Frodsham Solar

Environmental Statement: Volume 4
Non-Technical Summary

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1.0 INTRODUCTION

1.1 Overview

1.1.1 This document has been prepared on behalf of Frodsham Solar Limited ('the Applicant') and is a Non-Technical Summary (NTS) of the Environmental Statement (ES) that has been prepared for the Frodsham Solar project ('the Proposed Development').

1.1.2 The NTS has been prepared to explain the development proposed by the Applicant and to describe the likely significant environmental effects of the construction, operation (including maintenance), and decommissioning of the Proposed Development. It also outlines the mitigation measures proposed to reduce the effects on the environment. The NTS has been written in non-technical language to provide a clear, accessible, and concise summary of the findings of the ES.

1.1.3 The Proposed Development comprises a new solar energy generating station and an associated on-site Battery Energy Storage System ('BESS') on land at Frodsham Marsh, Frodsham, Cheshire West and Chester ('the Site'). The Proposed Development also includes the associated infrastructure for connection to the local electricity distribution network, as well as a private wire electricity connection that would enable local businesses to utilise the renewable energy generated by the Proposed Development.

1.1.4 The Proposed Development would allow for the generation and export of approximately 147 megawatts (MW) of renewable electricity, as well as the storage of up to approximately 100 MW of electricity in the BESS.

1.1.5 The Proposed Development is classified as a Nationally Significant Infrastructure Project (NSIP) as a result of its electricity generation capacity being greater than 50 MW. As such, the Applicant is required to apply for a Development Consent Order (DCO) to construct, operate and decommission the Proposed Development. A DCO is a legal document that has the effect of

granting planning permission for a development, along with granting other associated consents, and where required, land acquisition powers.

1.1.6 There is a clear and urgent need for new renewable energy infrastructure in the UK to help address the climate change emergency, meet Net Zero 2050 targets, and bolster national energy security. The Proposed Development will make a significant contribution toward these objectives by delivering a large-scale source of clean, low-carbon electricity.

1.1.7 The application for a DCO will be submitted to the Planning Inspectorate, with the decision whether to grant a DCO ultimately being made by the Secretary of State for the Department for Energy Security and Net Zero (hereafter referred to as the 'Secretary of State') pursuant to the Planning Act 2008.

1.2 What is Environmental Impact Assessment?

1.2.1 The nature, size and location of our proposals means that we are undertaking an Environmental Impact Assessment (EIA) for the Proposed Development. The core purpose of EIA is to identify, describe and assess, the significant effects (both adverse and beneficial) of the Proposed Development, which is an iterative and staged process.

1.2.2 As the Proposed Development is a NSIP, the following are the key EIA reporting stages through to the submission of the DCO application:

i) **EIA Screening** – depending on the scale of the development, EIA screening is undertaken to establish whether the development has the potential for significant environmental effects. The Applicant did not undertake EIA Screening but instead acknowledged that the Proposed Development has the potential for significant environmental effects and notified the Secretary of State of their intention to provide an Environmental Statement ('ES') with the DCO application.

ii) **EIA Scoping** – the scope of the EIA is consulted on with the Planning Inspectorate and consultees including the Local Planning Authority. An EIA Scoping Report was submitted to the Planning Inspectorate on the

30th May 2023, and the Planning Inspectorate issued their Scoping Opinion on the 10th July 2023. The Scoping Opinion has informed the scope of the EIA.

iii) **Preliminary Environmental Information** – the Applicant must prepare and consult on 'Preliminary Environmental Information' as part of a statutory consultation that includes prescribed statutory consultees[1], land interests and members of the public. The Applicant held a statutory consultation, which included the publication of a Preliminary Environmental Information Report, between 7th November and 19th December 2024.

iv) **Environmental Statement** – following consultation on the PEIR, the Applicant must submit an ES with the DCO application that reports on the likely significant effects of the Proposed Development, along with any proposed mitigation to reduce those effects. The ES is taken into account by the Secretary of State when deciding on whether to grant a DCO. The project is at this stage in the process.

1.3 Purpose of the Environmental Statement

1.3.1 This document is a Non-Technical Summary of the ES submitted with the DCO application for the Frodsham Solar project. The ES comprises four volumes as follows:

i) **ES Volume 1: Main Report [EN010153/DR/6.1]** – This is the main body of the ES, containing the written chapters. It begins with a Table of Contents, a Glossary of terms, and a list of Acronyms for reference.

ii) **Volume 2: Technical Appendices [EN010153/DR/6.2]** – The technical appendices to the ES contain detailed technical data and reports that support the assessments in the main chapters of the ES.

iii) **Volume 3: Figures [EN010153/DR/6.3]** – This comprises the maps, drawings, and figures referenced in the ES chapters

[1] *A list of statutory consultees is prescribed in Schedule 1 of the Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009. The applicant has a duty to consult with statutory consultees on the Proposed Development.*

iv) **Volume 4: Non-Technical Summary [EN010153/DR/6.4]** – The NTS (this document) is a standalone summary of the ES written in plain language. It condenses the main findings of the ES into a shorter document, with graphics and simplified explanations, so that non-specialist readers can understand the environmental implications of the Proposed Development.

1.3.2 The ES (as a whole) provides a comprehensive assessment of environmental effects. Readers concerned with specific issues (for example, how the Proposed Development might affect local wildlife or traffic or views) can find the relevant ES chapter and see both the analysis and supporting data.

2.0 THE SITE

2.1 The Site

2.1.1 The Site is located approximately 500 m to the north of the centre of Frodsham Town Centre within the administrative area of Cheshire West and Chester Council (CWaCC). The Site location is shown on ***Figure 1***.

2.1.2 The Site is defined by a single red line boundary that covers all land required for the Proposed Development, which in total is approximately 337.5 ha. This is also referred to within the ES as the Order limits.

2.1.3 The Site contains all of the principal elements of the Proposed Development which are illustrated on ***Figure 2*** and includes:

i) '**Solar Array Development Area**' – which would include solar photovoltaic modules and support frames, internal access tracks, cabling, inverters[2], transformers[3], the solar array substation (known as the 'Frodsham Solar Substation') and the BESS which would be co-located with the on-site substation;

ii) '**Main Site Access**' – the main vehicular access into the Site, which would be routed from the west via the Pool Lane roundabout and the access tracks used for the Frodsham Wind Farm. There would be no access to the Site from Frodsham during construction, operation or decommissioning other than for emergency vehicles, and access to a newly proposed public car parking area on Moorditch Lane;

iii) '**SPEN Frodsham Substation**' – the existing Scottish Power Energy Networks ('SPEN') Frodsham Substation located to the north of the River Weaver is included along with access into the substation;

iv) '**SPEN Grid Connection**' – an above-ground electricity connection which would link the on-site Frodsham Solar Substation to the SPEN Frodsham Substation;

[2] *Inverters convert direct current (DC) electricity collected by the solar photovoltaic modules into alternating current (AC).*
[3] *Transformers control the voltage of the electricity generated.*

v) '**Private Wire Connection**' – a below-ground electricity connection which would facilitate future electricity connections to businesses located south-west of the Proposed Development;
vi) '**Non-Breeding Bird Mitigation Area**' – an area of land used to mitigate for the potential impacts of the Proposed Development on wetland bird species; and
vii) '**Skylark Mitigation Area**' – which includes land that would be used to mitigate for the potential impacts of the Proposed Development on skylark.

Solar Array Development Area

2.1.4 The Solar Array Development Area Context Plan is shown on ***Figure 3***, which illustrates the key features described below.

2.1.5 The Solar Array Development Area would be located at the eastern extent of Frodsham and Helsby Marsh, an area of land between the Mersey Estuary and the M56. The boundaries of the Solar Array Development Area are formed by:

i) to the north – the River Weaver and the former INEOS Inovyn Dredging Deposit Ground;
ii) to the north-west – the Manchester Ship Canal (with the Mersey Estuary lying beyond);
iii) to the west – two of the former Manchester Ship Canal Dredging Deposit Ground Cells, known as 'Cell 3' and 'Cell 6'; and
iv) to the south and east – agricultural fields and the M56 motorway.

2.1.6 The Solar Array Development Area comprises three relatively distinct areas:

i) The Eastern Cluster of Frodsham Wind Farm which forms the western half of the Solar Array Development Area. Six wind turbines are located in this area. The land forms part of the former Manchester Ship Canal Dredging Deposit Ground, and includes 'Cells 1, 2 and 5'. The 'Cells' have been restored to agricultural land and are now grazed;

ii) Former agricultural land used by Frodsham Wildfowlers which forms the central area of the Solar Array Development Area. This area is former agricultural land which has been left fallow and managed to encourage use by wildfowl and is currently used for recreational shooting by Frodsham Wildfowlers. This area of the Site is crossed by a series of ditches which have been used to drain and manage water levels on Frodsham and Helsby Marsh; and

iii) Agricultural land, which forms the eastern portion of the Solar Array Development Area. It is understood that the land has been used for growing crops and silage. Some areas of the fields appear to have been left fallow and have colonised with scrub and wet grassland. Hedgerows demarcate boundaries between field units.

Main Site Access

2.1.7 There would be no access to the Site through Frodsham or the other residential areas of Helsby, Elton or Ince during construction, operation or decommissioning, other than for emergency vehicles. As such there would be no construction access into the Site from Brook Furlong or Weaver Lane.

2.1.8 The Main Site Access is from the west of the Solar Array Development Area via the Pool Lane roundabout which is approximately 2km north-west of Junction 14 of the M56 motorway.

2.1.9 Vehicles accessing the Site would turn onto Grinsome Road (a private road) from Pool Lane roundabout and travel east towards Protos[4] for approximately 1.5 km, before routing north at Grinsome Road Roundabout. Vehicles would then turn east along Marsh Lane which provides access to Frodsham Wind Farm. The Frodsham Wind Farm access tracks provide access to the Solar Array Development Area.

[4] A significant strategic development site with the benefit of planning permissions for a range of energy generation and resource management businesses

SPEN Frodsham Substation and SPEN Grid Connection

2.1.10 The SPEN Frodsham Substation is located north-east of the Solar Array Development Area and is separated from the Solar Array Development Area by the River Weaver. The SPEN Frodsham Substation comprises electrical equipment and infrastructure and is the point of connection for the Proposed Development. The SPEN Frodsham Substation distributes electricity into the local network, which links to homes and businesses in the local area. It is also linked to the National Grid, which transfers electricity around the UK.

2.1.11 The SPEN Grid Connection between the Solar Array Development Area and the SPEN Frodsham Substation comprises a corridor of land and includes a crossing of the River Weaver within which a 132kV overhead line on wooden pylons/poles would be constructed.

Private Wire Connection

2.1.12 The Private Wire Connection comprises a corridor which extends westwards from the Solar Array Development Area following existing access tracks as far as the Hoolpool Gutter. The connection would comprise an underground 132/33kV cable.

Non-Breeding Bird Mitigation Area

2.1.13 The Non-Breeding Bird Mitigation Area (NBBMA) is located west of the Solar Array Development Area and comprises ‘Cell 3’ of the Manchester Ship Canal (‘MSC’) Dredging Deposit Ground, a section of land between Cell 3 and the MSC, and land immediately surrounding Marsh Farm.

2.1.14 Cell 3 comprises areas of grassland with some manmade scrapes (shallow areas of water). A number of ponds are located in the land between Cell 3 and the MSC, these have been used in the past for recreational fishing.

2.1.15 The land between Cell 3 and the MSC, and land immediately surrounding Marsh Farm forms part of the Mersey Estuary Site of Special Scientific Interest[5] (SSSI).

Skylark Mitigation Area

2.1.16 The Skylark Mitigation Area is located south of the Solar Array Development Area between Moorditch Lane and the M56 motorway and comprises agricultural land that is currently in arable cultivation.

2.2 Site Context

2.2.1 In the eastern half of the Solar Array Development Area (i.e. the area to the 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 Site is more open, with only occasional trees and remnant sections of hedgerow. There are areas of scrub and woodland present on the embankments of the MSC dredging deposit cells.

2.2.2 The landform across the Site is largely flat and low-lying alongside the Mersey Estuary, however, engineered embankments associated with flood defences and the M56 motorway are present around and through the Site. The eastern half of the Site lies within an area at potential risk of flooding, but which benefits from flood defences along the River Weaver. There are a series of drains which dissect the agricultural and former agricultural land in the eastern half of the Site.

2.2.3 There are large areas of industrial development along this section of the River Mersey corridor, including power stations, oil refineries, chemical and manufacturing sites, and Frodsham Wind Farm.

2.2.4 The closest settlement to the Site is Frodsham on the south side of the M56 motorway. To the south-west of Frodsham lies Helsby, approximately 2 km from the Solar Array Development Area. Both Frodsham and Helsby lie at the

[5] *A SSSI is a legally protected area designated for its exceptional biological, geological, or ecological features.*

foot of the northern extent of the Cheshire Sandstone Ridge, which rises to a height of approximately 150m to the south of Frodsham and Helsby.

2.2.5 To the north and north-east of the Site, on the north bank of the River Weaver / Weaver Navigation, lie Runcorn and the settlements of Weston and Beechwood, located approximately 1km from the Solar Array Development Area.

2.2.6 The nearest residential properties to the Solar Array Development Area are within Frodsham beyond the M56 motorway to the south / south-east. Properties on Hawthorn Road and Wayford Mews are located approximately 140m from the Solar Array Development Area. Other properties within 350m of the Solar Array Development Area include those on Williams Way (230m distant) and Waterside Drive (290m distant). Two residential caravan sites are also situated off Brook Furlong to the north-west of Frodsham (north of the M56), adjacent to the Order Limits. Both sites have been developed without planning permission, and there is an outstanding planning enforcement notice against one of the sites requiring its removal.

2.2.7 A series of Public Rights of Way (PRoW) cross the Site. The PRoW network includes footpaths and restricted byways, which allow access by foot, horseback and cyclists. A national cycle route runs along a section of the Main Site Access and along part of the southern edge of the Site.

2.2.8 The Site is crossed by a series of utilities. The utilities that cross the Site include several above and below ground high voltage electricity transmission lines, high pressure gas lines, water distribution mains, telecommunication lines and private pipelines associated with nearby petrochemical plants. There are also proposals for new utilities across the Site which include a Carbon Dioxide pipeline and a Hydrogen pipeline. The Applicant is in discussion with the developers of these projects to ensure that none of the schemes will prevent the physical development of the others.

2.2.9 The Solar Array Development Area is designated as a Local Wildlife Site[6] and lies within the Green Belt[7].

2.2.10 The Mersey Estuary to the north of the Site is designated as a Site of Special Scientific Interest (SSSI), Special Protection Area[8] (SPA), and Ramsar[9] site. The SSSI also covers a strip of land approximately 100m wide on the southern side of the Manchester Ship Canal, the eastern 500m of which lies within the Non-Breeding Bird Mitigation Area within the Site.

2.2.11 Key environmental and planning designations on, and in close proximity to, the Site are shown on ***Figure 4.***

[6] An area recognised for its wildlife and habitat value at a local level.
[7] A designated area of open land surrounding or within urban areas, protected from most types of development to prevent urban expansion.
[8] A protected site designated to safeguard habitats critical for the conservation of wild bird species.
[9] A wetland of international importance designated under the Ramsar Convention, an international treaty aimed at conserving and sustainably managing wetlands. Ramsar Sites are recognized for their ecological significance, particularly as habitats for waterfowl and other wildlife.

3.0 THE PROPOSED DEVELOPMENT

3.1 Overview

3.1.1 The Proposed Development comprises a new solar energy generating station and an associated on-site BESS. It also includes the associated infrastructure for connection to the local electricity distribution network, as well as a private wire electricity connection that would enable local businesses to utilise the renewable energy generated by the Proposed Development.

3.1.2 Once constructed the Proposed Development would be operational for a period of 40 years. After 40 years the Proposed Development would be decommissioned and the Site returned to a condition suitable for reinstatement of its original use, except for areas of planting (woodland and hedgerows) and the created wetland areas, including the NBBMA, which would be left in-situ on return to the landowners.

3.1.3 The Proposed Development is expected to include the following key components:

i) **Ground Mounted Solar Arrays** – solar panels installed on fixed mounting structures (metal frames) set out in rows, the orientation of which would generally be towards the south but with some variation in angle to minimise the potential for glare to affect users of the M56 motorway. The solar panels are connected by cabling to on-site inverters, transformers and switchgear that collectively ensure the electricity generated by the solar panels is alternating current (AC) and at the required voltage;

ii) **BESS** – the BESS would store electricity at times of low demand and release electricity at times of peak demand. BESS are an important part of renewable electricity generating systems such as wind and solar due to their weather dependency and potential for intermittent generation. The BESS would be located in a single compound that includes battery storage containers and transformers, control equipment, and water storage tanks. Two locations are proposed for the BESS, both of which are central to the

Solar Array Development Area and outside of areas of flood risk, although only one location would ultimately be brought forward (with a decision to made during the detailed design phase, post consent);

iii) **Frodsham Solar Substation** – an on-site substation which would be co-located with the BESS and include the equipment needed to control and operate the Proposed Development. Two locations are proposed for the Frodsham Solar Substation, both of which are central to the Solar Array Development Area and outside of areas of flood risk, although only one location would ultimately be brought forward (with a decision to made during the detailed design phase, post consent);

iv) **Grid Connection and Private Wire Connection** – an overhead cable connection would be provided between the Frodsham Solar Substation and the SPEN Frodsham Substation. An additional buried private wire connection cable would be provided to facilitate potential future connections from nearby businesses;

v) **Other infrastructure** – the Proposed Development would include other associated infrastructure such as fencing, cabling, drainage, access tracks, and closed-circuit television (CCTV);

vi) **Landscaping, Habitat Creation and Recreational Infrastructure** – the Proposed Development would include extensive landscaping and habitat creation which includes specific areas set aside for skylark mitigation, and non-breeding bird mitigation. There would also be the provision of permissive paths and potentially car parking, to provide additional recreational opportunities within the Frodsham Marshes.

3.1.4 An Illustrative Environmental Masterplan has been prepared which provides an indicative layout of the Proposed Development, along with the proposed landscaping, habitat creation and improvements to recreational infrastructure. This is provided as ***Figure 5a-e***.

3.1.5 The technology associated with solar development is rapidly advancing, and this technological progression is expected to continue at pace over the

coming years as research and development in the manufacturing sector yields new technologies. As such, the Proposed Development includes flexibility to ensure the best available technology can be utilised at the time of construction. The assessments within the ES take into account the flexibility sought in the DCO.

3.1.6 A full description of the Proposed Development is provided in **ES Volume 1 Chapter 2: The Proposed Development *[EN010153/DR/6.1]***.

3.2 Construction Phase

3.2.1 Subject to obtaining the necessary consents, construction is anticipated to commence in January 2028 and be completed in mid to late 2030, with partial commissioning and power export scheduled from mid-2029[10].

3.2.2 The primary construction phases are expected to be as follows:

i) Construction of the Non-Breeding Bird Mitigation Area (NBBMA);
ii) Site enabling works – where construction compounds would be established, minor improvements made to the surface of the Main Site Access, and any temporary management of public rights of way would commence;
iii) Construction of the Solar Arrays, including:
    - Establishment of compounds and parking;
    - Construction of access tracks, fencing, and watercourse crossings;
    - Undertaking of any earthworks;
    - Marking out locations of solar arrays, solar transformers, and cable trenches;
    - Establishment of solar panel mounting structures;
    - Installation of solar panel modules, inverters, and transformers;
    - Installation of CCTV and monitoring systems;
    - Installation of cabling;

[10] *Throughout the technical assessments, construction is assumed to be undertaken over a 30-month period from January 2029 to June 2030 in order to provide a robust assessment.*

- Testing and commissioning; and
- Establishment of landscaping.

iv) Construction of the BESS and Frodsham Solar Substation;

v) Construction of the SPEN Grid Connection; and

vi) Construction of the Private Wire Connection.

3.2.3 During the period of peak construction activity, between months 2 and 19, there would be a need for approximately 159 staff on-site on weekdays, on average, and 79 staff on Saturdays. The period of activity requiring the maximum number of staff on site would occur between months 12 and 18, peaking in month 12 when there would be a maximum of approximately 243 staff per weekday, and 122 staff at weekends. The workforce would be distributed across the Site with work happening in parallel across the phases described above.

3.2.4 Construction operations would be limited to 08.00 to 18.00hrs Monday to Friday and 08:00 to 13:00hrs Saturday, with no construction work on Sundays or Bank Holidays.

3.2.5 It is anticipated that there would be two main construction compounds and four smaller secondary compounds to facilitate the construction works within the Solar Array Development Area. Two additional compounds would be provided to the north of the River Weaver for the purposes of the SPEN Grid Connection works, and one in Cell 3 for the NBBMA.

3.2.6 The main compounds would include the main site offices, site security, employee parking and the main site welfare, together with a fenced laydown area for storing plant, material, equipment and components. The smaller satellite construction compounds would include areas for storing plant, material, equipment and components.

3.2.7 Construction compounds would be created using a semi-permeable hardcore / gravel mix laid on a geomembrane. Where the compounds are located in areas that would eventually be covered with solar PV arrays, they would not

be removed but would be covered by the solar array at the end of construction as it is anticipated that they could be re-used when decommissioning takes place.

3.2.8 The construction access route to the Site would be from the west, leading from Pool Lane roundabout. The access to the SPEN Frodsham Substation would be via the A56 Chester Road, where a dedicated private access road leads to the substation complex. No construction traffic would be permitted to route through Frodsham, Helsby, Ince or Elton.

3.2.9 Lighting during construction would need to be sufficient to satisfy health and safety requirements, whilst ensuring impacts on the surrounding environment are minimised.

3.2.10 A number of utilities cross the Site and consultation with utility undertakers is ongoing. Specific safeguards to protect existing utilities would be adopted during construction works, with working methods agreed with the utility undertakers.

3.3 Operational Phase

3.3.1 The Proposed Development comprises a temporary development with an operational phase of up to 40 years. Decommissioning activities would commence 40 years after final commissioning and so decommissioning would be expected to start in 2070.

3.3.2 During the operational phase, access to the Site would principally be to the Frodsham Solar BESS and Substation, and to the wider site for routine maintenance operations, periodic replacement of equipment, habitat management, and farming activities.

3.3.3 It is expected that there would be 10 full time equivalent (FTE)[11] roles during the operational phase covering site maintenance, management and

[11] *Full-time equivalent, or FTE, measures the total amount of full-time employees working at any one organisation. It is a way of adding up the hours of full-time, part-time and various other types of employees into measurable 'full-time' units.*

administrative roles, and land management including landscape maintenance and agriculture. Additional employment is likely to be required for the management of the non-breeding bird mitigation area.

3.3.4 Vehicular access to the Site would be the same as that described above for construction, i.e. access would be from the west via Pool Lane, Grinsome Road and the Frodsham Wind Farm access track. An emergency access route would be provided from Frodsham via Brook Furlong and Marsh Lane. This access would only be used by emergency service vehicles.

3.3.5 During the operational phase, all existing PRoW (including those upgraded by the DCO) would be maintained on their existing alignment that is used by PRoW users (with the DCO providing for the 'legal' alignment of the PRoWs being moved to reflect the route that is actually used on the ground).

3.4 Decommissioning Phase

3.4.1 When the operational phase ends after 40 years the Proposed Development would require decommissioning. All solar panels, mounting poles, above ground cabling, inverters, transformers, BESS equipment, the Frodsham Solar Substation, and fencing would be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time. It is also likely that below ground cabling would be removed from Site and recycled. The Site would be returned to a condition suitable for return to its original use after decommissioning.

3.4.2 On decommissioning, the landscaping works undertaken across the Site would remain in place, and the land would be handed back to the landowner, with the only exceptions being the potential requirement by the landowner to revert the grassland created on the eastern half of the Site (to the east of Brook Furlong) and the Skylark Mitigation Areas back to land suitable for arable farming. Given that the western half of the Site is currently used for grazing, the grassland created and managed in this area would be retained.

3.4.3 It is likely that tree and scrub planting, together with created pond and wetland habitats, would be retained, including the habitats created within the NBBMA. 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 footpaths created across the Site.

3.4.4 Decommissioning is expected to take between 12 and 24 months and would be undertaken in phases.

Environmental Management

3.4.5 A series of outline environmental management plans have been prepared and submitted with the application, which outline the principles, controls, and measures to be implemented during construction, operation and decommissioning to reduce potential significant environmental effects from occurring. Post-consent, these outline plans will be developed into full plans which must be in substantial accordance with the outline and will require approval by CWaCC. The Proposed Development must then be undertaken in accordance with the approved plans. The outline plans submitted with the application are:

i) Outline Construction Traffic Management Plan [EN010153/DR/7.4]
ii) Outline Construction Environmental Management Plan [EN010153/DR/7.5]
iii) Outline Operational Environmental Management Plan [EN010153/DR/7.6]
iv) Outline Decommissioning Environmental Management Plan [EN010153/DR/7.7]
v) Outline Battery Safety Management Plan [EN010153/DR/7.8]
vi) Outline Public Rights of Way Management Plan [EN010153/DR/7.9]
vii) Outline Soils Management Plan [EN010153/DR/7.10]

viii) **Outline Skills, Supply Chain and Employment Plan [EN010153/DR/7.11]**

ix) **Outline Landscape and Ecological Management Plan [EN010153/DR/7.13]** which includes at **Appendix B** the **Outline Non Breeding Bird Mitigation Strategy (oNBBMS)**

4.0 ALTERNATIVES AND DESIGN EVOLUTION

4.1 Overview

4.1.1 It is a requirement that the Applicant considers reasonable alternatives as part of the EIA process. Alternatives have been considered for the Proposed Development and are set out in **ES Volume 1 Chapter 3 Alternatives and Design Evolution *[EN010153/DR/6.1]***.

4.1.2 The Applicant has considered the following alternatives:

i) Alternative Sites;
ii) Alternative Technologies; and
iii) Alternative Design Considerations.

4.1.3 These are considered under separate headings below.

4.2 Alternative Sites

4.2.1 The Applicant recognised at a very early stage that the application site offers several significant (and in many cases unique) technical, commercial and environmental benefits. These benefits broadly relate to the availability of grid capacity in the nearby SPEN Frodsham Substation, land ownership, the land characteristics and soil quality, the prevalent character of the surrounding existing landscape which is heavily influenced by major industrial land uses and infrastructure, and the opportunity to provide direct electricity supply to the nearby industrial land uses.

4.2.2 Irrespective of the benefits of development at the Site, the Applicant elected to look at alternative areas (including brownfield land) that could theoretically host an equivalent facility, in order to confirm whether there were any other more suitable locations. This consideration of potential alternative sites is presented in full in **ES Volume 2 Appendix 3-1 Alternative Site Assessment *[EN010153/DR/6.2]***.

4.2.3 The Alternative Site Assessment (ASA) looked at two alternative Option Areas in addition to the broad location of the Site (i.e. land to the north of the M56). The two alternative Option Areas are located to the south and east of Frodsham / Helsby, within 5km of the SPEN Frodsham Substation.

4.2.4 The conclusion of the ASA was that the chosen Site would be preferable to any potential alternative location to the south or east of Frodsham / Helsby.

4.2.5 The key constraints for the Site relate to impacts on ecology, and avoiding areas of flood risk; however, for both of these constraints the potential impacts of the Proposed Development have been mitigated.

4.3 Alternative Technologies

4.3.1 A variety of alternative technologies are available when designing a solar and battery storage project. Furthermore, the solar and energy sector is undergoing rapid advancements in technology. As a result, it is anticipated that new technology options may arise before construction begins, which could impact the final design of the Proposed Development. This necessitates a flexible approach in what is being applied for to allow the latest technology to be utilised at the time of construction. Notwithstanding this, several technological design options have been considered and preferred options taken forward, taking into consideration environmental effects and the Proposed Development's objectives and need for optimal functionality. For example, a decision has been made that the solar arrays will be mounted on fixed arrays, rather than tracking arrays which could change height and orientation to follow the sun across the day.

4.3.2 At the time the project was originally planned, there was a policy presumption against wind energy. Furthermore, an extension of the existing wind farm would not maximise the use of the available land beneath the existing turbines. As such, the Applicant did not pursue an option to extend the existing wind farm.

4.4 Alternative Design Considerations

4.4.1 The layout of the Proposed Development has evolved iteratively throughout the pre-application phase taking into consideration environmental effects, the Proposed Development's objectives and functionality, and feedback from stakeholders and public consultation.

4.4.2 The design process is documented within the separate **Design Approach Document *[EN010153/DR/5.8]***, however in summary the key changes to the layout of the Proposed Development since EIA Scoping in Summer 2023 relate to:

i) Site Boundary – Additional land has been included for ecological mitigation, works to the SPEN Frodsham Substation, and access. Land has been removed in relation to a previously identified opportunity to provide a private wire connection to the INEOS Inovyn Runcorn site on the north side of the River Weaver, and also the removal of an area previously proposed for solar panels in the north-east of the Site.

ii) **BESS and Frodsham Solar Substation** – Two potential locations for the BESS and on-site Frodsham Solar Substation have been identified. These are both located in the west of the Site, outside of areas of flood risk.

iii) **Grid Connection** – The benefits and disadvantages of having either a buried or overhead grid connection between the on-site Frodsham Solar Substation and the SPEN Frodsham Substation have been considered, and a decision has been made that the connection would be overhead (above ground).

iv) **Ecological Mitigation and Enhancement** – The location of areas where habitats would be created or managed to mitigate the impacts of the Proposed Development have been confirmed and included in the Site Boundary. The principal areas are the Non Breeding Bird Mitigation Area, and the Skylark Mitigation Area. The extent of the Skylark Mitigation Area has been reduced since the 2024 statutory consultation to reflect the

required land in order to effectively mitigate impacts on skylark and other ground-nesting birds.

v) **Amenity and Recreation** – Permissive paths have been proposed to create additional opportunities for recreational access for different user groups, along with a potential small visitor car park to reduce informal parking along Moorditch Lane. In addition, sections of existing public rights of way across the Site are proposed to be modified to allow cyclists, equestrians, and people with disabilities to access more of the Site. New bird viewing areas and educational displays are proposed to enhance the visitor experience.

vi) **Flooding** – The layout and design of the Proposed Development has been advanced to mitigate for potential flood risk impacts. This has included giving consideration to the siting of infrastructure, and the parameters for the height of infrastructure above an agreed design flood level.

5.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

5.1 Approach

5.1.1 The core purpose of an EIA is to assess the likely **significant** environmental effects (both adverse and beneficial) of a proposed development. The level of the environmental effect is, in general, identified by considering the sensitivity of a receptor (e.g. people, animals or watercourses) against the magnitude of a predicted impact.

5.1.2 Where significant adverse environmental effects are likely to occur, additional measures are proposed to reduce effects where practicable. Any effects that remain, once these measures are taken into account, are reported as 'residual effects'.

5.1.3 The purpose of identifying significant environmental effects is to ensure that decision makers are able to make an informed judgement on the environmental impacts of a proposal before determining whether or not to grant development consent.

5.2 Structure of the Environmental Statement

5.2.1 The scope of the EIA was determined following receipt of an EIA Scoping Opinion from the Planning Inspectorate, confirming the scope of assessment work that is required within the ES. The following environmental topics have been assessed in detail within the ES:

Chapter 1: Introduction;
Chapter 2: The Proposed Development;
Chapter 3: Alternatives and Design Evolution;
Chapter 4: Environmental Impact Assessment Methodology;
Chapter 5: Climate Change;
Chapter 6: Landscape and Visual Amenity;
Chapter 7: Terrestrial Ecology;
Chapter 8: Ornithology;

Chapter 9: Flood Risk and Surface Water;

Chapter 10: Ground Conditions;

Chapter 11: Cultural Heritage;

Chapter 12: Tourism and Recreation;

Chapter 13: Cumulative and In-Combination Effects; and

Chapter 14: Summary of Environmental Effects.

5.2.2 The EIA Scoping Opinion concluded that several topics did not require a full assessment chapter. These topics include:

i) Noise and Vibration
ii) Traffic and Transport
iii) Socio-Economics;
iv) Air Quality;
v) Glint and Glare;
vi) Agricultural Land;
vii) Human Health;
viii) Major Accidents and Disasters; and
ix) Waste.

Noise and Vibration

5.2.3 Within the EIA Scoping Opinion (**ES Volume 2 Appendix 1-1 *[EN010153/DR/6.2]***) the Planning Inspectorate agreed that noise and vibration effects during all phases of the Proposed Development associated with plant and machinery are unlikely to give rise to significant effects. This was based on a preliminary noise assessment which was provided by the Applicant in the request for an EIA Scoping Opinion.

5.2.4 The noise assessment has been updated to reflect the indicative design used within the ES (**ES Volume 2 Appendix 4-1 Noise Impact Assessment *[EN010153/DR/6.2]***). It demonstrates that impacts from plant and machinery from the ES layout would not give rise to significant effects. The assessment includes residential noise receptors, ecological receptors, and public rights of

way users. The **outline Construction Environmental Management Plan *[EN010153/DR/7.5]*** describes the measures that would be adopted to control noise during the construction phase.

Construction Dust Assessment

5.2.5 Within the EIA Scoping Opinion (**ES Volume 2 Appendix 1-1 *[EN010153/DR/6.2]***) the Planning Inspectorate agreed that the implementation of standard construction management processes, significant effects on air quality during construction operation and decommissioning are unlikely. Furthermore, due to the nature and location of the Proposed Development and the limited vehicle movements required during construction, operation, and decommissioning, the Inspectorate agrees this matter can be scoped out.

5.2.6 Nonetheless, the Applicant has prepared **ES Vol 2 Appendix 4-2: Construction Dust Assessment [EN010153/DR/6.2],** which assesses the risk of dust impacts on human and ecological receptors and advises on the mitigation that should be applied. The findings of this assessment have been integrated into the **outline Construction Environmental Management Plan [EN010153/DR/7.5].**

Traffic and Transport

5.2.7 Within the EIA Scoping Opinion (**ES Volume 2 Appendix 1-1 *[EN010153/DR/6.2]***) the Planning Inspectorate agreed that environmental effects relating to traffic and transportation can be scoped out of the ES. Subsequent to receiving the Scoping Opinion, the Applicant agreed with CWaCC that a Transport Assessment (not forming part of the ES) should be prepared to consider the impacts on highway operation, with particular focus on the construction phase and with consideration of other committed developments. As such a **Transport Assessment *[EN010153/DR/7.3]*** has been provided to assess the impacts of traffic on the operational highway network.

5.2.8 The Transport Assessment concludes that the impact of the Proposed Development on the adopted highway network would be low. Furthermore, there would be no unacceptable impact on highway safety as a result of the Proposed Development in isolation, or in combination with other planned and emerging proposals in the local area. The impact of construction traffic would be mitigated through the implementation of a Construction Traffic Management Plan. An **outline Construction Traffic Management Plan *[EN010153/DR/7.4]*** has been provided with the DCO application.

5.3 Consultation

5.3.1 The views of consultation bodies and the local community serve to focus the environmental studies and to identify specific issues that require further investigation, as well as to inform aspects of the design of the Proposed Development.

5.3.2 The Applicant has been holding monthly meetings with Planning Officers at CWaCC since September 2023. In addition, a series of meetings / consultations have been held with other technical Officers at CWaCC covering the following topics:

i) Highways;
ii) Public Rights of Way;
iii) Cultural Heritage;
iv) Archaeology;
v) Landscape;
vi) Economic Development;
vii) Local Lead Flood Authority;
viii) Environmental Health and Protection (including Contaminated Land Officer); and
ix) Ecology and Nature Conservation.

5.3.3 The Applicant has also been engaging with Historic England, Natural England, National Highways and the Environment Agency.

5.3.4 Cheshire Fire Rescue Service (CFRS) were also consulted in May 2024 and March 2025 in relation to the Frodsham Solar BESS to understand any specific requirements they have as the local fire and rescue service. Feedback from the CFRS has been used to inform the **Outline Battery Safety Management Plan [EN010153/DR/7.8]**.

5.3.5 Each chapter of this ES sets out a summary of the engagement undertaken for each topic, and how that has influenced the assessments presented in that chapter.

Community Consultation

5.3.6 The Applicant has undertaken a two-stage approach to pre-application consultation on the Proposed Development. Phase 1 comprised an informal, non-statutory consultation during Summer 2023. Phase 2 was a formal statutory consultation and was undertaken from 7th November to 19th December 2024, and included publication of the PEIR.

5.3.7 During these consultation phases the Applicant engaged with the local community via briefings, in-person information events, webinars and providing project information across a range of media types.

5.3.8 A **Consultation Report [EN010153/DR/5.1]** has been prepared and submitted with the DCO application. The Consultation Report details all consultations and engagement held during the pre-application period (including design workshops held between Phase 2 consultation and submission of the Application) and how these have been considered by the Applicant and have influenced the ongoing design process and have also informed the assessments presented in the ES.

6.0 FINDINGS OF THE ENVIRONMENTAL STATEMENT

6.1 Introduction

6.1.1 The likely significant effects of the Proposed Development are set out in **ES Volume 1: Main Report *[EN010153/DR/6.1].*** This section of the NTS provides a brief summary of the findings of each assessment. A summary of all the likely significant residual environmental effects of the Proposed Development is provided in **ES Volume 1 Chapter 14: Summary of Environmental Effects *[EN010153/DR/6.1]***.

6.1.2 Where significant effects have been identified they are highlighted in **bold** text within each topic summary. Reference to significant effects in this section use the term in the context of compliance with the EIA Regulations.

6.2 Climate Change

Introduction

6.2.1 The Proposed Development has the potential to be affected by the projected changes in climate, as well as contribute to the greenhouse gas (GHG) emissions which are advancing those changes.

6.2.2 **ES Volume 1 Chapter 5: Climate Change *[EN010153/DR/6.1]*** presents the findings of an assessment of the resilience of the Proposed Development to the effects of climate change, and the likely significant effects of the Proposed Development on climate change, specifically the impact on greenhouse gas (GHG) emissions.

Baseline

Climate Resilience Assessment

6.2.3 The baseline for the climate resilience assessment is based upon an assessment of the existing climatic conditions at the Site and how they are predicted to change over the 40 year life of the Proposed Development.

6.2.4 There is obviously a degree of uncertainty and variability in making long-term projections of changes in climatic conditions. However, the predictions in the assessment have concluded that climate change is projected to lead to hotter summers and warmer winters, and generally wetter winters and drier summers.

6.2.5 Projections indicate there will be an increase in near surface wind speeds over the UK and more significant impacts of wind will be experienced in the winter months, including an increase in frequency of winter storms.

Greenhouse Gas Assessment

6.2.6 A baseline for the GHG assessment has been established to assess and report the GHG emissions associated with the Proposed Development.

6.2.7 The approach that has been adopted for the assessment of the Proposed Development is often referred to as a 'business as usual' assessment where assumptions are made on current and future GHG emissions without the Proposed Development in place. This then allows the establishment of a baseline that can be compared against the activities of the Proposed Development that have the potential to generate GHG emissions (e.g. manufacture of components, transport of construction materials and emissions from construction phase activities).

6.2.8 It also provides the ability to assess the positive impact of delivering additional renewable energy onto the UK grid which can reduce greenhouse gas emissions associated with the energy sector.

Mitigation

6.2.9 The assessment of likely significant effects takes into account incorporated mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.2.10 Various measures are identified that are specifically aimed at mitigating the effects of climate change and the release of GHG emissions, which include, but are not limited to, the sourcing and transportation of materials, sustainable transport measures for construction staff, and measures such as management of waste to maximise recycling opportunities.

6.2.11 The Proposed Development would also have a range of climate change adaptation measures designed into it. One of the key measures is that the Proposed Development would be capable of operating in periods of potential flooding even when accounting for forecast increases in flood depth as a result of climate change.

Assessment of Likely Significant Effects

Climate Resilience Assessment

6.2.12 The resilience to climate change assessment has considered vulnerable receptors during the Operational Phase of the Proposed Development. This includes operational equipment (solar PV modules, BESS, transformers, inverters, substation, and cabling), vehicular access to the Site, and on-site workers.

6.2.13 Potential changes to climate that could affect the Proposed Development's resilience include increased winter precipitation, decreased summer precipitation, increase in temperatures, increased frequency and magnitude of storms, and changes in cloud cover. All have been factored into the assessment.

6.2.14 The Climate Resilience Assessment concludes that the effects of climate change to the Proposed Development are not significant, and that therefore the Proposed Development is considered resilient to the effects of climate change.

Greenhouse Gas Assessment

6.2.15 The GHG emissions from the Proposed Development have been calculated within the GHG Assessment. It concludes that, when compared with the baseline scenario, the Proposed Development would have a net carbon benefit over its lifetime and is fully consistent with existing and emerging policy requirements and fully in line with measures necessary to achieve the UK's trajectory towards net zero by 2050. It confirms that the Proposed Development would have a **significant** beneficial effect on climate change.

6.3 Landscape and Visual

Introduction

6.3.1 **ES Volume 1 Chapter 6: Landscape and Visual Amenity *[EN010153/DR/6.1]*** presents the findings of an assessment of the landscape and visual amenity effects of the Proposed Development.

6.3.2 The landscape assessment considers the potential effects of the Proposed Development on the landscape as an environmental resource, including both the physical fabric of the Site itself, and the character of the wider landscape.

6.3.3 The visual assessment considers the potential effects of the Proposed Development on people's views, including local residents, users of public rights of way and other routes/land with public access (including the Weaver Navigation), and road and rail users.

6.3.4 The methodology for the assessment of landscape and visual effects has been developed based on the *Guidelines for Landscape and Visual Impact Assessment*, (the GLVIA).

Baseline

6.3.5 The Study Area for the Landscape and Visual Impact Assessment (LVIA) extends to approximately 5km from the Site. Within this area, the baseline conditions have been established via a combination of desk-based assessment, and a series of site visits.

6.3.6 Most of the Study Area is not designated for its landscape quality. Some areas within the south of the Study Area, including Frodsham and Helsby Hills are locally designated by Cheshire West and Chester Council (CWaCC) as Areas of Special County Value for their landscape qualities.

6.3.7 The Site includes areas of farmland (some of which is grazed and some of which is arable) along with existing private roads and tracks, electricity pylons, and wind turbines. The Site is located within Frodsham Marshes, which is a

low-lying and flat area on the southern side of the River Mersey, and which includes several large-scale industrial and infrastructure developments in close proximity.

6.3.8 A number of public rights of way traverse the Site, providing recreational opportunities within the landscape. These allow access to residential areas within nearby settlements such as Frodsham and Helsby, both of which are separated from the Site by the M56.

6.3.9 As part of the LVIA, the visual effects of the Proposed Development have been assessed from a series of thirty viewpoints located along public rights of way, other routes or land with public access, along roads and within settlements. Locations are illustrated on **Figure 6**. Two of the viewpoints are located along the access road for the Weaver Navigation and reflect the views available to canal users in boats. Viewpoint locations were agreed in advance with CWaCC and the Canal and River Trust (CRT).

Mitigation

6.3.10 The assessment of likely significant effects takes into account incorporated mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.3.11 Mitigation of potentially adverse landscape and visual effects includes:

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) Use of antireflective material on Solar PV Modules to limit glint and glare effects.
vii) Creation of new permissive footpaths 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.
viii) Enhanced management of existing vegetation cover that defines character and provides visual screening.
ix) New planting of trees and hedgerows that is consistent with the landscape character of the Site and that provides further screening.
x) Provision for long-term management and maintenance of the landscape of the Site, through the implementation of a project-specific Landscape and Ecology Management Plan (LEMP);.
xi) New planting to minimise glint and glare effects.
xii) Achievement of a a measurable net gain in habitat across the Site, including through physical enhancements to the landscape fabric.
xiii) The development of a sensitive external security and maintenance lighting system, which would be designed to minimise the generation of light.

6.3.12 Additional measures to enhance the landscape of the Site would include:

i) Provision of signage and information about the variety of routes available within the Site.
ii) Design and installation of interpretative material along routes, providing information regarding the social and natural history of the Site and its present use for generating energy potential.
iii) Enhancement of the condition of public rights of way where feasible in order to enhance their appeal to users throughout the year.

Assessment of Likely Significant Effects

Construction Phase

6.3.13 The Proposed Development would involve minimal change to landscape features within the Site with minimal vegetation removal and no change to the underlying landform.

6.3.14 The presence of construction elements, including temporary compounds, plant, fencing/hoarding, signage, would contrast very clearly with the existing make-up of features, due to their appearance in, and the movement of plant and machinery through, the landscape. The effect on the landscape character of Frodsham Marshes would be **significant** and adverse during the construction phase.

6.3.15 Adverse visual effects have been predicted for users of sections of some of the public rights of way located within or in close proximity to the Site. These effects would be **significant** and adverse.

6.3.16 Outside of Frodsham Marshes, the Proposed Development would only have a limited effect on landscape character and upon views, and these effects would not be significant.

Operational Phase

6.3.17 The assessment of landscape and visual effects at the operational phase of the Proposed Development has been undertaken for the opening year of operation, immediately following completion of construction, ('Year 0') and for the tenth year of operation ('Year 10'). This allows the assessment to take account of the proposed planting and changes to the management of existing vegetation, which by Year 10 should be established to such a degree that it would be effective in providing visual screening.

6.3.18 The Proposed Development would largely comprise the introduction of a new solar array into a series of existing fields along with a BESS and on-site substation, to the north of the M56 and located away from nearby settlements.

The solar array would be relatively low in height and would have a relatively uniform appearance. The Proposed Development would not change the underlying landform within the Site, nor would it alter the pattern of fields within the Site.

6.3.19 There would be a net gain in tree cover within the Site as a result of proposed new planting.

6.3.20 The effects of this would be **significant** and beneficial.

6.3.21 A series of new waterbodies and associated wetland vegetation would also be created, and similar existing features would be managed with the intention of improving their value for biodiversity. The effects of this would also be **significant** and beneficial.

6.3.22 Within Frodsham Marshes, existing development is already a clear influence on the character of the landscape, but the introduction of the solar panels and other proposed features would increase this influence notably. Effects on the landscape character of Frodsham Marshes would be **significant** and would generally be adverse, although the improvement to public access would have a beneficial effect.

6.3.23 Outside of Frodsham Marshes, the Proposed Development would only have a limited effect on landscape character, and effects would not be significant.

6.3.24 The visual effects of the Proposed Development in Year 0, before proposed planting and other landscape mitigation has become established would be **significant** and adverse from some sections of the public rights of way that run through the Site or along some sections of the boundary.

6.3.25 By Year 10, the presence of new planting and changes to the management of existing vegetation would reduce the visibility of the Proposed Development. **Significant** and adverse effects would remain from some limited sections of the public rights of way network which run through the Solar Array Development Area.

6.3.26 Visual effects from the Sandstone Way which runs across Frodsham Hill, and from boats using the Weaver Navigation would be very limited and would not be significant.

6.3.27 Visual effects experienced by local residents in their properties would be limited and would not be significant. Views from properties already include prominent features such as the M56, wind turbines, electricity pylons and large industrial buildings, and the addition of the Proposed Development would not greatly change the nature of these views looking out across Frodsham Marshes.

6.3.28 Existing views from Frodsham War Memorial comprise a large-scale panorama looking across the Mersey Estuary and include a wide range of development including prominent industrial structures and other infrastructure. The Proposed Development would be clearly visible from the War Memorial but given the scale of the existing view would only result in limited change to the overall view experienced from this location. Effects would not be significant.

Operation Phase: Glint and Glare

6.3.29 The Glint and Glare Assessment set out in **ES Volume 2 Appendix 4-3: Glint and Glare Assessment *[EN010153/DR/6.2]*** considers effects on users of the M56 and residents in properties at the northern edge of Frodsham.

6.3.30 The assessment concludes that due to screening provided by existing and proposed vegetation, and the measures adjusting the tilt and angle of panels secured within the **Design Parameters Statement [EN010153/DR/7.1]**, glint and glare effects would be very limited and would not be significant.

Decommissioning Phase

6.3.31 Following decommissioning, the majority of the changes that would occur from the presence of the Proposed Development would end once the solar panels and other features are removed. Proposed planting, and access

improvements would remain (although this would be dependent on the landowners retaining them), and beneficial effects from these would continue.

6.4 Terrestrial Ecology

Introduction

6.4.1 **ES Volume 1 Chapter 7: Terrestrial Ecology *[EN010153/DR/6.1]*** presents the findings of an assessment of the likely effects of the Proposed Development on terrestrial ecological (including aquatic) features during the construction, operation and decommissioning phases. The assessment considers effects on designated sites, habitats and terrestrial protected species.

6.4.2 An assessment of the likely effects of the Proposed Development on birds (i.e. ornithology) is provided separately in Section 6.5 below.

Baseline

6.4.3 The ecological baseline of the Site has been established through desk-based studies and field surveys, including:

i) A review of published biodiversity records for the local area;
ii) Habitat surveys that have been undertaken between March 2022 and January 2025; and
iii) Protected species surveys for bats, invertebrates, water voles and otters that have been ongoing between Spring 2022 and March 2025.

6.4.4 All surveys have been undertaken by suitably competent and qualified ecologists in accordance with industry standard guidance.

6.4.5 There are six statutory designated sites with qualifying terrestrial ecological interest located within 2 km of the Site. The closest of which is the Mersey Estuary Site of Special Scientific Interest (SSSI) of which a small area is located within the NBBMA. The Mersey Estuary Special Protection Area (SPA) and Ramsar site is designated for its bird interest and so is considered in Section 6.5 below.

6.4.6 There are three non-statutory designated sites for nature conservation located partially within the Site: Frodsham, Helsby and Ince Marshes Local Wildlife Site (LWS), Frodsham Field Studies Centre LWS and Easton Clifton Tip LWS. A further eighteen LWSs are located within 2 km of the Solar Array Development Area.

6.4.7 The Site includes a number of fields separated by ditches, watercourses, hedgerows and tree lines. The fields primarily comprise grassland and arable land, some of the grassland fields are grazed. Also present are areas of reedbeds, scrub, broadleaved woodland, ponds, tracks and roads.

6.4.8 In relation to protected species, the following summarises the main findings of the baseline data collection:

i) **Bats** – The Site offers a range of habitats of varying value to bat species, those of higher value include hedgerows, tree lines, ditches and watercourses. The surveys identified a total of eight bat species across the Site. No trees with features suitable to support roosting bats were identified and the few buildings located on the Site offered low suitability for roosting.

ii) **Otter and Water Vole** – The majority of the ditches across the Site are sub-optimal for otters, and no evidence of presence was found within the Solar Array Development Area during the surveys; evidence of presence was identified in the NBBMA. These species are known to be present in the local area. In relation to water vole many of the ditches across the Site provide suitable habitat. On this basis the presence of otter and water vole has been assumed for the purposes of the assessments.

iii) Mammals – Badgers were identified on site and there are extensive records of them in the area. Habitats within the Solar Array Development Area, including hedgerows, tree lines, grassland and reedbed, provide suitable habitats for breeding, foraging and sheltering brown hare, hedgehog, Western polecat and harvest mouse.

iv) **Amphibians** – The Site provides suitable habitat for a range of amphibians such as frogs, toads and newts. Surveys for Great Crested Newt did not identify this species present on Site. It is likely that more common species of frogs and toads are present on site.

v) **Reptiles –** The Site contains suitable terrestrial habitat for reptiles. However, surveys did not identify their presence on the Site. Reptiles are considered reasonably likely to be absent from the Site, or present only in very low numbers.

vi) **Fish -** Watercourses and ditches located within and immediately adjacent to the Site are likely to support fish and eels.

vii) **Invertebrates** – Surveys were undertaken across the Site that identified a range of species typically associated with the types of habitat present. Some areas such as ungrazed grassland, and ponds, supported a more diverse range of invertebrate species.

viii) **Invasive Species** – A number of invasive species were recorded within the Site including Himalayan balsam, variegated yellow archangel, New Zealand pygmyweed and cotoneaster species.

Mitigation

6.4.9 Standard mitigation measures would be used to manage impacts to ecology during the construction phase. The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.4.10 Mitigation measures would include species and habitat protection measures, reasonable avoidance measures, mammal gaps/gates in perimeter fencing, pre-construction surveys, fish rescue plans where construction is undertaken within ditches, and pollution and lighting control measures.

6.4.11 At the outset of the design, the Site was reviewed to identify the areas which contained the highest value habitats and these were excluded from potential development areas. Buffers have also been applied to key features such as trees, hedgerows and ditches to minimise effects on these habitats and maintain wildlife corridors.

6.4.12 The Illustrative Environmental Masterplan ***Figure 5a-e*** illustrates the habitats retained across the Site and areas where habitats are to be created or enhanced. This includes the creation of new hedgerows, scrub and woodland, the management of grassland beneath panels to increase its biodiversity value and enhancement of ponds and reedbeds.

6.4.13 The Non Breeding Bird Mitigation Area, which is primarily being created to mitigate effects on birds (described below), would also benefit terrestrial ecology features. See ***Figure 2*** and ***Figure 5b***.

6.4.14 A Biodiversity Net Gain[12] (BNG) assessment has been undertaken. The assessment has shown that the Proposed Development would deliver a gain of 11% in area-based habitats, 89% in hedgerow units, and 13% in watercourse-based habitats when including the NBBMA. When excluding the NBBMA, the Proposed Development still achieves gains in area-based and linear habitats, but a 10% gain in watercourse-based habitats is not achieved. The results of the BNG assessment are reported outside the ES in the **BNG Report *[EN010153/DR/7.12]***.

Assessment of Likely Significant Effects

Construction Phase

6.4.15 The Proposed Development has been designed so that the majority of land impacted by the solar array and associated infrastructure is to low value habitats, such as arable land and intensively grazed pasture. The design seeks to largely retain important ecological features within the Site. This

[12] Biodiversity net gain is a conservation approach that aims to ensure any development project results in an overall increase in biodiversity.

includes the retention of woodland, hedgerows, tree lines and ditches, with the exception of minor hedgerow removal and ditch crossings; thereby maintaining connectivity for species within the wider environment. As such there would be no significant beneficial or adverse effects on habitats during the construction phase due to the protection of trees, woodland, hedgerows and watercourses across the Site.

6.4.16 The potential for adverse impacts on protected species has been identified. However, due to the established mitigation measures the effects on species would be not significant.

6.4.17 The assessment concludes that there would be no significant beneficial or adverse effects on statutory or locally designated sites for nature conservation during the construction phase with the exception of **significant temporary adverse** effects on Frodsham, Helsby and Ince Marshes LWS as a result of construction activity within the designated area.

Operational Phase

6.4.18 During the operational phase there would no significant adverse effects on statutory or locally designated sites for nature conservation.

6.4.19 The Illustrative Environmental Masterplan includes the creation and retention of a range of habitats within Frodsham, Helsby and Ince Marshes LWS. Management of the created and enhanced habitats would be informed by a regular ecological monitoring program during the Proposed Development's operational lifespan. As such the Proposed Development would result in medium to long term **moderate positive effects** on non-statutory designated sites for nature conservation, which is **significant.**

6.4.20 There would be other overall positive effects on habitats and protected species but these are not deemed to be significant.

Decommissioning Phase

6.4.21 The Proposed Development would be operational for a period of up to 40 years, after which it would be decommissioned. Following decommissioning, it is likely that tree and scrub planting, together with created pond and wetland habitats, would be retained, including the habitats created within the NBBMA. 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.

6.4.22 The impacts of the Proposed Development at the decommissioning phase are assessed to be comparable to those at the construction phase.

6.5 Ornithology

Introduction

6.5.1 **ES Volume 1 Chapter 8: Ornithology *[EN010153/DR/6.1]*** presents the findings of an assessment of the likely significant effects of the Proposed Development on ornithology (birds) during the construction, operation and decommissioning phases. The assessment considers effects on designated sites, non-breeding and breeding birds.

6.5.2 An assessment of the likely effects of the Proposed Development on terrestrial ecology is provided separately in Section 6.4 above.

Baseline

6.5.3 The ornithological baseline of the Site has been established through desk-based studies and field surveys, including:

i) A review of published biodiversity records for the local area, including survey reports undertaken for projects on the Site including the monitoring reports for Frodsham Wind Farm and the proposed HyNet Carbon Dioxide pipeline;
ii) Breeding and non-breeding bird surveys undertaken between November 2021 and March 2025.

6.5.4 All surveys have been undertaken by suitably competent and qualified ornithologists in accordance with industry standard guidance.

6.5.5 There are three statutory designated sites with qualifying ornithology interest located within 2 km of the Site: the Mersey Estuary SSSI, SPA and Ramsar sites. A small area of the Mersey Estuary Site of Special Scientific Interest (SSSI) is located within the NBBMA.

6.5.6 There are three non-statutory designated sites for nature conservation within 1 km of the Site with listed ornithological interests: Frodsham, Helsby and Ince Marshes LWS, Clifton Lagoon LWS and Upper Mersey Estuary LWS. Of

these designations, Frodsham, Helsby and Ince Marshes Local Wildlife Site (LWS) lies partially within the Site.

6.5.7 Extensive bird records of protected and notable species exist for the Site and wider study area, which is expected given proximity to the aforementioned designated sites.

6.5.8 The surveys undertaken by the Applicant identified a range of different species using the Site, this included species for which the Mersey Estuary SPA, Ramsar and SSSI is designated (i.e. SPA qualifying species).

6.5.9 The area of the Site which supported the highest (albeit relatively modest) numbers of SPA qualifying species was Cell 3, the area of the Site identified for mitigation and not for development of the solar array. Other parts of the Site supported fewer numbers of these SPA qualifying species (and less frequently).

6.5.10 Twenty-one breeding species of birds were recorded within the Site, this included ground-nesting species of open habitats including skylark and lapwing.

Mitigation

6.5.11 Standard mitigation measures would be used to manage impacts to ecology during the construction phase. The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.5.12 General mitigation measures would include species and habitat protection measures, reasonable avoidance measures, pre-construction surveys, and pollution and lighting control measures.

6.5.13 In relation to the SPA qualifying species from the Mersey Estuary SPA, Ramsar and SSSI which use the Site, mitigation is proposed through the

creation of a Non-Breeding Bird Mitigation Area (NBBMA) on and adjacent to Cell 3 of the Manchester Ship Canal Dredging Deposit Ground. Cell 3 forms part of the Frodsham Wind Farm mitigation and contains a small number of 'scrapes' intended for use by waterfowl and wading birds. However, the area in its current condition has opportunities to deliver additional notable benefits for birds of the Mersey Estuary SSSI, SPA and Ramsar site through further enhancements to the habitats in this area.

6.5.14 The proposed NBBMA will provide substantial improvements through the creation of wetland habitats (and protection of breeding birds). Measures proposed have been determined through consultation with Natural England, CWaCC and the RSPB, and provide a substantial opportunity to deliver a valuable habitat for SPA-qualifying species on land adjacent to the Mersey Estuary SPA. Further details on the proposals for the NBBMA are set out in the *Non Breeding Bird Mitigation Strategy* at *Appendix B* of the **outline Landscape and Ecological Management Plan *[EN010153/DR/7.13]***.

6.5.15 In relation to ground nesting birds which could be impacted by the Proposed Development, areas of suitable nesting habitat will remain available in the wider agricultural landscape, and grassland created around solar arrays of the Proposed Development will provide foraging habitat. The NBBMA would also provide suitable nesting habitat for skylark and would be particularly suitable for nesting lapwing.

6.5.16 In order to ensure impacts on skylark are adequately mitigated, it is also proposed to provide a Skylark Mitigation Area that will provide alternative suitable breeding habitat for skylark pairs that are displaced by the Proposed Development.

Assessment of Likely Significant Effects

Construction Phase

6.5.17 Construction of the Proposed Development would be phased to ensure habitat is available on the Site for birds of the Mersey Estuary SSSI, SPA and Ramsar site throughout the construction period and to manage disturbance effects. This includes the creation of the NBBMA in advance of construction works commencing across other areas of the former MSC Dredging Deposit Grounds, and also creating the NBBMA outside the core period for wintering birds. This along with the implementation of standard best practice measures within the **outline Construction Environmental Management Plan *[EN010153/DR/7.5]*** means that temporary construction effects on non-breeding birds associated with the statutory and non-statutory sites would not be significant.

6.5.18 Potential effects on breeding birds during construction include the temporary loss of nesting opportunities and foraging habitat, either directly through physical impacts or indirectly through disturbance. However, many of the habits used by breeding birds would be retained and protected throughout the construction period. Whilst there would be some disturbance effects, these are not considered likely to give rise to significant effects.

6.5.19 Implementation of the Skylark Mitigation Area in advance of construction would avoid significant effects on ground nesting bird populations.

Operational Phase

6.5.20 Once operational, and with the creation of new managed wetland habitats in the NBBMA and the wider enhancements to hedgerows, woodland and scrub, impacts on non-breeding bird populations within the statutory and non-statutory sites are likely to be beneficial and deliver a **long term significant positive effect.**

6.5.21 The Proposed Development has been designed to largely retain habitats used by most breeding bird species, such as scrub, hedgerows and ditchside vegetation. The Illustrative Environmental Masterplan (***Figure 5a-e***) includes creation of new, and enhancement of existing, habitats that are of value to breeding birds. This along with the NBBMA and the Skylark Mitigation Area will avoid adverse impacts on breeding bird population during the operational phase and will deliver minor beneficial effects which are not considered significant.

Decommissioning Phase

6.5.22 The Proposed Development would be operational for a period of up to 40 years after which it would be decommissioned. Following decommissioning, it is likely that tree and scrub planting, together with created pond and wetland habitats, would be retained, including the habitats created within the NBBMA. 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. .

6.5.23 The impacts of the Proposed Development at the decommissioning phase are assessed to be comparable to those at the construction phase.

Habitats Regulations Assessment

6.5.24 The Habitats Regulations Assessment[13] (HRA) Appropriate Assessment presented in the **Information to Inform Habitats Regulations Assessment *[EN010153/DR/5.3]*** concludes that with the mitigation measures proposed, principally the creation of the NBBMA, the Proposed Development will not result in an adverse effect on the integrity of the Mersey Estuary SPA or Ramsar site. Furthermore, through coordinated programming with other projects, no in-combination adverse effects to the integrity of the Mersey Estuary SPA or Ramsar site are assessed to arise.

[13] Habitat Regulations Assessment (HRA) is a process that assesses whether a proposed project could harm internationally protected wildlife sites or species and ensures that any risks to their conservation are properly assessed and mitigated.

6.6 Flood Risk, Drainage and Surface Water

Introduction

6.6.1 **ES Volume 1 Chapter 9: Flood Risk, Drainage and Surface Water *[EN010153/DR/6.1]*** presents the findings of an assessment of the likely significant effects on flood risk, drainage and surface water quality as a result of the Proposed Development.

6.6.2 The assessment has been supported by a series of technical studies including the following:

i) ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]ES Vol 2 Appendix 9-2: Water Framework Directive Assessment [EN010153/DR/6.2]
ii) ES Vol 2 Appendix 9-3: Hydraulic Modelling Report [EN010153/DR/6.2]

Baseline

6.6.3 The baseline hydrology, hydrogeology and geology conditions relating to the Proposed Development have been assessed through a combination of desk-based studies, flood modelling and site walkovers.

6.6.4 All potential sources of flooding have been reviewed as part of the assessment including fluvial (from rivers), tidal, surface water, sewer flooding, groundwater and artificial sources. The baseline condition of waterbodies that have the potential to be impacted by the Proposed Development have been obtained from the Environment Agency and from site visits.

6.6.5 The Site is intersected by several ditches and watercourses, most of which are located on the eastern half of the Site and drain the agricultural land in this area. The watercourses and ditches on the eastern half of the Site drain into the River Weaver. The ditches on the western half of the Site drain into the Manchester Ship Canal. Hoolpool Gutter flows beneath the Main Access Road, and discharges into the Manchester Canal.

6.6.6 The River Weaver is located north-east of the Site and flows north-west to join the Manchester Ship Canal immediately north of the Site. The Manchester Ship Canal is located immediately north-west of the Site and flows south-west, joining the River Mersey approximately 3.37km south-west of the Site.

6.6.7 Environment Agency data for the River Weaver, the Manchester Ship Canal, and Hoolpool Gutter show that these waterbodies have a moderate ecological water quality status but are classified as 'fail' by the Environment Agency. As such they are all subject to poor water quality indicators.

6.6.8 In relation to flood risk, the western half of the Site is located within Flood Zone 1, an area with a low probability of flooding. The eastern half of the Site is located within Flood Zone 3a an area at greater risk of flooding. Modelling has been undertaken for the River Weaver and the River Mersey to understand potential flood levels at various years in the future, taking into account changes that may result from climate change. The flood zones for the Site are shown on **Figure 4**.

Mitigation

6.6.9 A range of standard mitigation measures would be used to manage impacts on water quality during the construction phase. The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.6.10 Mitigation measures to prevent pollution from chemical and fuel spills would include providing emergency spill kits, carefully siting refuelling areas, and establishing proper storage for fuel, oil, and chemicals. Regular checks of plant machinery and storage tanks will also be implemented. Additionally, pollution can arise from silt entering watercourses, which would be managed through careful construction techniques, minimising work close to

watercourses, retaining buffer strips, and utilising measures such as silt fencing. A piling risk assessment would be conducted to ensure suitable piling methods are used to avoid impacts on groundwater quality.

6.6.11 The BESS and Frodsham Solar Substation compounds would be designed to manage surface water flows, ensuring they do not increase flood risk off-site. The drainage network would include measures to isolate the compounds from nearby watercourses in the event of a pollution incident.

6.6.12 To mitigate flood risk, critically important elements of the Proposed Development, such as the BESS and Frodsham Solar Substation, would be located in the western half of the Site, which is outside areas at risk of flooding. In the eastern half of the Site, where the flood risk is greater, components vulnerable to flood damage will be raised above predicted flood levels ensuring the development can remain operational even during periods of flooding.

6.6.13 The **ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]** outlines the principles, controls, and measures to be implemented to reduce environmental effects from occurring, including pollution control measures associated with fire water in the unlikely event of a fire at the BESS.

Assessment of Likely Significant Effects

Construction Phase

6.6.14 A range of potential impacts relating to flooding and water quality during the construction phase have been assessed:

i) Siltation and contamination of Watercourses/Waterbodies
ii) Chemical / Fuel Spillages and Contaminated Runoff
iii) Changes in Flood Risk
iv) Spreading of Invasive Species
v) Pollution of groundwater

6.6.15 The mitigation measures outlined above, to be implemented through the **outline Construction Environmental Management Plan *[EN010153/DR/7.5]***, will ensure that all of these impacts are not significant.

Operational Phase

6.6.16 A range of potential impacts relating to flooding and water quality during the operational phase have been assessed:

i) Increased flood risk from runoff
ii) Siltation of watercourses
iii) Damage to on-site infrastructure from fluvial and tidal flooding
iv) Contaminated firewater runoff
v) Changes to channel morphology

6.6.17 The proposed buffers around watercourses, along with measures outlined in the **outline Operational Environmental Management Plan *[EN010153/DR/7.5]*** and the drainage systems design for the BESS and Frodsham Solar Substation compounds, will ensure that there would be no significant adverse effects on water quality during the operational phase.

6.6.18 The Proposed Development has been designed to ensure that it remains operational during future predicted flood events. The assessment has also shown that the development can be operated safely and would have a negligible impact on flood risk elsewhere. As such there would be no significant adverse effects in relation to flood risk during the operational phase.

6.6.19 The Proposed Development is expected to improve water quality during the operational period by reducing chemical loads, as it will eliminate the use of fertilisers, insecticides, and herbicides currently applied to the agricultural land. Additionally, halting ploughing activities may positively impact water quality by decreasing soil erosion and sediment runoff into nearby watercourses. These impacts would be beneficial but not significant.

Decommissioning Phase

6.6.20 Impacts similar to those in the construction period could occur during decommissioning. An **outline Decommissioning Environmental Management Plan *[EN010153/DR/7.7]*** has been provided with the DCO application which outlines the principles, controls, and measures to be implemented during decommissioning. Implementation of the oDEMP would ensure that no significant environmental effects occur.

6.7 Ground Conditions

Introduction

6.7.1 **ES Volume 1 Chapter 10: Ground Conditions *[EN010153/DR/6.1]*** presents the findings of an assessment of the likely significant effects of the Proposed Development on ground conditions, including impacts related to contaminated land and land instability.

6.7.2 The assessment evaluates the potential for ground contamination on or near the Site due to historical and current land uses. It also examines how the Proposed Development could be affected by, or could impact, existing ground conditions on the Site and in the surrounding area.

6.7.3 The assessment comprises a risk assessment in relation to contamination and, where appropriate, makes recommendations for further investigation and the mitigation measures required to prevent, reduce, or offset the impacts of the Proposed Development.

Baseline

6.7.4 A comprehensive geo-environmental desk study for the Site is provided at **ES Volume 2 Appendix 10-1: Stage 1 Geo-Environmental Assessment *[EN010153/DR/6.2]***. This has involved a walkover of the Site, comprehensive review of historic mapping, review of historic site investigations and data from site investigations undertaken by the Applicant. It also includes a review of environmental information from the CWaCC, the Environment Agency and other publicly available records.

6.7.5 In broad terms the western half of the Site has historically been used as a deposit ground for dredgings from the Manchester Ship Canal since the 1930s. The eastern half of the Site has been in agricultural use since at least the 1960s, and prior to that it appears to have been used for grazing.

6.7.6 There has been extensive ground investigation across the western half of the Site that includes testing of soils and groundwater for contamination. This investigation was associated with the construction of Frodsham Wind Farm. The investigations identified the presence of some contaminants within the soils, which are associated with dredged materials. In the eastern half of the Site, site investigations did not identify any elevated levels of contaminants in the soils.

6.7.7 Other than discrete areas where recycled aggregate materials have been used to maintain tracks, no other forms of made ground have been identified within the Site.

6.7.8 The Inovyn Deposit Ground is located off site directly to the north. It accepted dredging deposits from the Weaver Navigation Canal periodically from the early 1960s until 2002. This area is still under an active environmental permit despite it no longer accepting dredgings and is subject to monitoring, sampling and bund inspection at regular intervals.

Mitigation

6.7.9 Mitigation measures are proposed to manage contamination risks during all project phases. The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.7.10 Further detailed investigations and assessments would be conducted prior to construction to inform the detailed design, focusing on proposed areas of piling and ground disturbance. If necessary, more in-depth assessments would be carried out to ensure appropriate construction methods are employed to manage any residual risks, such as piling risk assessments.

6.7.11 Within the NBBMA it would be necessary to re-engineer the materials in the former dredging deposit cell. An **outline Soil Management Plan**

[EN010153/DR/7.10] has been prepared which sets out how soils will be handled to preserve their quality and allow for successful reinstatement at the NBMMA and across the wider Site. The plan covers the approach to managing soils that may be contaminated, and how they would be either re-used, treated, or disposed of. The measures adopted would provide the most sustainable approach to using the existing soils to create the NBBMA, ensuing that no unacceptable risk to humans, groundwater, or ecosystems. This is also controlled via the **outline Construction Environmental Management Plan *[EN010153/DR/7.5].***

Assessment of Likely Significant Effects

Construction Period

6.7.12 A range of potential effects during the construction phase have been considered in the assessment including:

i) Exposure of ground workers to contaminants within shallow soils and groundwater
ii) Exposure to ground gases and hydrocarbon vapours
iii) Encountering Unexploded Ordnance (UXO)
iv) Release of contaminants to the air, water or groundwater
v) Potential impacts on ecological receptors

6.7.13 No significant effects have been identified following the implementation of the mitigation measures outlined above.

Operational Period

6.7.14 A range of potential effects during the operational phase have been considered in the assessment including:

i) Build-up of ground gases and vapours within buildings and confined spaces
ii) Release of contaminants to the air, water or groundwater
iii) Potential impacts on ecological receptors

iv) Impacts of contaminants on buildings, infrastructure and services
v) Exposure of contaminants to users of the Site

6.7.15 No significant effects have been identified following the implementation of the mitigation measures outlined above.

Decommissioning Phase

6.7.16 Impacts similar to those in the construction period would occur during decommissioning. An **outline Decommissioning Environmental Management Plan *[EN010153/DR/7.7]*** has been provided with the DCO application which outlines the principles, controls, and measures to be implemented during decommissioning. Implementation of the oDEMP would ensure that no significant environmental effects occur.

6.8 Cultural Heritage

Introduction

6.8.1 **ES Volume 1 Chapter 11: Cultural Heritage and Archaeology *[EN010153/DR/6.1]*** presents the findings of an assessment of the impacts of the Proposed Development on heritage assets and archaeology. This includes direct effects on archaeology resulting from the construction of Proposed Development, and effects upon the setting of heritage assets which may arise during the construction and operation of the Proposed Development.

Baseline

6.8.2 The baseline conditions for the historic environment have been established through desk-based assessment and field work, which has included site walkovers.

6.8.3 There are no designated heritage assets within the Site. There are a number of designated heritage assets (such as listed buildings, scheduled monuments and conservation areas) located south of the M56 within Frodsham, and hillforts to the south-west of Frodsham including at Helsby Hill.

6.8.4 The assessment has considered each designated heritage asset within 3km of the Site, with further designated assets beyond 3km also incorporated into the assessment where they are of the highest significance.

6.8.5 The majority of heritage assets identified within the Site are related to post-medieval agricultural practices and modern second world war structures, most of which appear to be sealed beneath thick canal dredging deposits identified within the western and northern parts of the Site. There is also potential for buried peat and organic remains across the Site, albeit investigations have shown these are at depths greater than any of the foundation works required for the Proposed Development.

Mitigation

6.8.6 The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.8.7 The design of the Proposed Development has considered the setting of designated heritage assets in the local area and sought to minimise impacts as far as practicable, for example by providing an offset from the interface between the Site and the River Weaver Boundary.

6.8.8 There will be pre-construction archaeological investigations and recording to gain greater information on the history of the Site and add to the archaeological record for the area, which is secured by a Requirement of the DCO.

Assessment of Likely Significant Effects

Construction Phase

6.8.9 During the construction phase, the Proposed Development would not adversely impact most of the identified archaeological heritage assets within the Site. This is due to assets either no longer being extant, or being sealed beneath thick overburden from prior canal dredging. With the embedded mitigation measures, including further archaeological investigation, effects on all archaeological assets would be not significant.

6.8.10 There would be no significant effects upon the setting of designated heritage assets in the vicinity of the Site, including from increased traffic, noise and visual impacts. This is typically due to the fact that construction traffic would not pass by in the immediate vicinity of the assets and that, largely due to intervening distance and other busy roads, there would not be any potential for noise or visual impacts that diminish the ability to understand, appreciate

or experience the contribution that the asset's setting makes to its overall cultural value.

Operational Phase

6.8.11 Once operational, it is predicted that the Proposed Development would not require any below ground works beyond maintenance of the solar panels and other infrastructure within the previously impacted footprint. Therefore, no additional impacts to archaeological heritage assets are predicted.

6.8.12 Similar to the construction phase, during the operational phase there would be very limited impacts to the setting of heritage assets. There would at most be minor adverse effects, which are not significant, to the following assets:

i) The Promontory Fort On Helsby Hill 250 m North West Of Harmers Lake Farm Scheduled Monument;
ii) The Grade II Listed War Memorial in Frodsham;
iii) Frodsham Conservation Area;
iv) Castle Park (Frodsham) Conservation Area and the Castle Park Grade II Listed Registered Park and Garden; and
v) Overton, St Lawrence's (Frodsham) Conservation Area.

Decommissioning Phase

6.8.13 Upon the completion of decommissioning the long-term effects of the operational phase on the setting of assets would be removed.

6.9 Tourism and Recreation

Introduction

6.9.1 **ES Volume 1 Chapter 12: Tourism and Recreation *[EN010153/DR/6.1]*** presents the findings of an assessment of the likely significant effects on tourism and recreation as a result of the Proposed Development.

6.9.2 The assessment considers the impacts of the Proposed Development on tourism and recreational assets (receptors) such as local visitor economy businesses, recreational routes, and watercourses.

Baseline

6.9.3 The baseline identifies the scale of the tourism industry within the Cheshire West and Chester area, and observes that Frodsham town centre is a thriving local retail centre with a well-used weekly market. As the starting point for the Sandstone Trail, Frodsham also attracts visitors looking to walk this long-distance recreational route across Cheshire.

6.9.4 Due to the scale of industrial characteristics of the landscape around the Site, the area north of the M56 is identified as being unlikely to attract visitors where beauty and tranquillity are a priority. However, this area does provide opportunities for recreation and enjoyment of the outdoors, within a diverse landscape which includes views of the estuary, the sandstone ridge to the south of Frodsham and various industrial features which are present within and close to the Site.

6.9.5 The following key tourism and recreational assets are identified as having the potential to be affected by the Proposed Development:

i) tourism, leisure and recreational businesses, organisations or groups located within the Site or within very close proximity (including Frodsham Wildfowlers, Hover Force and Runcorn Model Flying Association);

ii) tourism, leisure and recreational businesses, organisations or groups using the adjacent watercourses (including Runcorn Rowing Club, Weaver Sailing and Ski Club, the Daniel Adamson Steamship and Mersey Ferries);
iii) public rights of way (PRoW) including the National Cycle Network within the Site which are primarily focused on walking, cycling and birdwatching;
iv) other off-site PRoW and established recreational routes that pass through Frodsham (including the Sandstone Trail, the Eddisbury Way, the Delamere Way and the North Cheshire Way); and
v) Frodsham town centre's visitor economy including the market, food and drink and heritage.

Mitigation

6.9.6 The assessment of likely significant effects takes into account mitigation measures for the construction, operational and decommissioning phases such as those embedded within the design, or implemented via committed management plans (that are secured by requirements of the DCO) to reduce environmental effects.

6.9.7 Specific measures to reduce impacts on tourism and recreation receptors include the routing of construction and operational traffic to avoid urban areas and key recreational routes such as Brook Furlong.

6.9.8 A 10m buffer would be applied to all PRoW through the Site whilst improved surfacing, landscape screening, educational displays, improved bird viewing opportunities, and better maintenance of existing footpaths should preserve users' enjoyment of routes through the Site.

6.9.9 Almost 5km of permissive paths are proposed to provide enhanced views of the Mersey Estuary and River Weaver, and to provide additional walking routes within the Site.

Assessment of Likely Significant Effects

Construction Phase

6.9.10 There would be some temporary disruption to users of the PRoW network during the construction phase. An ***Outline Public Rights of Way Management Plan [EN010153/DR/7.9]*** has been prepared thar sets out a range of measures to be employed to avoid or reduce impacts on PRoW . The key aim is to ensure that the majority of PRoW remain open, accessible and safe at all times during the construction period. Whilst the overhead cables are being constructed over the River Weaver it would be necessary to prevent use of this section of the river by craft, swimmers, fishermen and other recreational and navigation purposes. These closures could be up to two weeks, but are anticipated to be over a much shorter period of time. During this period the river would still be available for use outside the construction times and at weekends.

6.9.11 The assessment concludes that with the implementation of the proposed mitigation measures, the Proposed Development would result in adverse effects on tourism and recreational activities during the construction phase, but that these effects would not be significant.

Operational Phase

6.9.12 All existing PRoW across the Site would be retained, with some minor formal diversions proposed which largely reflect the existing routing. During the operational phase, the enhanced PRoW network, provision of new permissive paths which increase access to all user groups, and additional recreational facilities are likely to have a positive effect on local tourism and recreation, potentially increasing the number of visitors to the local area. These effects would not be significant.

7.0 CUMULATIVE EFFECTS

7.1.1 Cumulative effects can occur in two distinct ways:

i) **Cumulative Effects** – where the environmental impacts of the Proposed Development with other emerging or approved development could combine to potentially increase the level of effect on a particular receptor; and

ii) In Combination (Intra-Project) Effects – where the environmental impacts of the Proposed Development can interact and combine to potentially increase the level of effect on a particular receptor.

Cumulative Effects

7.1.2 The assessment of cumulative effects has been carried out in accordance with the Planning Inspectorate's 'Nationally Significant Infrastructure Projects - Advice Note Seventeen: cumulative effects assessment relevant to nationally significant infrastructure projects. This advocates a staged approach to the 'Cumulative Effects Assessment' (CEA).

i) **Stage 1** – establishing the zone of influence (ZoI) of the Proposed Development and a long list of sites that could act cumulatively with the Proposed Development;

ii) **Stage 2** – producing a shortlist of potential cumulative developments following the application of inclusion / exclusion criteria;

iii) **Stage 3** – gather detailed environmental information on the shortlisted sites; and

iv) Stage 4 – assessment of cumulative effects.

7.1.3 **ES Volume 1 Chapter 4: *EIA Methodology [EN010153/DR/6.1]*** establishes the ZoI for each of the environmental topics and an initial long list and short list of developments which have the potential to give rise to cumulative effects with the Proposed Development (as advocated in Stages 1 and 2 of the CEA).

7.1.4 Each of the technical chapters have provided an assessment of cumulative effects with the projects identified on the short list, with a summary of the likely significant cumulative effects provided within **ES Volume 1 Chapter 13: Cumulative and In Combination Effects *[EN010153/DR/6.1]***. In most instances the distance of the other schemes from the main area of development i.e. the Solar Array Development Area, coupled in many cases with the mitigation secured by virtue of committed management plans on the various projects, avoids the likelihood of significant cumulative effects occurring. However, two of the projects, the HyNet Hydrogen Pipeline, and the Runcorn Spur CO_2 Pipeline cross the Site; these projects have a higher likelihood of resulting in cumulative effects.

7.1.5 The HyNet Hydrogen Pipeline will run underground along the southern edge of the site and won't include any large above-ground installations on or adjacent to the Site. It is expected to have no long-term environmental effects, and while there may be some overlap in construction timing, these effects are likely to be minor and short-term due to both projects committing to best practice measures and co-operation between project teams.

7.1.6 The Runcorn Spur CO_2 Pipeline would cross the northern part of the Site and is still in early planning stages. It is expected to use similar construction methods and timelines to the HyNet Hydrogen Pipeline. Co-ordination between the two project teams will be important to avoid construction overlaps that could harm sensitive environmental areas, particularly the Mersey Estuary. Clear rules and timing restrictions will be followed to reduce the potential, as set out in the **Outline Construction Environmental Management Plan [EN010153/DR/7.5]** for any adverse impacts.

7.1.7 Overall, through careful planning, co-operation, and use of best practices, no significant cumulative environmental effects are expected from cumulative schemes alongside the Proposed Development.

In Combination (Intra-Project) Effects

7.1.8 **ES Volume 1 Chapter 13: Cumulative and In Combination Effects *[EN010153/DR/6.1]*** includes an assessment of whether different environmental effects from the proposed development could combine to result in greater impacts on people, wildlife, or places than they would individually. It looks at how these combined effects might influence:

i) Local residents and businesses
ii) People using public footpaths or the River Weaver
iii) Construction workers and maintenance staff
iv) Local wildlife and heritage sites

7.1.9 The findings show that while there may be short-term, minor combined effects during construction (such as from noise, dust, visual disturbance, or restricted access), these impacts will be well-managed through incorporated mitigation measures.

7.1.10 During the operational phase, any effects are expected to be minimal and not significant.

7.1.11 The overall conclusion is that the Proposed Development would not result in likely significant combined environmental effects.

8.0 SUMMARY

8.1.1 The ES presents the findings of the environmental assessments undertaken as part of the EIA for the Proposed Development.

8.1.2 Likely significant adverse environmental effects have been identified during the construction phase at a localised level in and around the Site in relation to locally designated wildlife sites, the landscape in the immediate vicinity of the Site, and users of PRoW within the Site.

8.1.3 Likely significant adverse environmental effects would continue in the operational phase for the local landscape and users of PRoWs within the Site, but there would also be significant beneficial environmental effects in relation to ecology and biodiversity, and a reduction in atmospheric greenhouse gas emissions.

8.1.4 Mitigation measures have been identified to mitigate and control environmental effects during the construction, operation and decommissioning phases of the Proposed Development. These are secured by requirements of the DCO, should this be granted.

Figures

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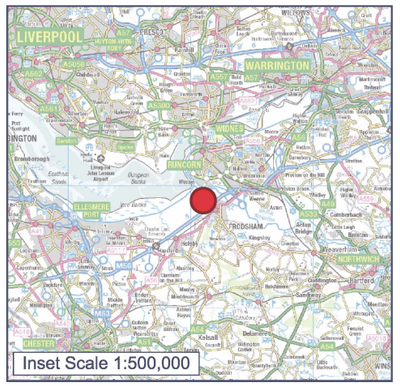
Order Limits

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



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Environmental Statement: Volume 4

Project

FRODSHAM SOLAR

Figure Number

NTS Figure 1

Figure Title

Site Location

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0 500 1,000 1,500 2,000 2,500 m

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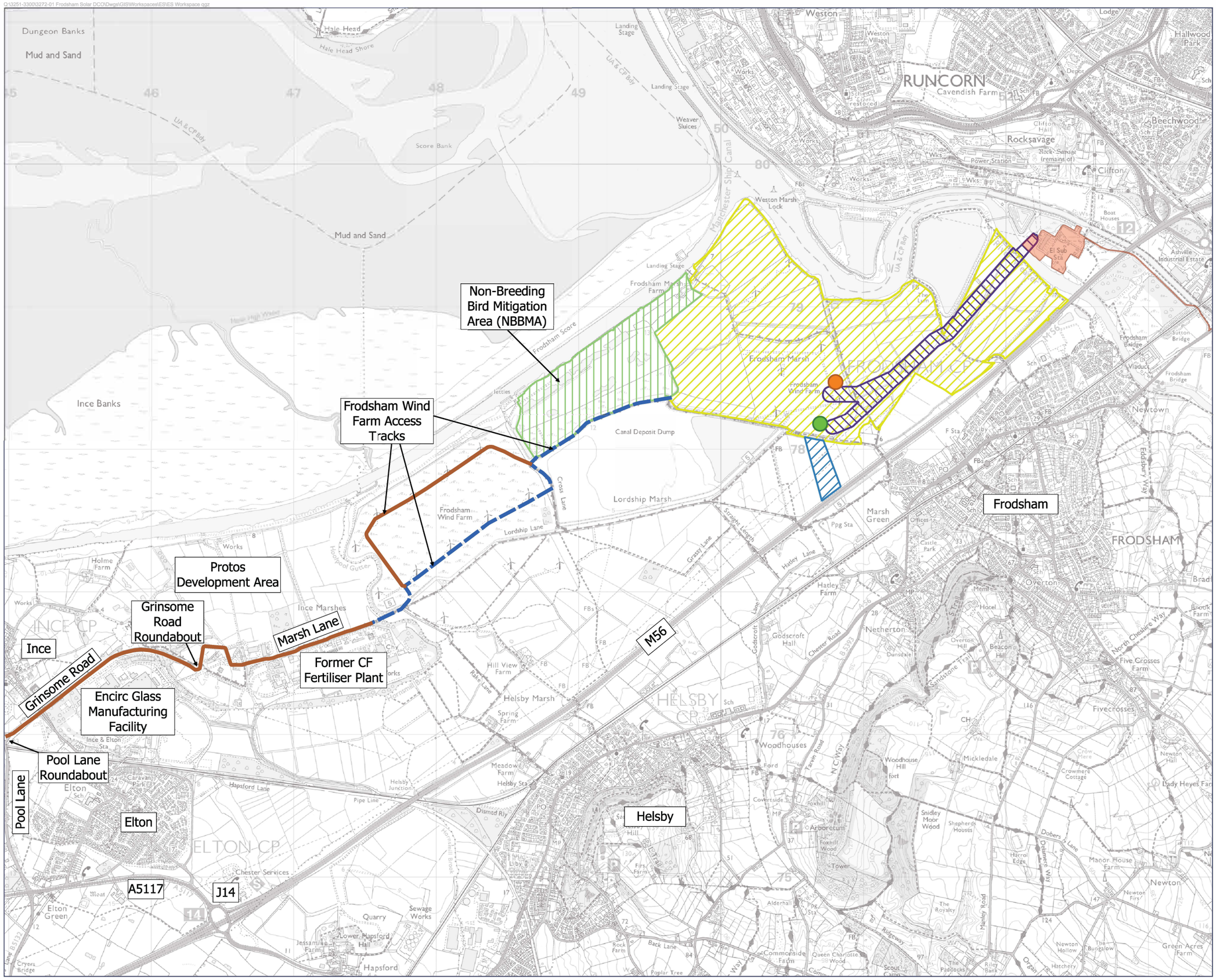

Solar Array Development Area

SPEN / National Grid Substation and Access to the Substation Compound

SPEN Grid Connection

Skylark Mitigation Area

Main Site Access with Private Wire Connection

Main Site Access without Private Wire Connection

BESS and Substation Compound (Option 1)

BESS and Substation Compound (Option 2)

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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FRODSHAM SOLAR

Figure Number

NTS Figure 2

Figure Title

The Proposed Development Areas

Scale

1:25000@A3

Date

May 2025

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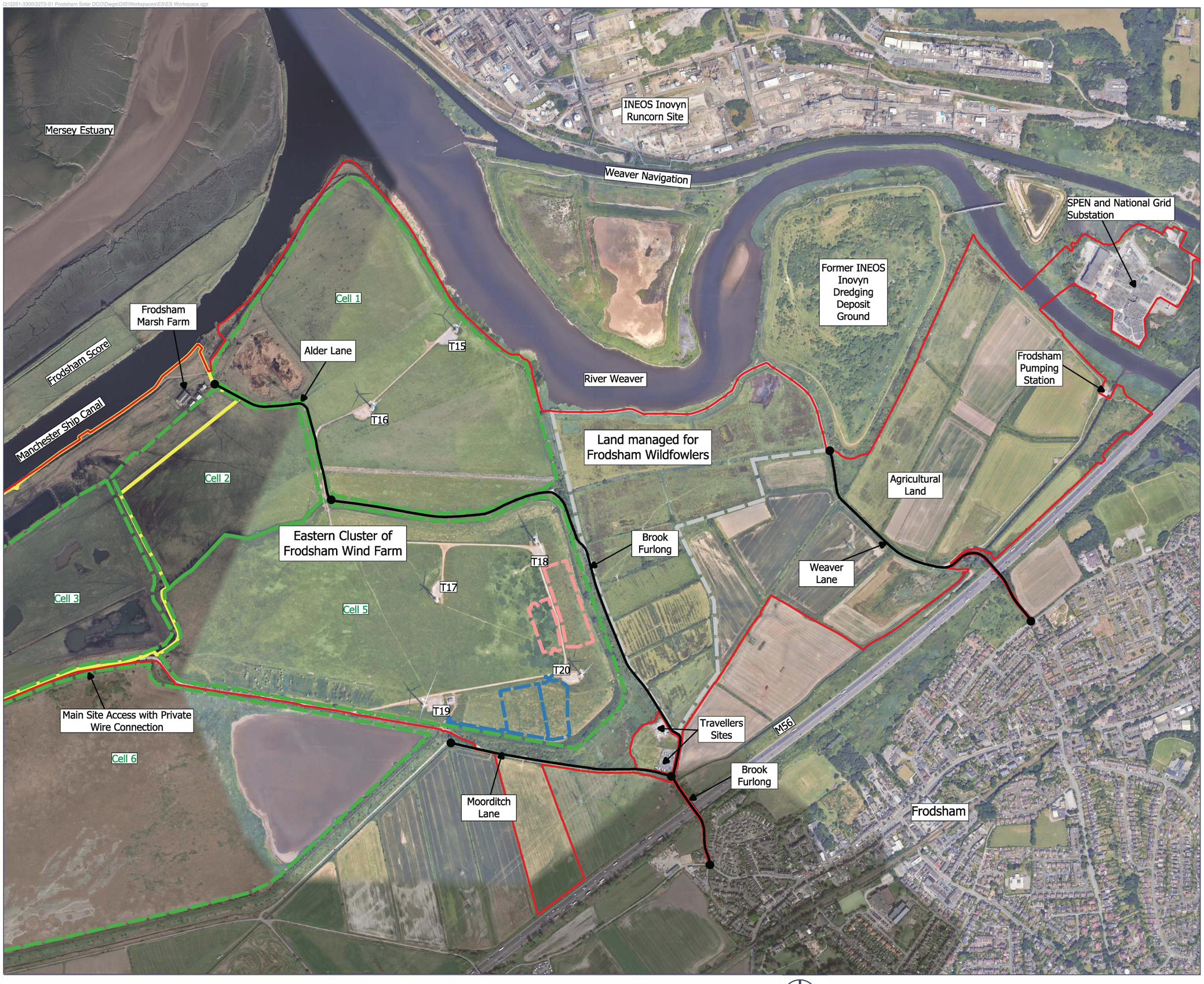

Image © 2024 Google, Landsat / Copernicus

- Order Limits
- Manchester Ship Canal Dredging Deposit Ground Cells
- Non-Breeding Bird Mitigation Area
- Land managed for Frodsham Wildfowlers
- BESS and Substation Compound (Option 1)
- BESS and Substation Compound (Option 2)

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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FRODSHAM SOLAR

Figure Number

NTS Figure 3

Figure Title

Solar Array Development Area Site Context Plan

Scale

1:10000@A3

Date

May 2025

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- Order Limits
- 2.5km Buffer

Flooding and Rivers

- Main Rivers
- Areas Benefiting from Flood Defences
- Flood Zone 2
- Flood Zone 3

Listed Buildings

- I
- II*
- II
- Scheduled Monument
- Registered Parks and Gardens
- SSSI
- SPA
- Ramsar
- Green Belt

For Local Wildlife Sites see Chapter 7.0

N

0 850 1,700 2,600 3,400 4,300 m

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Figure Number

NTS Figure 4

Figure Title

Planning and Environmental Designations

Scale

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Date

May 2025

INTERPRETATION PANELS

- Welcome to Frodsham Solar Park (general information and maps
- A. Bird Mitigation Area Information
- B. Pipelines
- C. Reedbeds
- D. Manchester Ship Canal
- E. Mersey Estuary View
- F. Frodsham Wind Farm
- G. Geography/Geology - e.g. River/Sandstone Ridge
- H. Weston Bank Industry and River Weaver
- I. River Weaver and Weaver Navigation

1
2
3
4

- Order Limits
- Solar PV Modules
- Principal Public Access / Biodiversity Enhancement Zones
- Retained/created neutral grassland or modified grassland
- Public Right of Way
- Proposed Permissive Path
- Existing Vegetation
- Proposed Native Woodland
- Proposed Native Scrub
- Proposed Native Trees and Shrubs
- Proposed Native Hedgerow
- Proposed Native Hedgerow (maintained at a low height)
- Area for Potential Skylark Mitigation plots
- Non Breeding Bird Mitigation Area

N

0 250 500 750 1000 1250 1500m

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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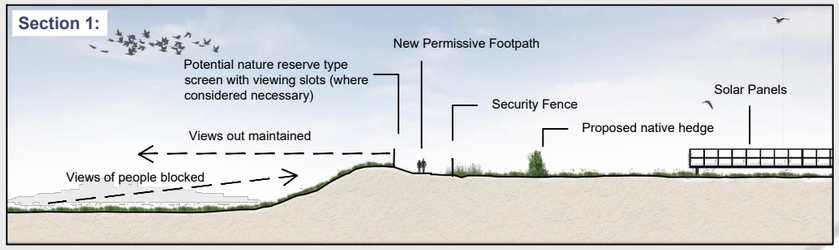
FRODSHAM SOLAR

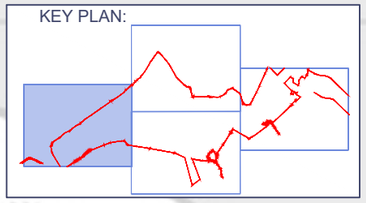
Figure Number
NTS Figure 5a

Figure Title
Illustrative Environmental Masterplan Key Plan

Scale
1:15,000 @A3

Date
May 2025





Potential viewing point over the NBBMA

Frodsham Marsh Farm

Existing tree cover removed

Neutral grassland areas to be managed to provide foraging habitat

Proposed water storage area on raised bank

Neutral grassland areas to be managed to provide foraging habitat

Manchester Ship Canal

New island within scrapes to provide roosting and nesting locations for birds

Existing drainage ditch

New islands within scrapes to provide roosting and nesting locations for birds

New wet (marshy) grassland area adjacent to existing and proposed scrapes

Existing drainage ditch

Potential bicycle parking

Potential bird screening measures (where considered necessary): Timber structures with viewing slots

New wet (marshy) grassland area adjacent to existing and proposed scrapes

Proposed permissive path A links Brook Furlong to Moorditch lane, creating a new loop in the network and providing for a wide variety of currently unavailable route options

Sheet 1 (Figure 2-3b)

Sheet 2 (Figure 2-3c)

Sheet 3 (Figure 2-3a)

- Order Limits
- Solar PV Modules
- Solar Array Security Fence (indicative draft layout)
- Solar Array Utility Fence (indicative draft layout)
- Bird Screening Measures
- Public Right of Way
- Proposed Permissive Path
- Existing Vegetation
- Neutral Grassland
- Marshy Grassland
- Raised Bank
- Existing Drainage Ditch
- Existing Scrape
- Proposed Scrape
- Proposed Water Storage Area
- Section Line

N

0 100 200 300 400 500m

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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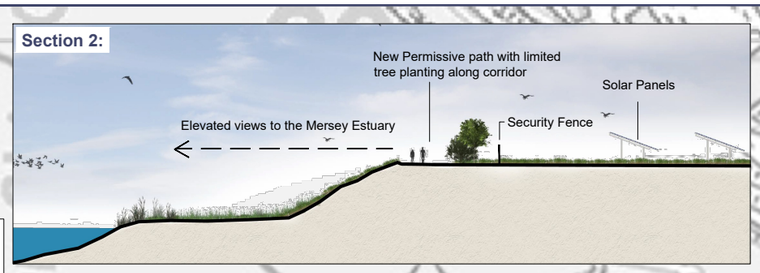
FRODSHAM SOLAR

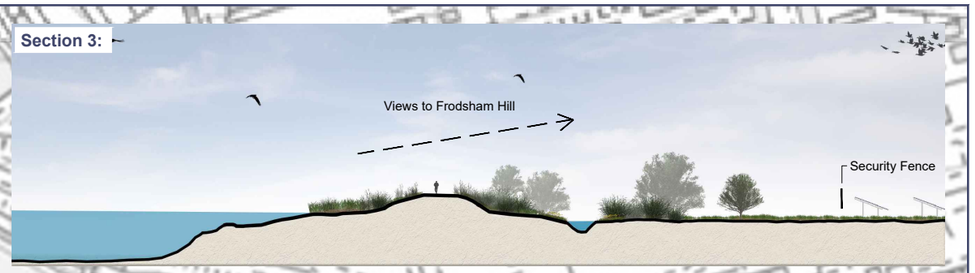
Figure Number
NTS Figure 5b

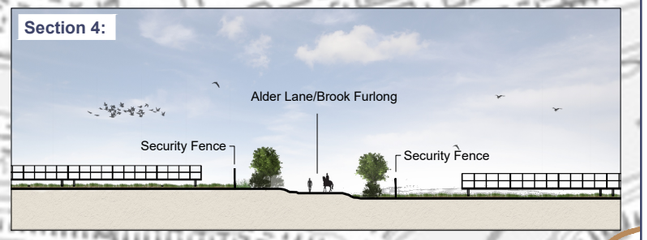
Figure Title
Illustrative Environmental Masterplan Sheet 1

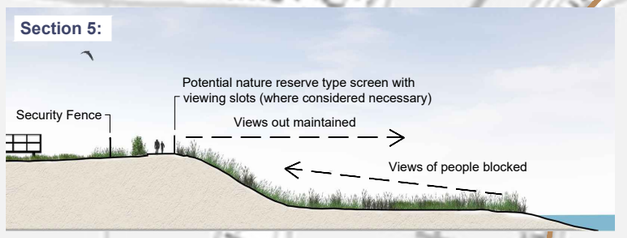
Scale
1:5000 @A3

Date
May 2025









Permissive path B along top of River Weaver/ship canal embankment connects Frodsham Marsh Farm and Alder Lane to Frodsham via Footpath 81 and Footpath 93 to create loop and provide waterside route

PRoW diverted to follow farm access, maximising the benefits of wetland habitat creation/enhancement. Boardwalks (permissive path G) to lead from the PRoW into the wetland

Potential Bird Screening Measures (where considered necessary): Timber structures with viewing slots allow views of River and birdlife whilst preventing birds from being disturbed by people

New permissive path route B extended along River Weaver and returning alongside Manchester Ship Canal

Weston Marsh Lock

Manchester Ship Canal

River Weaver

Maintain open views towards Frodsham and Helsby Hills from footpaths here

New scrapes created close to The Lum

Planting to break up visibility of solar panels, whilst retaining long-range views towards Frodsham Hill and Helsby Hill

Proposed permissive path C links Brook Furlong to Weaver lane, creating a new loop in the network and providing for a wide variety of currently unavailable route options

Retain historic flood bank, which predates the construction of the Ship Canal

Alder Lane

Potential to rationalise PRoW network.Currently overgrown and wet, and may benefit from boardwalk

Existing Pipelines

Specimen tree planting to both sides of Alder Lane

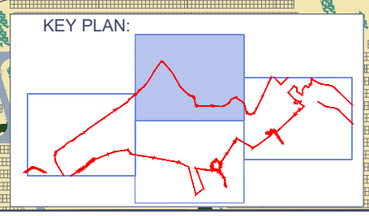
Sheet 1 (Figure 2-3b)

Sheet 2 (Figure 2-3c)

Sheet 3 (Figure 2-3d)

Sheet 4 (Figure 2-3e)

KEY PLAN:



N

0 100 200 300 400 500m

- Order Limits
- Solar PV Modules
- Solar Array Security Fence (indicative draft layout)
- Solar Array Utility Fence (indicative draft layout)
- Indicative Access Track
- Potential Overhead HV Line
- Principal Public Access / Biodiversity Enhancement Zones
- Retained/created neutral grassland or modified grassland
- Retained/created reedbed
- Proposed pond/ditch
- Public Right of Way
- Proposed Permissive Path
- Existing Vegetation
- Proposed Native Woodland
- Proposed Native Scrub
- Proposed Native Trees and Shrubs
- Proposed Native Hedgerow
- Proposed Native Hedgerow (maintained at a low height)
- Section Line

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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FRODSHAM SOLAR

Figure Number
NTS Figure 5c

Figure Title
Illustrative Environmental Masterplan Sheet 2

Scale
1:5000 @A3

Date
May 2025

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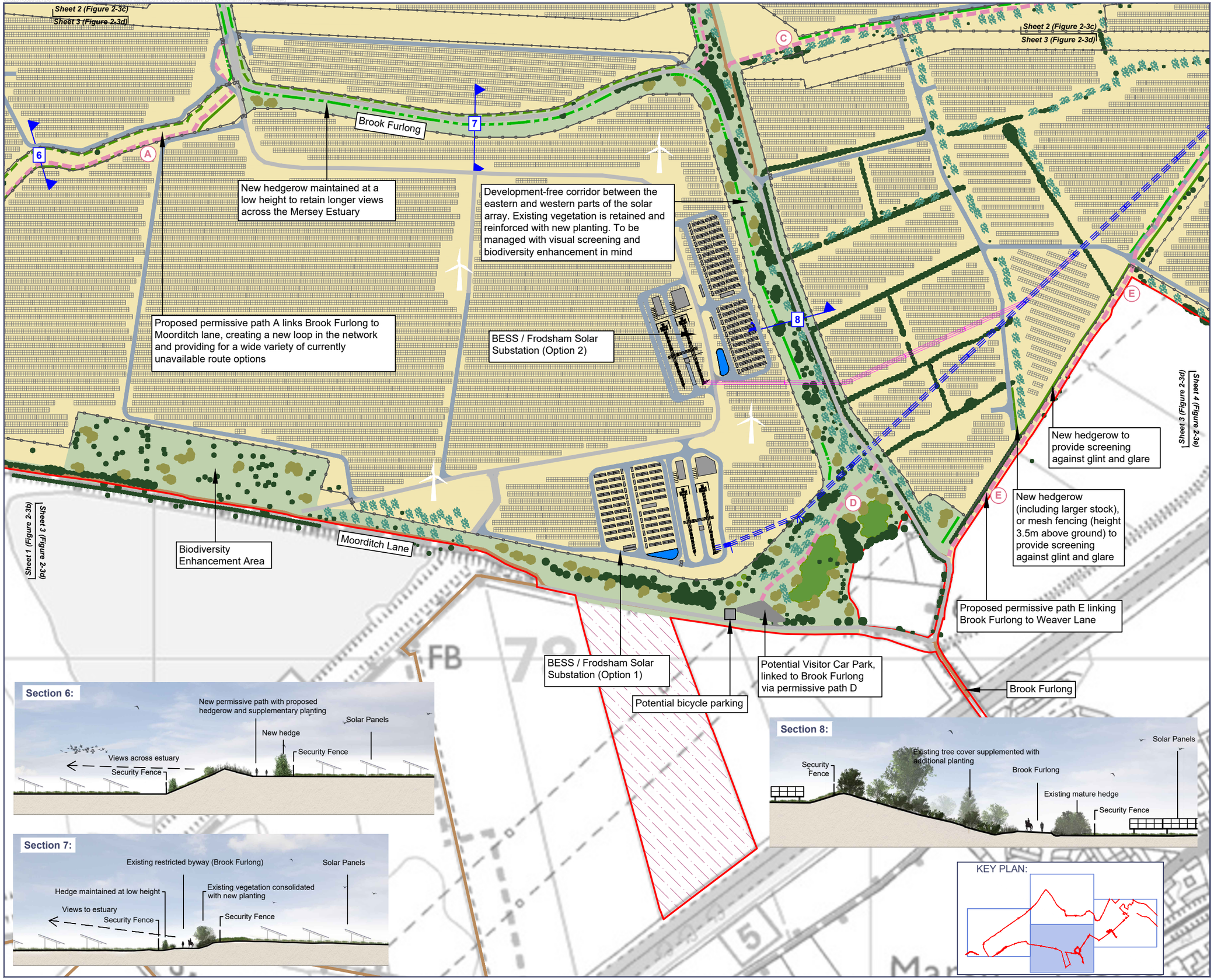

- Order Limits
- Solar PV Modules
- Solar Array Security Fence (indicative draft layout)
- Solar Array Utility Fence (indicative draft layout)
- Indicative Access Track
- Potential Overhead HV Line
- Principal Public Access / Biodiversity Enhancement Zones
- Retained/created neutral grassland or modified grassland
- Retained/created reedbed
- Proposed pond/ditch
- Public Right of Way
- Proposed Permissive Path
- Existing Vegetation
- Proposed Native Woodland
- Proposed Native Scrub
- Proposed Native Trees and Shrubs
- Proposed Native Hedgerow
- Proposed Native Hedgerow (maintained at a low height)
- Section Line

N

0 100 200 300 400 500m

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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FRODSHAM SOLAR

Figure Number
NTS Figure 5d

Figure Title
Illustrative Environmental Masterplan Sheet 3

Scale
1:5000 @A3

Date
May 2025

NB. This area is not open water, but is now covered with grassland and scrub

Planting to break up visibility of solar panels, whilst retaining long-range views towards Frodsham Hill and Helsby Hill

River Weaver

Viaduct

Permissive path F to enhance and connect Weaver Lane to River Weaver

Proposed screen planting to provide glint and glare mitigation

Permissive path F to enhance and connect Weaver Lane to River Weaver

New tree and hedgerow planting to screen solar panels from the south

Weaver Lane

Proposed screen planting to provide glint and glare mitigation

Sheet 2 (Figure 2-3c)

Sheet 4 (Figure 2-3e)

Sheet 4 (Figure 2-3e)

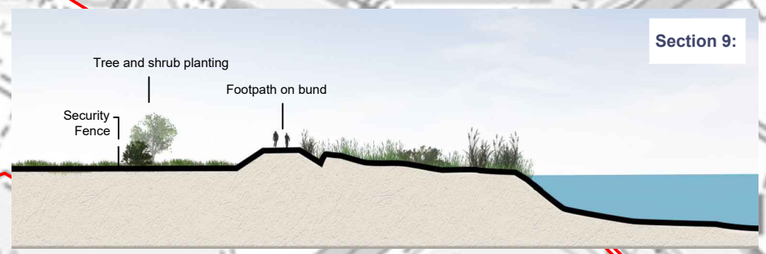
Sheet 3 (Figure 2-3d)

Frodsham

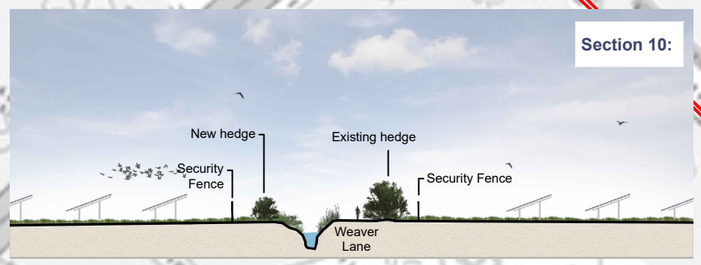
Frodsham Bridge

Viaduct

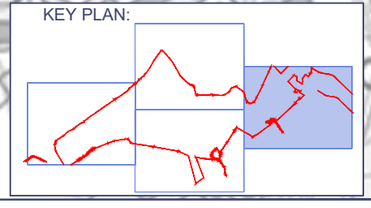
Section 9:



Section 10:



KEY PLAN:



N

0 100 200 300 400 500m

- Order Limits
- Solar PV Modules
- Solar Array Security Fence (indicative draft layout)
- Solar Array Utility Fence (indicative draft layout)
- Indicative Access Track
- Potential Overhead HV Line
- Potential Underground 132kV Cable
- Principal Public Access / Biodiversity Enhancement Zones
- Retained/created neutral grassland or modified grassland
- Retained/created reedbed
- Proposed pond/ditch
- Public Right of Way
- Proposed Permissive Path
- Existing Vegetation
- Proposed Native Woodland
- Proposed Native Scrub
- Proposed Native Trees and Shrubs
- Proposed Native Hedgerow
- Proposed Native Hedgerow (maintained at a low height)
- Section Line

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Figure Number
NTS Figure 5e

Figure Title
Illustrative Environmental Masterplan Sheet 4

Scale
1:5000 @A3

Date
May 2025

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VIEWPOINTS
1. Mersey Way, near Hale
2. A56, Sutton Weaver
3. Ship Street, Frodsham
4. Hawthorne Road, Frodsham
5. Langdale Way, Frodsham
6. Public footpath, near St Laurence's Church, Frodsham
7. Castle Park, Frodsham
8. A56, Chester Road, Frodsham
9. Frodsham Hill War Memorial
10. Public footpath, north of Foxhill House
11. Plovers Lane, Helsby
12. Bates Lane
13. Helsby Hill
14. M56, Weaver Lane overbridge
15. M56, Brook Furlong overbridge
16. M56, Straight Length overbridge
17. Public footpath within draft Order Limits
18. Restricted byway leading to Frodsham Marsh Farm
19. Restricted byway, Lordship Lane
20. Restricted byway, Cross Lane
21. Restricted byway, Straight Length
22. Public footpath, Ince
23. Public footpath adj. to River Weaver
24. The Willows, Frodsham
25. Public footpath, adj. to River Weaver
26. Public footpath, adj. to St Laurence's Church
27. Public footpath, near Rocksavage Moorings
28. Marsh Lock
29. Weaver Navigation Access track
30. Weston Road, Runcorn

Key

- Order Limits (the Site)
- LVIA Study Area
- Distance from proposed Solar PV Modules at 1km and 2.5km intervals

Viewpoint Location and Type

- Annotated Photograph
- Photomontage

N

0 900 1,800 2,700 3,600 4,500 m

Case Reference: EN010153
Document Reference: EN010153/DR/6.4
Regulation 5(2)(a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Frodsham Solar

Figure Number

NTS Figure 6

Figure Title

Viewpoint Locations Sheet 1

Scale

1:45000@A3

Date

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