



Clifton Marsh Solar Development

Non-Technical Summary (NTS)

Clifton Solar Project Limited

13 May 2024



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1. Introduction

This Non-Technical Summary (NTS) summarises the key findings of the Environmental Impact Assessment (EIA) presented in the Environmental Statement (ES) in relation to the proposal to construct and operate Clifton Marsh Solar Development (hereafter known as the proposed development).

The ES has been prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (known hereafter as the 'EIA Regulations'). The proposed development has an expected generating capacity of 49.9 megawatts (MW) and is therefore classified as a 'major development'; a development that has a generating capacity of no more than 50 MW and a site area of at least one hectare.¹

The application seeks consent under the Town and Country Planning EIA Regulations that planning permission be deemed to be granted.

This NTS has been prepared in accordance with The Town and Country Planning EIA Regulations.

1.1. The Applicant

Vattenfall is a leading European energy company with approximately 20,000 employees, owned by the Swedish state. For more than 100 years Vattenfall has powered industries, supplied energy to people's homes and modernised the way its customers live through innovation and cooperation.

Vattenfall aims to make fossil-free living possible within a generation and is leading the transition to a more sustainable energy system through growth in renewables and climate-smart energy solutions for our customers.

Vattenfall has over 50 wind farms, onshore and offshore, across five countries and pioneered co-locating wind with solar energy generation and battery storage. They have been in the UK since 2008, investing over £3.5 billion in enough wind to power nearly a million British homes. Vattenfall owns the largest onshore wind farm in England and Wales, Pen y Cymoedd, and in Scotland operates wind farms on the Isle of Skye and in Aberdeenshire. Vattenfall has previously developed and operated a 5 MW solar farm in Pendine, South Wales and is developing two further solar farms that have been consented in England; 22 MW in Leicestershire and 24 MW in Kent.

The aim of the proposed development is to generate a source of clean renewable energy to mitigate climate change and to provide benefits to the local community.

Vattenfall are committed to promoting a wellbeing economy by ensuring they achieve long term investment in the local communities where they operate. They focus on the environmental and social aspects of their developments and work together with local and national stakeholders to achieve shared goals.

¹ Available from: <https://www.legislation.gov.uk/ukxi/2015/595/part/1/made> [Accessed 04/06/2024]

1.2. Consultants

The proposed development has been designed by the Applicant and assessed by the Applicant in association with its lead consultants, Natural Power Consultants Limited (Natural Power). Natural Power has been appointed to coordinate and produce this ES and associated EIA documentation.

Natural Power has been providing expertise to the renewable energy industry since the company was formed in 1995 and is one of Wales' and the UK's leading renewable energy consultants. Natural Power currently employs over 420 people working full time providing renewable energy services nationally and internationally, including a dedicated Welsh team with over 460 MW worth of applications consented, including those that have gone to appeal.

Other consultants involved in the EIA have provided independent professional input as follows:

- Pegasus Group (Landscape and Visual Impact Assessment (LVIA));
- Ion Acoustics (Noise);
- Headland Archaeology (Cultural Heritage);
- Pager Power (Glint and Glare and Electromagnetic Field Assessment); and
- Agricultural Land Classification (PAG Consultancy).

2. Approach to EIA

The EIA process uses a systematic, evidence-based approach in order to evaluate and interpret the likely impacts and subsequent effects of the proposed development upon physical, biological and human receptors. This ES has been prepared in accordance with The Town and Country Planning EIA Regulations that set out the legal requirements for this process.

The ES reports the findings made in the EIA of the proposed development. The scope of the EIA was the subject of a formal scoping opinion from Fylde Council, which was issued 18 December 2023. This included formal consultation consultees including the Environment Agency, Lancashire County Council, Natural England, National Grid, National Gas, Electricity North West, Shell UK, Sabic UK, Blackpool Airport, BAE Systems, National Air Traffic Services (NATS) and Health and Safety Executive (HSE).

During the EIA process, site visits, site surveys and desktop assessments, in line with relevant guidance, were carried out to investigate the potential impacts of the proposed development on the environment and mitigation measures to be applied. A review of planning and other relevant policies was also undertaken to inform the assessment process and ensure the proposed development adequately considered local and national policy. The ES follows the structure presented in Table 2.1. Where relevant, each ES chapter considers the baseline environment, the likely significant effects for each phase of the proposed development, any required mitigation (i.e., measures to reduce the significance of the effects identified) and cumulative effects (i.e. effects that can arise cumulatively from interaction of the proposed development with other relevant projects or plans).

Table 2.1: ES structure

Volume	Heading	Description
1	Section 1: Introduction and Approach to EIA	Presents the proposed development and provides a brief overview of the Applicant and the ES. It also describes the approach taken to assess effects relating to the topics investigated as part of the EIA.
1	Section 2: Site Selection and Design Evolution	Explains the site selection and the design evolution process that has resulted in the proposed development and includes a Previously Developed Land Assessment.
1	Section 3: Project Description	Provides a detailed description of the infrastructure associated with the proposed development.
1	Section 4: Landscape and Visual Impact Assessment	Provides an assessment of the landscape and visual impacts of the proposed development.
1	Section 5: Ecology and Ornithology	Provides an assessment of the habitats, (non-avian) fauna and avian species present within the site boundary and immediate surrounding environment.
1	Section 6: Hydrology, Geology and Hydrogeology	Assesses the effects on the hydrological and hydrogeological environment by the proposed development, including a Flood Risk Assessment (FRA) and Drainage Strategy.
1	Section 7: Traffic and Transport Statement	Identifies the transport routes and assesses the potential effects upon the transport network resulting from the proposed development. A traffic management plan (TMP) has also been included as part of the assessment.
1	Section 8: Noise	Provides an assessment of the potential noise effects of the proposed development.
1	Section 9: Other Matters	Assesses potential effects in relation to population and human health, major accidents and disasters in the proposed development area, and outlines mitigation where it is deemed necessary. Effects on public access, telecommunications and utilities have also been assessed in this section.
1	Section 10: Archaeology and Historic Environment	Provides an assessment of the potential effects of the proposed development upon cultural heritage assets.
1	Section 11: Schedule of Mitigation	Summarises the proposed mitigation and residual effects of the proposed development and assesses the potential synergistic effects created by effects from different subject areas in combination.
2	Supporting Figures and Visualisations	ES figures and visualisations to accompany sections.
3	Appendices	Provides additional supporting documents and data which inform the ES.
4	NTS	Provides a high-level summary of the ES in terms that can be understood by a layperson.

The application will also be supplemented by accompanying standalone documents including a Planning Statement and Design and Access Statement (DAS).

3. Overview of the proposed development

3.1. Site Location

The proposed development is located at Clifton Marsh Solar Farm, Preston, PR4 0XE, in Lancashire. Figure 1.1, at the end of this document, illustrates the proposed development's location.

The proposed development covers approximately 68.7 hectares (ha) of relatively flat, low lying agricultural land predominantly used for grazing, with an elevation of 4.3 – 4.6 metres (m) Above Ordnance Datum (AOD). Comprising of a variety of small to large fields bound by a combination of hedgerows and watercourses. There are also small water bodies within the site boundary, and the southern, eastern and north-eastern sections of the boundary are bordered by woodland. A main road (A584) also runs adjacent to the northern boundary.

The proposed development area is centred on Ordnance Survey (OS) grid reference easting, northing, 346524 429154.

3.2. Project Description

The proposed development is expected to have an operational lifetime of 40 years and will have a generating capacity of up to 49.9 megawatt (MW).

The proposed development as a whole comprises the construction and operation of a up to 49.9 MW solar farm development and the associated infrastructure, including:

- Solar Photovoltaic (PV) modules mounted on to frames to form arrays with string inverters;
- Transformers;
- Substation;
- Fencing and security measures (thermal CCTV);
- Access tracks;
- Onsite cabling;
- Landscaping; and
- Habitat enhancement.

The application is for solar arrays comprising of a generating export capacity of up to 49.9 MW. The proposed development would be connected by Electricity Northwest Ltd (ENWL) to their local electricity network joining the adjacent 132 kilovolts (kV) transmission line at the corner pylon immediately west of the onsite substation (see Figure 1.1 at the end of the document). Underground cabling will connect the onsite substation, to the emergence point adjacent to the pylon. The connection point is within the site boundary and therefore no cabling or works will be required for the connection. The proposed development is intended to operate for up to 40 years. It is also requested that the ancillary equipment required to operate the solar PV arrays such as the existing onsite electricity substation will be subject to the lifespan of the proposed development.

The proposed development land is used for agricultural grazing and for arable farming.

The proposed development area includes eight arable fields and one pasture field, with an assortment of boundary features, ranging from fence lines to wet ditches and hedgerows to the Pippy Lane Banks Biological Heritage Site (BHS).

Where possible, field boundaries will be respected as part of the design of the proposed development.

The landowners have been consulted throughout the development process in particular with establishing appropriate areas for habitat management.

Full details of the infrastructure associated with the proposed development is provided in Section 3: Project Description located in Volume 1 of the ES.

4. Site Selection and Design Evolution

4.1. Site Design and Consideration of Alternatives

In accordance with the EIA Regulations, there is a requirement to consider alternatives. The consideration of alternatives and design evolution has been undertaken with the aim of avoiding, preventing, reducing, or, if possible, offsetting likely significant adverse environmental effects, while ensuring operational efficiency of the proposed solar farm, cost effectiveness, and other relevant matters such as existing land use and planning policy. The design of the proposed development has evolved through engineering design work, in response to consultation feedback, site visits and survey work.

The Applicant has a well-established process for selecting sites and identifying land for solar development, especially within England. The overall approach to solar development site selection is to identify areas of land where the siting of a solar development would result in minimal environmental effects, be free from overriding technical constraints, and be economically viable.

The assessment was carried out in the following stages:

- Stage 1 – Identification of an initial search area; and
- Stage 2 – Grid Connection opportunities in the search area.

This section is intended to show why the proposed development, was selected for a solar farm, following analysis and a sequential approach to identify all land potentially suitable within the established search area. For further details on the design and site selection process, see Section 2: Site Selection and Design Evolution, located in Volume 1 of the ES.

High-level feasibility was undertaken for the proposed development through undertaking desk based studies and surveys, using publicly available data, and considering the site boundary topography and surrounding designated sites.

The proposed development lies within agricultural farmland at a low elevation (approximately 5 m AOD). The gradient of the majority of the proposed development area is less than 5°.

An Agricultural Land Classification (ALC) was undertaken in March 2023 for the assessment and identified that the entirety of the proposed development area land is classified as grade 3b. This subgrade includes land capable of producing moderate yields of a narrow range of crops.

The ALC highlights that the proposed development area was mild and moderately moist which does overly restrict the agricultural use of the land.

There are no designated sites hydrologically connected with the proposed development area.

Potential for grid connections within the Fylde area are highly limited due to voltage constraints, thermal overload on the lines and fault level limitations at major substations and grid supply points.

Obtaining available capacity on the grid network is currently a major challenge across the UK. The two key elements that determine the viability of a grid connection are the cost and the timeframe for delivery of the connection. On examination of the published ENWL constraint maps a number of grid connections points were identified. ENWL were then engaged via 'connection surgeries', meetings with ENWL engineers to discuss their connection viability.

The outcome of these meetings was an understanding that the majority of available connections in the area had already been taken by other developments including residential and commercial developments and that there was extremely limited headroom capacity to provide new connections.

It was then indicated that the best chance of achieving a connection in this area would be somewhere on the Penwortham to Peel circuit. As this is a 132 kv circuit it was determined that a minimum project size of 49.9 MW would be needed to sustain the cost of connection.

A refined search area was then created that covered a radius of 3 km from either substation and 200 m from the overhead line itself.

A search for suitable land within that search area was then undertaken to highlight any sites that were available.

Site considerations were

- Utilisation of brownfield land, and avoidance of Green Belt land where possible;
- If greenfield land is required due to lack of suitable and viable development land, the search can continue initially focused away from Green Belt and BMV (least valuable Agricultural Land Classifications), albeit Green Belt and BMV could be highlighted as part of the sequential site selection process; and
- Once broad parcels of land have been identified, an understanding of available land capacity and land area needs to be achieved before progressing to the next stage.

Following identifying broad parcels of potentially suitable land at stage 1, the process then progresses to further investigation based on environmental and planning considerations, such as the risk of flooding, protected sites etc.

Appropriate access and transport arrangements are also important, as are necessary landowner arrangements and willingness. Stage 2 considerations are summarised as follows:

- **Environmentally Sensitive Areas** – avoiding land comprising or incorporating:

- Sites of Special Scientific Interest and European sites;
- Flood Zones;
- Areas of Outstanding Natural Beauty;
- National Parks;
- World Heritage Sites; and
- Scheduled Ancient Monuments;
- **International, national and locally designated sites of importance for biodiversity** – including:
 - Special Areas of Conservation;
 - Special Protection Areas;
 - Ramsar sites; and
 - Locally designated sites including Local Wildlife Sites.
- **Designated heritage assets** – including:
 - Listed Buildings;
 - Registered Parks and Gardens; and
 - Registered Battlefields.
- **Landscape and visual considerations** – including avoiding areas of high landscape value.

The identified sites were assessed against these criteria using a traffic light rating and then the landowners of the sites that performed the best were identified and an effort made to contact them.

The proposed development has good access from the strategic road network and provides a good access point to the Peel to Penwortham overhead line circuit via a pylon located on site. The proposed development area is predominantly flat allowing the design of the site to achieve maximum yield for the amount of land used and also benefits from substantial screening. Additionally, the landowner wished to proceed, embracing the opportunity for his land to contribute to greenhouse gas emission reduction targets and was already using his land to graze sheep which will continue once the proposed solar development is built, this means there will be no loss of food production and the solar farm will provide a stable income helping to provide security and longevity for the farmer, his family and their business.

4.2. Legislation and Policy Context

The design of the proposed development has been influenced by a range of planning policy considerations, as well as good practice guidance. A separate Planning Statement has been prepared, which accompanies the application for the proposed development. In this section of the DAS, relevant national and local planning policy and guidance is summarised.

The need to address climate change is embedded in law. The Climate Change Act 2008 (as amended) requires the UK to achieve a 100% reduction in greenhouse gas (GHG) emissions, otherwise known as net zero, in 2050.

4.3. National Planning Policy on Design

4.3.1. National Planning Policy Framework

In 2023, the National Planning Policy Framework (NPPF) was revised and Paragraph 160 of the NPPF states: *'to help increase the use and supply of renewable and low carbon energy and heat, plans should... (b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and (c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems.'*

Paragraph 163 states that *'when determining planning applications for renewable and low carbon development, local planning authorities should: (a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to significant cutting greenhouse gas emissions; (b) approve the application if its impacts are (or can be made) acceptable.'*

The NPPF highlights the importance of identifying high quality places is fundamental to the planning and development process. The NPPF expands upon the fundamental principles of good design to define what is expected for well-designed places and explain how planning policies and decisions should be supportive of this.

4.3.1.1. Renewable and Low Carbon Energy, 2015²

Guidance was published in 2015, Renewable and Low Carbon Energy, to help local councils in developing their own policies for renewable energy. With regards to solar photovoltaic (PV) technology, Paragraph 12 states that where a planning application is required in regard to solar, factors to consider include:

- *'The importance of siting systems in situations where they can collect the most energy from the sun;*
- *Need for sufficient area of solar modules to produce the required energy output from the system;*
- *The effect on a protected area such as an Area of Outstanding Natural Beauty or other designated areas;*
- *The colour and appearance of the modules, particularly if not a standard design'.*

This guidance also states that:

'the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.'

Furthermore it states:

'In the case of ground-mounted solar panels it should be noted that the effective screening and appropriate land topography the area of a zone of visual influence could be zero'.

² Available from: <https://www.gov.uk/guidance/renewable-and-low-carbon-energy#:~:text=The%20National%20Planning%20Policy%20Framework,planning%20concerns%20of%20local%20c,ommunities> [Accessed 31/05/2024]

4.4. Local Planning Policy on Design

4.4.1. Climate Action Plan

In April 2019, Preston City Council declared a climate emergency. The Council have pledged that the city will be net zero by 2030. The Council website states that the Council *'would use its leadership and influence in the city to work with others towards making the district of Preston zero carbon by the same date.'*

4.4.2. Fylde Local Plan to 2032 (Incorporating Partial Review)

Fylde Council's Local Plan to 2032 (incorporating Partial Review)³ was adopted in December 2021.

The Local Plan states that *'the planning system has a key role in assisting in mitigating the causes of climate change by reducing greenhouse gas emissions and encouraging energy production from renewable sources.'*

Strategic Policy CL3 of Fylde Local Plan relates to *'Renewable and Low Carbon Energy Generation – excluding onshore wind turbines'*.

This policy (CL3) states that renewable and low carbon energy development is significant within Fylde and states that *'opportunities for renewable and low carbon development, including microgeneration, should be maximised, while ensuring that adverse impacts are addressed satisfactorily; including cumulative landscape and visual impacts'*.

'Policy CL3 encourages and supports the installation of renewable and low carbon energy generation within Fylde by providing a criteria based framework to determine applications. The policy applies to most types of renewable and low carbon energy generation including, but not restricted to solar, biomass generation, hydropower and micro-generation'.

The local plan highlights how climate change will have a detrimental impact on the health and wellbeing of the population. The plan states by *'reducing energy use, improving insulation and promoting renewable energy generation in Fylde will tackle the threat that climate change has on health and wellbeing. Encouraging sustainable energy generation will reduce carbon emissions and associated health problems.'*

Strategic Policy GD7: Achieving Good Design in Development notes how *'the importance of high quality design is integral to the Local Plan and is therefore central to the planning of all development'*. It goes on to say that *'good design can deliver wider economic, environmental and social benefits'*. *'On that basis, the Council considers that to achieve high quality, sustainable design proposals must:*

- a. Respond positively to their context and setting, including reinforcing local identity and character;*
- b. Address the connections between people and places;*
- c. Be physically, functionally and economically integrated into their existing environment in a positive and inclusive manner;*

³ Fylde Council, (2021). *Fylde Local Plan to 2032 (incorporating Partial Review)*. Available from: <https://new.fylde.gov.uk/wp-content/uploads/2021/12/Fylde-Local-Plan-to-2032-incorporating-Partial-Review-adopted.pdf> [Accessed 18/07/2024]

- d. *Be integral to creating safe, accessible and inclusive environments; and*
- e. *Reduce the impact of the development on the natural environment and enhancing biodiversity’.*

4.4.3. Other Design Guidance

4.4.3.1. National Design Guide, 2021⁴

The National Design Guide, published in 2021, illustrates how well-designed places that are *‘beautiful, healthy, greener, enduring and successful can be achieved in practice’*. This document should be read in conjunction with the Government’s collection of planning practice guidance, along with separate planning practice guidance on design process and tools.

The report provides a structure that can be used for large scale development and used for the content of local design policies, guides and identifies issues that are significant for design codes that are applied to new developments.

The report highlights how the design quality of the new development is key to creating a development that benefits the population and surrounding communities.

The report puts emphasis on the importance of considering the following when designing a new development:

- *‘Locally identified priorities and concerns;*
- *The strategic priorities of the local authority;*
- *The priorities of the local authority;*
- *The priorities of a particular user group;*
- *The scale of the proposal;*
- *Its site and location; and/or*
- *The design process, including whether it is at a strategic or detailed stage.’*

The report states:

‘Well-designed places and buildings come about when there is a clearly expressed ‘story’ for the design concept and how it has evolved into a design proposal. This explains how the concept influences the layout, form, appearance and details of the proposed development. It may draw its inspiration from the site, its surroundings or a wider context. It may also introduce new approaches to contrast with, or complement, its context. This ‘story’ will inform and address all ten characteristics. It is set out in a Design and Access Statement that accompanies a planning application.’

Components for a good design include:

- *‘The context for places and buildings;*
- *Hard and soft landscape;*
- *Technical infrastructure – transport, utilities, services such as drainage; and*

⁴ Available from: https://assets.publishing.service.gov.uk/media/602cef1d8fa8f5038595091b/National_design_guide.pdf
[Accessed 31/05/2024]

- *Social infrastructure – social, commercial, leisure users and activities.*

A well-designed development must consider the appearance, materials and detailing. The correct choices must also be made at all levels, including the following:

- The layout;
- The form and scale;
- Appearance;
- Landscape;
- Materials; and
- Detailing.

A well-designed place consists of individual characteristics that interact to create it's character. The figure below presents this.

Source: National Design Guide

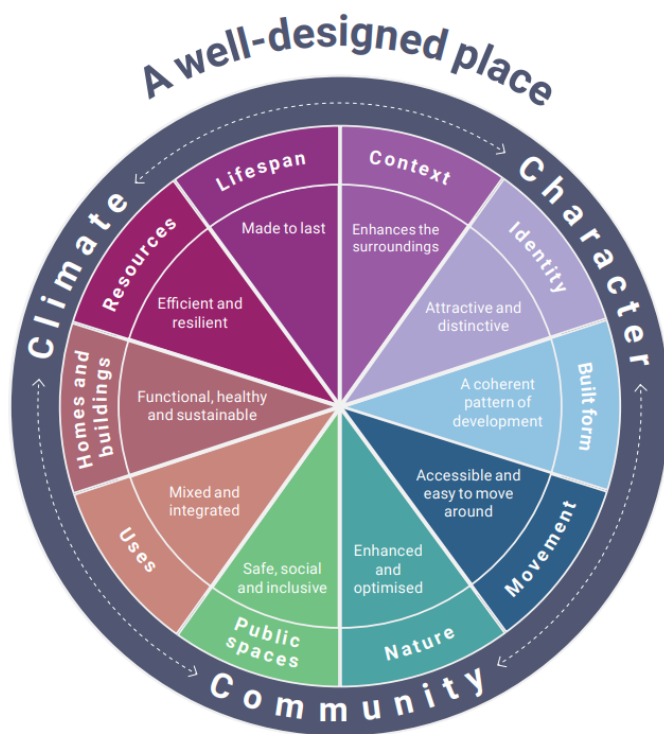


Figure 4.1: The ten characteristics of well-designed places

The figure above identifies the ten characteristics that work positively to address environmental issues affecting the climate, and also help sustain a sense of community.

Section 'R2: Careful selection of materials and construction techniques', of the report states that new developments, such as solar developments should be well-designed and use materials carefully to reduce their environmental impact. It is highlighted that this can be achieved in several ways; use of locally sourced materials, high solar performance, and designs based on the typical dimensions of materials to reduce the amount of waste. The design of the proposed development should be in a

suitable location that is durable and adaptable, in order to work well over its lifetime and reduce long-term resource needs.

5. Environmental Assessments

This section of the NTS presents summaries of the assessments of potential effects of the proposed development presented in the ES and the measures taken or put forward to reduce the significance of the effects identified (i.e., mitigation measures).

5.1. Landscape and Visual

The Landscape and Visual Impact Assessment (LVIA) provided at Section 4 of Volume 1 of the ES has been completed by Chartered Landscape Architects at Pegasus Group and has been undertaken in accordance with industry guidance. The approach to the LVIA and the selection of assessment viewpoints, were determined during the process of assessment and take account of Fylde Council's comments on landscape and views in its scoping opinion and in subsequent email correspondence between Natural Power and Fylde Council's Landscape Officer.

The development of the proposals has been an iterative process, and landscape proposals are included as part of the proposed development to minimise the landscape and visual effects of the proposed development as far as possible. Landscape proposals are indicated on Figure 4.7: Outline Landscape Plan in Volume 2 of the ES. Landscape proposals include new hedgerow including hedgerow trees within gaps in existing hedgerow, new tree and woodland planting, and new species-rich grassland and wildflower areas, referred to where relevant below and subject to detailed design.

The LVIA assesses the effect of the construction, operation and decommissioning of the proposed development on the landscape features of the site, and on landscape character and people's views within 2 km of the site boundary, with reference to Figure 4.5: Screened Zone of Theoretical Visibility and Viewpoint Locations in Volume 2 of the ES, (which shows the locations from which the proposed development theoretically would be seen from); further to field assessment; and with reference to assessment viewpoints selected as part of the visual assessment.

The site comprises relatively flat, low-lying, predominantly arable farmland approximately 6 km west of Preston, and approximately 0.3 km north of the River Ribble at its closest point. The site is bound to the north by short sections of the A583 Blackpool Road and the A584 Preston New Road and by Clifton Business Park adjacent to the north-western boundary of the site. The site is bound by a minor road along its western boundary, which provides access to the entrances to the SUEZ recycling and recovery centre and the United Utilities (UU) water treatment works near the south-western corner of the site. To the immediate southeast of the site, beyond intervening woodland, is the SUEZ Recycling and Recovery facility and Clifton Marsh Landfill Site.

The LVIA identifies that the site is not within a designated landscape subject to special protection and there are no landscape designations within the 2 km LVIA study area or the wider 5 km study area.

5.1.1. Effects on Landscape Features and Character

Farmland within the site boundary, predominantly arable farmland, is divided into fields of varying sizes and shapes, and fields are defined by a mix of hedgerow (predominantly hawthorn with varying degrees of tree cover); wet and dry field ditches, (both open and vegetated); post and wire fencing; trees including willow and poplar; and woodland including ash, oak, and silver birch. The southern, eastern, and north-eastern boundaries of the proposed development are bound by mature woodland and woodland extends westwards into part of the eastern extent of the site. The proposed development area is relatively flat but also includes raised banks (running roughly east west through the centre of the site), and field ditches along some field boundaries, resulting in some localised variations in topography and landform. The raised banks comprise the earthwork remains of historic flood defences and are one of two known non-designated heritage assets within the site boundary. The other non-designated heritage asset in the site comprises a small subcircular earthwork in the north-eastern part of the proposed development area.

The construction and operation of the proposed development would result in a **significant** change to site land use and character, changing from agricultural fields to an operational solar development. The proposed development would introduce new built components onto the site, which although of limited height, would affect most of the site area and would alter the character of the site. The proposed development would be in the context of the electricity overlines running across the site and the surrounding landscape, and in the context of the A584 Preston New Road and the A583 Blackpool Road to the north; Clifton Marsh Business Park adjoining part of the north-western edge of the proposed development; and the SUEZ Recycling and Recovery facility, Clifton Marsh Landfill Site and the UU water treatment works in the immediate surroundings of the site, to the southeast, south and southwest of the proposed development.

The proposed layout would however retain most landscape features of the site and **no significant** landscape effects are predicted to occur upon site topography and landform, hedgerow, trees and woodland or watercourse and drainage features in the site.

The landscape proposals embedded as part of the proposed development include replacement hedgerow, tree and woodland planting taking account of minimal losses to accommodate the proposed site access and access track and would introduce new species-rich grassland and wildflower grassland and additional hedgerow planting, including hedgerow trees, and tree and woodland planting onto the site. The proposed development would result in a **beneficial** effect on these landscape features which would increase overtime as planting becomes established and matures.

There would be **no significant** landscape effects upon the landscape character areas (LCAs) identified in the 'Landscape Strategy for Lancashire'⁵ report, published in 2000, referring to LCA 17a: Clifton and Hutton Marsh and LCA 15d: The Fylde.

⁵ Lancashire County Council (2000). A Landscape Strategy for Lancashire (2000). Available from: <https://www.lancashire.gov.uk/council/strategies-policies-plans/environmental/landscape-strategy/> [Accessed 18/07/2024]

5.1.2. Effects on Views

LVIA field assessment determined that visibility of the proposed development would be considerably less than shown on Figure 4.5: Screened Zone of Theoretical Visibility and Viewpoint Locations in Volume 2 of the ES, due to the low scale of the proposed development together with the relatively flat landscape and the level of intervening screening provided by mature hedgerow, trees, woodland, by raised landform in the southern context of the site and by intervening built development including individual properties and farmsteads and settlement in the site's context.

The proposed development would result in no effects on people's views (and landscape character) beyond the A584 Preston New Road and the A583 Blackpool Road north of the site due to intervening hedgerow, trees, and woodland (along the site's boundaries, along these road corridors and along intervening field boundaries), see Figure 4.9: Viewpoint 2, Figure 4.11: Viewpoint 4 and Figure 4.12: Viewpoint 5 in Volume 2 of the ES.

There would be no effects on views experienced by persons south of the site and the River Ribble, due to landform rising south of the southern boundary of the site, and intervening field boundary hedgerow and trees, see Viewpoints 6 and 7 at Figures 4.12 and 4.13.

To the east and southeast of the site, effects on views would be experienced within a much narrower radius than 2 km, due to site boundary woodland, intervening hedgerow, and trees and due to raised landform across Clifton Marsh Landfill Site in the immediate south-eastern context of the site.

To the west and southwest of the site, visibility of the site and the proposed development has been assessed from the edge of Freckleton, approximately 2 km distant from the site, noting that the likelihood of significant visual effects occurring decreases with distance.

The LVIA identifies that during construction and on completion of the proposed development (at Year 1), the proposed development would result in the greatest visual effect on public receptors (**moderate adverse**) experienced by road users with open views towards the proposed development from the minor road running along the site's western boundary, (see Figure 4.8a to 4.8c: Viewpoint 1 Baseline Photograph, Wireline and Year 1 and Year 15 Photomontages and Figure 4.17: Viewpoint 10 Baseline Photograph and Wireline).

This road is considered to mostly be used by workers travelling to and from the entrances to the SUEZ recycling and recovery centre and the UU water treatment works near the south-western corner of the site. Visual effects on persons at Viewpoint 1 would reduce at Year 15, taking account of hedgerow planting proposed along the western edge of the proposed development which would provide increased filtering and screening of the proposed development at Year 15 onwards.

During construction of the proposed development, **significant (major/moderate adverse)** visual effects would be experienced by the closest residents who would have some open views towards the proposed development, including:

- Residents at Beechfield House, approximately 185 m northeast of the site at its closest point (between part of the north-western site boundary and the residential property) accessed off the A584 Preston New Road to the north and accessed off the northern end of the minor road running south towards Clifton Fields office development);

- Residents at the semi-detached property adjacent to the northern end of the minor road running south towards Clifton Fields office development (1 Marsh Cottage and Clifton Marsh Cottage, approximately 225 m southwest of the site boundary at its closest point); and
- Residents of the property at Clifton Marsh Farm, (approximately 285 m northeast of the site boundary at its closest point).

The significance of the visual effect on residents at Beechfield House and on residents of the property at Clifton Marsh Farm also would be **significant (major/moderate adverse)** at Year 1 of the proposed development.

These significant effects would reduce to being **not significant (moderate adverse)** at Year 15 due to maturing tree and woodland planting proposed along the edge of the proposed development in the western part of the site, along with proposed hedgerow management (which would allow hedgerows to grow to a minimum of 3 m high) and infill hedgerow and hedgerow tree planting, which would reduce visibility of the proposed development by Year 15.

5.1.3. Cumulative Effects

The following solar farms in the site's surroundings (within the wider 5 km study area) are considered as part of the existing landscape and views of the site:

- Solar farm at the UU water treatment works approximately 80 m southwest of the south-western corner of the site at its closest point;
- Clifton solar park, south of Deepdale Lane approximately 1.1 km northwest of the north-eastern boundary of the site at its closest point, south of larger scale industrial development north of Deepdale Lane at the Westinghouse Springfields site (where fuel used in nuclear reactors in the UK and overseas to generate electricity is made); and
- Solar Farm at Cooper House Farm, approximately 3.5 km northwest of the north-western corner of the site at its closest point.

The LVIA assesses that there is a glimpsed view of a small part of the solar farm at the UU water treatment works southwest of the site in views southwards from the minor road running along the site's western boundary. However, inter-visibility between the site and this solar farm is otherwise restricted by intervening landform and vegetation screening.

Inter-visibility between the site and Clifton solar park and the solar farm at Cooper House Farm also is restricted by vegetation screening. It is judged that these solar farms do not influence the character and views of the site and its surroundings potentially affected by the proposed development.

Within EIA, cumulative effects are considered to arise from the combination of effects from the proposed development and from other proposed or approved schemes in the vicinity, acting together to generate elevated levels of effects.

The planning application search to inform the scope of the cumulative landscape and visual assessment identified no approved development or developments awaiting a planning decision within the 2 km LVIA study area, within which the proposed development would give rise to limited and localised significant effects on landscape character and views. In the absence of development

proposed or approved within the 2 km LVIA study area, the addition of the proposed development into the landscape and people's views would not result in cumulative landscape and visual effects.

5.1.4. Conclusions

There would be limited significant effects on landscape features, on landscape character and on people's views as a result of the proposed development, limited to landscape features and character within the site itself and limited to people in the immediate surroundings of the site who would have open views of the proposed development.

It is assumed that the effects of the proposed development would be negative (adverse) in nature even though it is acknowledged that, for some people, the impacts could be considered to be positive (beneficial).

Overall, the proposed development including embedded landscape proposals, could be accommodated within the site without undue harm to the character and visual amenity of the landscape.

5.2. Ecology and Ornithology

An assessment of the relevant potential effects on ecology and ornithology is included in Section 5 of the Environmental Statement. For this section ecology is considered to cover both ornithological and ecological receptors, in all instances where ecology is mentioned ornithological species are also considered.

A programme of baseline ecology surveys was undertaken between April 2022 – March 2023. The following surveys were undertaken:

- Desk based study;
- Extended Phase 1 habitat survey;
- Habitat Suitability Index assessment for great crested newts;
- Breeding bird survey; and
- Wetland and Wintering Bird Surveys.

All surveys were conducted following the most relevant industry guidelines.

The proposed development is not located within any statutory sites designated for ecological or ornithological interests; however, it is adjacent to Newton Marsh Site of Special Scientific Interest (SSSI) and includes a portion of the locally designated Pippy Lane Banks Biodiversity Heritage Site (BHS). In addition, the Ribble and Alt Estuary Special Protection Area (SPA), Ramsar site and Important Bird Area (IBA) is approximately 660 m to the south.

The proposed development comprises of nine fields in arable/grassland rotation. The ditches and hedgerows have rank tussock rich margins while the post and rail fences have no field margins. Areas of broadleaved woodland, including those associated with Pippy Lane Banks BHS are present within and adjacent the proposed development area. There is one pond within the site boundary and six within 250 m of the proposed development, including two artificial water storage lagoons lined

with plastic. A chicken broiler is also present within the surveyed buffer, with chickens grazing the adjacent improved grassland field.

Surveys recorded suitability for great crested newts, as such a great crested newt District Level Licence has been applied for to further compensate for the potential impacts on great crested newts and provide an overall long-term significant benefit for this species. Suitability for species associated with the ditch network; water vole, otter and eels has not been discounted and protection of the ditch network has been integral to the proposed developments design, avoiding additional culverts and maintaining suitable buffers were possible. This was included within the consultee responses with badger, otter, water vole, dormice, bat sp., reptiles and eels scoped out of a full assessment within the scoping report due to the lack of potential Likely Significant Effects (LSE) following the implementation of embedded mitigation.

Due to the presence within the proposed development of bird species associated with the nearby Newton Marsh SSSI and Ribble Estuary SSSI, and proximity of these features, both designated sites were considered Important Ecological Features (IEFs) and the potential for LSE assessed. Pippy Lane Banks BHS was also considered an IEF due to the potential disturbance and habitat loss. An Appropriate Assessment was undertaken for the Ribble and Alt Estuary SPA and Ramsar, due to the potential for habitat loss for species associated with the designated site during the operational phase.

Embedded mitigation, such as creation of a site-specific Construction Environment Management Plan (CEMP) which will include Species Protection Plans (SPPs) and appointing an Environmental Clerk of Works (ECoW) to monitor adherence to such plans. Additional embedded mitigation and biodiversity enhancement in the form of a Habitat Management Plan (HMP) to restore habitats within the proposed development and provide additional suitable habitat for ground-nesting bird species including skylark, is also included with an Outline HMP included in Appendix 5.4.

It is considered that implementation of these mitigation and habitat enhancement measures will reduce the likelihood of impacts on IEFs at the appropriate biogeographical scale so that no significant effects are anticipated upon these IEFs. The proposed development will result in additional biodiversity benefits through achieving 61.77% net gain for area-based habitats, a 14.20% net gain for hedgerow habitats and 11.75% for watercourse habitats.

5.3. Hydrology, Geology and Hydrogeology

An assessment of the potential effects on the Hydrological, Geological, and Hydrogeological environment is presented with Section 6 of the ES.

The study area related to Section 6 includes the Clifton Marsh Solar Development red line boundary with a 2 km buffer area, and both upper and lower reaches of watercourse catchments present within that boundary. This study area can be seen in Figure 6.1: Hydrological Overview, Volume 2 of the ES.

A hydrological baseline desktop review was undertaken in February 2023. The scope and methodology of the assessment was agreed with statutory consultees. Surveys were undertaken to

help establish the baseline. These included soil resources assessment and walkover surveys for contaminated and hydrological features of interest at the proposed development area.

Statutory consultees were also consulted during the ES and their guidance used in designing the layout to protect watercourses from disturbance and potential effects on water quality during the construction and operation.

The protection of water and geological resources, the approach to flooding, and resilience against the impacts of climate change, are regulated by national policy. The proposed development will implement a drainage strategy and embedded mitigation that will mitigate the risk of flooding both within the site boundary and downstream whilst also implementing a Flood Warning and Emergency Plan.

As a result of the assessment, it was determined that the risks associated with proposed development were mitigated through the implementation of good practice and embedded mitigation. Adherence to a site-specific CEMP as well as the appointment of an ECoW are considered to be appropriate mitigation and **no significant effects** are expected from the proposed development.

5.4. Traffic and Transport

Natural Power were commissioned to undertake a Traffic and Transport Statement for the ES for the proposed development. The proposed development lies on agricultural land near Preston approximately 1.3 km to the south of the settlement of Clifton within the Fylde Council area.

The Traffic and Transport Statement has assessed the impact of construction related traffic on the local road network (i.e. M55 and the A583) as construction of the Clifton Marsh Solar Farm commences.

With peak construction traffic anticipated to be from months 1 to 3, daily flows on the A583 are predicted to increase by a maximum of 0.3% and 5.1% for total traffic and HGV traffic respectively, this equates to 36 HGV movements per day. This signifies that the predicted increase in total traffic is negligible and would be insignificant to users of the road. Traffic associated with the proposed development is also of a short duration, temporary nature, and operational traffic will be limited occasional trips by car or van.

5.5. Noise

A noise assessment of the proposed development has been carried out by Ion Acoustics.

There will be noise emitting plant on site that will include inverters, transformer stations, and a substation transformer to connect to National Grid. Noise emissions will be greatest during the middle of the day, however, there may be periods during the summer months that the solar farm may operate in the early morning.

Following several items of guidance and consultations with the Environmental Health of Fylde Council, criteria has been developed to assess the solar farm.

Baseline noise monitoring was carried out for properties surrounding the site. The prevailing background sound levels were reasonably high during the day, with many noise sources surrounding the site, including the A583 and A584 dual carriageways, and dropping to low background sound levels at night.

The background sound level was compared to noise emission predictions from the solar farm. It can be concluded that from results that it is unlikely that noise emitted from the equipment onsite will be audible at any given receptor. Therefore, there will be a negligible noise impact.

5.6. Other Matters

This section summarises the potential effects of the proposed development in respect of Glint and Glare, major accidents and disasters, climate, utilities, and human health risks including Electromagnetic Field.

Access routes being utilised for the proposed development will have appropriate warning signs for overhead lines. Therefore, considering the location of the electricity lines in relation to proposed infrastructure, with appropriate mitigation during the construction phase (and similar for the decommissioning phase), the potential effect of the proposed development on overhead electricity lines is considered not significant.

Three gas pipelines are present within the site boundary:

- Carnforth to Bretherton easement, Feeder 15 - National Grid Gas PLC;
- Shell NW Ethylene pipeline; and
- Sabic 8 Ethylene pipeline – Sabic UK Petrochemicals Ltd.

As suggested by HSE at scoping stage, consultation with the operators of the pipeline has been undertaken and the following has been undertaken:

- Mapping of development restricted areas due to the pipelines; and
- Ensuring the integrity of the pipelines and protecting the pipelines from development and operational works.

Consultation has been undertaken with the pipeline operators and is still ongoing. To honour the pipeline easements, the pipeline has been mapped and marked as a constraint and infrastructure has not been placed within the agreed buffers.

The Shell NW Ethylene pipeline is present within the site boundary and the design has been amended to satisfy the easement requirements of 3 m either side of the pipeline (edge of easement).

The Sabic 8 Ethylene pipeline is present within the site boundary and the design has been amended to satisfy Sabic's easement requirements of 6 m either side of the pipeline (edge of easement).

National Gas Transmission (NGT) operates the high-pressure gas pipeline that runs through the site boundary. The pipeline has a 24.4 m easement in operation (12.2 m) either side of the pipe) and no development, construction or landscaping is permitted within the easement without formal written approval from NGT.

The proposed development is not considered to pose a significant risk to human health. The proposed development area does not involve any hazardous substances during construction or operation.

The proposed development is not of a type that would store or process hazardous substances in quantities relevant to the potential for industrial major accidents with respect to The Planning (Hazardous Substances) Regulations 2015.

The proposed development is not located within a safeguarding zone of an Explosives site licensed under the Explosive regulations 2014 or the Dangerous goods in harbour area Regulations 2016.

There are potential health and safety risks associated with the construction phase of any development. Measures will be implemented to promote health and safety across the proposed development area. During construction and operational phases of the proposed development, the site boundary will be secured by fencing, to prevent members of the public accessing the site.

There are no public rights of way (PRoW) passing within the site boundary. The nearest PRoW is located approximately 106 m north west of the site boundary, north of the A584, Preston New Road, located opposite Clifton Business Park and M & V Motors.

A high-level electromagnetic field assessment has been undertaken to assess the potential electromagnetic fields generated by electrical equipment within a fixed ground-mounted solar photovoltaic development with respect to safe levels for human exposure.

Levels of electromagnetic radiation from the underground cables and overhead powerlines are predicted to be below International Commission on the Non-Ionizing Radiation Protection (ICNIRP) reference levels for magnetic fields, even when assuming maximum radiation is being experienced from the proposed underground cables and the existing overhead powerlines.

Electric field levels from the existing overhead powerlines are predicted to be above ICNIRP reference levels, and an approximately 15 m minimum horizontal clearance distance is recommended in regard to human activity.⁶

Radiation from the substation, transformers and PV inverters will be even less significant because the equipment is predicted to be housed in protective enclosures and the substation, transformers and PV inverters will be Conformité Européenne (CE) marked, meaning they should not generate or be affected by electromagnetic disturbance.

A glint and glare assessment has been undertaken for the proposed development, see Appendix 9.1, Volume 3 of the ES. This assessment pertains to the potential impact upon road safety, residential amenity and aviation activity.

No impact is predicted on roads in regard to glint and glare, and mitigation is not required.

No impact is predicted on dwellings in regard to glint and glare, and no mitigation is required.

⁶ This recommendation specifically addresses public exposure limits for human health, and the minimum clearance distance is with reference to human activity. In other words, it's advising that people should not be within 15 m horizontally of the overhead powerlines for a prolonged period of time. This standoff distance limits risks associated with prolonged exposure to electromagnetic fields generated by the overhead powerlines. (Pager Power May 2024)

Low impacts are predicted on Warton Airfield in regard to glint and glare, and no mitigation is required.

No significant impacts are predicted upon aviation activity at Blackpool Airport and detailed modelling is not required.

No significant impacts are predicted upon aviation activity at Carr Valley Airfield and detailed modelling is not required.

No significant impacts are predicted upon aviation activity at Wesham House Farm Heliport and detailed modelling is not recommended.

No significant impacts are predicted upon aviation activity at St Michael's Airfield and detailed modelling is not required.

The proposed solar development has the potential to make savings on greenhouse gas (GHG) emissions compared to electricity generation which involves the burning of fossil fuels. This proposed development has the potential to produce up to 49.9 MW of clean renewable energy.

The proposed development will enhance biodiversity within the site boundary by increasing and creating a range of habitats for a variety of species.

Due to the low-lying nature of the proposed development, significant effects in relation to accidents and disasters are not anticipated.

The proposed development is not located in an area with a history of natural disasters such as extreme weather events, and the construction and operation of the proposed development would be managed within the requirements of a number of health and safety related regulations, including the Construction (Design and Management) Regulations 2015⁷ and the Health and Safety at Work etc. Act 1974⁸.

Due to the safety features of modern solar developments, the results of detailed assessments into, climate and carbon balance, utilities, and planning conditions to mitigate the potential effects, it is concluded that the proposed development would not present a significant safety risk to the public.

5.7. Archaeology and Historic Environment

A desk-based assessment and field visit was undertaken to determine the potential for hitherto unknown archaeological remains within the proposed development and the potential impact that the development could have on those heritage assets that are known to be within the proposed development. In addition, the potential impact that the development could have on the designated and non-designated heritage assets within the wider study area was assessed. It is concluded that there was no impact on any heritage assets located within the study area.

⁷ Construction (Design and Management) Regulations 2015. Available from: <https://www.legislation.gov.uk/uksi/2015/51/contents/made> [Accessed 15/07/2024]

⁸ Health and Safety at Work etc. Act 1974. Available from: <https://www.legislation.gov.uk/ukpga/1974/37/contents> [Accessed 15/07/2024]

Within the proposed development there are two non-designated heritage assets identified requiring assessment. All other heritage assets were scoped out of the assessment.

One non-designated asset is earthwork remains to the west of Clifton Marsh Farm. The older northern area was previously subject to a geophysical survey which established that there were no remains of archaeological interest present and no further work would need to be carried out. The more prominent earthworks which run east to west across the middle of the proposed development area are to be kept within the development and access points re-used in order to minimise any disturbance to them; if these access points are to be widened then an archaeological watching brief is to be carried out. Following the mitigation, the significance of effect is considered to be minor adverse and not significant.

The other non-designated asset is a small sub-circular earthwork identified to the east of Clifton Marsh Farm. This is to be preserved in situ within the proposed development area. A geophysical survey will be carried out in order to establish the extent of the feature and define a buffer around the identified extent of the feature, within which concrete mounts are to be used in that area for the solar arrays rather than the more conventional piled methods. No further intrusive archaeological work will be required. Following the mitigation, the significance of effect is considered to be negligible.

5.8. Cumulative Effects

Each topic chapter presented within the ES, where relevant, undertook a cumulative assessment which assessed whether the combination of multiple effects occurring from the proposed development along with those from other relevant projects or plans would result in an effect of greater significance than the individual effects alone. There is no widely accepted methodology or best practice for assessing cumulative effects, although various guidance documents exist. The significance criteria that will be used for the cumulative assessment will follow the policy and guidance documents and the general EIA approach in this section, unless otherwise defined within a topic section.

The EIA Regulations state that *'Each application (or request for a screening opinion) should be considered in its own merits. There are occasions, however, when other existing or approved developments may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved document.'*

Schedule 4 of the Town and Country Planning (EIA) Regulations 2017, also lists the information for inclusion in ESs and states it should include:

'5. A description of the likely significant effects of the development on the environment resulting from, inter alia:

... (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environment importance likely to be affected or the use or natural resources.'

Solar farm planning applications that have been consented or operational with a capacity of 1.5 MW or greater within a 10 km search radius were considered. Consented or operational wind turbines with a capacity of 500 kilowatts (kW) within a 10 km search radius were considered. Planning applications of more than 10 dwellings within 10 km that were consented or constructed within a 10 km search radius were considered in the cumulative impact assessment.

All of the assessments undertaken for the proposed development either concluded that there was no potential for cumulative effects or that potential cumulative effects are considered to be not significant.

Synergistic effects (also known as intra-project combined effects) result when multiple individual effects from a single project combine to influence a common receptor in a way which is greater than the sum of the individual effects. Synergistic effects have been considered in Section 11: Schedule of Mitigation, and it has been concluded that no significant synergistic effects are predicted for the proposed development.

6. Conclusions

The proposed development has been located in a suitable area for solar development following a thorough site selection and design process. Through balancing the various site constraints with the scale of development required to be economically viable and meet green energy targets, the Applicant considers that the proposed development provides the best use of the site with respect to the potential renewable electricity generating capacity balanced against the potential environmental and other effects.

The ES presents the potential effects of the proposed development as well as potential cumulative and synergistic effects which consider such effects in combination. Following the use of mitigation, no significant effects are predicted as a result of the proposed development.

The Applicant has also proposed enhancements and habitat management measures which will result in numerous beneficial effects including:

- The proposed development will result in 61.32% net gain for area-based habitats, a 14.20% net gain for hedgerow habitats and 11.75% for watercourse habitats;
- The proposed development will enhance biodiversity within the site boundary by increasing and creating a range of habitats for a variety of species;
- The habitat proposals are to benefit the habitats and species found within the landscape, with additional measures included when in close proximity to woodland to provide maximum enhancement for this feature;
- A great crested newt District Level Licence has been applied for to further compensate for the potential impacts on great crested newts and provide an overall long-term significant benefit for this species. As such the favourable conservation status of great newts will not be impacted by the proposed development and they are not considered an Important Ecological Features (IEF);

- The overall reduction in fertilisers/herbicides (in line with the Biodiversity Net-Gain BNG assessment) will in turn benefit any fauna within the watercourses over the long term;
- The HMP includes a range of enhancements which will provide a long-term benefit to the protected species which may be associated with the ponds;
- Enhanced foraging resource for a range of species; and
- The change to a solar development with modified grassland below with sheep grazing would implement drainage techniques may provide a reduction to the risk of flooding.

The habitat management will, in turn, improve breeding bird habitat for various breeding bird species, improving biodiversity across the site as well as benefit water quality, resulting in a biodiversity net benefit.

The proposed development positively contributes to the achievement of the UK's goal to increase renewable energy generation to help combat the challenges posed by climate change. The design of the proposed development has been informed by consideration of technical, environmental and policy constraints. Additionally, the iterative design process has been informed by consultation with key stakeholders and the local community.

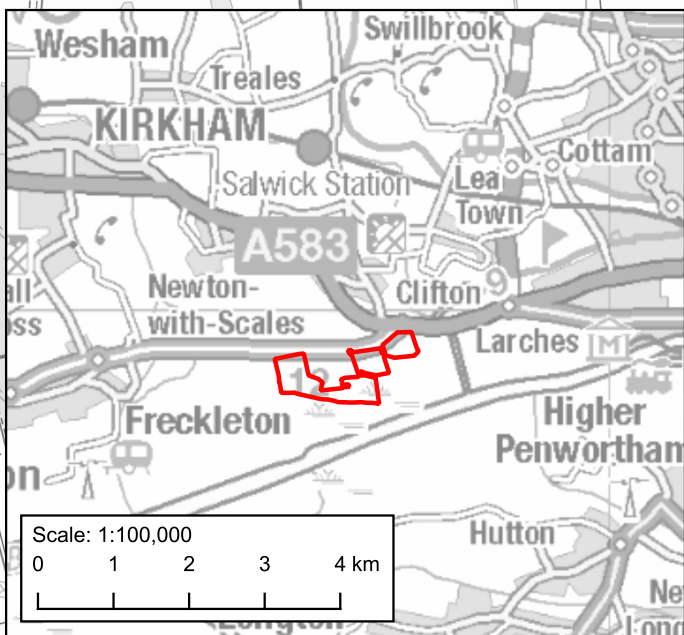
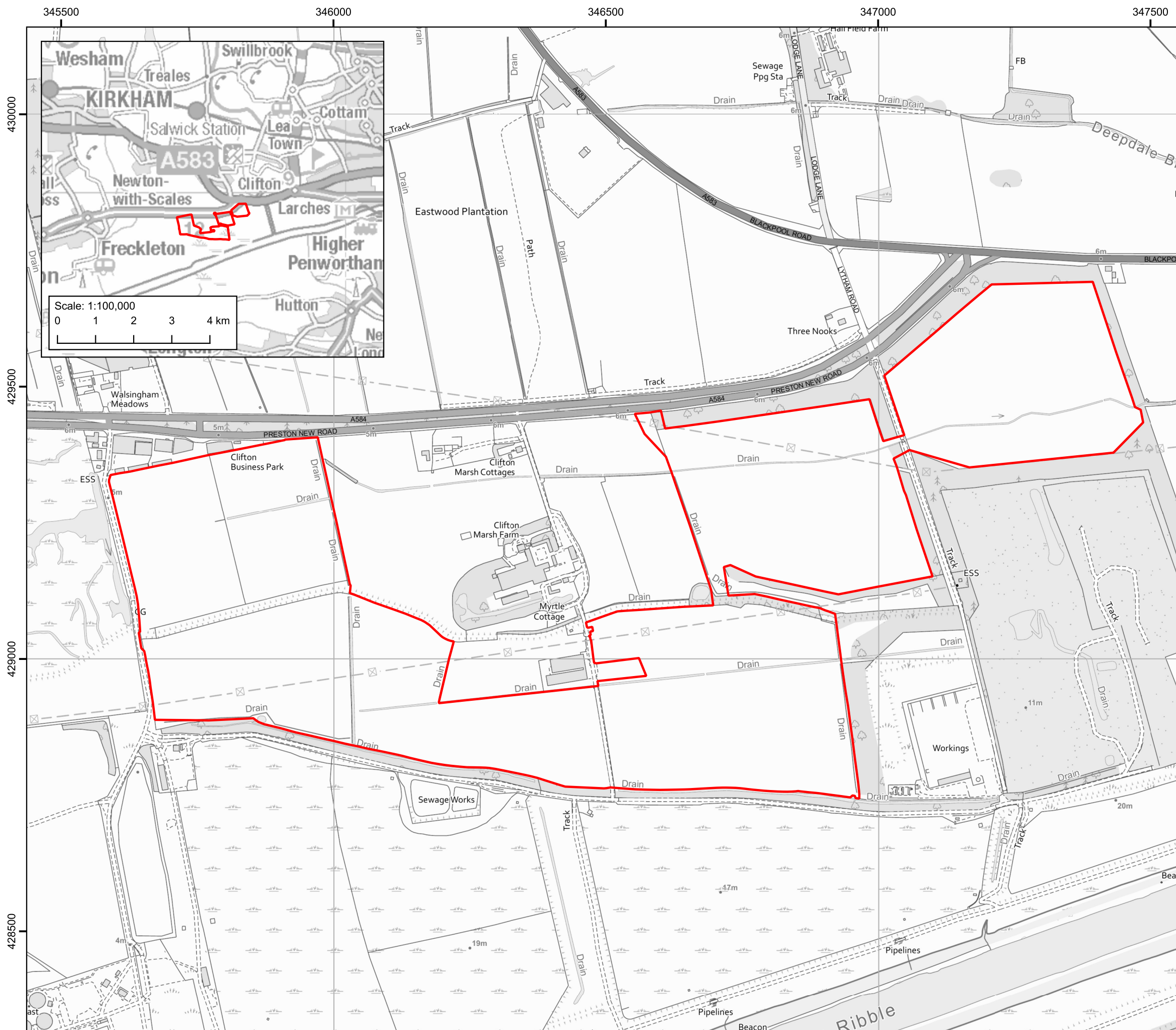
It is anticipated that the proposed development, which will have an installed capacity range of up to 49.9 MW, could generate up to 48,048 megawatt hours (MWhs) per year. Based on this installed capacity, it is estimated that the average annual generation expected at the site could be equivalent to the approximate annual domestic needs of 14,142 average households.⁹

The essential benefits of using solar energy for the generation of electricity is that it is renewable and safe. It also provides for diversity and security of supply which remain part of the Government's energy policy.

When generating electricity, the proposed solar development would offset the generation of a similar amount of electricity that would otherwise be generated by conventional fossil fuel power stations.

Solar developments provide an important contribution towards making the UK more energy self-sufficient. If constructed, the proposed development would help improve this self-sufficiency and narrow the energy supply gap.

⁹ Based on average capacity factor for solar photovoltaics DUKES stats 2018-2022 is 11.18%. [Accessed 17/04/2024]. It is important to note that the capacity factors used here will not typically reflect the final capacity factor of the proposed development and are much lower than for this proposed development. The actual capacity factor would be anticipated to be greater, as modern infrastructure are more efficient than many of the older photovoltaics on operational solar farms where the DUKES data is derived from. $49.9 \text{ MW} \times 8760 \text{ hours in a year} \times 11\% \text{ capacity factor} = 48,048 \text{ MWh} / 3,400 \text{ kWh (Strategy (BEIS), the average household in the UK, 2022)} = 14,142 \text{ households}$. Figures all rounded to the nearest whole number.



Project:
**Clifton Marsh Solar Farm,
Lancashire**

Title:
Figure 1.1: Location Plan

Key
 Site boundary

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Scale @ A3: 1:7,000
 Coordinate System: British National Grid
 0 100 200 300 400 m

Date: 20-05-24 Prepared by: PL Checked by: MG

Ref: GB203995_M_008_D

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