastructure as follows:

i) **ES Volume 3 Figures 6-4a** and **6-4b** [**EN010153/DR/6.3**] show the theoretical visibility of proposed structures within the Solar Array Development Area (except the BESS/Substation structures) across the entire Study Area and over a 2.5km radius around the Solar Array Development Area respectively.

ii) **ES Volume 3 Figures 6-4c** and **6-4d** [**EN010153/DR/6.3**] also show the theoretical visibility of proposed structures within the Solar Array Development Area (except the BESS/Substation structures) across the entire Study Area and over a 2.5km radius around the Solar Array Development Area respectively. However, on these two Figures, colour banding is used to differentiate between locations where more, or fewer Solar PV Modules are predicted be visible.

iii) **ES Volume 3 Figure 6-4e** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-4f** [**EN010153/DR/6.3**] show the theoretical visibility of the proposed BESS/Substation Option 1, reflecting the different heights of the BESS structures, Substation structures, and overhead line connection pylons as set out in **Section 6.3**, across the entire Study Area and over a 2.5km radius around the Solar Array Development Area respectively.

iv) **ES Volume 3 Figure 6-4g** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-4h** [**EN010153/DR/6.3**] show the theoretical visibility of the proposed BESS/Substation Option 2, reflecting the different heights of the BESS structures and Substation structures as set out in **Section 6.3**, across the entire Study Area and over a 2.5km radius around the Solar Array Development Area respectively.

v) **ES Volume 3 Figure 6-4i** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-4j** [**EN010153/DR/6.3**] show the theoretical visibility of the proposed fencing and CCTV columns, as set out in **Section 6.3**, across the entire Study Area and over a 2.5km radius around the Solar Array Development Area respectively.

6.6.43 Full details of how the ZTVs were produced, details of the data used, any assumptions made and any limitations inherent in the process are set out in **ES Volume 2 Appendix 6-2** [**EN010153/DR/6.2**].

6.6.44 The ZTVs were produced using a publicly available 2m LIDAR Digital Surface Model (DSM) available from the Environment Agency under the terms of the OpenGovernment Licence. The data was captured in 2022. The DSM does not reflect any subsequent changes in landform occurring as a result of the

ongoing tipping of dredgings within Cell 6 of the former Manchester Ship Canal Dredging Deposit Grounds immediately south-west of the Solar Array Development Area (refer to **ES Volume 3 Figure 1-4** [**EN010153/DR/6.3**] for location). As such, the actual visibility of the Proposed Development may be less than shown on the Figures.

6.6.45 The ZTVs produced using the DSM reflect the presence of screening features in the landscape. However, the data does not distinguish between ground surfaces and the surface of structures and vegetation. As a consequence, the ZTV output may indicate visibility from areas known to be occupied by woodland and buildings (i.e., views from treetops and roofs). Ordnance Survey open mapping data (OS Zoomstack Woodland and OS Zoomstack Local Buildings) datasets have been added to the ZTV Figures, as a solid white hatch on top of the ZTV information (but beneath base mapping), to mask out mapped areas of tree cover and buildings, noting that this is unlikely to be exhaustive but helps refine the ZTV.

*Viewpoints*

6.6.46 The LVIA includes a detailed assessment of likely significant visual effects from a series of pre-determined viewpoint locations. The viewpoints included in the LVIA were agreed as part of post-scoping consultation, as discussed in **Section 6.4**.

6.6.47 Viewpoints fall into three categories, as set out in the GLVIA:

i) Representative viewpoints (which represent the experience of different types of receptors in the vicinity).
ii) Specific viewpoints (a particular view, for example a well-known beauty spot).
iii) Illustrative viewpoints (which illustrate a particular effect/ issue, which may include limited/ lack of visibility).

6.6.48 It should be noted that the viewpoint itself is not the receptor. Rather it is the people that would be experiencing the view from it. People within the Study Area that are likely to experience views of the Proposed Development include:

i) Local residents.
ii) Users of public rights of way, and other routes/ land with public access.
iii) Road and rail users.
iv) Waterborne receptors including users of the Weaver Navigation.

6.6.49 A list of the viewpoints included in the LVIA is set out in **Table 6-5**. Viewpoint locations are illustrated on **ES Volume 3 Figures 6-4a** to **6-4j** [**EN010153/DR/6.3**] and on **ES Volume 3 Figures 6-5a** to **6-5e** [**EN010153/DR/6.3**]. The precise location of each viewpoint was determined in the field and was selected to show the clearest views towards the Solar Array Development Area.

6.6.50 The LVIA includes a series of photographs from the agreed viewpoints. Viewpoint photography from the majority of the proposed viewpoints was shot in April 2023, March 2024 and February 2025, with deciduous foliage beginning to appear, but providing a good indication of unscreened winter visibility (i.e. a worst-case scenario of visibility). Photography from Viewpoints 28 and 29 was shot in July 2024 and reflects summer visibility with deciduous foliage present.

6.6.51 Photomontage locations were confirmed as part of post-scoping consultation (refer to **ES Volume 2 Appendix 6-3** [**EN010153/DR/6.2**]). All photography and photomontages have been prepared and presented in accordance with the requirements of TGN 06/19, and a detailed methodology describing this process is set out in **ES Volume 2 Appendix 6-2** [**EN010153/DR/6.2**].

6.6.52 Where new planting, or changes to the management of existing vegetation is proposed as mitigation, visualisations reflect this. The photomontages include a Year 0 image showing how the Proposed Development would appear at the start of operations, and a Year 10 image indicating the

anticipated appearance at a point when planting is well established and is providing effective mitigation.

**Table 6-5 - Viewpoint Locations**

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| 1: Mersey Way, near Hale | 347457, 380905 | *Representative* of views across the Mersey Estuary<br><br>Footpath along the water's edge, approx. 2.9km north-west of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 2: A56, Sutton Weaver | 354370, 379338 | *Representative* of views available to local residents and road users<br><br>Edge of small village east of the Weaver Valley, approx. 2.1km east of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 3: Ship Street, Frodsham | 352059, 378437 | *Representative* of views available to residents in the adjacent properties<br><br>Side road at the northern edge of Frodsham, approx. 268m south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 4: Hawthorne Road, Frodsham | 351778, 378194 | *Representative* of views available to residents in the adjacent properties<br><br>Side road at the northern edge of Frodsham, approx. 270m south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 5: Langdale Way, Frodsham | 352633, 377838 | *Representative* of elevated views available from eastern Frodsham<br><br>Side road at the eastern edge of Frodsham, approx. 1.08km south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 6: Public footpath, near St Laurence's Church, Frodsham | 351941, 377383 | *Representative* of views available from elevated parts of central Frodsham<br><br>Footpath through an area of public open space in central Frodsham, approx. 1.07km south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| 7: Castle Park, Frodsham | 351451, 377223 | *Representative* of the views available to users of the public open space, and to residents in nearby properties<br><br>Public open space in Frodsham, approx. 1.04km south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 8: A56, Chester Road, Frodsham | 351138, 376962 | *Representative* of the views available from the western edge of Frodsham<br><br>Public footpath immediately north of the A56, approx. 1.2km south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 9: Frodsham Hill War Memorial | 351770, 377058 | *Specific* view from Frodsham Hill, which is a well-known and well frequented location<br><br>Hill top, approx. 1.32km south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 10: Public footpath, north of Foxhill House | 350655, 375668 | *Representative* of views available to walkers on the hillside between Helsby and Frodsham<br><br>Footpath running up the side of Woodhouse Hill, approx. 2.45km south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 11: Plovers Lane, Helsby | 349940, 376006 | *Representative* of views available to residents in the north-eastern part of Helsby<br><br>Minor road at the north-eastern edge of Helsby, approx. 2.33km south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 12: Bates Lane | 350091, 375019 | *Representative* of views available from the ridge south-east of Helsby<br><br>Minor road south of Helsby, approx. 3.16km south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 13: Helsby Hill | 349195, 375435 | *Specific* view from Helsby Hill, which is a well-known and well frequented location | Verified photomontage (TGN 06/19 Type 4) |

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| | | Hill top, approx. 2.93km south of the Solar Array Development Area | |
| 14: M56, Weaver Lane overbridge | 352005, 378595 | *Representative* of views available to users of the M56, and of the public footpath that runs over the overbridge<br><br>Bridge over the M56, within the Order Limits, 103m south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 15: M56, Brook Furlong overbridge | 351161, 377923 | *Representative* of views available to users of the M56, and of the restricted byway that runs over the overbridge<br><br>Bridge over the M56, at the boundary of the Order Limits, approx. 295m south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 16: M56, Straight Length overbridge | 350200, 377334 | *Representative* of views available to users of the M56, and of the restricted byway that runs over the overbridge<br><br>Bridge over the M56, approx. 880m south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 17: Public footpath within Order Limits | 351372, 379197 | *Representative* of views available to walkers. The viewpoint is located on an engineered riverbank and allows panoramic views across the eastern part of the Order Limits<br><br>At the boundary of the Order Limits, 162m north of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 18: Restricted byway leading to Frodsham Marsh Farm | 350098, 378881 | *Representative* of views available to users of the restricted byway.<br><br>Within the Solar Development Array Area | Verified photomontage (TGN 06/19 Type 4) |
| 19: Restricted byway, Lordship Lane | 347762, 376871 | *Representative* of views available to users of National Cycle Route 5 and other users of the restricted byway | Annotated photograph (TGN 06/19 Type 1) |

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| | | Within the Order Limits, north-east of the Former CF Fertilisers Plant, approx. 2.41km from the Solar Array Development Area | |
| 20: Restricted byway, Cross Lane | 348667, 377909 | *Representative* of views available to users of National Cycle Route 5 and other users of the restricted byway<br><br>Within the Order Limits, between the Eastern and Western Clusters of Frodsham Wind Farm, approx. 1.1km from the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 21: Restricted byway, Straight Length | 349937, 377623 | *Representative* of views available to users of the public rights of way, and of National cycle Route 5<br><br>Intersection of several public rights of way at the boundary of the Order Limits, approx. 688m south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 22: Public footpath, Ince | 345227, 377026 | *Representative* of views available to walkers<br><br>Approx 4.63km west of the Solar Array Development Area, close to the village of Ince | Annotated photograph (TGN 06/19 Type 1) |
| 23: Public footpath adj. to River Weaver | 351196, 379061 | *Representative* of views available to walkers<br><br>Within the Order Limits, approx. 49m from the Solar Array Development Area, on a footpath that runs along the embankment of the Ship Canal | Verified photomontage (TGN 06/19 Type 4) |
| 24: The Willows, Frodsham | 352253, 377781 | *Representative* of views available to residents in the nearby properties and to road users<br><br>From road running through central Frodsham, approx. 878m south of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| 25: Public footpath adj. to River Weaver | 352174, 379271 | *Representative* of views available to walkers<br><br>Within the Order Limits, approx. 27m from the Solar Array Development Area, on a footpath that runs adjacent to the River Weaver | Verified photomontage (TGN 06/19 Type 4) |
| 26: Public footpath, adj. to St Laurence's Church | 352073, 377316 | *Representative* of views available to walkers<br><br>Footpath through an area of public open space in central Frodsham, approx. 1.18km south of the Solar Array Development Area | Verified photomontage (TGN 06/19 Type 4) |
| 27: Public footpath, near Rocksavage Moorings | 352541, 379610 | *Representative* of views available to walkers and other canal users<br><br>Footpath running along the Weaver Navigation, approx. 53m east of the Order Limits and approx. 515m from the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |
| 28: Marsh Lock | 350501, 379805 | *Representative* of views available to canal users (as a worst case)<br><br>Edge of lock, approx. 292m north of the Solar Array Development Area at the junction of the Weaver Navigation and the Manchester Ship Canal. Not a publicly accessible location and included with the permission of the Canal and River Trust to act as a proxy for views from the canal to the north | Annotated photograph (TGN 06/19 Type 1) |
| 29: Weaver Navigation Access Track | 351379, 379741 | *Representative* of views available to canal users (as a worst case)<br><br>Edge of lock, approx. 603m north of the Solar Array Development Area along the access track leading to March Lock. Not a publicly accessible location and included with the permission of the Canal and River Trust to act as a proxy for views from the canal to the north | Annotated photograph (TGN 06/19 Type 1) |

| Viewpoint | British National Grid Co-ordinates | Receptor Type and Location | Visualisation Type |
|---|---|---|---|
| 30: West on Road, Runcorn | 350713, 380702 | *Representative* of views available to residents in the nearby properties and to road users<br><br>From road running through southern Runcorn, approx. 1.1km north of the Solar Array Development Area | Annotated photograph (TGN 06/19 Type 1) |

### *Glint and Glare*

6.6.53 In some circumstances, sunlight can reflect off solar PV modules. This can result in glint and glare effects that may give rise to adverse effects upon some visual receptors. The reader should refer to **ES Volume 2 Appendix 4-3** [**EN010153/DR/6.2**] for details of the glint and glare baseline.

### *Future Baseline*

6.6.54 In the absence of the Proposed Development, it has been assumed that the Order Limits would remain in its present usage, i.e. predominantly arable and pasture, with all existing public rights of way and other access routes remaining in-situ. It has been assumed that routine maintenance would be carried out to retain the existing broad pattern of vegetation.

6.6.55 Some change is anticipated in the area surrounding the Order Limits, as plots at Protos are progressively developed and the amount of built development thus increases further to the west within Frodsham Marshes. As Cell 6 of the former Manchester Ship Canal Dredging Deposit Grounds (refer to **ES Volume 3 Figure 1-4** [**EN010153/DR/6.3**] for location), located immediately south-west of the Solar Array Development Area is progressively filled, the local landform would also undergo changes.

6.6.56 Frodsham Wind Farm has an operational life of 25 years, following which it would be decommissioned, and wind turbines removed. However, it seems reasonable that an application would be made to repower the wind farm, given

the urgent need for renewable energy, and thus the turbines may ultimately be retained, or replaced by new turbines.

## 6.7 Incorporated Mitigation and Enhancement Measures

### *Introduction*

6.7.1 The **DAD** [**EN010153/DR/5.8**] and describes the design of the Proposed Development and how this has evolved via an iterative process. Key to this has been the development of a series of Project Design Principles that reflect not only the design of the development, but also the approach to the implementation and management of the Proposed Development throughout its lifespan, including the proposals described in the **oLEMP** [**EN010153/DR/7.13**].

6.7.2 The Project Design Principles are set out in the **DAD** [**EN010153/DR/5.8**] (broken down into more detailed measures) and in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]. Not all are relevant to landscape and visual matters. Those which are relevant have been set out below:

i) Project Design Principle 2: Landscape and Views. Develop the proposals in a manner sensitive to their landscape setting and reflecting the value placed on the landscape by local communities, reducing visual impacts from nearby properties, recreational routes and key viewpoints.
   - Retain and enhance the open character of Frodsham Marshes, where feasible.
   - Retain and enhance existing vegetation cover that defines character and provides visual screening.
   - Undertake new planting of trees, scrub and hedgerows which is consistent with character and to provide further screening.
   - Contain development within established field boundaries to retain landscape pattern.
   - Provide development-free buffers alongside existing landscape features.
   - Provide long-term management and maintenance of the landscape of the Order Limits.

- Retain open vistas looking across Frodsham Marshes and the wider estuary, where feasible.
- Give consideration to impacts upon the long-range views from Frodsham War Memorial and Helsby Hill.
- Consider, and seek to mitigate where possible, adverse impacts upon views from properties, with particular reference to those located at closer distances such as at the northern edge of Frodsham.
- Consider potential impacts arising from glint and glare and mitigate if adverse effects are identified.

ii) Project Design Principle 3: Biodiversity and Green Infrastructure. Protect and enhance green infrastructure within the Order Limits and in doing so create the conditions for enhanced biodiversity locally.

- Achieve a minimum of 10% increase in habitat and hedgerow units, and no net loss in watercourse units.
- Manage, maintain and increase vegetation cover within the Order Limits for the lifespan of the Proposed Development.
- Retain and enhance existing site features, and introduce development-free buffers around hedgerows, ditches and other features of biodiversity value. Buffers will be a minimum of 5m around hedgerows and a minimum of 10m around watercourses.

iii) Project Design Principle 4: Public Access and Recreation. Retain, enhance and encourage public access through the life of the proposals, including during construction and decommissioning where feasible.

- Create new permissive pathways to link up existing routes, filling gaps in the existing network and creating loops where possible, to enhance appeal to users and to improve connectivity.
- Provide wayfinding signage and information about the variety of routes available within the Order Limits and in respect of onward connections. Information to consist of both physical signage on site and published material to provide guidance to potential visitors.

- Design and install interpretative material along access routes, providing information regarding the social and natural history of the Order Limits and its present use for generating energy.
- Provide and signpost potential formal public car parking area(s) within the Order Limits, where provided.

iv) Project Design Principle 6: Cultural Heritage. Develop the proposals so that they are sensitive to the presence of heritage assets, their settings, and the wider historic environment.

- Maintain views from the Order Limits (and their surroundings) to heritage assets located on the higher ground.
- Retain the legibility of the flat topography within the Order Limits and views to the river in views from the higher ground.
- Provide interpretative material explaining the relationship between the Order Limits and the surrounding historic landscape.

v) Project Design Principle 7: Amenity

- Consider all infrastructure elements at the design stage and whether it is possible to enhance the amenity of the Order Limits through minor adjustments or rationalisation – e.g. avoidance of unnecessary signage or excessively large areas of hardstanding.
- Ensure that all temporary works are removed.
- Develop a Construction Environmental Management Plan to ensure that all construction activities are managed sensitively and in accordance with all statutory requirements and recognised good practice.
- Ensure that CCTV uses infra-red technology to minimise potential impacts from lighting.
- All lighting would be ‘on-demand’ only and would only be switched on during maintenance works, or in the event of an emergency or security breach.

6.7.3 The final design is described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**], and the design evolution and alternatives are also discussed in **ES Volume 1 Chapter 3: Alternatives and Design Evolution** [**EN010153/DR/6.1**].

### *Mitigation*

6.7.4 As set out in **ES Volume 1 Chapter 4: EIA Methodology** [**EN010153/DR/6.1**], the approach taken for the ES is that all committed mitigation measures which are identified in the control documents or are secured via the requirements in Schedule 2 of the DCO, are considered as 'incorporated mitigation' and form an intrinsic part of the Proposed Development. As such the impact of the committed mitigation is reflected in all conclusions made in **Section 6.8** regarding likely significant landscape and visual effects.

6.7.5 Additionally, the design of the Proposed Development also includes a series of enhancement measures. These are not proposed to mitigate against likely significant adverse landscape and visual effects, but rather are measures that would enhance the baseline condition of the landscape. Conclusions made in **Section 6.8** reflect the presence of enhancement measures.

6.7.6 All incorporated landscape and visual mitigation measures, and all enhancement measures are described in turn below.

6.7.7 As noted above, the **DAD** [**EN010153/DR/5.8**] sets out Project Design Principles that underpin the design of the Proposed Development and which will need to be met via the implementation of a series of documents, strategies, and plans.

6.7.8 The design of the Proposed Development reflects the **Design Parameters Document** [**EN01053/DR/7.1**]. The parameters are described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] and those that are relevant to landscape and visual matters are discussed in **Section 6.3**.

6.7.9 In respect of landscape and visual matters, the chief relevant document to deliver mitigation measures is the **oLEMP** [**EN010153/DR/7.13**], which sets out a framework for the successful implementation, establishment and longer-term management and maintenance of the proposed landscape and ecological works that form a key part of the Proposed Development. The **Illustrative Environmental Masterplan** (refer to **ES Volume 3 Figures 2-3a-e** [**EN010153/DR/6.3**]) illustrates the location of these measures, where they can be displayed in plan format.

6.7.10 The following mitigation measures have been incorporated into the design of the Proposed Development, and are set out in outline in the **oLEMP** [**EN010153/DR/7.13**]:

i) Retention of existing vegetation cover that defines character and provides visual screening.
ii) Containment of development within established field boundaries to retain the existing landscape pattern.
iii) Provision of generous development-free buffers alongside existing landscape features, including public rights of way.
iv) Retention of open vistas looking across Frodsham Marshes and the wider estuary, where feasible.
v) Retention of open vistas towards Frodsham Hill and Helsby Hill, where feasible.
vi) Create new permissive paths to link up existing routes, filling gaps in the existing network and creating loops where possible, to enhance appeal to users and to improve connectivity.
vii) Use of antireflective material on Solar PV Modules to limit glint and glare effects (delivered via the **oOEMP** [**EN010153/DR/7.6**]).

6.7.11 The following mitigation measures would also be required in order to achieve the Project Design Principles for the Proposed Development. These again are set out in outline in the **oLEMP** [**EN010153/DR/7.13**]:

i) Enhanced management of existing vegetation cover that defines character and provides visual screening.
ii) New planting of trees and hedgerows that is consistent with the landscape character of the Order Limits and that provides further screening.
iii) Provision for long-term management and maintenance of the landscape of the Order Limits.
iv) New planting to minimise glint and glare effects from the outset.

6.7.12 The development of an external security and maintenance lighting system, incorporating measures to achieve the relevant Project Design Principles for the Proposed Development (refer to **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] for further details) would be controlled via measures which are set out in outline in the **oOEMP** [**EN010153/DR/7.6**], including;

i) Ensuring that CCTV uses infra-red technology to minimise potential impacts from lighting.
ii) Ensuring that all lighting would be 'on-demand' only and would only be switched on during maintenance works, or in the event of an emergency or security breach.

6.7.13 Mitigation measures required during the construction phase are set out in outline in the **oCEMP** [**EN010153/DR/7.5**], which would include:

i) Planning and implementation of construction activities in such a way as to limit the need for any temporary closures and/or diversions to public rights of way.
ii) Measures to ensure that all temporary works are removed.
iii) Measures to retain existing vegetation and protect it from any potential harm resulting from construction activities.
iv) Measures to minimise or eliminate any adverse effects resulting from construction lighting.

6.7.14 Mitigation measures required during the decommissioning phase are set out in outline in the **oDEMP** [**EN010153/DR/7.7**], which would govern decommissioning activities, and would include measures anticipated to be very similar in type and scope to those included in the CEMP.

### *Enhancement Measures*

6.7.15 Enhancement measures are set out in outline in the **oLEMP** [**EN010153/DR/7.13**] and would include:

i) Measures to achieve a minimum 10% increase in habitat and hedgerow units, and no net loss in watercourse units, including through physical enhancements to the landscape fabric.
ii) Provision of wayfinding signage and information about the variety of routes available within the Order Limits and in respect of onward connections. Information to consist of both physical signage on site and published material to provide guidance to potential visitors.
iii) Design and installation of interpretative material along access routes, providing information regarding the social and natural history of the Order Limits and its present use for generating energy.
iv) Enhancement of the condition of public rights of way where feasible in order to enhance their appeal to users throughout the year.
v) Provision of other access enhancements including new parking for both cars and bicycles (if required).

### *Delivery*

6.7.16 Should the Proposed Development be consented, then the DCO will require that full versions of the **oLEMP** [**EN010153/DR/7.13**], **oOEMP** [**EN010153/DR/7.6**], **oCEMP** [**EN010153/DR/7.5**], and **oDEMP** [**EN010153/DR/7.7**] are produced and agreed with CWaCC, and other bodies as necessary. These plans must be in substantial accordance with the outline versions, and the Proposed Development must be undertaken in accordance

with those full plans. This is secured via a Requirement in Schedule 2 of the draft DCO.

## 6.8 Assessment of Likely Significant Effects

### *Construction Phase*

#### *Overview*

6.8.1 The construction phase of the Proposed Development is described in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**]. The overall construction period is anticipated to last for a period of approximately 30 months. As noted in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] the assumption is that many activities would occur in parallel, due to the scale of the Proposed Development. Nevertheless, there would necessarily be a sequential approach to construction, with some activities only able to commence after others are completed. Thus, different activities would take place at different times during this period and, as such, landscape and visual effects would vary over time and would not occur on a consistent basis throughout the construction phase, but rather are likely to vary in intensity with specific effects of shorter duration occurring in different parts of the Order Limits and being experienced in different parts of the landscape.

6.8.2 Construction would, by necessity, require the use of specialist vehicles and other plant, some of which would be readily apparent by virtue of their colour, size or movement. In particular, cranes are expected to be used to install the Inverter and Transformer units / Power Control Units and these would be particularly visible due to their height. However, these would only be on site for short periods. There would also be movement of construction vehicles and site traffic along the proposed Main Site Access.

6.8.3 Temporary lighting may be required to ensure the health, safety and welfare of those on site during poor light conditions, and in particular at the beginning and end of the working day in winter. This may require temporary lighting rigs or in some instances mobile task lighting. Some use of low level lighting of compounds for security purposes may be required through the night. Measures to reduce or eliminate adverse effects upon amenity arising from

such lighting would, as stated above, be set out in the CEMP (refer to **ES Volume 2 Appendix 2-3** [**EN010153/DR/6.2**] for the oCEMP).

*Construction Phase Landscape and Visual Effects*

6.8.4 Construction activities including traffic movements would be temporary, variable in their location and intermittent. As construction of certain areas and elements is completed, the operational landscape and visual effects of these areas would begin to be experienced alongside the construction activity and would be a precursor to the subsequent, more static operational effects, experienced alongside ongoing construction of other elements and areas.

6.8.5 Much of the construction plant and equipment would be relatively low in height and would not be visually conspicuous over a wide area. Exceptions to this that would be more widely visible include the movement of plant and delivery vehicles along the Main Site Access and within the Solar Array Development Area, and the presence of cranes whilst structures are erected.

6.8.6 A breakdown of likely significant construction phase effects upon the landscape fabric of the Order Limits, upon the LCAs within the LVIA Study Area and upon the 29 viewpoints included in the LVIA is set out in **ES Volume 2 Appendix 6-6** [**EN010153/DR/6.2**] including a description of the sensitivity of the receptors (which is informed by the detailed discussion of receptor sensitivity set out in in **ES Volume 2 Appendix 6-7** [**EN010153/DR/6.2**] and in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**]) and the magnitude of impact, and is summarised in **Table 6-6** and the subsequent text. Likely significant effects would be experienced by the following receptors:

i) CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes.
ii) Viewpoint 17: Public footpath within Order Limits.
iii) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
iv) Viewpoint 20: Restricted byway, Cross Lane.
v) Viewpoint 21: Restricted byway, Straight Length.
vi) Viewpoint 23: Public footpath, adj. to River Weaver.
vii) Viewpoint 25: Public footpath, adj. to River Weaver.

6.8.7 None of the landscape and visual effects identified during the construction phase would differ depending upon which BESS/Substation option is progressed. The sites of the two options are relatively close together within the same element of landscape fabric, would not require any appreciably different methods of construction, and would have very similar influences upon landscape character and upon views.

**Table 6-6 – Summary of Construction Phase Effects**

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| **Landscape Fabric** | | | |
| Arable Land | Low | Small | Minor Adverse Not Significant |
| Pasture Grassland | Low | Small | Minor Adverse Not Significant |
| Neutral Grassland | Medium | Small | Minor Adverse Not Significant |
| Hedgerows | Medium | No Change | No Effect |
| Tree belts and hedgerow trees | High | No Change | No Effect |
| Scrub | High | Small | Minor Adverse Not Significant |
| Waterbodies and wetland vegetation | High | Small | Minor Adverse Not Significant |
| Hardstanding | Low | Small | Minor Adverse Not Significant |
| **Landscape Character** | | | |
| CWaCC LCA 2a: Frodsham | Medium to High | No Change | No Effect |
| CWaCC LCA2b: Helsby Hill | Medium to High | No Change | No Effect |
| CWaCC LCA3a: Helsby to Tarporley Sandstone Ridge | Medium | No Change | No Effect |
| CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes | Medium to High | Medium | Moderate to Major Adverse Significant |

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| CWaCC LCA5b: Frodsham to Northwich | Medium | No Change | No Effect |
| CWaCC LCA5f: Helsby to Frodsham | Medium to High | No Change | No Effect |
| CWaCC LCA8a: Aston | Medium | No Change | No Effect |
| CWaCC LCA9a: Dunham to Tarvin Plain | Low to Medium | No Change | No Effect |
| CWaCC LCA15c: Lower Weaver Valley | Medium to High | No Change | No Effect |
| CWaCC LCA16a: Stanlow and Ince Banks | High | No Change | No Effect |
| HBC LCA3: Moore Village and Keckwick Brook Valley | Medium to High | No Change | No Effect |
| HBC LCA4: Upper Mersey Valley | Medium | No Change | No Effect |
| HBC LCA5: Norton Wooded Parkland | High | No Change | No Effect |
| HBC LCA6: Runcorn Hill and Heath Parkland | Medium | No Change | No Effect |
| HBC LCA7: Hale Shore and Farmland | Medium to High | No Change | No Effect |
| **Viewpoints** | | | |
| 1: Mersey Way, near Hale | High | Negligible | Negligible Neutral Not Significant |
| 2: A56, Sutton Weaver | Medium to High | Negligible | Negligible Neutral Not Significant |
| 3: Ship Street, Scotland | High | Small | Minor to Moderate Adverse Not Significant |
| 4: Hawthorne Road, Frodsham | Medium to High | Small | Minor Adverse Not Significant |
| 5: Langdale Way, Frodsham | Medium to High | Small | Minor Adverse Not Significant |

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| 6: Public footpath, near St Laurence's Church, Frodsham | High | Small to Medium | Moderate Adverse Not Significant |
| 7: Castle Park, Frodsham | High | Small | Minor Adverse Not Significant |
| 8: A56, Chester Road, Frodsham | High | Small | Minor to Moderate Adverse Not Significant |
| 9: Frodsham Hill War Memorial | High | Medium | Moderate Adverse Not Significant |
| 10: Public footpath, north of Foxhill House | High | Small | Minor to Moderate Adverse Not Significant |
| 11: Plovers Lane, Helsby | High | Negligible | Negligible Neutral Not Significant |
| 12: Bates Lane | Medium | Small | Minor to Moderate Adverse Not Significant |
| 13: Helsby Hill | High | Small to Medium | Moderate Adverse Not Significant |
| 14: M56, Weaver Lane overbridge | Medium to High | Small to Medium | Moderate Adverse Not Significant |
| 15: M56, Brook Furlong overbridge | Medium to High | Small to Medium | Moderate Adverse Not Significant |
| 16: M56, Straight Length overbridge | Medium to High | Small | Minor Adverse Not Significant |
| 17: Public footpath within Order Limits | High | Medium | Moderate to Major Adverse Significant |
| 18: Restricted byway leading to Frodsham Marsh Farm | Medium to High | Large | Moderate to Major Adverse Significant |
| 19: Restricted byway, Lordship Lane | High | Negligible | Negligible Neutral Not Significant |
| 20: Restricted byway, Cross Lane | High | Medium | Moderate to Major Adverse Significant |
| 21: Restricted byway, Straight Length | High | Medium | Moderate to Major Adverse Significant |

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| 22: Public footpath, Ince | High | Negligible | Negligible Neutral Not Significant |
| 23: Public footpath, adj. to Manchester Ship Canal | High | Medium | Moderate to Major Adverse Significant |
| 24: The Willows | High | Small | Minor to Moderate Adverse Not Significant |
| 25: Public footpath adj. to River Weaver | High | Medium to Large | Moderate to Major Adverse Significant |
| 26: Public footpath, adj. to St Laurence's Church | High | Small to Medium | Moderate Adverse Not Significant |
| 27: Public footpath, near Rocksavage Moorings | High | Negligible | Negligible Neutral Not Significant |
| 28: Marsh Lock | High | Small | Minor Adverse Not Significant |
| 29: Weaver Navigation Access Track | High | Small | Minor Adverse Not Significant |
| 30: Weston Road, Runcorn | High | Small to Medium | Minor to Moderate Adverse Not Significant |

*Landscape Fabric*

6.8.8 There would be little vegetation loss that would relate specifically to construction activities. Localised removal of arable land, pasture grassland, neutral grassland and scrub would be required to accommodate the proposed temporary contractor's compounds (refer to **ES Volume 3 Figure 2-1** [**EN010153/DR/6.3**] for locations) and for any excavations for underground cabling. Compound areas and excavations would be reinstated post-construction. There would also be further limited disturbance in arable, pasture and neutral grassland areas arising from the installation of new structures and associated vehicle movements. Again, reinstatement would

follow post-construction, except where construction compounds are located in areas that would be covered by solar PV arrays (albeit these are likely to be vegetated over time). In the context of the vegetation cover within the Order Limits as a whole, the majority of which would be retained and protected from harm throughout construction, change would be small in magnitude. The resulting effect would be **minor adverse** on all elements of landscape fabric. Construction phase effects on landscape fabric would **not be significant**.

6.8.9 Trees and hedgerows would be unaffected by construction activities (i.e. there would be no direct loss resulting from construction over and above any loss required to achieve the operational footprint of the Proposed Development, the effects of which are assessed below). As such, there would be **no effect** on these elements of landscape fabric.

*Landscape Character*

6.8.10 Temporary construction phase activities would occur within CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes. Within this LCA, the presence of construction elements including temporary compounds, plant, fencing/hoarding, signage, would contrast very clearly with the existing make-up of features, by virtue of both their appearance and their movement within and across the LCA. A **moderate to major adverse** effect on the character of CWaCC LCA4a would occur during the construction phase, which would be **significant**.

6.8.11 In relation to the other LCAs within the Study Area, construction phase activities would either be visible as a very limited and small scale presence obviously located outside of and in a clearly different landscape context to these LCAs, or would not be visible at all. None of the other LCAs would experience any effects upon their character as a result of the construction phase.

*Visual Effects*

6.8.12 Of the 29 viewpoints included in the LVIA, six would experience significant visual effects during the construction phase, these being:

i) Viewpoint 17: Public footpath within Order Limits.
ii) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
iii) Viewpoint 20: Restricted byway, Cross Lane.
iv) Viewpoint 21: Restricted byway, Straight Length.
v) Viewpoint 23: Public footpath adj. to Manchester Ship Canal.
vi) Viewpoint 25: Public footpath adj. to River Weaver.

6.8.13 Viewpoints 17, 18, 23 and 25 are all located within or very close to the Order Limits. As such, construction activities would be very clearly visible at short range. A range of new features would be introduced into the view during the construction phase which would stand out in some cases due to form, colour and movement, and which would contrast with the existing features. Visual effects would be **moderate to major adverse**.

6.8.14 Viewpoints 20 and 21 are located along the proposed Main Site Access. As such, there would be frequent but intermittent traffic passing by during the construction phase. This would be very prominent and would result in obvious changes in the views available to users of the byway. Visual effects would be **moderate to major adverse**.

*Night-time Effects*

6.8.15 Lighting during construction would need to provide sufficient illumination to satisfy health and safety requirements, whilst ensuring impacts on the surrounding environment, including from sky glow, glare and light spillage, are minimised.

6.8.16 As set out above, the **oCEMP** [**EN010153/DR/7.5**] includes measures to minimise adverse effects upon the amenity of the surrounding area. Artificial lighting would only be used during the hours of darkness, low levels of natural

light or during specific construction tasks to ensure the health, safety and welfare of those on site, including construction staff and visitors.

6.8.17 Given this, it can be concluded that night-time construction effects resulting from lighting would be limited and would **not be significant**.

### *Operational Phase: Effects on Landscape Fabric*

#### *Sensitivity*

6.8.18 The landscape fabric of the Order Limits comprises the following:

i) Arable land.
ii) Pasture.
iii) Neutral grassland.
iv) Hedgerows.
v) Tree belts, and hedgerow trees.
vi) Scrub.
vii) Small waterbodies with wetland vegetation.
viii) Areas of hardstanding.

6.8.19 Effects are described and assessed below, and summarised in **Table 6-7**.

6.8.20 Arable land is concentrated in the eastern part of the Solar Array Development Area. It is a common vegetation type both locally and nationally and one that can easily be recreated via new seeding/planting of crops. Susceptibility to change is low. Arable land is not a distinctive or rare type of vegetation, nor is it one that makes any strong contribution to local character. Value is low. Overall, sensitivity is low.

6.8.21 Pasture grassland is concentrated in the north-western part of the Solar Array Development Area in the vicinity of the Eastern Cluster of Frodsham Wind Farm. The grassland is a common vegetation type both locally and nationally and one that can easily be recreated via new seeding. Susceptibility to change is low. The pasture grassland within the Solar Array Development

Area is very obviously improved grassland that would not occur naturally. It is not distinctive or rare and makes little strong positive contribution to local character. Value is low. Overall, sensitivity is low.

6.8.22 Neutral grassland within the Order Limits is located throughout most of the Solar Array Development Area and within the Non-Breeding Bird Mitigation Area (NBBMA) on Cell 3. These are areas which are no longer in agricultural use and where a more diverse range of vegetation types have developed, including patches of wetland species and patches of scrub. This type of grassland, whilst not unusual in wetter areas, is far less common both locally and nationally than typical pasture. Specific management interventions would be required to recreate and maintain it. Susceptibility to change is medium. This type of grassland includes a variety of different plant species and has some biodiversity value. It is also distinctive when contrasted with typical pasture or arable land and does contribute positively to local character. Value is medium. Overall, sensitivity is medium.

6.8.23 Hedgerows are located along many of the field boundaries within the Order Limits, especially in the central and eastern parts of the Solar Array Development Area. The total length of existing hedgerows is approximately 6.4km. Hedgerows are commonplace locally and nationally. They can be replaced using new planting, which would within a relatively short period (typically three to five years) recreate a feature similar to the features lost. Susceptibility to change is low to medium. Hedgerows are important features in their own right and provide a sense of structure and enclosure within the wider landscape. They are an important component of character within the Solar Array Development Area. Value is medium to high. Overall, sensitivity is medium.

6.8.24 Belts of trees are located along the strip of land that forms the southern and eastern edge of Frodsham Wind Farm, between the western and central parts of the Solar Array Development Area. Some of the hedgerows within the Solar Array Development Area also include mature and semi-mature trees. Tree belts are commonplace both locally and nationally. Direct like-for-like

replacement is not possible in the short-medium term, due to the time it would take for replacement planting to develop. Susceptibility to change is therefore high. Trees are important features within the landscape, adding structure and providing a strong sense of enclosure. They make a clear positive contribution to character. Value is high. Overall, sensitivity is high.

6.8.25 Areas of scrub vegetation are located along internal and external boundaries within the eastern part of the Solar Array Development Area. These areas include rough grassland and scattered trees and shrubs. Scrub is not especially common, but does tend to develop as part of natural regeneration in areas that are not actively managed. Scrub can be recreated relatively easily via new planting and seeding, specific management interventions are required to maintain the desired mix of vegetation and avoid succession to denser woodland/tree belts. Susceptibility to change is medium. Scrub includes different types of vegetation and has some biodiversity value. It makes a limited contribution to character as part of a wider mosaic of vegetation types. Value is medium. Overall, sensitivity is medium.

6.8.26 Waterbodies and areas of wetland vegetation are scattered through the Solar Array Development Area and the NBBMA. These include areas of open water such as The Lum, and areas where reed and other vegetation cover is dense, including a network of ditches. This vegetation is dependent upon a combination of landform and impeded drainage, and hence is more common in lower lying areas and close to watercourses. Specific interventions would be required to recreate and maintain it. Susceptibility to change is high. Waterbodies, the network of ditches, and wetland vegetation are distinctive, have biodiversity interest and contribute to local character. Value is high. Sensitivity is high.

6.8.27 Areas of hardstanding are located along existing access tracks throughout the Order Limits, around the bases of wind turbines, and within the SPEN Grid Connection Area. Hardstanding is not a sensitive element of landscape fabric. Any loss of hardstanding would very clearly not result in likely significant effects, and any increase in hardstanding is reflected in

conclusions made regarding other more sensitive elements. As such, a detailed assessment of effects on hardstanding has not been undertaken.

*Changes Arising from the Proposed Development*

6.8.28 The introduction of the Solar Array Development (including the BESS and Frodsham Solar Substation) would result in the introduction of new Solar PV Modules within areas of existing grassland vegetation (including arable land). Localised loss of grassland would be required to accommodate the proposed invertors, transformers and switchgear structures. The new BESS compound and Frodsham Solar Substation compound (either option) would result in the loss of grassland. Localised loss of grassland and hedgerow vegetation would be required as a result of the introduction of new lengths of access track. The timber poles required to carry the overhead line from the proposed Substation (either option) to the Frodsham Substation would also require very localised loss of grassland.

6.8.29 Existing vegetation would be enhanced via a combination of changes to management and new planting/seeding. The principal areas where this would occur are described in the **oLEMP** [**EN010153/DR/7.13**] and illustrated on **ES Volume 3 Figure 2-3a-e** [**EN010153/DR/6.3**].

6.8.30 The land where the Solar PV Modules would be located would be subject to managed grazing. The grassland around the margins of these would be subject to enhanced management. The intention would be that these along with other retained areas of grassland within the Solar Array Development Area would be become either ‘other neutral grassland’ or ‘modified grassland’ (refer to **ES Volume 1 Chapter 7: Terrestrial Ecology** [**EN010153/DR/6.1**] for further details regarding the proposed grassland types) via changes to the management regime and/or new seeding.

6.8.31 Approximately 1.7ha of new native woodland planting would be provided along the south-eastern boundary of the Solar Array Development Area, adjacent to the motorway. Approximately 0.5ha of new native woodland

would be planted close to the southern boundary of the Solar Array Development Area, immediately south-east of BESS Option 1.

6.8.32 Approximately 2.4km of new native hedgerow and approximately 5km of new native tree and shrub belts would be planted along field boundaries and along the routes of both existing rights of way and new permissive paths running through the Solar Array Development Area. In addition, approximately 6.4km of existing hedgerows would be subject to enhanced management.

6.8.33 The intention is that that these linear plantings would not always be continuous screening belts of vegetation but would either include gaps between new plantings or would be managed at reduced heights in places in order to maintain lines of sight across the Order Limits to preserve the open character of the area, including views out across the Mersey Estuary and inland towards the distinctive landform of Frodsham Hill and Helsby Hill.

6.8.34 Approximately 0.87ha of new native scrub would be planted, chiefly close to the southern boundary of the SADA, to complement other existing and proposed vegetation in this area.

6.8.35 Within the NBBMA, existing grassland would undergo enhanced management, and works would be carried out to provide new waterbodies and wet grassland, through the creation of localised variations in landform. Some of the existing ponds within this area may be infilled and a new 'reservoir' created to feed the enhanced wetland. Refer to **ES Volume 1 Chapter 2:** [**EN010153/DR/6.3**] for further details on the options proposed for the creation of the NBBMA. Details of how the NBBMA would be managed are provided in the Non Breeding Bird Mitigation Strategy which is provided as Appendix B to the **oLEMP** [**EN010153/DR/7.13**].

6.8.36 Within the Skylark Mitigation Area, the existing arable land would be retained. Within this vegetation, small plots would be created which would not be farmed, and this would provide foraging habitat for skylarks.

*Effects of the Solar Array Development (and NBBMA)*

6.8.37 Land within the Solar Array Development Area would be taken out of arable use as a result of the Proposed Development. These areas would be converted to 'modified grassland' as discussed above or to new waterbodies/wetland vegetation and would be managed as such for the 40-year operational life of the Proposed Development. Arable land within the Skylark Mitigation Area would be managed as 'other neutral grassland'. As such, there would be a large magnitude of change, which would result in a **moderate** level of effect. Given the greater value of the new grassland in landscape and biodiversity terms, it is considered that these effects would be **beneficial**, and that effects would **not be significant** due to the low sensitivity of arable land.

6.8.38 Pasture grassland within the Order Limits would be largely retained, with only localised loss of vegetation to accommodate new structures and access tracks. The grassland would continue to be grazed under a carefully controlled management regime for the 40-year operational life of the Proposed Development (or would be cut with machinery if grazing proves unfeasible) which is described in the **oLEMP** [**EN010153/DR/7.13**]. Management outcomes would be to create 'modified grassland' as discussed above. It is likely that this management of the grassland would result in variation of the sward structure within pasture areas and result in biodiversity enhancements. Change would be relatively limited and would be small to medium in magnitude. There would be a **minor to moderate** level of effect. As the majority of pasture would be retained, effects would **not be significant**. The initial loss of small areas of pasture would have an **adverse** effect. However, the proposed changes to management and associated biodiversity enhancements would diversify the structure and improve the quality of the grassland and would have a **beneficial** effect after a short period of time.

6.8.39 Neutral grassland within the Order Limits would be largely retained, with only localised loss of vegetation to accommodate new structures and access

tracks. This would be managed for the 40-year operational life of the Proposed Development, via a carefully controlled grazing regime for the 40-year operational life of the Proposed Development (or would be cut with machinery if grazing proves unfeasible) which is described in the **oLEMP** [**EN010153/DR/7.13**]. It is likely that this management of the grassland would result in variation of the sward structure and result in biodiversity enhancements. Management outcomes would be to create 'other neutral grassland' as discussed above. Both BESS/Substation options would be located within this element of landscape fabric, and there would no difference of note in the change that would occur depending upon which option is ultimately progressed. Change would be relatively limited and would be small to medium in magnitude. This would result in a **minor to moderate** level of effect. As the majority of neutral grassland would be retained, effects would **not be significant**. The initial loss of small areas of neutral grassland would be **adverse**. Management to enhance biodiversity would diversify the structure and improve the quality of the grassland and would have a **beneficial** effect.

6.8.40 The majority of hedgerows would be retained by the Proposed Development. Localised losses would occur to accommodate crossing points for new access tracks, but only very short lengths of hedgerow would need to be removed, which would not materially affect the integrity of the whole feature. Approximately 2.4km of new hedgerow would be planted. All retained and new sections of hedgerow would be managed during the 40-year operational life of the Proposed Development, with the intention of enhancing the degree of visual screening provided by hedgerows, and enhancing the biodiversity of the Site by means of increasing habitat and habitat connectivity, on the basis described in the **oLEMP** [**EN010153/DR/7.13**]. Landscape mitigation would include planting up of gaps in existing hedgerows where appropriate. Change would be medium in magnitude. A **moderate** level of effect would occur. The majority of the existing hedgerow network would be retained and enhanced, and following the implementation of new planting, there would be a circa 35% net increase in hedgerow vegetation within the Order Limits. Effects would

**not be significant**. The initial loss of short sections of hedgerow would have an **adverse** effect. The enhanced management of retained hedgerows and provision of new hedgerow planting would have a **beneficial** effect.

6.8.41 The existing tree belts within the Order Limits and all hedgerow trees would be retained as part of the Proposed Development. New native woodland would be planted along the southern and south-eastern boundary. Overall, approximately 5km of new native tree and shrub belts would be planted. There would thus be a considerable net increase in tree cover within the Order Limits. All retained and proposed vegetation would be managed throughout the 40-year operational lifespan of the Proposed Development, with the intention of enhancing visual screening and increasing areas of habitat and habitat connectivity, which will in turn benefit biodiversity, on the basis described in the **oLEMP** [**EN010153/DR/7.13**]. A medium magnitude of change would occur. This would result in a **moderate to major** level of effect. There would be a net increase in tree cover and no losses. As such, it is considered that effects would be **significant** and **beneficial**.

6.8.42 Scrub vegetation within the Order Limits would be largely retained, with only localised loss of vegetation to accommodate new structures and access tracks. New scrub planting would be provided close to the southern boundary of the Order Limits. Existing and new vegetation would be managed for the 40-year operational life of the Proposed Development. The intention of management would be to maintain and enhance habitats in order to benefit biodiversity. Change would largely consist of maintaining the status quo and thus be limited, with a small to medium magnitude. A **minor to moderate** level of effect would occur. The majority of the scrub would be retained and enhanced, and as such, effects would **not be significant**. Any initial loss of small amounts of vegetation would have an **adverse** effect. The long term enhanced management of retained vegetation and planting of new areas of scrub would have a **beneficial** effect

6.8.43 Existing waterbodies and wetland vegetation within the Order Limits would be retained as part of the Proposed Development, with the exception of the

potential infill of some ponds associated with the creation of the NBBMA which would be offset by the creation of new features as described above. Management would occur for the 40-year operational life of the Proposed Development with the intention of maintaining and enhancing the aquatic habitats on site and thus improving biodiversity. New waterbodies would be created close to Marsh Farm in the north-west of the Solar Array Development Area, and within the NBBMA. It should be noted that the proposals for NBBMA retain some degree of flexibility as to the extent of new waterbodies that would be created, and the conclusions regarding effects on this element of landscape fabric reflect this. Change would be relatively limited and incremental and would be medium in magnitude. A **moderate to major** level of effect would occur which would be **significant**. As the condition of existing vegetation would be enhanced and there be a net increase in the extent of waterbodies and wetland vegetation, effects would be **beneficial**.

*Effects of the Main Site Access*

6.8.44 The route of the proposed Main Site Access comprises existing hard surfaced routes, which would be retained as part of the Proposed Development. No new elements outside the footprint of the existing routes would occur as secured via the **oCEMP [EN010153/DR/7.5]**. There would be no loss of vegetation associated with the Main Site Access and consequently there would be **no effect** on landscape fabric arising from this element of the Proposed Development.

*Effects of the Proposed SPEN Grid Connection*

6.8.45 Most works associated with the proposed SPEN Grid Connection within Frodsham Substation would take place within the built footprint of the existing Substation. Some localised loss of grassland and scrub would be required to accommodate the proposed new pylon, which would be outside the existing Substation footprint. Change in landscape fabric would be negligible in magnitude. Effects would be **negligible** and **neutral**.

**Table 6-7 – Summary of Operational Phase Effects on Landscape Fabric**

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| Arable Land | Low | Large | Moderate Beneficial<br>Not Significant |
| Pasture Grassland | Low | Small to Medium | Minor to Moderate Adverse (initial loss)<br>Minor to Moderate Beneficial (enhanced management of retained vegetation)<br>Not Significant |
| Neutral Grassland | Medium | Small to Medium | Minor to Moderate Adverse (initial loss)<br>Minor to Moderate Beneficial (enhanced management of retained vegetation)<br>Not Significant |
| Hedgerows | Medium | Medium | Moderate Adverse (initial localised loss)<br>Moderate Beneficial (new planting and enhanced management of retained vegetation)<br>Not Significant |
| Tree belts and hedgerow trees | High | Medium | Moderate to Major Beneficial<br>Significant |
| Scrub | High | Small to Medium | Minor to Moderate Adverse (initial localised loss)<br>Minor to Moderate Beneficial (new planting and enhanced management of retained vegetation)<br>Not Significant |
| Waterbodies and wetland vegetation | High | Medium | Moderate to Major Beneficial<br>Significant |

## *Operational Phase: Effects upon Landscape Character*

### *Introduction*

6.8.46 A detailed assessment of effects upon the landscape character of each of the 15 CWaCC and HBC LCAs located within the Study Area is included in **ES Volume 2 Appendix 6-7** [**EN010153/DR/6.2**]. Likely significant effects on character would be experienced within CWaCC LCA 4a: Frodsham, Helsby

and Lordship Marshes. 10 of the LCAs would experience effects that would not be significant, and four would experience no effect upon their character. **Table 6-8** and the subsequent text summarise the findings of the assessment. There would be no difference of note in the effects upon landscape character that would be experienced initially (Year 0), and in the medium and longer-term (e.g. by Year 10), unless otherwise stated.

**Table 6-8 – Summary of Operational Phase Effects on Landscape Character**

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| CWaCC LCA 2a: Frodsham | Medium to High | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA2b: Helsby Hill | Medium to High | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA3a: Helsby to Tarporley Sandstone Ridge | Medium | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes | Medium to High | Medium | Moderate to Major Adverse (in general)<br><br>Moderate to Major Beneficial (landscape and biodiversity enhancements, and enhancements to public access)<br><br>Significant |
| CWaCC LCA5b: Frodsham to Northwich | Medium | No Change | No Effect |
| CWaCC LCA5f: Helsby to Frodsham | Medium to High | Small | Minor to Moderate Adverse Not Significant |
| CWaCC LCA8a: Aston | Medium | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA9a: Dunham to Tarvin Plain | Low to Medium | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA15c: Lower Weaver Valley | Medium to High | Negligible | Negligible Neutral Not Significant |
| CWaCC LCA16a: Stanlow and Ince Banks | High | Negligible | Negligible Neutral Not Significant |

| Receptor | Sensitivity | Magnitude | Effect |
|---|---|---|---|
| HBC LCA3: Moore Village and Keckwick Brook Valley | Medium to High | No Change | No Effect |
| HBC LCA4: Upper Mersey Valley | Medium | No Change | No Effect |
| HBC LCA5: Norton Wooded Parkland | High | No Change | No Effect |
| HBC LCA6: Runcorn Hill and Heath Parkland | Medium | Negligible | Negligible Neutral Not Significant |
| HBC LCA7: Hale Shore and Farmland | Medium to High | Negligible | Negligible Neutral Not Significant |

*CWaCC LCA 4a: Frodsham, Helsby and Lordship Marshes*

6.8.47 The Proposed Development would be introduced into CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes. There would be direct physical changes within the Solar Array Development Area arising from the proposed new structures, new access roads, and the implementation of the measures described in the **oLEMP** [**EN010153/DR/7.13**].

6.8.48 The Proposed Development would include measures to enhance the amount and quality of public access. This would be achieved through the provision of improvements to existing rights of way and the provision of new permissive paths. In combination these would improve the overall network of routes and its usefulness as a recreational resource. Improvements would include a potential new car park, physical upgrades to surfaces, new and improved signposting and the introduction of interpretative materials to help people visiting the Site to understand and appreciate their surroundings. If provided, the car park would be small in extent, located immediately off an existing hard surfaced access road and its presence would have no appreciable influence upon the wider character of CWaCC LCA 4a. There is potential for visitor numbers at Frodsham Marshes to increase as a result of the proposed enhancements, and the appreciation of the landscape by the wider population may also therefore potentially increase.

6.8.49 New planting and other landscape treatments would be introduced to provide screening of some of the views, including those from the motorway and the edge of Frodsham to the south-east. Internal planting alongside routes and field boundaries would soften and reduce the impact of the proposed infrastructure as experienced from within the Order Limits. The generous landscape treatments in the corridors along the public access routes would provide continuity and enhancement of existing habitats and an enhanced network for both people and biodiversity.

6.8.50 In relation to the two BESS/Substation options, the Sites of the these are located close to one another, and both would occupy relatively small footprints. The BESS and Substation would always be experienced in the context of the wider Solar Array Development set within Frodsham Marshes. There would be no appreciable difference in the influence of the Proposed Development upon landscape character depending upon which option is progressed.

6.8.51 A **moderate to major** level of effect would occur, which would be **significant**. The Proposed Development would result in a notable change in the character of that part of the LCA within and in close proximity to the Solar Array Development Area. This part of the LCA is already influenced strongly by the presence of large-scale built infrastructure development, but this influence would increase perceptibly due to both the physical extent of the solar farm and its visibility from locations within and outside the LCA. The underlying character of a very flat, low-lying salt marsh where large-scale industry and infrastructure development exerts a strong influence would remain. Outside this area, further to the south and west, character would not undergo any change of note from baseline. The enhanced level of access provision and the implementation of the landscape proposals would accord broadly with the landscape guidelines for the LCA set out in a *Landscape Strategy for Cheshire West and Chester Borough*.

6.8.52 The effects of the Proposed Development upon landscape character would generally be **adverse**. The landscape and biodiversity enhancements and

the enhancements to public access and interpretation would however have notable **beneficial** effects, the majority of which (access enhancements, and enhanced management of existing vegetation) would be experienced as soon as, or shortly after, the Proposed Development becomes operational. The benefits deriving from new planting would be more evident once this has become established (e.g. by Year 10).

*Other LCAs*

6.8.53 In relation to the other LCAs within the Study Area (including the higher sensitivity landscapes located on the Sandstone Ridge, which may ultimately be designated as a National Landscape), the Proposed Development would be very clearly located in a separate landscape context along the Mersey Estuary. Any changes would therefore be limited to change in outward views from these LCAs (i.e. to their visual context) looking across the Estuary where large scale industry/infrastructure development is well-established. The change that would occur would not be affected to any appreciable degree by which BESS/Substation option is ultimately chosen.

6.8.54 Within CWaCC LCA 5f: Helsby to Frodsham, a **minor to moderate adverse** effects would occur, which would **not be significant**. The introduction of the Proposed Development would result in small scale changes to the outwards views available from this area looking across the Mersey Estuary. The visual context of what is a small LCA would change, but underlying landscape characteristics would remain, and there would be no notable change in character.

6.8.55 Within nine LCAs, effects would be limited to some localised limited visibility of the Proposed Development. This change in the visual context of each of the LCAs would not be sufficient to result in any appreciable change in character from baseline.

6.8.56 Within CWaCC LCA16a: Stanlow and Ince Banks, theoretical visibility would be more extensive, but the existing character of landscape/seascape defined by open water, tidal processes and views of large-scale built development in

landward views would not change appreciably as a result of the Proposed Development.

6.8.57 The following LCAs would experience a **negligible neutral** effect, which would **not be significant**:

i) CWaCC LCA2a: Frodsham.
ii) CWaCC LCA 2b: Helsby Hill.
iii) CWaCC LCA 3a: Helsby to Tarporley Sandstone Ridge.
iv) CWaCC LCA 8a: Aston.
v) CWaCC LCA 9a: Dunham to Tarvin Plain.
vi) CWaCC LCA 15c: Lower Weaver Valley.
vii) CWaCC LCA 16a: Stanlow and Ince Banks.
viii) HBA LCA 6: Runcorn Hill and Heath Parkland.
ix) HBC LCA 7: Hale Shore and Farmland.

6.8.58 Within the following four LCAs, the Proposed Development would not be visible. As such, there would be no change in character and **no effect** would occur:

i) CWaCC LCA 5b: Frodsham to Northwich.
ii) HBC LCA 3: Moore Village and Keckwick Brook Valley.
iii) HBC LCA 4: Upper Mersey Valley.
iv) HBC LCA 5: Norton Wooded Farmland.

### *Operational Phase: Visual Effects*

#### *Introduction*

6.8.59 The ZTVs of the Proposed Development are discussed below, followed by details of visual effects at Viewpoints, visual effects upon users of public rights of way, users of the Weaver Navigation, local residents, and other receptors. Commentary is provided on the influence of light conditions upon the visibility of the Proposed Development.

#### *ZTV*

6.8.60 The ZTVs of different elements of the Proposed Development are presented on **ES Volume 3 Figures 6-4a-j** [**EN010153/DR/6.3**]. These demonstrate that theoretical visibility of the Proposed Development would be relatively continuous within the Solar Array Development Area and from the River Mersey. Elsewhere visibility would be more fragmented due to the screening effects of vegetation, buildings and other structures, and due to variations in topography.

6.8.61 **ES Volume 3 Figures 6-4a** to **6-4d** [**EN010153/DR/6.3**] illustrate the theoretical visibility of the Solar Array Development Area. **ES Volume 3 Figure 6-4a** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-4b** [**EN010153/DR/6.3**] illustrate that theoretical visibility would be relatively extensive across the low-lying land at Frodsham Marshes and across the remainder of the Estuary and that it would extend to the higher ground in and around Frodsham and Helsby. **ES Volume 3 Figure 6-4c** [**EN010153/DR/6.3**] and **ES Volume 3 Figure 6-4d** [**EN010153/DR/6.3**] demonstrate that there would be very few locations from which the entirety of the Solar Array Development Area would be visible, and that indeed from most locations within the ZTV, less than 40% of the structures are predicted to be theoretically visible. Theoretical visibility of over 60% of the structures is predicted from very localised and scattered locations on Helsby Hill, Frodsham Hill and at the edge of Runcorn.

6.8.62 **ES Volume 3 Figure 6-4e** to **6-4h** [**EN010153/DR/6.3**] illustrate the theoretical visibility of the two BESS/Substation options. The figures demonstrate that there would be limited and localised differences in the theoretical visibility of the two options. Theoretical visibility of Option 1 would be slightly greater towards the south and west of the Study area, whereas theoretical visibility of Option 2 would be slightly greater towards the north and east. It should be recognised that the proposed 12m pylons would be timber poles and the proposed 13m high substation structures would be lattice structures, all of which would be slender and are unlikely to be perceived as prominent elements other than at close range, irrespective of the extent of theoretical visibility.

6.8.63 **ES Volume 3 Figure 6-4i** [**EN010153/DR/6.3**] and **PEIR Volume 3 Figure 6-4j** [**EN010153/DR/6.3**] illustrate the theoretical visibility of the proposed fencing and CCTV columns. The Figures demonstrate that the extent of visibility is predicted to be similar to that of the Solar Array Development Area as shown *on* **ES Volume 3 Figures 6-4a** to **6-4d** [**EN010153/DR/6.3**]. It should be noted that the proposed fencing would comprise timber poles with an open weld mesh infill and that the proposed 4m high CCTV columns would be slender structures. Neither of these features is expected to be a prominent presence relative to the Solar Arrays, other than at close range, irrespective of the extent of theoretical visibility.

*Effects at Viewpoints*

6.8.64 A detailed assessment of visual effects upon each of the 30 LVIA viewpoints is included in **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**]. In summary, it is anticipated that significant visual effects would occur at two viewpoints initially, namely:

i) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
ii) Viewpoint 25: Public footpath adj. to River Weaver.

6.8.65 By Year 10, it is anticipated that landscape mitigation of visual effects at Viewpoint 25 would be such that the adverse effect would have reduced, such that it would no longer be considered significant.

6.8.66 Effects at each Viewpoint are summarised in **Table 6-9** and discussed in the subsequent text below. Those Viewpoints where the largest effects would occur are discussed first, and those where effects would be the least are discussed last. Effects would be the same initially (Year 0) and in the medium and longer term (Year 10) unless otherwise stated.

6.8.67 In relation to the two BESS/Substation options, the Sites of the these are located close to one another, and both would occupy relatively small footprints. The BESS and Substation would always be experienced in the context of the wider Solar Array Development set within Frodsham Marshes. From Viewpoint 16 and Viewpoint 21, Option 1 would be more clearly visible than Option 2, but this would have little bearing upon the overall conclusions regarding the visual effects of the Proposed Development at these two Viewpoints.

6.8.68 There would be no appreciable difference in the influence of the Proposed Development upon views from any other Viewpoint as a result of which option is progressed.

**Table 6-9 – Summary of Operational Phase Effects on Viewpoints**

| Receptor | Sensitivity | Magnitude | Effect (Year 0) | Effect (Medium/long-term: Year 10) |
|---|---|---|---|---|
| 1: Mersey Way, near Hale | High | Small | Minor Adverse<br>Not Significant | Minor Adverse<br>Not Significant |
| 2: A56, Sutton Weaver | Medium to High | Negligible | Negligible<br>Neutral<br>Not Significant | Negligible<br>Neutral<br>Not Significant |
| 3: Ship Street, Frodsham | High | Small | Minor to Moderate Adverse<br>Not Significant | Minor Adverse<br>Not Significant |

| Receptor | Sensitivity | Magnitude | Effect (Year 0) | Effect (Medium/long-term: Year 10) |
|---|---|---|---|---|
| 4: Hawthorne Road, Frodsham | Medium to High | Negligible | Negligible Neutral Not Significant | Negligible Neutral Not Significant |
| 5: Langdale Way, Frodsham | Medium to High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 6: Public footpath, near St Laurence's Church, Frodsham | High | Small to Medium | Moderate Adverse Not Significant | Moderate Adverse Not Significant |
| 7: Castle Park, Frodsham | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 8: A56, Chester Road, Frodsham | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 9: Frodsham Hill War Memorial | High | Small to Medium | Moderate Adverse Not Significant | Moderate Adverse Not Significant |
| 10: Public footpath, north of Foxhill House | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 11: Plovers Lane, Helsby | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 12: Bates Lane | Medium | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 13: Helsby Hill | High | Small to Medium | Moderate Adverse Not Significant | Moderate Adverse Not Significant |
| 14: M56, Weaver Lane overbridge | Medium to High | Small to Medium (initially) Small (medium and long-term) | Moderate Adverse Not Significant | Minor to Moderate Adverse Not Significant |
| 15: M56, Brook Furlong overbridge | Medium to High | Small to Medium (initially) Small (medium and long-term) | Moderate Adverse Not Significant | Minor to Moderate Adverse Not Significant |
| 16: M56, Straight Length overbridge | Medium to High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 17: Public footpath within Order Limits | High | Medium | Moderate Adverse Not Significant | Minor to Moderate Adverse Not Significant |

| Receptor | Sensitivity | Magnitude | Effect (Year 0) | Effect (Medium/long-term: Year 10) |
|---|---|---|---|---|
| 18: Restricted byway leading to Frodsham Marsh Farm | Medium to High | Large | Moderate to Major Adverse Significant | Moderate to Major Adverse Significant |
| 19: Restricted byway, Lordship Lane | High | Negligible | Negligible Neutral Not Significant | Negligible Neutral Not Significant |
| 20: Restricted byway, Cross Lane | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 21: Restricted byway, Straight Length | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 22: Public footpath, Ince | High | Negligible | Negligible Neutral Not Significant | Negligible Neutral Not Significant |
| 23: Public footpath, adj. to Manchester Ship Canal | High | Medium | Moderate Adverse Not Significant | Moderate Adverse Not Significant |
| 24: The Willows | High | Small | Minor to Moderate Adverse Not Significant | Minor to Moderate Adverse Not Significant |
| 25: Public footpath adj. to River Weaver | High | Medium to Large (initially) Medium (medium and long-term) | Moderate to Major Adverse Significant | Moderate Adverse Not Significant |
| 26: Public footpath, adj. to St Laurence's Church | High | Small to Medium | Moderate Adverse Not Significant | Moderate Adverse Not Significant |
| 27: Public footpath, near Rocksavage Moorings | High | Negligible | Negligible Neutral Not Significant | Negligible Neutral Not Significant |
| 28: Marsh Lock | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |
| 29: Weaver Navigation Access Track | High | Small | Minor Adverse Not Significant | Minor Adverse Not Significant |

| Receptor | Sensitivity | Magnitude | Effect (Year 0) | Effect (Medium/long-term: Year 10) |
|---|---|---|---|---|
| 30: Weston Road, Runcorn | High | Small to Medium | Minor to Moderate Adverse Not Significant | Minor to Moderate Adverse Not Significant |

6.8.69 At Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm, the Proposed Development would be introduced at short range. The new solar PV modules and associated structures would be prominent in all directions from the Viewpoint, which is located on a restricted byway located between field units which will become filled with solar PV modules mounted on frames within the Solar Array Development Area. The long-distance views south to Helsby Hill and Frodsham Hill would not be obscured by the new structures and there will still be long distance views due north towards and across the estuary. However, the experience of users of the byway would change from one of travelling through an open area of large-scale pasture grassland with wind turbines and other infrastructure to one of travelling through a solar farm.

6.8.70 Whilst built structures, including industry and infrastructure development are already clearly visible from the Viewpoint, and will continue to be, the introduction of multiple low level solar array structures close to byway users would create a greater degree of enclosure. It should be noted that the solar panels would be set back from the byway and that proposed mitigation measures include hedgerow and tree planting on both sides of the farm track which forms the route (refer to **ES Volume 3 Figures 2-3a-e** [**EN010153/DR/6.3**] for sections illustrating the arrangement of the solar panels in relation to public rights of way). This mitigation will partially screen and soften immediate views of structures over time and improve the amenity of the route. Nevertheless, the Proposed Development would remain a prominent addition that introduces notable change from baseline in all directions. A **moderate to major adverse** effect would occur, which would be **significant**.

6.8.71 At Viewpoint 25: Public footpath adj. to River Weaver, the Proposed Development would introduce new solar PV modules and fencing into short-range views to the south and west. There would be an obvious increase in the influence of built development within the adjacent fields, and an associated loss of the visibility of existing grassland and arable land within the same fields. The new overhead connection across the River Weaver to the Frodsham Substation would also be visible in the context of other existing similar connections, which are mounted on larger and more prominent steel lattice pylons. The introduction of the Proposed Development would result in an obvious increase in the influence of built development upon views from the riverside footpath. The experience of footpath users would change from one where large scale infrastructure is a clearly visible and prominent presence set within the surrounding landscape, to one where infrastructure is the predominant land use to the south and west. A **moderate to major adverse** effect would occur initially, which would be **significant**.

6.8.72 As proposed planting establishes, this would provide partial screening of views of the solar arrays, whilst retaining longer vistas toward Helsby and Frodsham Hills. By enclosing the eastern end of the solar PV modules infrastructure with vegetation, the extent to which infrastructure is predominant will be reduced and users of the footpath will be walking alongside a River within a vegetated corridor with infrastructure elements visible beyond. By Year 10, it is considered that adverse visual effects at Viewpoint 25 would have reduced in scale such that the effect will have reduced to **moderate adverse**, and to not be significant

6.8.73 At Viewpoint 6: Public footpath, near St Laurence's Church, Frodsham and Viewpoint 26: Public footpath, adj. to St Laurence's Church, the Proposed Development would be clearly visible in the middle ground of the view. There would be some limited screening provided by foreground features. The influence of industrial and infrastructure development is already well-established at short range (within Frodsham) and in the middle and background of the view. This influence would increase as a result of the

Proposed Development, but not to such a degree that there would be any fundamental change in the nature of the views available looking out across the Mersey Estuary. At both viewpoints, a **moderate adverse** effect would occur, which would **not be significant**.

6.8.74 At Viewpoint 9: Frodsham Hill War Memorial, the Proposed Development would be visible in the middle ground of the view, set below the Viewpoint to the north. Whilst through the introduction of the solar arrays there would be a clearly visible new component in the view, the underlying nature of the view would not change. The view would remain an expansive panoramic view seen from an elevated and exposed location. Views are across extensive lower-lying areas in a broad arc from west to east within which a dynamic mosaic of built development and land uses including a diverse array of industry and infrastructure is a well-established presence, and which provides a complex context for existing views and for any potential changes in view. The commemorative function of the War Memorial and the ability of people to experience this would be unaffected. A **moderate adverse** effect would occur, which would **not be significant**.

6.8.75 At Viewpoint 13: Helsby Hill, the Proposed Development would be clearly visible within a very broad and expansive panorama. In this instance the Proposed Development would be further away and less central in the view, and would only occupy a relatively small proportion of the wider views available. The existing views from this location are (as with from Frodsham Hill) expansive, panoramic and already influenced by a diverse array of land uses including industry and infrastructure development. The introduction of a large solar array would add a new component to the view and incrementally increase the influence of built development within the mosaic of land uses. A **moderate adverse** effect would occur, which would **not be significant**.

6.8.76 At Viewpoint 17: Public footpath within the Order Limits, and Viewpoint 23: Public footpath adj. to the River Weaver, views of the Proposed Development would be clear at short range. Both Viewpoints are located along elevated sections of embankment at the northern edge of the Order Limits. A

development-free buffer would be maintained between the Viewpoints and the solar PV modules, and this would limit the prominence of the new structures within the view. The views south to Helsby Hill and Frodsham Hill would be maintained without obstruction. The well-established influence of development upon the view would increase, with new structures occupying a narrow band across the middle ground of the views. Once proposed planting to the south and south-west of the two Viewpoints establishes, this would reduce the visibility of the solar PV modules. The underlying nature of the view, namely an expansive view across Frodsham Marshes to the Frodsham and Helsby Hills with a range of different types of built development including prominent electricity generating and supply infrastructure present, would not change greatly. Effects at both Viewpoints would be **moderate adverse** initially, reducing to **minor to moderate** adverse by Year 10. Effects would **not be significant**.

6.8.77 At Viewpoint 14: M56, Weaver Lane overbridge, the Proposed Development would be clearly visible to the north-east initially. The established influence of development upon the view would increase. To the west, views would be very well screened by intervening existing vegetation cover. The M56 would remain the most prominent feature in the view irrespective of the presence/absence of the Proposed Development. Over time, as proposed native woodland planting at the south-eastern boundary of the Order Limits establishes, the visibility of the proposed solar PV modules and associated infrastructure would reduce, although some visibility is likely to remain. A **moderate adverse** effect would occur initially, reducing to **minor to moderate adverse** by Year 10. Effects would not be **significant**.

6.8.78 At Viewpoint 3: Ship Street, Frodsham, the Proposed Development would be well screened by foreground vegetation cover between the edge of Frodsham and the motorway. There would be limited visibility of the proposed solar PV modules through breaks in this vegetation, but only small-scale changes in view would result. The view would remain very similar to baseline, namely a view interrupted by vegetation cover at short range and with

industry/infrastructure development in the background. Over time, proposed planting would provide further screening of views. A **minor to moderate adverse** effect would occur initially, reducing to **minor adverse** by Year 10. Effects would **not be significant**.

6.8.79 At Viewpoint 15: M56, Brook Furlong overbridge, the Proposed Development would be clearly visible to the north-east in the middle ground of a view where the M56 would remain the most prominent feature. Existing features would screen views to the north-west, with only glimpses of new structures in this direction. There would be a limited increase in the influence of built development upon the view. Over time, proposed planting would provide further screening of views. A **minor to moderate adverse** effect would occur initially, reducing to **minor adverse** by Year 10. Effects would **not be significant**.

6.8.80 At Viewpoint 24: The Willows, a gap along the adjacent road allows relatively narrow ground level views out towards the marshes within which Frodsham Wind Farm is partially visible. The Proposed Development would be partially to well-screened by intervening buildings and existing vegetation in the middle ground. Views of the Proposed Development from second floor windows in the adjacent properties are likely to be slightly clearer. The Proposed Development would be a limited addition to a view that is largely defined by built development in the foreground, and where industry and infrastructure is a well-established background presence. The nature of the view looking outwards from this part of Frodsham over the Mersey Estuary would not change notably. A **minor to moderate adverse** effect would occur, which would **not be significant**.

6.8.81 At Viewpoint 30: Weston Road, Runcorn, expansive views out along the Mersey Estuary are available (including extensive industrial/infrastructure development), these are partially screened by foreground vegetation cover and industrial structures. The Proposed Development would be a limited and relative small scale addition to existing views that are already characterised by the presence of large-scale industrial and infrastructure development at a

variety of distances from the Viewpoint, and this would not change to any notable degree as a result of the Proposed Development. A **minor to moderate adverse** effect would occur, which would **not be significant**.

6.8.82 At twelve Viewpoints, the Proposed Development would be well screened by intervening features, such that only narrow or otherwise restricted views of the new structures would be available. Existing well-established industrial and infrastructure development would often remain notably more prominent. There would be little change in the nature of the view from baseline. As such, effects would be **minor adverse** and would **not be significant** at the following Viewpoints (refer to **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**] for further details):

i) Viewpoint 1: Mersey Way, near Hale.
ii) Viewpoint 5: Langdale Way, Frodsham.
iii) Viewpoint 7: Castle Park, Frodsham.
iv) Viewpoint 8: Chester Road, Frodsham.
v) Viewpoint 10: Public footpath, north of Foxhill House.
vi) Viewpoint 11: Plovers Lane, Helsby.
vii) Viewpoint 12: Bates Lane.
viii) Viewpoint 16: M56, Straight Length overbridge.
ix) Viewpoint 20: Restricted byway, Cross Lane.
x) Viewpoint 21: Restricted byway, Straight Length.
xi) Viewpoint 28: Marsh Lock
xii) Viewpoint 29: Weaver Navigation Access Track.

6.8.83 At five Viewpoints, whilst theoretically visible, the Proposed Development would be screened by existing features to such a degree or would otherwise be such a limited addition to the view, that it would be difficult to make out as a distinct feature. There would no appreciable change to the nature of the views available. As such, effects would be **negligible** and **neutral** at the following Viewpoints (refer to **ES Volume 2 Appendix 6-8** [**EN010153/DR/6.2**] for further details):

i) Viewpoint 2: A56, Sutton Weaver.
ii) Viewpoint 4: Hawthorne Road, Frodsham.
iii) Viewpoint 19: Restricted byway, Lordship Lane.
iv) Viewpoint 22: Public footpath, Ince.
v) Viewpoint 27: Public footpath near Rocksavage Moorings.

*Effects on users of Public Rights of Way and other recreational routes*

*Introduction*

6.8.84 The locations of the PRoWs within and close to the Order Limits are presented on **ES Volume 3 Figure 6-5e** [**EN010153/DR/6.3**]. Each PRoW is colour-coded. The same PEIR Volume 3 Figure also shows National Cycle Route 5, the Cheshire Circuit, long-distance paths and viewpoint locations.

6.8.85 At each of the routes illustrated on **ES Volume 3 Figure 6-5e** [**EN010153/DR/6.3**], the availability of views across Frodsham Marshes will be amongst the main reasons for a journey to take place, and this indicates a high susceptibility to change. The routes form part of a network of PRoWs and other routes that run across Frodsham Marshes and which links with nearby settlements and the countryside to the south. Additionally, the presence of National Cycle Route 5 indicates a nationally important route. Value is high. Overall, sensitivity is high. It should be noted that where routes are accessible to riders (i.e. bridleways and byways), that these users will be higher up than walkers, and thus may in some instances have clearer views of the surrounding area (depending upon the level of screen provided by existing features).

6.8.86 In relation to the two BESS/Substation options, Option 1 is likely to be more clearly visible than Option 2 from routes to the south-west of the Solar Array Development Area, including from Frodsham RB97, Frodsham RB98 and Frodsham RB101 (refer to Viewpoint 21). However, this would have little bearing upon the overall conclusions regarding the visual effects of the Proposed Development. This is because the BESS and Substation would be

relatively limited components of a far larger development that would be visible from sections of these routes, and where other prominent infrastructure would remain more clearly visible.

*Routes within (or close to) the Solar Array Development Area*

6.8.87 From the routes within the Solar Array Development Area, or at its boundary, views of the Proposed Development would typically be clear initially and experienced at short range. Viewpoints 17, 18, 23 and 25 are all located along these routes. As seen on the **Works Plans** [**EN010153/DR/2.3**], a 10m wide development-free buffer would be maintained along each route and would be increased in width wherever there is scope to do this. A more extensive strip up to approximately 140 m wide would be maintained development free at the northern edge of the Solar Array Development Area (close to Viewpoints 17 and 23). The corridor of land that runs through the centre of the Site, immediately east of Frodsham Wind Farm would also be maintained development free, and this area would vary in width between approx. 60 m and approx. 170 m.

6.8.88 As such, each of the routes that cross the Solar Array Development Area would run through a corridor of undeveloped land, with physical separation from the proposed new structures, and in some instances with existing vegetation cover along the corridors being managed to retain and enhance visual screening. The landscape proposals for the Proposed Development would provide considerable new planting located along the corridor of each route, comprising either new native hedgerows or new native tree and shrub belts. This planting would break up views of the new structures, reducing their visibility and enhancing the amenity of users.

6.8.89 Initial change in view would be greatest where there would be little or no screening vegetation or other features present to restrict views of the Proposed Development. Users of the southern half of Frodsham RB102 and the majority of Frodsham RB108 (including walkers, riders and cyclists) (both of which form part of the Cheshire Circuit) would pass through the Solar Array

Development, with clear views of new structures available at short range (refer to Viewpoint 18). Walkers along approx. 800m of Frodsham FP93 (forming part of the Cheshire Circuit) would pass along the eastern edge of the Solar Array Development adjacent to the River Weaver, again with clear views of new structures at short range (refer to Viewpoint 25). Walkers along approx. 530m of Frodsham FP81, where the footpath would be flanked by solar panels on both sides would experience clear views of new structures at short range to the south and west, with retained hedgerow vegetation providing considerable screening of structures to the east. Users of all these routes would experience a clear increase in the influence of built development upon the views available to them. A large magnitude of change would occur, which would result in an initial **moderate to major adverse** level of effect. Given the degree of change in view that would occur, effects would be **significant**.

6.8.90 As proposed new planting establishes, the visibility of the new structures would reduce. From the southern half of Frodsham RB102 and the majority of Frodsham RB108 (both of which form part of the Cheshire Circuit), a low hedgerow on the northern and eastern side of the routes would partially screen views of the arrays whilst preserving views over them towards the Mersey Estuary Specimen tree planting along both sides of RB102 would line and frame the footpath corridor. Tree and shrub planting along the south side of RB108 would be installed and allowed to grow taller, consolidating the existing remnants of a former hedge on the embankment which rises to the deposit ground beyond, providing a better vegetated flank to the footpath. The amenity of users would be enhanced by the presence of the new planting and the retention of views across to the Mersey estuary would preserve this aspect of character. The Proposed Development would remain a prominent presence however, and effects would remain **moderate to major adverse** and **significant**.

6.8.91 From the southern part of Frodsham FP93 (forming part of the Cheshire Circuit) and the southern part of Frodsham FP81, proposed tree and shrub

planting around the perimeter of the solar PV modules would break up views and provide screening of the new features. Along Frodsham FP93, a relatively dense screening belt would be effective in reducing the prominence of the Proposed Development, creating a generous vegetated flank to what is a linear walkway running along the River Weaver flood defence embankment. Along this section of footpath, where there are numerous visible infrastructure elements, the river is and will remain the main point of interest in views. Along Frodsham FP81, the proposed planting would complement the existing dense hedgerows on the north-eastern side of the footpath. The views available to walkers would become more enclosed by vegetation, and the prominence of the new structures would reduce. By Year 10, the magnitude of change in view would reduce to medium, and effects would reduce to **moderate adverse**. Longer term visual effects would **not be significant**.

6.8.92 Approx. 1 km of Frodsham FP81 and the entirety of Frodsham FP91 (both forming part of the Cheshire Circuit) run adjacent to the undeveloped area of land at the northern edge of the Solar Array Development. Approx. 600m of Frodsham FP 93 runs along the bank of the River Weaver to the north-west and west of the Inovyn Deposit Ground. Walkers using these routes would experience views of the Proposed Development as an obvious new addition, which would be clearly visible at short range at times from these routes refer to Viewpoints 17 and 23). The influence of built development upon the view would increase. Nevertheless, the underlying nature of the views available to walkers, which are expansive views across Frodsham Marshes towards Frodsham Hill and Helsby Hill, and out across the Mersey, with a range of prominent built development present would not change. The provision of the wide development-free buffer between the footpaths and the solar PV modules would limit the influence that the Proposed Development would have and would maintain clear visual separation between the new structures and walkers. Proposed planting would over time reduce the visibility of the new structures. A medium magnitude of change would occur, resulting in a **moderate adverse** level of effect, reducing to **minor to moderate** in the longer-term. Whilst clearly visible, the Proposed Development would not

result in any fundamental change in the nature of the views available to walkers, and as such effects would **not be significant**.

6.8.93 From Frodsham RB99 and the short section of Frodsham RB108 that adjoins it (both forming part of the Cheshire Circuit), and from approx. 860 m of Frodsham RB98, users (including walkers, riders and cyclists) towards the Proposed Development would be partially screened by existing vegetation cover and by the rising land at the edge of Manchester Ship Canal Dredging Deposit Ground that is located immediately north and west of the routes. Views of the proposed new structures would only be available intermittently from these routes due to the level of existing screening. Degrees of visibility would sometimes vary between the type of user, with the more elevated vantage point of riders at times allowing greater visibility of structures. There would be partial and intermittent visibility of the new structures associated with the solar PV array areas, the BESS and Frodsham Solar Substation (irrespective of which Option is progressed). Change would be no greater than small to medium in magnitude, and visual effects would typically be **minor to moderate adverse**. Given the degree to which the Proposed Development would be screened from view, and hence the limited amount of change that would occur, effects would **not be significant**.

*Routes south of the M56*

6.8.94 From routes south of the M56, the Proposed Development would be screened by vegetation either side of the motorway. Viewpoints 3, 14 and 15 are located along these routes, and Viewpoint 4 is located on a side street just off National Cycle Route 5. From these routes, the Proposed Development, despite its relative proximity, would typically be a partially visible background feature, which would always be seen in the context of the far more prominent motorway, and the pylons and turbines that are typically visible above vegetation cover. Change would be no greater than small to medium in magnitude, and visual effects would typically be **minor to moderate adverse** and would **not be significant** from the following sections of route (where

screening by existing features is especially effective, effects would be less than stated below):

i) Approx. 150 m stretch of Frodsham FP81 located south of the M56.
ii) Approx. 2.5 km stretch of National Cycle Route 5 located south of the M56 and north of the A56.

*Main Site Access*

6.8.95 Several PRoWs and a section of NCR5 either follow or run close to the route of the proposed Main Site Access. Viewpoints 19 and 20 are located along the proposed Main Site Access itself, and Viewpoint 21 is located along the restricted byway running further to the south. From these viewpoints, the proposed new structures associated with the Solar Array Development and the BESS/Substation (option 1 in particular) would be well screened by intervening vegetation cover and the rising land at the edge of the Manchester Ship Canal Dredgings Deposit Ground.

6.8.96 There would be very infrequent and intermittent use of the Main Site Access by maintenance traffic during the 40-year operational life of the Proposed Development. From these routes, at worst the Proposed Development would be a limited addition to a view where industry and infrastructure is well established, and where existing structures, including wind turbines, the former CF Fertilisers facility and development at Protos are all prominent in close proximity. Change in view would be small in magnitude at worst. As such, visual effects from the following routes/sections of routes would be no greater than **minor adverse** and, in many instances, would be **negligible** and **neutral**. Effects would **not be significant**:

i) Frodsham RB95.
ii) Frodsham RB97.
iii) Approx. 1km of Frodsham RB98, along the southern edge of the NBBMA.
iv) Frodsham RB 101.
v) Frodsham RB103.

vi) Frodsham RB 104.
vii) Frodsham RB107.
viii) Ince RB40
ix) Approx. 5.1km of National Cycle Route 5 that largely follows the PRoWs listed above.

6.8.97 Approx. 370 m of Frodsham RB98 running along the Order Limits (forming part of NCR5), adjacent to the rising land at the edge of Manchester Ship Canal Dredgings and approx. 175m of Frodsham RB93 running along the northern side of the Inovyn Deposit Ground (forming part of the Cheshire Circuit) would be located outside the ZTV of the Proposed Development. As there would be no change in view from these routes, **no effect** would occur.

*Long-Distance Paths*

6.8.98 The Sandstone Trail and the North Cheshire Way run largely outside the ZTV of the different elements of the Proposed Development. From specific points along the route such as Frodsham War Memorial and close to the St Laurence's Church in Frodsham, views out towards the Order Limits area available, and thus there would be a localised visual effect from these locations (refer to Viewpoint 9 and Viewpoint 26). However, from the route as a whole, the experience of users would barely change. The presence of the Proposed Development is unlikely to have any bearing upon a decision to walk either route, and effects on users would **not be significant**.

6.8.99 The route of Eddisbury Way runs entirely outside the ZTV of the Proposed Development. Users would not be affected.

*Permissive Paths*

6.8.100 The Proposed Development would introduce a series of permissive paths within the Solar Array Development Area which would link existing PRoWs and enhance connectivity between these existing routes. The permissive paths would be wholly new routes that would only exist as a result of the Proposed Development. Any journey along them would therefore be made in the full knowledge that they would pass through or adjacent to a commercial scale solar farm. The proposed permissive paths have been designed within corridors of sufficient width that mitigation planting can be provided in a similar way as for other rights of way on site and provision of these permissive paths would enhance the functional amenity of the PRoWs within and adjacent to the Solar Array Development Area.

*Rights of Way Improvements*

6.8.101 Additionally, the proposed access improvements comprising new parking facilities and improved signage would enhance the experience of all users, whether on existing public rights of way or on the proposed permissive paths. This would comprise a positive outcome of the Proposed Development that would occur irrespective of any potentially adverse changes in view.

*Effects on users of the Weaver Navigation*

6.8.102 Views from the Weaver Navigation would be very well screened by existing vegetation cover along the southern and western sides of the canal, and opportunities for views towards the Proposed Development would be very limited.

6.8.103 A public footpath runs along a section of the eastern bank of the canal between the A56 and Rocksavage Moorings. Viewpoint 27 reflects the views available from the northernmost section of this footpath, immediately opposite the Order Limits. Views across the canal in this area are defined by the dense vegetation cover that surrounds Frodsham Substation and which prevents longer views. The only element of the Proposed Development that is likely to

be visible is the new connection to the Substation, and this would appear little different to the existing Substation structures.

6.8.104 Further north, the canal is set at a lower elevation than the land immediately to the south. An access track runs along the southern side of the canal, with a densely vegetated embankment leading down to the water's edge. Viewpoint 28 and Viewpoint 29 are at locations along this track, including at Marsh Lock at the point where the Weaver Navigation links with the Manchester Ship Canal. The two Viewpoints are within private land and were selected in consultation with CRT to act as proxies for views from the Canal itself, recognising that views from the Canal are likely to be better screened by the aforementioned vegetation cover and rising landform.

6.8.105 Solar PV modules at the edge of the Solar Array Development Area and associated fencing are likely to be visible from sections of the canal banks where these are open and elevated, but views from boats using the Canal itself would be from a lower elevation and very well screened, such that the Proposed Development is unlikely to be visible from these. An exception to this would be the Daniel Adamson, which is a larger boat that has three decks. Receptors on the upper decks of the Daniel Adamson are likely to be able to see over the intervening vegetation cover, and the Solar Array Development would at times be evident in such views. Any change in view would occur in the context of prominent industry at the edge of Runcorn located immediately adjacent to the north bank of the Canal and the prominent pylons that are located close to the water and which converge on the Frodsham Substation. Change in view would be no greater than small in magnitude, and visual effects would be no greater than **minor adverse**, and would **not be significant**.

*Effects on Local Residents*

6.8.106 As set out in **Section 6.5**, the change in view that would be experienced from any property would not be so great that the living conditions of residents would

be affected to the degree that any property would become an unattractive and unsatisfactory place (but not necessarily uninhabitable) place to live.

6.8.107 From the residential caravans located along Brook Furlong, close to the southern boundary of the Order Limits, vegetation cover at the boundary of these and the rising land to the north (Manchester Ship Canal Deposit Ground) would provide substantial screening of the Proposed Development.

6.8.108 An approximately 100m wide strip of land immediately north and north-west of the two sites would be retained development-free as shown on the **Works Plans** [**EN010153/DR/2.3**], and new woodland planting in this area would enhance the screening provided by existing vegetation. The nearest part of the proposed Solar Array Development Area would be located to the north-east, approximately 20m from the edge of the two sites at the closest point. The solar panels themselves would be approximately 40m away. Existing 400kV pylons are approximately 25m from the nearest site boundary.

6.8.109 There would be some visibility of the new structures through the intervening screening features. Change in view would occur in the context of the very prominent nearby pylons, one of which is located within the more northerly of the two sites, and the Eastern Cluster of Frodsham Wind Farm, which is also prominent. The Proposed Development would be a limited addition to the view in this context, and only a small proportion of the new structures are likely to be visible.

6.8.110 From properties within Frodsham, the visibility of the Proposed Development would be determined by a combination of intervening vegetation cover, and the juxtaposition of buildings within the town. At the northern edge of Frodsham, views would typically be screened by vegetation cover along the southern side of the M56. This would limit the degree to which the Proposed Development would be visible (refer to Viewpoint 3) and in some cases would wholly screen the new structures from view (refer to Viewpoint 4).

6.8.111 Further to the south, whilst located further from the Proposed Development, properties are more elevated due to the rising landform. Views out across the

Mersey Estuary are available from some locations, although more typically views are restricted by surrounding buildings and vegetation. Viewpoints 5, 8 and 24 reflect views from properties within or at the edge of the town, and Viewpoints 6, 7 and 26 are located within areas of public open space within the matrix of urban development (with properties nearby).

6.8.112 Where views are relatively open and unobstructed, the Proposed Development would be clearly visible in a context where the influence of industry and infrastructure along the Mersey Estuary is well-established, and there would at worst be a limited increase in the influence of such development (refer to Viewpoints 6 and 26). In many cases, views would be interrupted by other nearby buildings or other features, and only a limited proportion of the Proposed Development would be visible (refer to Viewpoints 5, 7, 8 and 24).

6.8.113 More distant views would be available from some properties within Runcorn to the north (refer to Viewpoint 30), Sutton Weaver to the east (refer to Viewpoint 2), and Helsby to the south of the Solar Array Development Area (refer to Viewpoint 11). Views from the majority of properties within these settlements would be screened by intervening features. Where views out towards the Solar Array Development Area are available, the Proposed Development would at worst be a limited addition to a view where more prominent existing industrial and infrastructure development is already well-established. Any change from baseline would be relatively small in scale.

6.8.114 The visual effects of the Proposed Development as experienced from residential properties would not differ to any appreciable degree depending upon which BESS/Substation option is progressed. The BESS and Substation would be relatively minor features forming part of a far larger development and would always be seen in the context of other more prominent existing development. As such, it can reasonably be concluded that visual effects would **not be significant** at any property.

*Effects on other Receptors*

6.8.115 Other visual receptors likely to have views of the Proposed Development would include road and rail users, and especially travellers on the M56, and users of more distant PRoWs not addressed above.

6.8.116 Views from the M56 are inherently transient in nature and would typically be experienced from vehicles moving at high speed. The Proposed Development would be intermittently visible from approximately 8.3km of motorway between Junction 12 and 14, with consistent visibility predicted to occur for approximately 4.3km of this (between Junction 12 and the Straight Length overbridge). The Proposed Development is unlikely to be a prominent addition to a view where wind turbines, pylons and industrial structures north of the River Weaver at Runcorn are already very prominent (the National Grid Frodsham Substation is also very prominent from the bridge carrying the motorway over the River Weaver and Weaver Navigation) and where the attention of drivers (but not necessarily passengers) will be focused on the road ahead. The motorway corridor itself would remain the most prominent feature in the view. Any change from baseline would be limited. Refer to **ES Appendix 6-9** [**EN010153/DR/6.2**] for further analysis of how the Proposed Development would affect the views available to motorway users.

6.8.117 From other routes including minor roads and the railway that runs broadly parallel to the M56, change in view would not differ greatly to that described above. Travellers on these routes are likely to be moving more slowly through the landscape but are also likely to be better screened by vegetation cover along the roadside/railway and by buildings and other structures. Again, change from baseline would be limited.

6.8.118 From PRoWs that are distant from the Order Limits and from other routes/land with public access, visibility of the Proposed Development would typically be fragmented. Clear views of most or all of the Proposed Development are unlikely to be available. Change is likely to be limited to partial views of the

new structures and seen in the context of more prominent existing structures. Again, change from baseline would be limited.

6.8.119 The visual effects of the Proposed Development as experienced from any of the receptors discussed above would not differ to any appreciable degree depending upon which BESS/Substation option is progressed. The BESS and Substation would be relatively minor features forming part of a far larger development and would always be seen in the context of other more prominent existing development. It can therefore be reasonably concluded that visual effects would **not be significant**.

*The Influence of Light Conditions*

6.8.120 As set out in Section 6.3, the LVIA assumes that the proposed Solar PV Modules would be black in colour, to provide a worst-case of potential visual effects. In reality, the way the Proposed Development would be seen by people would vary with changes in lighting conditions, and this would affect the prominence of different features within the landscape irrespective of their colour.

6.8.121 **ES Volume 2 Appendix 6-10** [**EN010153/DR/6.3**] provides further analysis of how light conditions would affect the views available. This includes photography from Viewpoint 9: Frodsham War Memorial taken in different light conditions. The Appendix concludes that there is clear and demonstrable variance in the appearance of features due to change in light conditions, and the appearance of the Proposed Development would thus vary depending upon light conditions, especially when seen from more distant and elevated vantage points such as Frodsham War Memorial. This would affect its prominence in the view, which would therefore not be consistent.

***Operational Effects: Glint and Glare***

6.8.122 The Glint and Glare Assessment set out in **ES Volume 2 Appendix 4-3** [**EN010153/DR/6.3**] confirms that impacts on users of the M56 and residents in properties at the northern edge of Frodsham would be low. The tilt of some

of the proposed panels has been altered to reduce effects on road users of the M56, along with the introduction of screen planting as shown on the **oLEMP** [**EN010153/DR/7.13**]. The proposed native woodland planting at the south-eastern edge of the Solar Array Development Area would obscure views of the panels and would provide further mitigation of likely significant effects. The assessment also concludes that no solar reflections are geometrically possible towards the Frodsham Memorial receptor.

6.8.123 Given the low level of glint and glare effects, it can be concluded that potential visual effects resulting from this would be similarly very limited and would **not be significant**.

### *Operational Effects: Landscape Designations*

6.8.124 There would be little theoretical visibility of the Proposed Development from within either the Helsby and Frodsham Hills ASCV (which as set out in Section 6.6 is considered for the purposes of the LVIA to have an equivalent extent to the potential future Cheshire Sandstone Ridge National Landscape) or the Weaver Valley ASCV. None of the LCAs within or which overlap the boundaries of the two ASCVs would experience likely significant effects upon their character.

6.8.125 The availability of panoramic views across the Mersey Estuary from locations within the Helsby and Frodsham Hills ASCV (notably from Helsby Hill and Frodsham Hill themselves) are one of the special landscape qualities of the ASCV. The Mersey Estuary does not lie within the ASCV, and is a clearly very different type of landscape to that which is designated. The introduction of the Proposed Development into outward views would add a new feature into these views but would not prevent or otherwise interrupt the views themselves. Outward views would remain expansive, long-range panoramas looking across the low-lying land on either side of the Mersey, where large-scale industrial and infrastructure development is a well-established presence. The nature of the views would therefore not change. The presence

of the Proposed Development would not materially affect the special landscape qualities of the ASCV.

6.8.126 From within the Weaver Valley ASCV views towards the Proposed Development would be very well screened by intervening features, and it is unlikely that any of the new structures would be clearly visible. Views out of the ASCV to the north-west are already characterised by the presence of prominent large-scale built development. The presence of this existing development and the further presence of the Proposed Development would have no influence of note upon the special qualities identified by CWaCC for which the ASCV is designated.

### *Implications for the Openness of the Green Belt*

6.8.127 The Order Limits are largely within the Green Belt (other than a section of the proposed Main Site Access), and the ZTV of the Proposed Development (refer to **ES Volume 3 Figure 6-4a** [**EN010153/DR/6.3**] to **ES Volume 3 Figure 6-4j** [**EN010153/DR/6.3**]) extends across land within the Green Belt (along the Mersey Estuary and around Helsby and Frodsham). Most of the effects of the Proposed Development would be experienced from locations within the Green Belt.

6.8.128 As discussed above likely significant effects upon landscape character and upon views would be relatively localised. Likely significant effects upon character would occur within the Solar Development Area and land adjacent to it, all within the eastern part of CWaCC LC 4a: Frodsham, Helsby and Lordship Marshes. Significant visual effects would occur from stretches of public rights of way running through or adjacent to the Solar Array Development Area.

6.8.129 In relation to the LVIA, the consideration regarding the Green Belt is whether the introduction of the Proposed Development would result in visual change that materially affects the perception that the Green Belt is open. The **Planning Statement** [**EN010153/DR/5.6**] then considers this along with other (non-landscape and visual related) factors that affect openness.

6.8.130 The nature of solar energy development is such that, whilst often occupying a relatively large footprint, individual structures are low in height. The majority of proposed structures would be the proposed solar PV modules, which are inherently visually permeable by virtue of their form and arrangement. The panels would be set out in rows with clear airspace between them and would be mounted on lightweight frames with space between the panels and the ground beneath. As such, the proposed Solar PV panels would be located within their host fields, with vegetation growing beneath and around the panels, and would always be viewed in this context.

6.8.131 The proposed BESS and Frodsham Solar Substation compounds would, irrespective of which option is ultimately progressed, introduce new structures, some of which would be located within new areas of hardstanding. The Solar Array Development would also require the introduction of the proposed Transformers, Invertors and Switchgear structures. None of these new structures would be large in size or scale when compared to the large scale infrastructure that already exists here, and their individual footprints would be small.

6.8.132 The Proposed Development would be introduced into a part of the Green Belt within Frodsham Marshes, at a location that is low-lying and where long views out are available. These views include extensive built development, much of which is prominent. Within the Green Belt itself, development is sparse but does include locally very prominent tall structures at Frodsham Wind Farm and the lines of pylons that run across the Marshes, both of which are partially within the Order Limits. The M56 is also a prominent feature located within the Green Belt.

6.8.133 In the eastern half of the Solar Array Development Area, east of Brook Furlong, fields tend to be enclosed by dense hedgerows and tree belts. In the western half of the Solar Array Development Area, the landscape is more open. The Proposed Development would include provisions to maintain and enhance existing boundary vegetation cover (with increasing visual screening a key outcome) and would provide considerable new planting which would

enhance screening, but without preventing the availability of views across the Order Limits and out across the Mersey Estuary and to Helsby and Frodsham Hills. As such, the degree of enclosure provided by vegetation cover would increase as a result of the Proposed Development, but visual openness would be largely retained.

6.8.134 The ZTVs presented on **ES Volume 3 Figure 6-4c** and **ES Volume 3 Figure 6-4d** [**EN010153/DR/6.3**] illustrate the proportion of the proposed Solar Array Development that would be visible from any given location. As noted above, from most locations within the ZTV less than 40% of the structures are predicted to be theoretically visible. The ZTVs presented on **ES Volume 3 Figure 6-4e** [**EN010153/DR/6.3**] to **ES Volume 3 Figure 6-4h** [**EN010153/DR/6.3**] illustrate the theoretical visibility of structures associated with both BESS/Substation Options and demonstrate the less extensive extent of visibility of these.

6.8.135 As such, the full extent of the Proposed Development would not typically be visible from locations within the Study Area. Those locations from which the full extent (or something close to it) would be visible are elevated locations on Helsby Hill and Frodsham Hill (both within the Green Belt), and at the edge of Runcorn. Such views are by their nature inherently open, expansive and panoramic (refer to viewpoints 9 and 13). The views available are long-range ones looking across the Mersey Estuary and include prominent industry and infrastructure. The nature of these views would not change as a result of the Proposed Development, nor would any perception that they would be any less open.

6.8.136 From the public rights of way within the Order Limits and along the boundary of the Order Limits, visibility of the Proposed Development would vary depending upon the degree of existing and proposed vegetation cover and upon landform. Clear views across the Solar Array Development would be available initially from sections of footpath running adjacent to the River Weaver at the eastern and northern boundaries, from the restricted byway that leads to Frodsham Marsh Farm and from the footpath running through

the Order Limits from the Weaver Lane overbridge. Proposed new planting would reduce visibility over time. From other routes, views would be at least partially screened by existing vegetation.

6.8.137 Whilst clear views of the Proposed Development would be available at short range from some routes, the presence of the new structures would not generally prevent views to features located beyond them. Boundary vegetation on the far side of host fields would typically remain visible, with new planting providing further boundary vegetation cover over time, and the visibility through the Solar Array Development Area to prominent vertical features such as Frodsham Wind Farm and the transmission pylons, and beyond the Order Limits to Helsby Hill and Frodsham Hill and across the Mersey Estuary would remain.

6.8.138 The retention of open views across Frodsham Marshes, and the maintenance of intervisibility between the Proposed Development and the elevated vantage points on Helsby Hill and Frodsham Hill, both form one of the measures that would achieve the Project Design Principles. As such, the design of the Proposed Development has had specific regard to the need to retain the visual element of openness.

6.8.139 The Proposed Development would occupy an extensive footprint within Frodsham Marshes. However, due to the nature of the surrounding landform and vegetation cover, and due also to the low height of proposed structures, the full extent would seldom be apparent from the surrounding area. Existing tree belts and hedgerows that enclose several of the host fields where solar PV modules would be located would be retained and enhanced as part of the Proposed Development. As such the degree of enclosure in the landscape would increase. Longer views through and out of the Proposed Development would be retained, and the presence of prominent existing features that are currently visible when looking out of the Solar Array Development Area in such views would remain.

6.8.140 There would inevitably be some loss of perceived openness which would occur, but the combination of the location of the Proposed Development and the approach taken to its design would limit the degree to which this would occur. The degree to which this landscape would be accessible to the public would increase due to the improvements to existing rights of way network. The Green Belt in and around the Order Limits would continue to be experienced as an area that is very flat and low-lying, with more elevated landscapes to the south in particular, where long views in and out are available, and where industrial and infrastructure development is a prominent influence. The introduction of the Proposed Development would not materially change the experience of the Green Belt to a degree that it would no longer be perceived as visually open.

### *Decommissioning Phase*

6.8.141 Likely significant landscape and visual effects experienced during the decommissioning stage would, by and large, be similar in nature to those that would occur during construction. Infrastructure would be removed, using plant similar to that utilised during construction. As discussed in **ES Volume 1 Chapter 2:** [**EN010153/DR/6.1**] and in **Section 6.7** above, decommissioning activities would be managed via a bespoke DEMP.

6.8.142 It should also be noted that the decommissioning stage would result in a reversal of the likely significant effects associated with the operation of the Proposed Development, i.e. the adverse effects of the solar farm and associated infrastructure upon landscape character and upon views described above would largely cease (with the exceptions of the localised effects of retained access tracks and foundations) and land that has been physically disturbed by the Proposed Development would be reinstated pursuant to what is agreed in the DEMP.

6.8.143 On decommissioning, the landscaping works undertaken across the Site would be left in place and the land handed back to the landowner, the only exception being the potential requirement by the landowner to revert the

areas currently used for arable farming to this condition. Tree and scrub planting, together with created pond and wetland habitats, would be retained, including the habitats created within the NBBMA. Where grassland has been created/managed as part of the Proposed Development and does not lie within the areas returned to arable farming, the grassland would be left in place at the point of decommissioning. However, as the land would be handed back to the landowners on completion of decommissioning the long term retention of the landscaping improvement works cannot be guaranteed. Similarly, following decommissioning the landowner may or may not retain the permissive paths created across the Site. Land within the solar PV array areas would be likely be returned to agriculture.

## 6.9 Additional Mitigation, Enhancement and Monitoring

6.9.1 **ES Volume 3 Figure 2-2** [**EN010153/DR/6.3**] and **ES Volume 3 Figures 2-3a-e** [**EN010153/DR/6.3**] illustrate a scheme that has been designed to mitigate against likely significant adverse landscape and visual effects, insofar as this is reasonably practicable and does not entail unreasonable constraints upon the operation and function of the Proposed Development.

6.9.2 Mitigation has been designed to reflect the existing character of the receiving landscape, which is relatively open. Additional planting could potentially be undertaken to further reduce the visibility of the proposed new structures, but this would be to the detriment of the existing landscape (and views across it), which is not considered desirable, and which would conflict with the Project Design Principles for the Proposed Development.

6.9.3 As set out in **Section 6.7**, a LEMP would be prepared (provided in outline in the **oLEMP** [**EN010153/DR/7.13**]), specifying the measures to manage and maintain all existing and proposed vegetation, and the proposed permissive path network located within the Order Limits.

6.9.4 The LEMP would include provision for regular monitoring, and details of how the outcomes of this monitoring would be reported and how any necessary changes to management and maintenance would be agreed and communicated. Changes to the management and maintenance of the landscape within the Order Limits may be necessary to achieve the desired outcomes. Furthermore, it is possible that additional mitigation measures will be identified and subsequently implemented as part of the regular monitoring process e.g. in response to increased flooding, significant changes in temperature of other weather patterns, or changes in legislation.

## 6.10 Residual Effects

6.10.1 The likely significant landscape and visual effects of the Proposed Development have been assessed in accordance with good practice guidance set out in the GLVIA. The LVIA has considered likely significant effects upon the landscape fabric of the Order Limits itself, upon the landscape character of the Study Area, and upon views. Effects have been assessed during the construction, operational and decommissioning phases of the Proposed Development. Glint and glare effects, and effects upon landscape designations and upon the openness of the Green Belt have also been considered.

6.10.2 The residual likely significant effects of the Proposed Development would be as set out in **Section 6.8**, and are summarised below.

6.10.3 During construction, likely significant landscape and visual effects would occur upon the following receptors:

i) CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes.
ii) Viewpoint 17: Public footpath within Order Limits.
iii) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
iv) Viewpoint 20: Restricted byway, Cross Lane.
v) Viewpoint 21: Restricted byway, Straight Length.
vi) Viewpoint 23: Public footpath, adj. to Manchester Ship Canal.
vii) Viewpoint 25: Public footpath, adj. to River Weaver.

6.10.4 Once operational, likely significant landscape and visual effects would occur upon the following receptors:

i) Tree belts and hedgerow trees within the Order Limits (a beneficial effect).
ii) Waterbodies and wetland vegetation within the Order Limits (a beneficial effect).
iii) CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes.
iv) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
v) Viewpoint 25: Public footpath, adj. to River Weaver.

vi) Users of byways Frodsham RB102 and Frodsham RB 108.

vii) Users of approx. 800m of footpath Frodsham FP93.

viii) Users of approx. 530m of footpath Frodsham FP81.

6.10.5 At Viewpoint 25 and along footpaths Frodsham FP93 and Frodsham FP81 proposed planting would reduce the visibility of the Proposed Development over time. As such, long-term visual effects upon people at these locations would not be significant, and thus likely significant effects would occur in the short-term only.

6.10.6 Effects during the decommissioning phase are anticipated to be similar to construction phase effects.

## 6.11 Inter-Project Cumulative Effects Assessment

6.11.1 Cumulative effects can result from a combination of impacts, which on their own may not be significant but when combined with others, could generate likely significant effects.

6.11.2 The approach to the Cumulative Effects Assessment is described in **ES Vol 1 Chapter 4 Methodology [EN010153/DR/6.1]**. A short list of projects which the Proposed Development could have likely significant cumulative environmental effects with has been prepared, see **ES Vol 2 Appendix 4-4 Short List of other 'reasonably foreseeable' developments [EN010153/DR/6.1]**. The location of the projects is shown on **ES Vol 3 Figure 4-3: Short List Cumulative Schemes – 1km [EN010153/DR/6.3]**.

6.11.3 As set out in **ES Vol 1 Chapter 4 Methodology [EN010153/DR/6.1]** there are a number of development schemes located within Protos, a significant development site with the benefit of planning permissions for a range of energy generation and resource management businesses. Due to the proximity of the developments to one another they have been collectively assessed below. Where specific cumulative effects could arise from an individual project these have been expanded on.

6.11.4 Project Ref 16 (100MW BESS) and Ref 17 (135Kv substation) have also been considered together due to their proximity and the interrelationship of the two projects.

6.11.5 In addition to the schemes discussed in **ES Vol 2 Appendix 4-4 Short List of other 'reasonably foreseeable' developments [EN010153/DR/6.1]**, CWaCC requested that some consideration be given to the proposed solar farm development at Gowy Landfill. This scheme is at the EIA Screening stage, and information in the public domain is thus very limited. Nevertheless some discussion of likely cumulative landscape and visual effects is included below.

6.11.6 **Appendix 6-1: LVIA Methodology** [**EN010153/DR/6.2**] includes details of the approach followed when undertaking an assessment of cumulative landscape and visual effects. It should be recognised that the cumulative assessment is concerned with the effects of the Proposed Development in a scenario where the other cumulative schemes are present, rather than the effects of those schemes.

***Halton Schemes - Ref 16 (100MW BESS) and Ref 17 (135Kv substation)***

6.11.7 Schemes 16 and 17 would be located on the north side of the Weaver Navigation, opposite the existing Substation. The influence of built infrastructure on this section of the Weaver Navigation and its surroundings is well-established.

6.11.8 No LVIA was submitted for Scheme 16. The Planning Statement submitted for that scheme notes that the area where Scheme 16 would be located is defined by heavy industrial uses and transport infrastructure, and that Scheme 16 would not be incongruous in this context, nor would it change the character or appearance of the area.

6.11.9 No LVIA was submitted for Scheme 17. The Planning Statement submitted for that scheme notes that Scheme 17 would be largely screened from the surrounding area by the adjacent consented BESS facility (Scheme 16), and where visible would be seen in the context of Scheme 16, and the M56 including Junction 12, concluding that the presence of Scheme 17 would be in keeping with the character of the area.

6.11.10 Both Scheme 16 and Scheme 17 have been consented, and thus it can be concluded that the landscape and visual effects were considered acceptable by HBC. When granting consent for Scheme 17, HBC must have considered cumulative effects with Scheme 16.

6.11.11 As set out in Section 6.8, the Proposed Development would be well-screened from the canal by existing vegetation cover and would have little influence upon the amenity of users. There would be little intervisibility with Schemes

16 and 17 from the Weaver Navigation, and any cumulative change resulting from the presence of the Proposed Development would very limited and would be experienced in the context of prominent existing development that is already visible from the canal corridor.

6.11.12 Cumulatively there would be an incremental increase in the influence of infrastructure upon landscape character and upon views, but this would be small in scale. Cumulative landscape and visual effects would **not be significant**, during either construction, operation or decommissioning.

***Protos Schemes – Ref 20 (Ince Biopower CO2); Ref 27 (Plastics Recycling Facility); Ref 25 & 28 (Hydrogen Production Facility); Ref 31 (Waste Recycling and hydrogen refuelling); 34 (Standby Electricity Generating Plant); Ref 35 (Post Combustion CO2 Capture Facility); Ref 81 (Protos West AGI)***

6.11.13 Collectively these schemes would represent an intensification in the established cluster of industrial structures at Protos and the adjacent land uses (e.g. Encirc and the former CF Fertilisers Plant). They would be separated from the Solar Array Development Area by approximately 3km of relatively open marsh and would be very obviously separate from it.

6.11.14 No LVIA was submitted for Scheme 20. The Planning Statement submitted for Scheme 20 notes that any change in landscape character would be limited due to the influence of the neighbouring land uses (i.e. other nearby development), and that change in view would be consistent with the existing visual context.

6.11.15 No LVIA was submitted for Scheme 25 & 28. The Planning Statement submitted for Scheme 25 & 28 notes that any change in landscape character would be limited due to the influence of the neighbouring land uses (i.e. other nearby development), and that change in view would be consistent with the existing visual context.

6.11.16 An LVIA was submitted for Scheme 31. This concluded that landscape and visual effects would not be significant due to the well-established presence of existing development and construction activities in the immediate vicinity at Protos and at adjacent facilities.

6.11.17 A Landscape and Visual Impact Appraisal (not a full LVIA) was submitted for Scheme 34. This concluded that given the very restricted views of the site and the nature of the existing surrounding development, which is largely industrial (and increasing in extent as Protos is progressively developed), the landscape and visual effects of Scheme 34 is likely to be minimal.

6.11.18 An LVIA was submitted for Scheme 35. This concluded that the landscape and visual effects of Scheme 35 would not be significant.

6.11.19 The above Schemes have all been consented, and it can thus be concluded that landscape and visual effects, including cumulative effects must have been acceptable to CWaCC.

6.11.20 Scheme 20 remains at the scoping stage, and thus no LVIA has yet been submitted. Scheme 20 would be located adjacent to Ince Bio Power and the former CF Fertilisers Plant. It would include several industrial structures which would be relatively low in height and two 90m high stacks. Given the context adjacent to existing large-scale structures where several tall stacks are already present, any landscape and visual effects are likely to be limited in scale and extent.

6.11.21 No planning application has been submitted for Scheme 81. The Scheme would comprise above ground infrastructure which would connect to Scheme 37. Scheme 81 would be located close to Ince Bio Power and the Protos ERF. It would comprise a compound containing small structures, and an underground pipeline connection running south from this to Scheme 37. Given the location next to far larger existing structures, any landscape and visual effects are anticipated to be very localised, and are likely to be very limited in scale.

6.11.22 During construction, traffic utilising the Main Site Access would pass through the Protos area and there would thus be some limited intensification of the influence of traffic in that area, which would be additional to that of the cumulative schemes. Given the well-established industrial character of Protos and its vicinity, any construction stage cumulative landscape and visual effects would **not be significant**.

6.11.23 Once operational, traffic associated with the Proposed Development would reduce to a low level. The physical separation of the built elements of the Proposed Development and the cumulative schemes at Protos (which are approximately 3km to the west of the SADA at the closest) would mean than any interactions between them would be very limited. Cumulatively there would be an incremental increase in the influence of built development on the marshes, but this would be very limited in scale. The Proposed Development and the cumulative schemes at Protos would be experienced as separate and unrelated presences in the landscape when seen from elevated locations such as Frodsham War Memorial (Viewpoint 9) and Helsby Hill (Viewpoint 13). Cumulative change would not result in any landscape and visual effects appreciably different from those identified in Section 6.8. Cumulative landscape and visual effects would **not be significant** during the operational stage.

6.11.24 Cumulative landscape and visual effects that would occur during decommissioning would be similar in nature to the construction stage effects and would **not be significant**.

***Ref 32 (Hydrogen Production Facility)***

6.11.25 Scheme 32 would be located within the existing assemblage of structures at Stanlow oil refinery, more than 5.5km from the Solar Array Development Area.

6.11.26 An LVIA was submitted for Scheme 32. This concluded that significant visual effects would occur during the construction and decommissioning phases from users of nearby public footpaths, but that operational visual effects would

not be significant. Consideration of landscape effects was scoped out of the LVIA.

6.11.27 There would be a limited intensification of the influence of built development at Stanlow upon surrounding area but given the separation from the built components of the Proposed Development, this would not result in any interactions between the two that would give rise to likely significant cumulative change. Cumulative landscape and visual effects would **not be significant**, during either construction, operation or decommissioning.

***Ref 33 (Encirc Automated Warehouse)***

6.11.28 Scheme 33 would be located at Encirc Glass, immediately south-west of Protos. It would comprise an extension to the well-established existing facility at Encirc Glass, adding a new 44m high building to the east of the existing building.

6.11.29 An LVIA was submitted for Scheme 33. This concluded that visual effects upon residents at Orchard Park Lane, Eton would be significant, but that other landscape and visual effects would not be significant, and that cumulative landscape and visual effects would **not be significant**.

6.11.30 Scheme 33 has been consented, and it can thus be concluded that landscape and visual effects, including cumulative effects must have been acceptable to CWaCC.

6.11.31 Scheme 33 would be located approximately 4km from the SADA, with development at Protos and the former CF Fertilisers Plant located in the intervening landscape (immediately north-east of Scheme 33). The Main Site Access would run immediately north of Encirc Glass but would be separated from it by a dense belt of established tree cover. Scheme 33 would be accessed via the existing Encirc Glass access, which is from the south, and is wholly separate to the Main Site Access.

6.11.32 The physical separation of the Proposed Development and Scheme 33 would mean than any interactions between them would be very limited. Cumulatively there would be an incremental increase in the influence of built development on the marshes, but this would be very limited in scale. Cumulative landscape and visual effects would **not be significant**, during either construction, operation or decommissioning.

***Ref 37 (HyNet Hydrogen Pipeline)***

6.11.33 The route of the pipeline proposed as part of Scheme 37 runs through the southern part of the SADA, north of but roughly parallel to the M56, and would also cross the Skylark Mitigation Area. The pipeline would cross the River Weaver via a trenchless crossing. The Rocksavage Hydrogen Above Ground Infrastructure ('HAGI') would be located immediately south of the M56 overbridge between the River Weaver and Weaver Navigation, adjacent to the Order Limits, but approximately 350m from the SADA (and separated from it by the motorway). Sections of the Main Access Road and the SPEN Substation Access also fall within the draft order limits for Scheme 37, and it assumed that these would be used for construction access for that scheme.

6.11.34 Construction is anticipated to take place in the period 2025-2029, and as such may overlap with the construction period for the Proposed Development. Pipelaying is anticipated to take place between March and September during 2027 and 2028, with construction anticipated to advance between 150m and 350 per day. The trenchless crossing of the River Weaver would take approximately 6 months, but would not be restricted to the March-September period. The construction of the Rocksavage HAGI is anticipated to last up to 12 months.

6.11.35 Post-construction it is assumed that the pipeline corridor would be reinstated. Additional mitigation would be provided along the ditches within the extent of the Skylark Mitigation Area. A wildflower meadow would be created within the Rocksavage HAGI compound.

6.11.36 The operational life of Scheme 37 is anticipated to be approximately 40 years. Decommissioning may overlap with the decommissioning of the Proposed Development. Decommissioning of Scheme 37 would leave the pipeline in situ, with localised works required to plug the pipeline at intervals and stabilise major crossings. The Rocksavage HAGI would be removed.

6.11.37 A draft LVIA has been submitted as part of the PEIR for Scheme 37. This concludes that in the vicinity of the Order Limits, significant construction stage effects would occur upon the character of CWaCC LCA4a, CWaCC LCA9a and CWaCC LCA15c. Operational and decommissioning stage effects upon CWaCC LCA15c would also be significant. Significant construction stage visual effects would be experienced by users of National Cycle Route 5 and by users of the Weaver Navigation. Users of the Weaver Navigation would also experience significant effects during the operational stage. It should be noted the sources of some of these significant effects would be from elements of Scheme 37 located south of the M56, such as the Rocksavage HAGI or pipeline excavation south of the motorway, which would have little or no interaction of note with the Proposed Development.

*Construction*

6.11.38 On the basis that there is likely to be some overlap between the construction periods for Scheme 37 and for the Proposed Development, and that some of the construction traffic for both may use the same routes, this would inevitably result in cumulative landscape and visual effects.

6.11.39 As the pipeline construction would be undertaken on a progressive basis, with excavated areas filled and restored following pipelaying, the extent and duration of disruption would be limited.

6.11.40 Cumulative effects would represent a localised intensification of the construction stage effects described and assessed in **Section 6.8**. The Proposed Development would be the principal source of construction effects due to its greater footprint and greater duration. Change in view would be experienced chiefly by people using the public rights of way within and close

to the SADA, and this would sometimes be in combination (both developments visible in the same field of view), sometimes in succession (the developments would be visible in different fields of view, but from the same location, due for example to screening by retained features), and sometimes in sequence (the two developments would not be visible from the same location, but would fall in and out of view as one travels along the routes, again due to screening by retained features).

6.11.41 The presence of pipeline construction would appear as a relatively limited addition to the wider construction effects of the Proposed Development, and the cumulative magnitude of change experienced by landscape receptors and by visual receptors would not differ appreciably from that set out in **Section 6.8** and **Appendix 6-6: Construction Phase Effects** [**EN010153/DR/6.2**], and nor would the cumulative level of effect experienced by these receptors.

6.11.42 Thus, whilst both Scheme 37 and the Proposed Development would each result in significant construction stage landscape and visual effects in their own right, the specifically additional cumulative construction stage landscape and visual effects resulting should the construction of both schemes be experienced together at the same time would **not be significant**

***Ref 38 (HyNet Carbon Dioxide Pipeline)***

6.11.43 The route of the pipeline proposed as part of Scheme 38 would terminate at the Ince Above Ground Infrastructure (AGI) to the south of the former CF Fertilisers Plant. Access would run south from the Grinsome Road Roundabout and would not overlap with the Order Limits.

6.11.44 An LVIA was submitted for Scheme 38. This concluded that, in the vicinity of the Order Limits, landscape and visual effects would not be significant. Scheme 38 has been consented and thus it can be concluded that the landscape and visual effects were considered acceptable by PINS.

6.11.45 The physical separation of the Proposed Development and Scheme 33 would mean than any interactions between them would be very limited.

Cumulatively there would be a very incremental increase in the influence of built development, but this would be very limited in scale, and given the established influence of the existing structures at Protos and the former CF Fertilisers Plant cumulative change to the landscape or to views would be minimal. Cumulative landscape and visual effects would **not be significant**, during either construction, operation or decommissioning.

***Ref 78 (Runcorn Carbon Dioxide Spur Pipeline)***

6.11.46 The route of the pipeline proposed as part of Scheme 78 would run through the Order Limits. A detailed route has yet to be determined. Construction is currently anticipated to take place from 2026-2028. Above ground infrastructure would be located within the existing area of industrial development at the edge of Runcorn, north of the Weaver Navigation, and at the Ince AGI forming part of Scheme 38 discussed above.

6.11.47 Scheme 78 remains at the scoping stage, and thus no LVIA has yet been submitted.

6.11.48 In the absence of detailed information regarding Scheme 78, it is assumed that the nature of cumulative change and the resulting cumulative landscape and visual effects would be broadly similar as for Scheme 37 (i.e. short-term disturbance to construct the pipeline, with reinstatement to follow, and thus would **not be significant**.

6.11.49 In the event that construction of Scheme 78 is delayed and takes place after the Proposed Development is constructed, then there is potential for effects of a different nature to occur. In this scenario, the construction of Scheme 78 is likely to disturb some elements of the landscape proposals that form part of the Proposed Development. The developer of Scheme 78 would thus need to provide appropriate mitigation measures to minimise or eliminate any likely adverse effects upon the operational landscape fabric of the Proposed Development, and likely adverse visual effects upon users of public rights of way and permissive paths within the Order Limits.

### *Ref. 83 (Gowy Solar)*

6.11.50 A screening request for a proposed solar farm located at the Gowy Landfill was made to CWaCC in 2024 (ref: 24/02269/SCR). CWACC have screened the development as EIA but the applicant has sought a screening direction from the Secretary of State, the screening direction is pending. As such, there is little information in the public domain regarding the scheme, and should a planning application be progressed, the design may change from that presented in the screening request.

6.11.51 The Gowy Landfill is located approximately 7.9km from the SADA, and lies just south of the M56. Restoration of the landfill is to be completed during 2025. The landfill is visible from Helsby Hill (Viewpoint 13) set within the expansive panoramic views available from that location, but is not visible from any other LVIA Viewpoint. It is a minor presence in views from Helsby Hill.

6.11.52 The physical separation of the Proposed Development and Gowy Solar would mean than any interactions between them would be very limited. Cumulatively there would be an incremental increase in the influence of built development as seen from Helsby Hill, but this would be very limited in scale, and would not appreciably influence landscape character. Cumulative landscape and visual effects would **not be significant**, during either construction, operation or decommissioning

### *Cumulative Effects resulting from more than one Scheme*

6.11.53 There is potential for the Proposed Development, Scheme 37 and Scheme 78 to be constructed within a similar timescale, and thus for overlap between the construction periods of each. In this scenario, construction of the two pipelines would occur at the broadly the same time as the Proposed Development, and thus there would be an increased amount of construction plant and construction activities present within the Order Limits.

6.11.54 This would further intensify cumulative landscape and visual change over and above what is discussed above. The scale of additional change would be

limited. Change in view would be experienced chiefly by people using the public rights of way within and close to the SADA, and this would sometimes be in combination (all three developments visible in the same field of view), sometimes in succession (the developments would be visible in different fields of view, but from the same location, due for example to screening by retained features), and sometimes in sequence (the three developments would not be visible from the same location, but would fall in and out of view as one travels along the routes, again due to screening by retained features).

6.11.55 It is unlikely that the magnitude of change experienced by landscape receptors or visual receptors would increase appreciably. The level of effect experienced by receptors is also unlikely to increase. Likely significant effects would remain as set out in Section 6.8 and **Appendix 6-6: Construction Phase Effects** [**EN010153/DR/6.2**] and no additional receptors would experience likely significant landscape and visual effects. As such, the specifically cumulative landscape and visual effects that would occur in this scenario would **not be significant**.

6.11.56 Any cumulative interaction between Scheme 37 and Scheme 78 and the Proposed Development once operational would be very limited. The two pipelines would largely comprise below ground infrastructure, and above ground elements would be separated from the Proposed Development by intervening existing features. Operational stage landscape and visual effects would **not be significant**.

6.11.57 Cumulative landscape and visual effects that would occur during decommissioning would at worst be similar in nature to the construction stage effects (and would in all likelihood be less, due to the pipelines being retained in-situ), and would **not be significant**.

6.11.58 Conclusions made in respect of the schemes at Protos reflect the potential presence of some or all of these schemes (i.e. not just each scheme individually) when under construction or once operational.

## 6.12 Conclusions

6.12.1 The likely significant landscape and visual effects of the Proposed Development have been assessed in accordance with good practice guidance set out in the GLVIA. The LVIA has considered effects upon the landscape fabric of the Order Limits itself, upon the landscape character of the Study Area, and upon views. Likely significant effects have been assessed during the construction, operational and decommissioning phases of the Proposed Development. Glint and glare effects, and effects upon landscape designations and upon the openness of the Green Belt have also been considered.

6.12.2 The Proposed Development would be introduced into a flat and very low-lying location located at Frodsham Marshes on the southern side of the Mersey. The Order Limits include the Eastern Cluster of Frodsham Wind Farm with six prominent wind turbines present. Other prominent development in the vicinity includes the Western Cluster of the Wind Farm, lines of electricity pylons, the M56, extensive industrial development at the edge of Runcorn, and more distant industrial development further to the west.

6.12.3 The design of the Proposed Development reflects Project Design Principles that would be delivered via a series of documents, plans and strategies, most notably the **oLEMP** [**EN010153/DR/7.13**]. Key elements relating to landscape and visual amenity include:

i) The retention and enhancement existing vegetation and the provision of additional new tree and hedgerow cover consistent with landscape character and which provides visual screening.
ii) The containment of development within existing field boundaries.
iii) The provision of generous development-free buffers along existing landscape features and public rights of way.
iv) The retention of a proportion of the open views from public vantage points within the Solar Array Development Area towards the Mersey Estuary, the remainder of Frodsham Marshes, Helsby Hill and Frodsham Hill.

v) The enhancement of access provision within the Order Limits via improvement of existing routes, creation of new permissive paths, provision of wayfinding signage and information, and interpretative material.
vi) The provision of long-term management and maintenance of the landscape of the Order Limits, so that the Project Design Principles can be achieved.

6.12.4 The residual effects of the Proposed Development are summarised below.

6.12.5 During construction, likely significant landscape and visual effects would occur upon the following receptors:

i) CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes.
ii) Viewpoint 17: Public footpath within Order Limits.
iii) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
iv) Viewpoint 20: Restricted byway, Cross Lane.
v) Viewpoint 21: Restricted byway, Straight Length.
vi) Viewpoint 23: Public footpath, adj. to Manchester Ship Canal.
vii) Viewpoint 25: Public footpath, adj. to River Weaver.

6.12.6 Once operational, likely significant landscape and visual effects would occur upon the following receptors:

i) Tree belts and hedgerow trees within the Order Limits (a beneficial effect).
ii) Waterbodies and wetland vegetation within the Order Limits (a beneficial effect).
iii) CWaCC LCA4a: Frodsham, Helsby and Lordship Marshes.
iv) Viewpoint 18: Restricted byway leading to Frodsham Marsh Farm.
v) Viewpoint 25: Public footpath, adj. to River Weaver.
vi) Users of byways Frodsham RB102 and Frodsham RB 108.
vii) Users of approx. 800m of footpath Frodsham FP93.
viii) Users of approx. 530m of footpath Frodsham FP81.

6.12.7 At Viewpoint 25 and along footpaths Frodsham FP93 and Frodsham FP81 proposed planting would reduce the visibility of the Proposed Development over time. As such, long-term visual effects upon people at these locations would not be significant.

6.12.8 Effects during the decommissioning phase are anticipated to be similar to construction phase effects.

6.12.9 The introduction of the Proposed Development would not result in any changes that would materially affect the special landscape qualities of either the Helsby and Frodsham Hills ASCV or the Weaver Valley ASCV.

6.12.10 Any glint and glare resulting from the proposed solar PV modules would not give rise to any landscape and visual effects of note.

6.12.11 The combination of the location of the Proposed Development and the approach taken to the design would limit the degree to which the perceived openness of the Green Belt would change. The Green Belt in and around the Order Limits would continue to be experienced as an area that is very flat and low-lying, with more elevated landscapes to the south in particular, where long views in and out are available, and where industrial and infrastructure development is a prominent influence. The introduction of the Proposed Development would not materially change the perceived openness of the Green Belt.

6.12.12 In conclusion, the Proposed Development would whilst occupying an extensive footprint comprise a series of structures that are low in height and which can therefore benefit from the screening provided by existing vegetation cover. It would be introduced into a large-scale landscape context where long range expansive views across and along the Mersey Estuary are characteristic of the landscape that is experienced from public rights of way, road, rail and canal routes, and from nearby settlements. Large scale industrial and infrastructure development is a well-established presence and indeed is often very prominent. In this context, the degree to which the

change resulting from the Proposed Development would change the nature of the landscape would be limited. Likely significant and adverse landscape and visual effects would occur, but would be experienced by a small number of receptors, and would be localised in their extent.

6.12.13 Proposed new planting would over time reduce the visibility of the proposed new structures from some locations, including from much of the public right of way network that currently passes through or adjacent to the Order Limits. The improvement of the existing PRoW network and the extension of the network with some strategic permissive paths that link existing routes would provide a much more useable network that would enable more and better quality recreational access to the land within the Order Limits. The path network would all be set within generous corridors such that there would be a positive landscape experience.

6.12.14 Whilst there would be some likely significant adverse visual effects due to the change experienced from parts of the footpath network, in the majority of cases these would last for a limited period only, with longer-term effects not significant. These adverse effects would be balanced by the benefits of the overall improved experience of the landscape brought about by the enhanced access proposals.

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