



ARCUS

PLANNING, DESIGN AND ACCESS STATEMENT

ALDEBY SOLAR PARK

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Prepared By:

Arcus Consultancy Services

Suite 1C
Swinegate Court East
York
North Yorkshire
YO1 8AJ

T +44 (0)1904 715 470 | **E** info@arcusconsulting.co.uk
W www.arcusconsulting.co.uk

Registered in England & Wales No. 5644976

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ENVIRONMENTAL STATEMENT

Environmental Report accompanied by Figures and the following Technical Appendices:
Technical Appendix 1.1 – EIA Screening Opinion
Technical Appendix 4.1 - Landscape and Visual Impact Assessment Methodology
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1 INTRODUCTION

1.1 Background

This Planning, Design and Access Statement (the Statement) has been prepared by Arcus Consultancy Services Ltd. (Arcus) on behalf of Infinis Solar Developments Limited (the Applicant), to accompany the planning application submitted to Norfolk County Council (the Council/NCC) for the installation of a ground mounted solar photovoltaic (PV) array/solar park with associated infrastructure (the Development). The Development will have a generating capacity of approximately 7 Megawatts (MW). The Development is located on land at the closed Aldeby landfill site, Common Road, Aldeby, Beccles, NR34 0BL (the Site).

The Site is located within the area of South Norfolk District Council as local planning authority and Norfolk County Council (NCC) as Mineral and Waste Authority. Due to the location of the Site on Aldeby Landfill, the application is to be considered by the Minerals and Waste Authority – NCC.

In November 2020 a request for pre-application advice was submitted to NCC. Advice was received on 15 January 2020 and this advice has been used to help form the final design of the site and application submission.

Further consultation was received on 21st April requesting the inclusion of additional topics in the Environmental Statement as well as other accompanying information. Further detail on this is summarised at Section 1.8 of the Statement.

1.2 Statement Approach

This Statement illustrates that the Applicant has fully considered the design behind the Development, in accordance with:

- the Planning Practice Guidance web-based resource: What should be included in a Design and Access Statement accompanying an application for planning permission?¹;
- Planning Practice Guidance web-based resource: National Information Requirements²;
- National Planning Policy Framework³ and CABE best practice guidance 'Design and Access Statements: How to Read, Write and Use them'⁴.

The Statement also includes an appraisal of key planning policies at both a national level and local. This application is accompanied by an Environmental Statement (ES) which has been prepared in accordance with Town and Country Planning (Environmental Impact Assessment) Regulations 2017. This Statement does not form part of the ES, however it is informed by its findings. The environmental assessments undertaken as part of the Environmental Impact Assessment (EIA) have fed into an iterative design process. The final layout minimises the environmental impact of the Development during construction, operation and decommissioning phases whilst also delivering a viable scheme which provides carbon reduction benefits.

The following plans and drawings are submitted alongside the planning application:

- Planning Drawing 1 – Site Location Plan
- Planning Drawing 2 – Site Layout Plan

1 Planning Practice Guidance, Paragraph 031 Reference ID: 14-031-20140306.

2 Planning Practice Guidance, Paragraph 022 Reference ID: 14-022-20140306.

3 National Planning Policy Framework, 2019.

4 CABE, Design and access statements, How to write, read and use them, March 2006.

- Planning Drawing 3 – Racking and Solar Panel Elevation
- Planning Drawing 4 – DNO Switching Station Elevation
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The PDAS is accompanied by the Environmental Statement which covers the following topics, scoped into the EIA by Norfolk County Council:

- Landscape and Visual Impact Assessment;
- Ecology;
- Traffic and Access; and
- Hydrology and Hydrogeology.

In addition, the following documents also accompany the PDAS but do not form part of the Environmental Statement:

- Annex A – Glint and Glare Study; and
- Annex B – Tree Protection Plan.

1.3 The Applicant

Infinis Solar Developments Ltd. is part of the Infinis group, the UK's leading generator of low carbon power from captured landfill methane (CLM), with an annual generation in excess of 1,400 GWh and additional business activities in captured mineral methane (CMM) and power response (PR). Infinis Solar Developments Ltd has been initiated to start a multi-year programme to add solar generation capacity to a large number of suitable sites within their portfolio to provide clean, renewable and low carbon energy.

The introduction of solar into Infinis' energy generation portfolio is an exciting development and aligned with Infinis' vision of building a low carbon future. Infinis Solar Developments Ltd. is strategically partnered with FCC Environment, a leading waste and resource management company to complement the existing generation of low carbon power from CLM operations with the development of solar PV on landfill sites. The solar project would be developed with due consideration to the existing landfill infrastructure and the landfill restoration plan. The use of this closed landfill site ensures that there is no loss of greenfield land which could otherwise be used for agriculture, the Site has limited uses due to existing gas infrastructure (see Section 2.2 for further details on gas infrastructure) and below ground landfill waste. The Development would not interfere with the contaminants waste beneath the capped landfill surface, as there is no requirement for ground excavation with the solar panels likely to be anchored to the ground with concrete footings, or short piles, so as not to impact on the capping. Additionally, infrastructure for both access and grid are already in place as part of the landfill operations.

1.4 Site Selection

The purpose of the Development is to harness solar power to generate electricity. The design of a solar development must also take account of potential environmental effects. The Development must therefore strike a balance between energy yield and minimising environmental effects.

The Applicant has a portfolio of renewable energy generation developments throughout the UK, and has been reviewing the suitability of solar farms within the existing CLM electricity generation sites.

Currently, the dominant source of renewable energy in the UK is wind⁵. Energy diversification, including one within the renewable energy mix is an important contribution to sustainable development. Increasing sources of energy supply within the renewable energy mix will allow the promotion of energy security, efficiency and accessibility locally and internationally.

The Applicant aims to draw on the unique blend of natural resources and energy demands to promote diversification of the renewable energy mix, and add a new Solar Park at the Site.

Not every site will be suitable for accommodating solar, and therefore the Applicant has been through a thorough feasibility exercise to assess the suitability of the Site. The potential for installing a solar development at the Site has been assessed through feasibility work, which assessed technical and environmental issues to identify development sites and then derive the most appropriate scale and infrastructure layout.

The key criteria which have led to the Site being selected for solar development include:

- Solar irradiation levels;
- Proximity to an existing grid connection with capacity to accept the Development with no or minimal upgrades;
- Separation from local population;
- Existing landfill infrastructure including access;
- Land which is not suitable for conventional uses (i.e. no loss of agricultural land as the existing gas infrastructure results in limited uses for the Site);
- Existing screening provided by trees and hedges;
- Topography;
- Field size/shading;
- Access to the site for construction;
- Absence of nature conservation designations;
- Located within flood zone 1 and so of low flood risk; and
- Potential for a commercial/land agreement with a landowner.

Following consideration of the above factors and the existing infrastructure within the wider area, the selected site was identified as having very good potential for development with minimal environmental impacts.

1.5 Rationale for the Development

This section sets out the rationale for the Development, which is underpinned by national and international commitments on climate change, policy objectives, electricity market reform and industry drivers.

The UK is one of 195 signatories to the Paris Agreement under the United Nations Framework Convention on Climate Change (2016)⁶, which commits to limiting the global average temperatures to under 2 °C above pre-industrial levels with an aim of reducing this figure to 1.5 °C. Considerable reductions in greenhouse gas emissions are required to meet this goal.

Following the Paris Agreement, the UK has recently committed to meeting a legally binding target to cut greenhouse gas emissions by at least 100% from the 1990 baseline by 2050, which would result in net zero greenhouse gas emissions. This target, which is

⁵ Office of National Statistics (2019) *UK Energy Statistics* [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/812626/Press_Note_June_19.pdf (Accessed 29/10/2019)

⁶ United Nations Framework Convention on Climate Change (2016) *The Paris Agreement* [Online] Available from: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement> (Accessed 12/11/2020).

set out in the Climate Change Act 2008 (2050 Target Amendment) Order 2019⁷, is more ambitious than the 80% reduction set out in the 2011 National Policy Statement for Energy (EN-1)⁸. The 2008 Climate Change Act⁹ also introduced legally binding carbon budgets which restrict maximum greenhouse emissions for five-year periods ahead of the 2050 Net Zero Target. The fifth carbon budget, set out in the Carbon Budget Order 2016¹⁰ requires a 57% reduction in annual UK greenhouse gas emissions between 2028 and 2030 relative to 1990 levels.

Meeting these legally binding targets requires major investment in new technologies, the electrification of heating, industry and transport, prioritisation of sustainable energy and cleaner power generation.

An integral part of UK energy strategy is to reduce the dependency on fossil fuels. Paragraph 2.2.16 of National Policy Statement EN-1 identifies that a significant proportion of the UK's generating capacity is due to close and that new low-carbon generation is required which to make up for the reduction in energy generated by fossil fuels. The National Infrastructure has recommended that 65% of the UK's electricity should be provided by renewable sources by 2030 in order to tackle climate change while meeting energy demand.

To address these objectives and meet the emissions reduction targets, the electricity being consumed will need to be almost exclusively from low carbon sources, in contrast with the third quarter of 2019, when around 39% of our electricity was supplied by burning gas, oil and coal. Therefore, a new low carbon energy mix is required which is reliable, secure and affordable.

If consented, the Development would contribute to the delivery of these policy objectives, diversify the energy mix and facilitate the transition to low carbon energy, whilst decreasing the dependency on fossil fuels. Due to rapid advances in technology, solar PV is one of the most cost-effective sources of energy, leading to more affordable and secure energy supply to consumers.

1.6 Benefits of Solar Energy

One of the most sustainable forms of energy production worldwide is the production of solar energy through the use of solar PV arrays. Solar energy generation does not require fossil fuel use during generation, and although there is variability in the amount and timing of sunlight over the day, season and year, a properly sized and configured system can be designed to be highly reliable. In the case of the Development, the proposed array of approximately 7MW would generate approximately 6,633 megawatt hours per year ('MWh/yr') which would offset the annual electricity usage of approximately 1,432 homes in South Norfolk¹¹.

⁷ HM Government (2019) *The Climate Change Act 2008 (2050 Target Amendment) Order 2019* [Online] Available from: <http://www.legislation.gov.uk/ukxi/2019/1056/made> (Accessed 19/08/2019)

⁸ Department of Energy & Climate Change (2011) *Overarching National Policy Statement for Energy (EN-1)* [Online] Available from: <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure> (Accessed 12/11/2020)

⁹ HM Government (2008) *The Climate Change Act 2008* [Online] Available from: <https://www.legislation.gov.uk/ukpga/2008/27/contents> (Accessed 12/11/2020)

¹⁰ HM Government (2016) *The Carbon Budget Order 2016* [Online] Available from: <https://www.legislation.gov.uk/ukxi/2016/785/made> (Accessed 12/11/2020)

¹¹ The equivalent number of homes supplied has been obtained from *Regional and Local Authority Electricity Consumption Statistics* (Department for Business, Energy & Industrial Strategy, Updated 19 Dec 2019) (available online at: <https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics> [accessed 27/11/2020]), using the average household energy use for South Norfolk and annual generation estimate calculated by Infinis.

Solar power production also generates electricity with a limited impact on the environment as compared to other forms of renewable electricity production, as there is no need for extensive ground disturbing foundations, there are no tall vertical structures or moving parts involved and there is no noise associated with solar PV arrays during operation.

1.7 Landfill Restoration Plan

The Site is situated on the closed Aldeby landfill, as such, the landfill site is subject to an approved restoration plan which is currently in the process of being implemented. The Development would defer the implementation of the affected area of the restoration plan for the lifetime of the Development. Upon decommissioning of the Development, the restoration plan would be re-implemented. The amendment to the timing of the restoration would be implemented via a separate Section 73 application which will be made to vary the restoration scheme (as approved under application C/7/2018/7007, drawing no 601R294) to defer the implementation of the approved restoration plan for the area of the Site.

As the implementation of the restoration plan is well progressed on site, much of the planting and mitigation which has been implemented in line with the plan would be maintained throughout the life of the Development. Planning Drawing 2 shows the proposed layout of the Development and where changes to the Site would be. The ecology report accompanying this report finds there would be a small loss of vegetation as a result of the Development, however as set out in Chapter 5 of the ES, adverse impact from this loss would be negligible and as shown on Figure 4.9 of the ES, proposed planting and mitigation would compensate for this change. Upon decommissioning of the Development, the Site would be reinstated to the agreed restoration plan layout.

Environmental assessments have been undertaken accordingly. The current baseline has been used to assess potential adverse impacts, but an assessment against the current future baseline of the completed restoration plan has also been considered. All assessments find the impact to be acceptable once proposed mitigation and planting is implemented on site.

1.8 Pre-Application Consultations

1.8.1 Consultation with Norfolk County Council

The Applicant has sought to front-load the planning process by engaging with NCC through a pre-application enquiry ('the Enquiry'). The purpose of the Enquiry was to determine the scope of the Application and the supporting technical reports, agree on the approach to addressing the main issues and seek the Council's views on the principle of the development. The enquiry was submitted in November 2020.

A written response to the Enquiry was issued on 15 January 2021. The response indicates that the Development could be supported by the Council providing that an EIA is undertaken for the Development and consideration is given to the technical issues highlighted by the case officer as follows:

- Visual impact on the surrounding landscape, in particular the Broads Authority area;
- Impact on heritage assets, in particular Grade II listed Oaklands Farmhouse;
- Highway safety and access to site via the haul road;
- Impact on surface water and impact on the settlement of the landfill; and
- Nature conservation and biodiversity considerations, in particular in relation to the Broads.

Engagement with the Council prior to submission of this application has informed the design development and the scope of the technical documents submitted with this application.

Further consultation was received on 21st April requesting the inclusion of Ecology, Transport, Hydrology and Hydrogeology within the ES as well as other accompanying information such as a Tree Protection Plan (Annex 2).

1.8.2 Community Consultation

The Applicant is committed to ongoing engagement with Aldeby Parish Council and Burgh St. Peter Parish Council, as part of an ongoing consultation process. A notification email has been sent to both Parish Councils to inform of the Development and the invitation to engage during the planning application process.

A virtual meeting was set up with Aldeby Parish Council on 1st March 2021 at 5:30pm. This meeting included the Applicant providing a brief overview of the Development followed by a Q&A session. Following this meeting an email was sent to the Parish Council summarising the main points raised and responses as well as the actions as a result of the consultation meeting.

Following the Parish Council virtual meeting, residential properties within 500m of the Development were sent a letter via post informing them of the proposals, the process and providing details of the dedicated project website. Any comments were welcomed from residents either via post or email.

The dedicated project website was set up to keep interested parties informed about the Development and the planning process. The web address is as follows:
<https://aldebysolarpark.co.uk/>.

1.9 The Development and the EIA Regulations (2017)

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, (EIA Regulations) define EIA development as either:

- Schedule 1 development; or
- Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location.

Solar PV development is not listed in Schedule 1 of the regulations but under Schedule 2 of the EIA Regulations a development area threshold of 0.5 ha is applied to category 3 (a) industrial installations for the production of electricity. The Development exceeds the Schedule 2 area threshold of 0.5 ha and, as such, whether the Development is EIA development or not depends on an assessment against the screening selection criteria, as set out in Schedule 3 of the EIA Regulations, which comprise:

- Characteristics of the development;
- Location of the development; and
- Characteristics of the potential impact.

PPG paragraph 018 states that EIA will only apply to a small proportion of projects and only those which are likely to have significant effects.

A request for a Screening Opinion was submitted to the council in November 2020. A response was received on 29 December 2020 which found that the Development would require an EIA. This was in principle due to the potential landscape effects on the Broads Authority area. Therefore, an Environmental Statement has been produced to accompany the planning application.

2 SITE AND SURROUNDINGS

2.1 Location

The Site is currently a closed landfill and prior to that was used for the extraction of sand and gravel. Waste is no longer accepted at the Site and the restoration scheme is ongoing. There are hedgerows with trees along the southern and eastern boundaries of the Site. Immediately north and west of the site is closed landfill with restoration activities ongoing. The landfill site boundary to the north and west is bounded by mature trees and woodland.

The Site surroundings are generally flat and low-lying, mainly agricultural. To the north is the remainder of the landfill site, followed by arable fields and a woodland area, then isolated properties and farms and the village of Burgh St. Peter. To the west is woodland and farmland, and a few residential properties (College Cottages) to the southwest of the proposed Site access. To the east is woodland and further agricultural land, with some isolated properties such as The Shrublands and Greys Cottages.

The location of the Site is shown on Planning Drawing 1 – Site Location Plan.

2.2 Site Description

The total area of the Site is approximately 11.62 ha. The topography of the Site is illustrated on Planning Drawing 10 and it can be confirmed that there would be no anticipated change in contours over the operational lifetime of the Development. The Developed is located on one of the oldest and most settled parts of the landfill site.

The Site is currently a closed landfill and prior to that was used for the extraction of sand and gravel. Waste is no longer accepted at the Site and the restoration scheme is ongoing.

Access to the Site would be proposed off Common Road to the west, providing connectivity to Rectory Road and the A143 via Dun Cow Road. Existing landfill access roads will be used wherever possible.

The Site is currently utilised for landfill gas management and leachate management for compliance with an Environmental Permit with the Environment Agency. Infrastructure associated with this activity is spread across the Site. The Development would not interfere with this infrastructure and operation would continue as normal. The design of the Development ensures safe separation of electrical equipment to gas infrastructure and technicians are able to safely access landfill infrastructure for ongoing monitoring and operations. Detailed engineering design would follow a successful planning application to ensure all infrastructure is maintained and managed safely. A further detailed description of the site in relation to specific topics can be found in the accompanying technical reports found in the Appendices 1 – 5.

2.3 Surrounding Land Use

The Site is situated in rural countryside, with the extensively drained River Waveney valley to the south. The low-lying solar development would sit within the gently rolling landform, broken up by existing lines of mature trees. The Site lies to the east of Common Road, to the north and west of St Mary's Road, and south of Taylors Road. The Site is adjacent to the Broads Authority area (the Broads), a landscape of historical and cultural significance, which is located to the south of St Marys Road.

The nearest settlements to the Site include Burgh St Peter to the North and Aldeby to the north west, with a small number of scattered rural properties and farms within the vicinity of these villages and the Site. Existing settlements are situated within a low-lying landscape, where present woodland and hedgerows limit views.

The nearest properties consist of isolated houses and farms, including:

- College Cottages – 135 m to the southwest of the access track and 240m from the closest panels (privately owned dwellings);
- Collage Farm – approximately 260 m south of the Site (privately owned dwelling); and
- Oaklands Farmhouse – approximately 300 m north of the Site (privately owned dwelling).

A more detailed description of the Site and its surroundings is included in the Landscape and Visual Impact Assessment included as part of the Environmental Statement.

2.4 Planning History of the Site

According to available public records, previous planning applications of note which fell within the current redline boundary of the Site are summarised as follows:

Year	Reference number	Description	Outcome
1989	D/7/1987/3193	Development of a landfill site for the disposal of controlled waste.	Approved
1996	C/7/94/7029	Restoration of sandpit through infilling with controlled waste	Approved
2007	C/7/2007/7004	Variation of Condition 2 and 12 of planning permission C/7/94/7029 to alter permitted working of the site and to amend the final restoration scheme to allow an extension to the area of existing landfilling and restoration activities	Approved
2012	C/7/2012/7008	Variation of Condition 1 attached to planning permission C/7/2007/7004 to allow extension of time to complete landfilling and restoration obligations at the site until 8 July 2018	Approved
2014	C/7/2014/7020	Variation of Condition 1 of planning permission C/7/2012/7008	Approved
2020	C/7/2018/7007	Variation of condition 1 of permission reference C/7/2014/7020 to extend the life of the landfill for a further 3 years until 8 July 2021.	Approved

None of these previous applications would have any bearing on the determination of this application.

3 THE DEVELOPMENT

3.1 Overview

A planning application is made for the installation of a solar park comprising an array of ground mounted solar PV panels with associated infrastructure DNO switching station, client switching stations, battery containers, general spares container, access track, fencing, security cameras and cabling. The export capacity of the Development would be approximately 7 MW.

Access to the Development would utilise an existing landfill site access off Common Road to the west providing connectivity to Rectory Road and the A143 via Dun Cow Road. Land within the landfill site is included within the proposed red line boundary for provision of an access track between Common Road and the Site utilising existing landfill access roads. Access would be extended as needed to reach areas of panels further within the site. This would minimise the requirement for new tracks. Where new access tracks are required, they will be constructed approximately 3.5 m wide

The layout of the Development is shown on Planning Drawing 1.

The construction phase of the Development will have a duration of up to 12 months (including contractor appointment, discharge of conditions etc.) The construction period would be approximately 4 months and planning permission is sought for a temporary operational period of 35 years. The Site would be fully decommissioned and restored at the end of the time period for the temporary planning permission.

3.2 Development Infrastructure, Amount, Use, Appearance and Scale

3.2.1 Solar PV Array

The Development would consist of rows of solar panels known as strings, which are dark in hue and recessive in the landscape. The panels or modules are composed of photovoltaic cells and are designed to maximise the absorbency of the sun's rays and minimise solar glare. Each string of panels would be mounted on a rack comprising metal poles anchored to the ground via concrete footings of shallow piles. Panels are typically tilted 10 to 25 degrees from the horizontal to face south towards the sun. Moreover, there is usually a distance of 2-6 meters between strings of panels in order to avoid inter-panel shading but this distance is influenced by slope and aspect.

The panels would be mounted at approximately 0.8 m from the ground at the lowest point (the southern edge) rising to approximately 2.6 m at the highest point (the northern edge), although the anticipated maximum height could be up to 3 m to account for variations in slope and aspect at the Site.

Typical elevations of the solar panels are shown in Planning Drawing 3. Due to the rapid advancement of Solar PV technologies, it is possible that the design of the solar panels may differ slightly from those shown on the plan.

3.2.2 Associated Infrastructure

The scale of the associated infrastructure is as follows:

- Racking System (Solar PV Panelling) – up to 28.9 m length x 2.6 m height (panels tilted to 15 degrees angle) x 6.8 m width;
- 2 m high security fence (wooden post and galvanised wire);
- Gate height 2 m and width 3.1 m (galvanised steel and wire);
- CCTV cameras located on 3 m high poles;
- DNO switching station container (steel painted green) - up to 10 m length x 3.5 m height x 2.5 m width;

- Two client side switching stations (steel painted green) – up to 6.1 m length x 3 m height (this includes a plinth of 0.35 m above the ground level) x 2.5 m width;
- Battery storage container (steel painted green) – 12.2 m length x, 2.6 m height x 2.5 m width;
- One general storage container (steel painted green)– 12.2 m length x 2.6 m, height x 2.5 m width; and
- Access tracks – 3.5 m wide.

3.2.3 Landscaping

The landscape proposals for the Site have been designed to preserve and enhance the existing landscape features, to screen views of the solar panels from outside the Site and to enhance the biodiversity and habitat value of the Site.

The Development includes planting proposals and enhancements are detailed in the Landscape and Visual Impact Assessment in the ES and (Figure 4.9 of the ES).

The landscape scheme will include the following elements:

- Hedge planting (with a percentage of native evergreens such as native yew and holly) interplanted within existing vegetation to infill gaps and reinforce the existing boundary vegetation and soften and filter the limited views to Site. Planting will be concentrated along the access track in the south west near College Cottages and provide green linkages to the fenland landscape to the south.
- New hedge planting with standard trees randomly situated along the northern boundary of the solar array to further filter any potential glimpsed views from the limited number of residential properties located on Common Road, Taylors Road, and Mill Road to the north.
- Other measures incorporated with the Development to improve its biodiversity value include:
 - The retention of the existing grassland under the solar panels with a graded edge with scalloped bays to boundary hedgerows;
 - Logs and brushwood produced during woodland management operations may be used to provide biodiversity enhancements such as log piles and hibernacula.

These measures would also help to improve local biodiversity and landscape character.

3.3 Access

Access would be via the existing landfill site access point off Common Road to the west, providing connectivity to Rectory Road and the A143 via Dun Cow Road.

The existing access road within the site boundary has been utilised by HGVs throughout the operation of the landfill site and is therefore suitable for use by construction vehicles. This would minimise the requirement for new tracks. Where necessary, internal stone access tracks will be provided to enable construction and maintenance of the Development as shown in Planning Drawing 9.

Full details of the access arrangement are presented in the Transport Statement (Appendix 6.1 of the ES).

3.4 Design Considerations

This section outlines how the design of the Development evolved to reach the final layout which is the subject of this application. It includes the key decisions taken in the design

stage, including evaluation of constraints, to ensure that the design of the project has been undertaken in a rigorous and considered manner.

3.4.1 Design Rationale

The use of the former landfill site helps to ensure that the environmental impacts of the Development are minimal. The Development would not interfere with the landfill cap, remaining at surface level. There is therefore minimal potential for impacts on, or the disturbance or potential spread of, contaminated land and soils. Therefore, the Development makes use of an otherwise sterilised site and results in no loss of agricultural land etc. Given the former use as a landfill site and the current CLM electricity generating station, infrastructure for both access and grid connection are already in place ensuring less disruption in the construction of the Development (compared to a green field site). The Development is also fully reversible and the Site would be reinstated in accordance with the agreed landfill restoration plan following the temporary lifetime of the Development (35 years). Further details on the reinstatement of the restoration plan is at Section 1.7 of this Statement.

After an appraisal of the Site it has been found to be both technically and environmentally viable for solar development. The scheme has been designed to be as visually unobtrusive as possible and to avoid incursions into areas with environmental sensitivities.

The layout and design process of the Development was an iterative one informed by consideration of a variety of environmental and technical assessments, professional advice from consultants and the Pre-application and EIA Screening response received from the Council. Indicative layouts were developed on the basis of initial site visits, desk-based information and assumptions based on known constraining factors. More detailed site assessment and investigation was then undertaken by obtaining baseline information relating to environmental effects including landscape, ecology and flood risk amongst others.

Following the collation of this baseline information, key determining factors included ensuring that residential amenity and ecological assets would be protected through the minimisation of adverse impacts. The layout and location of the PV array and other infrastructure was chosen as it was felt that it would provide the most suitable design layout for the Site.

The final design of the Development is therefore a careful balance between addressing site constraints, minimising environmental impact and ensuring commercial viability. This approach to site design helps minimise unnecessary environmental impacts at an early stage. Where this is not feasible, such effects can be reduced through identification of mitigation measures that can be integrated early on in the development process.

The proposed tree planting and landscape improvements have been designed to provide visual screening and general landscape improvements using native species which will integrate the Development in the wider landscape and at the same time provide a biodiversity net gain.

3.5 Construction

3.5.1 Construction Activities

The construction and installation of the Development will take approximately 4months.

The construction process would consist of the following principal activities:

- Site mobilisation and provision of welfare/office facilities;
- Construct access track and site preparation;
- Delivery of materials;

- Construction of the solar PV array, underground cables, transformer and substation compound, security fencing and CCTV;
- Testing and commissioning; and
- Site restoration and landscaping.

Most of these operations would be carried out concurrently in order to minimise the overall length of the construction programme. Site restoration would be programmed and carried out to allow restoration of disturbed areas as early as possible.

3.5.2 Construction Control Mechanisms

3.5.2.1 Traffic Management

Appendix 6.1 of the ES details measures of traffic management which the Principal Contractor will implement during the construction phase which include ensuring construction vehicles follow approved routes and operating the entrance to the site under set protocol. Details of the traffic movements expected and staff numbers are given in the Transport Statement (Appendix 6.1 of the ES).

3.5.2.2 Working Hours

Standard daytime working hours are likely to be utilised, between 7:30am to 6pm Monday to Friday and 7:30am to 4pm on Saturdays.

Depending on the time of year, some work lighting may be required to facilitate construction during these hours.

3.5.2.3 Waste Management

Any non-hazardous waste produced is likely to be primarily packaging and cable off cuts. This waste will be stored in a covered skip and recycled or appropriately disposed of. Re-vegetation of working areas will occur as soon as naturally possible after construction.

3.6 Operational Phase Overview

The Development will have an operational period of 35 years during which time it will be unmanned and monitored remotely. Maintenance would be overseen by suitably qualified contractors who would visit the Site as required but typically less than twice per month. Activities would be restricted principally to vegetation management, equipment/infrastructure maintenance and servicing including replacement of any components that fail, and monitoring to ensure the continued effective operation of the Development.

3.7 Decommissioning Overview

When the operational phase ends, the Development will require decommissioning. The operational phase is limited to 35 years therefore decommissioning must be considered. All solar PV array infrastructure including modules, mounting structures, cabling, inverters and transformers would be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time.

Decommissioning would be expected to take between 3-4 months. The effects of decommissioning are similar to, or often of a lesser magnitude than construction effects and have been considered where possible in the relevant technical assessments. However, there can be a high degree of uncertainty regarding decommissioning as engineering approaches and technologies are likely to change over the operational life of the Development.

Notice will be given to the Council in advance of commencement of the decommissioning works, with all necessary licenses or permits being acquired. Decommissioning will be timed to minimise its environmental impact.

4 PLANNING POLICY CONTEXT

4.1 Introduction

This section of the Statement reviews the key national and local planning policies which relate specifically to the Development. The aim of this section is to establish the land use implications of the Development, consider its compliance with the Development Plan, and identify other material considerations to be taken into account during the determination process.

4.2 Legislative Background

The Town and Country Planning Act 1990 Section 70(2) states that:

"In dealing with such an application the authority shall have regard to the provisions of the Development Plan, so far as material to the application, and to any other material considerations."

The Planning and Compulsory Purchase Act 2004 forms an amendment to the Town and Country Planning Act 1990. Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that:

"If regard is to be had to the Development Plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise."

The process for determining a planning application can be defined as:

- Identification and consideration of the key provisions within the Development Plan;
- Clarification of whether the Development is in accordance with the Development Plan;
- Identification and consideration of relevant material considerations; and
- Conclusions on whether planning permission is justified.

4.3 National Planning Policy Framework (February 2019) (NPPF)

The NPPF was first published in March 2012 and has since been revised on two occasions, most recently February 2019. It sets out the UK government's planning policies for England and how these are to be applied. The NPPF reiterates that applications for planning permission must be determined in accordance with the Development Plan, unless material considerations indicate otherwise. The NPPF also identifies that national planning policy is a material consideration when making decisions on planning applications. The most relevant aspects of national planning policy contained within the NPPF are as follows:

Presumption in Favour of Sustainable Development

The NPPF sets out the economic, environmental and social planning policies for England. Central to these main themes is a presumption in favour of sustainable development, and that development should be planned positively. In achieving sustainable development, three overarching objectives are identified for the planning system; economic, social and environmental. The environmental objective includes *"mitigating and adapting to climate change including moving to a low carbon economy"*.

Renewable Energy

The NPPF is clear that planning has a key role in supporting renewable energy and associated infrastructure. Whilst there is no specific policy for solar energy development contained in the NPPF, Paragraph 148 proposes that the planning system should support the transition to a low carbon future in a changing climate.

"The planning system should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings, and support renewable and low carbon energy and associated infrastructure"

In order to increase the supply of renewable and low carbon energy, Paragraph 151 states that plans should provide a positive strategy for renewable energy development and consider identifying suitable areas for renewable and low carbon energy.

The NPPF is also clear that LPAs should not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions (Paragraph 154). Applications for renewable and low carbon development should be approved if the impacts are (or can be made) acceptable.

Guidance on Environmental Issues

The NPPF contains policies on a number of environmental issues in achieving sustainable development.

The approach to encouraging sustainable transport and managing impacts on transport networks is set out in Paragraphs 102 to 111. Paragraphs 170 to 202 emphasise the importance of preservation and enhancement of the built and natural environment. They set out detailed requirements for the assessment of the impact on the landscape value, biodiversity and habitats, and the historic environment. These requirements have been considered throughout the relevant assessments accompanying the Application and have been addressed, to demonstrate compliance of the Development in Section 5 Assessment of the Development.

4.4 Local Development Plan

Due to the landfill properties of the Site the Development will be determined by the Minerals and Waste Authority - NCC and therefore the most relevant Development Plan for the Site consists of Core Strategy and Minerals and Waste Development Management Policies Development Plan Document ('CSMWDMPDP'), adopted in September 2011.

At a local level, the Site falls within the jurisdiction of South Norfolk Council. Therefore, although less relevant than the NCC Development Plan, the development plans for the local council will also be briefly considered.

4.4.1 Norfolk County Council – Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2010-2026

The Core Strategy and Minerals and Waste Development Management Policies Development Plan Document (CSMWDMPDP) was adopted by NCC in September 2011. The Minerals Safeguarding Areas policy map identify the Site as being in a Sand and Gravel Safeguarded Mineral Resource. The relevant policies from within the CSMWDMPDP are listed below:

- CS13 – Climate change and renewable energy generation
- CS16 – Safeguarding mineral and waste sites and mineral resources
- DM1 – Nature Conservation
- DM8 – Design, local landscape and townscape character

4.4.2 South Norfolk Council

The South Norfolk Local Plan is made up of various documents. The Development Management Policies Document was adopted in October 2015. The Site is not subject to any allocations within the Policies Map. The core policies from the Local Plan relevant to the Development are outlined below.

Development Management Policies Document (2015)

- DM 1.1 – Ensuring development management contributes to achieving sustainable development in South Norfolk
- DM 1.3 – The sustainable location of new development
- DM 1.4 – Environmental quality and local distinctiveness
- DM 3.8 – Design Principles applying to all development
- DM 3.13 – Amenity, noise and quality of life
- DM 4.1 – Renewable Energy
- DM 4.2 – Sustainable drainage and water management
- DM 4.5 – Landscape Character and River Valleys
- DM 4.8 – Protection of Trees and Hedgerows
- DM 4.9 – Incorporating landscape into design
- DM 4.10 – Heritage Assets

The Joint Core Strategy for Broadland, Norwich and South Norfolk was adopted in March 2011 and also forms part of the South Norfolk Local Plan, and is likely to be relevant to the determination of the full application. The Core policies from the Local Plan relevant to the Development are outlined below.

Joint Core Strategy for Broadland, Norwich and South Norfolk (2011)

- Policy 1 – Addressing climate change and protecting environmental assets
- Policy 2 – Promoting good design
- Policy 3 – Energy and water
- Policy 18 – The Broads

5 ASSESSMENT OF THE DEVELOPMENT

5.1 The Principle of the Development

This section addresses the requirements of NPPF Paragraph 11; NCC Policies 2 and 11; as well as the general development policy criteria set out in SNC's DM 1.1 and DM 1.3 as set out in Section 4 of this Statement.

The Development is located on a closed landfill site which, following extensive environmental assessment, has been found to have capacity for a solar park with a generating capacity of approximately 7 MW. The Site is currently in use for the generation of energy from landfill gas, which is to continue for the lifetime of the solar park. The Development therefore comprises the efficient use of land which otherwise would have limited alternative uses. The Broads is located on the south side of St Mary's Road, to the south of the Site. Further discussion of impact on this designation can be found within the Landscape and Visual Impact Assessment in the ES.

Once constructed, the Development will not generate a significant amount of additional traffic as operational traffic will be limited to maintenance site visits. Therefore, any impacts on traffic volumes will be short lived during the construction period and unlikely to increase traffic flow during this time to the previous landfill traffic volumes. The traffic and transport implications are discussed further in Chapter 6 of the ES and Technical Appendix 6.1.

The effects of the Development on the character, appearance or general amenity of the area have been assessed throughout the ES' various environmental and technical assessments which accompany this planning application. The assessments undertaken have not identified any potential significant adverse effects as a result of the Development with effects on landscape being the only effects considered to be significant, however overall, the predicted landscape and visual effects arising from the Development are regarded as acceptable. The accompanying landscaping plan (Figure 4.9 of the ES) sets

out the proposed mitigation planting scheme providing landscape benefits as well as net biodiversity gain as set out in Ecological Impact Assessment (Chapter 5 of the ES).

The Development is reversible and the resumption of the remediation of the landfill site will be possible upon decommissioning. As a renewable energy scheme providing low carbon, clean energy, the Development will help the Council make a valuable contribution towards the reduction of carbon emissions and increase renewable energy capacity. NCC (Policy CS13) as well as SNC (Policy DM 4.1) recognises the importance of renewable energy for sensitively located renewable and low carbon energy generation.

In summary, the Development is considered to comply with the requirements of NPPF Paragraph 11; NCC Policy CS13; as well as the general development policy criteria set out in SNC's Policy DM 3.8 and DM 4.1 and JCS' Policy 1 and Policy 2.

5.2 Ground Conditions

Solar development is fully reversible with no long-term effects on the land. In this case, permission is only sought for a temporary period of 35 years, after which the infrastructure will be fully removed so that the restoration plan can be reinstated (for more information on this process see Section 1.7 of this Statement).

Due to its previous use, the land has potential for contamination. However, the Development on-site would not impact on the landfill cap, remaining at surface level (any mounting frame footings would either be concrete pads or shallow piles that would be in the top soil above the cap). There is therefore minimal potential for impacts on, or the disturbance or potential spread of, contaminated land and soils.

More generally, the Development would not affect the structure and/or quality of the soils. Furthermore, the temporary nature of the Development means that it would not lead to an irreversible loss of the land, and that land would be reinstated after the Development is decommissioned.

The Development is therefore in accordance with **NPPF Paragraph 170** and NCC Policy CS13, CS16 and SNC policy DM 1.4 and policy DM 3.8 and JCS' Policy 1 and Policy 2.

5.3 Landscape

This section assesses the Development in relation to NPPF Paragraph 127, JCS Policy 3 and NDP Policies B6 and B8, as set out in Section 4 of this Statement.

A Landscape and Visual Impact Assessment (LVIA) (Chapter 4 of the ES and Technical Appendix 4.1) has been carried out in order to identify the baseline conditions of the Site and the surrounding area within 2 km of the Site boundaries (Study Area), to assess the likely significant effects that the Development may have on identified landscape and visual receptors, and to recommend mitigation measures to offset or reduce any adverse effects.

The Broads is located on the south side of St Mary's Road, to the south of the Site. The Broads are unique in that they share the primary functions of the other fourteen National Parks which are conservation and the promotion of the understanding and enjoyment (which includes recreation) of the special qualities of the designated area alongside a third function which is the management and protection of the waterways and the interests of navigation.

The Site falls within the National Character Area (NCA) 80 The Broads, as defined by Natural England. This NCA follows the route of three tidal rivers and their tributaries and accompanying low-lying floodplains to the coast. It covers the entirety of the Norfolk Broads and its immediate setting. The Site is located just within a southern extension or finger of the NCA that follows the route of the River Waveney from Ditchingham in the west to the outskirts of Lowestoft in the east. The characteristics of the NCA are likely to

be represented over a wide area. As such, any changes at the Site level relative to the NCA would be extremely small in scale and are unlikely to impact upon those key landscape characteristics identified for the NCA.

At a regional/ local level, the main source of reference is the South Norfolk Landscape Character Assessment (2001) and updated and reviewed by Chris Blandford Associates (in 2012) to support the emerging Local Plan.

This district wide assessment divides South Norfolk into seven different landscape typologies. These areas were then sub-divided further to establish 20 discrete Local Landscape Character Areas (LLCAs). The Site is shown to be within C2: Thurlton Tributary Farmland with Parkland area.

The LVIA indicates that the Zone of Theoretical Visibility (ZTV) shows theoretical visibility of the Development limited to the Site and its immediate setting, with some intermittent visibility extending to the south up to approximately 2 km. The limited extent of theoretical visibility reflects the enclosed nature of the Site itself by established vegetation to its boundaries. Some views are obtained from an isolated property and a short section of Eastend Road and potential glimpsed views through gaps in vegetation.

Residual effects are those that are predicted to remain after implementation of the secondary mitigation measures described above. Landscape proposals are suggested which in combination with the existing approved embedded landscape restoration proposal may mitigate these impacts. The previous use of the Site combined with the limited height of the Development and the very high degree of containment afforded by boundary vegetation ensure that effects are small in magnitude and restricted to the Site and its immediate setting.

The Development would introduce a new element into the landscape but is not inappropriate in terms of scale or massing for this location. The Site would be viewed in the context of its previous industrial use as a landfill site following quarrying activity. The Development would form an incidental component of glimpsed and filtered views from minor lanes and a few isolated properties. There would be a change in view, but this change, with mitigation, would not be harmful in this analysis.

A mitigation strategy is set out within the LVIA and Figure 9. This aims to provide an enhanced interim restoration to the existing approved landfill restoration scheme. This will visually integrate the Development into the wider landscape and provide a landscape buffer to the limited views from the south.

The Site is within the setting of the Broads Authority area. The LVIA finds that the Development would not detract from the overall existing landscape quality, features and characteristics of the Broads given the extensive tree and vegetation cover surrounding the site and within the immediate landscape context.

There would be a small-scale alteration of the aesthetic and perceptual aspects of the landscape, such as glimpsed views of the solar panels on the restored landfill landform from minor lanes and a few isolated properties. These views will be glimpsed through gaps in boundary vegetation. The existing Site boundary vegetation will be enhanced with additional hedgerow planting inter-planted to infill gaps and provide a thicker screen with a graded edge of ruderal and longer grasses for biodiversity and to provide a softened edge. The landscape effects would be negligible, adverse but reversible, and there would be no discernible improvement or deterioration to the existing landscape character of The Broads. The Development would not harm or make the existing situation worse and with mitigation may alleviate and improve the current landscape condition.

Overall, the LVIA concludes that whilst the Development would give rise to minor to negligible adverse landscape and visual effects, effects predicted to arise during the operational phase would be largely limited to the Site and a very limited number of

receptors. The Development would not detract from the existing high value landscape quality, features and characteristics of the Broads and there is little impact on the setting. The comprehensive assessment of both landscape and visual analysis suggests that the impacts will be acceptable in all cases. Landscape proposals are suggested which may mitigate any minor impacts. The previous use of the Site combined with the limited height of the Development and the very high degree of containment afforded by boundary vegetation ensure that effects are small in magnitude and restricted to the Site and its immediate setting. Overall, the predicted landscape and visual effects arising from the Development are regarded as acceptable and therefore, the Development meets the requirements of NPPF Paragraph 127, NCC Policy CS13, DM1, DM8 and SNC policy DM 1.4, policy DM 3.8, DM 3.13, DM 4.5, DM 4.8 and DM 4.9 and JCS' Policy 1, Policy 2 and Policy 18.

5.4 Glint and Glare

'Glint' is defined as a momentary flash of bright light, while 'Glare' is defined as a continuous source of bright light.

Previous studies have measured the intensity of reflections from solar panels with respect to other naturally occurring and manmade surfaces. The results show that the reflections produced are of intensity similar to or less than those produced from still water and significantly less than reflections from glass and steel.

Glint and glare effects can only occur when the weather is clear and sunny. When a solar reflection towards a road user or resident is possible, the individual will also be looking in the direction of the Sun. This means the Sun and solar reflection will be visible simultaneously. The Sun is a significantly brighter source of light than a reflection from a solar panel. Furthermore, at any one location, only a particular area of solar panels will produce a solar reflection towards it. In all cases, a clear view of the reflecting solar panels at the particular time of day when a solar reflection was geometrically possible would be required.

A separate Glint and Glare Assessment (Annex 1 1) has been undertaken and concludes that with the exception of one case of moderate impact to one of the ground-based assessed receptors, no significant impacts towards surrounding road users and surrounding dwellings have been identified which require appropriate mitigation. The property predicted to have a moderate impact is located west of the Development, in close proximity. Mitigation measures have been specifically included in the Landscape Planting Plan, provided in the LVIA, which provided sufficient mitigation to ameliorate the identified moderate impact to the sole dwelling once it had reached a height of 4 m. The Development is therefore able to sufficiently demonstrate compliance with the relevant provisions of NCC Policy DM8 and SNC policy DM 3.8 and DM 3.13 in relation to maintaining amenity in respect of glint and glare effects and JCS' Policy 1 and Policy 2.

5.5 Ecology and Ornithology

An Ecological Impact Assessment (EcIA) (Chapter 5 of the ES) has been carried out to identify and appraise the likely significant effects that the Development may have on ecological resources at the Site, and to recommend appropriate mitigation measures.

The Site was considered to have extremely limited potential for protected species and no further ecology surveys were recommended. The Site was assessed to be of negligible suitability for bats and a habitat suitability index assessment of the waterbody on site was below average, for potential for great crested newts.

The EcIA finds that several protected species have the potential to be negatively impacted by the Development in the absence of precautionary mitigation including bats, birds, amphibians, reptiles, and badger. A range of mitigation measures (detailed within

Chapter 5 of the ES) have therefore been recommended to safeguard these species during construction. Overall, Chapter 5 of the ES finds no predicted significant adverse effects.

Given the current low biodiversity value of the Site, adverse impacts caused by the operational phase of the Development are expected to be negligible. In order to increase the Site's long-term biodiversity value, enhancement measures will be implemented, primarily meadow grassland planting.

Habitats and protected species have the potential to be positively impacted by transforming an inactive landfill site into diverse meadow grassland underneath solar panels which will support a greater diversity of plants as well as providing greatly improved resources for reptiles, mammals, ground nesting birds and invertebrates.

The ES finds that the Development is acceptable in terms of impacts on ecology and complies with NPPF Paragraph 170, NCC Policy CS13 and DM1 and SNC policy DM 1.4, policy DM 3.8, DM 4.8 and DM 4.9 and JCS' Policy 1 and Policy 2.

5.6 Historic Environment

Given the historic use of the Site as a landfill there is no potential for undiscovered archaeological remains to be impacted and as such there would be no direct archaeological effects associated with the Development.

There are no Conservation Areas, World Heritage Sites, Registered Battlefields, or Registered Parks and Gardens within the immediate locality. The nearest Scheduled Monument to the Site is located within Chipping Aldeby. The Scheduled Monument is split across two sites though listed under the same reference (ref. 1002189) and relates to Aldeby Castle. Aldeby Castle is located approximately 1 km northwest of the Site at its closest. There are two Grade I Listed Buildings within the vicinity of the Site: Church of St Peter and St Paul (approximately 760 m southeast of the Site); and Church of St Martin located (approx. 1.1 km to the northwest of the Site). The closest Grade II listed building is the Old Cottage, located 330 m to the northwest of the Site.

Existing landform, topography, vegetation (woodland, tree lines, hedgerows) and buildings would obstruct views between the Development and any of the Listed Buildings or scheduled monuments. As a result, no heritage features are considered sensitive to the Development.

Chapter 4 of the ES and Technical Appendix 4.1 includes assessment of landscape and visual effects on heritage assets and overall, the predicted landscape and visual effects arising from the Development are regarded as acceptable.

Therefore, the Development complies with the NPPF and the policies in the local plan. The proposed Development is therefore in accordance with NPPF Paragraphs 189-202, NCC Policy CS13 and DM8 and SNC policy DM 1.4, policy DM 3.8, and DM 4.10 and JCS' Policy 1 and Policy 2.

5.7 Hydrology and Flood Risk

Chapter 7: Hydrology and Hydrogeology of the ES assesses potential effects of the Development on the hydrological and hydrogeological environment and is based on the findings of the Flood Risk Assessment (Technical Appendix 7.1) and Groundwater Risk Assessment (Technical Appendix 7.2) undertaken which have been prepared in accordance with the requirements of the Environment Agency ('EA'), the NPPF and all other relevant legislation, guidance and information.

The whole Site is located in Flood Risk Zone 1¹². These definitions are provided in the National Planning Policy Framework (NPPF) where Flood Risk Zone 1 is categorised as having a less than 1 in 1,000 (0.1%) annual probability of flooding, the lowest risk of flooding potential.

Further to this, the land take of the Development is minimal, as the solar panels themselves are anchored at surface level, or on short piles, avoiding the need for excavated foundations. However, as the area of the Development would exceed 1 hectare the FRA has been prepared to ensure that both flood risk potential offsite and surface water run-off are considered.

The residual flood risk is assessed as being negligible for fluvial (river), groundwater, sewer/ surface water drains, reservoirs and tidal, and low for pluvial (surface water).

The Groundwater Risk Assessment outlines two design options for the panel foundations (short piled anchor system or ballasted system). The short piled anchor system design option will only be selected where there is sufficient capping depth to ensure that the capping is not penetrated. This consideration will ensure the integrity of the existing landfill cap will not be compromised and no pollutant pathways are created through the proposed infrastructure.

Chapter 7 of the ES finds no likely significant adverse effects following the implementation of the embedded mitigation.

The local hydrological environment, following mitigation, is therefore considered to be not sensitive to the type of development proposed. The FRA finds that overall, the Development will be safe for its lifetime and will not increase flood risk elsewhere and the Groundwater Risk assessment finds that Subject to the mitigation measures proposed, the Development poses a low risk with respect to contamination to either the Site itself, site users or sensitive receptors in the vicinity. The proposal is therefore in accordance with NPPF Paragraphs 158-161 and NCC Policy CS13 and SNC policy DM 1.4, policy DM 3.8, and DM 4.2 in terms of Flood Risk and JCS' Policy 1, Policy 2 and Policy 3.

5.8 Access, Transport and Traffic

Chapter 6 of ES and the Transport Statement (Technical Appendix 6.1) has been produced to examine any potential traffic impacts of the Development. The ES assesses the existing conditions of the highways network and the potential impact of the Development and proposes traffic management measures to be followed during the construction and operation of the Development.

The Development will generate traffic during construction which will be minor in comparison to previous site operations, with a likely similar or even lesser amount of traffic during decommissioning, and minimal traffic during operation. Construction traffic will consist of HGVs, light good vehicles and cars and no abnormal loads movements will be required. During the operational phase of the Development, additional traffic would be restricted to maintenance vehicles and would be minimal.

Access would be via the existing landfill site access point off Common Road to the west, providing connectivity to Rectory Road and the A143 via Dun Cow Road.

From preliminary studies undertaken at the Site both Dun Cow Road and Common Road are not wide enough for two HGVs to pass each other, or for a car to pass an HGV. Therefore, a significant effect was identified within Chapter 6 of the ES relating to driver delay, that Dun Cow Road and Common Road are single track roads with no passing places. In order to prevent the risk of road blockage through opposing vehicles meeting

¹²Gov.uk (2018). Flood map for planning. Available at: <https://flood-map-for-planning.service.gov.uk/summary/507400/342210> [Accessed 13 Feb. 2018].

on these routes, the Development would need to implement traffic management procedures for the duration of the construction period. The following scheme is proposed which would not require road closure, but would apply temporarily during construction:

- Common Road to become one-way (southbound) between Beccles Road and Dun Cow Road;
- Dun Cow Road to become one-way (northbound) between Common Road and Beccles Road;
- A temporary traffic signal contraflow system could be implemented at the Dun Cow Road/Common Road junction in order to control access to the southern part of Common Road.

Swept Path Analysis has been undertaken of the Dun Cow Road/ Common Road junction and confirms that HGVs can negotiate the bend.

Traffic volumes generated by the Development are not likely to be sufficient to lead to any delay or other traffic-related effects. Overall, the residual effects following implementation of the mitigation measures as described above are predicted to be minor and thus not significant in terms of the EIA Regulations.

Chapter 6 of the ES and the accompanying Transport Statement finds that given the small impact of the Development on the highways network and the traffic management measures to be implemented, the Development complies with NPPF Paragraphs 102 and NCC Policy CS13, Policy DM8 and SNC policy DM 1.4, policy DM 3.8 and JCS' Policy 1 and Policy 2.

5.9 Noise and Vibration

The nearest receptors of potential noise effects are College Cottages located 135 m to the southwest of the access track and 240 m from the closest panels (privately owned dwellings). Collage Farm is approximately 260 m south of the Site (privately owned dwelling); and Oaklands Farmhouse – approximately 300 m north of the Site (privately owned dwelling).

Construction of the Development will involve negligible noise and vibration, as the excavation requirements would be minimal, and no large machinery is needed for excavation or piling.

During the operational phase of the Development, the only noise generated would be by the inverters (with noise reduced by housing around them), switching stations and battery storage containers (air conditioning units) (located in the southwest of the Site), but this is very low-level noise. With the existing noise from roads (which pass along all four boundaries of the landfill site) and the CLM generators already located on the landfill site, noise from the Development will not be discernible to nearby receptors over that which is already part of the noise baseline. Additionally, solar panels only operate during daylight hours, and therefore there is no noise generated in the evening, night and early morning, when ambient noise levels are typically at their lowest.

Construction-related noise will be addressed through a Construction Management Plan to be prepared after the application is determined.

The Development is therefore in accordance with NPPF Paragraph 180 and NCC Policy CS13, Policy DM8 and SNC policy DM 1.4, policy DM 3.8, policy DM3.13 and JCS' Policy 1 and Policy 2 with regard to noise.

5.10 Tree Protection

A Tree Protection Plan has been prepared and accompanies this application at Annex B. The Development has been designed so that there would be no disturbance to the existing hedgerows and trees within and adjacent to the Site. As part of the design for

the Development there are areas of new infill planting and new tree and hedgerow planting that are proposed, primarily to the southeast, southwest and north of the Solar Park. There is an existing access road off Common Road to the west, which currently serves the landfill site and would be used for the construction and operation of the Development. There are no works required to this access road and so the Tree Protection Plan focuses on the area around the Solar Park only. The Tree Protection Plan sets out protection measures which would be put in place to ensure that there would be no risk of impact on existing trees, associated with the Development.

The Development is therefore in accordance with NPPF Paragraph 180 and NCC Policy DM1 and SNC policy DM 4.8, policy DM3.13 and JCS' Policy 1 with regard to tree protection.

6 OTHER RELEVANT MATERIAL CONSIDERATIONS

6.1 Planning Practice Guidance (PPG) (first published March 2014)

The Government's Planning Practice Guidance ('PPG') provides advice across a variety of planning matters which is continuously updated. The web-based guidance should be read alongside the NPPF and is a material consideration in the determination of planning applications.

The Renewable and Low Carbon Energy PPG¹³ was most recently updated in June 2015 and incorporates the approach set out in the speech by the former Minister for Energy and Climate Change, The Rt Hon Gregory Barker MP, to the solar PV industry in 2013¹⁴ and the Written Ministerial on Solar Energy: Protecting the Local and Global Environment (2015)¹⁵. The Guidance states that large scale ground-mounted solar PV development should be focussed on previously developed and non-agricultural land, unless the proposed use of agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land. In these cases, the development must encourage biodiversity improvements around arrays.

Further considerations for large-scale solar highlighted in the PPG include:

- The use of planning conditions to ensure that installations are removed when no longer in use and land is restored to its previous use;
- Visual impact and glint and glare;
- Security measures such as lights and fencing;
- Conservation of heritage assets;
- Mitigation of landscape and visual impacts; and
- Energy generating potential.

6.2 UK Renewable Energy Roadmap

The UK Renewable Energy Roadmap (2011)¹⁶ ('the Roadmap') sets out the UK Government's commitment to increasing the use of renewable energy. The Roadmap outlines that the UK has the potential to meet its 2020 target of 15% of UK energy consumption from renewable resources, and deliver an operational capacity of 29 gigawatts ('GW') of renewable energy by that same year.

The Roadmap identifies the National Policy Statements (NPSs) as a potential means of improving the delivery of renewable energy development through their advice on need, mitigation and delivery in a sustainable manner.

The UK Renewable Energy Roadmap Update (2013)¹⁷ ('the Roadmap Update') reports on the progress that has been made in the renewable energy sector since the publication of

¹³ Ministry of Housing, Communities & Local Government (2015) *Planning Practice Guidance: Renewable and Low Carbon Energy* [Online] Available from: <https://www.gov.uk/guidance/renewable-and-low-carbon-energy> (Accessed 12/11/2020)

¹⁴ Department of Energy & Climate Change and The Rt Hon Gregory Barker (2013) *Gregory Barker Speech to the Large Scale Solar Conference* [Online] Available from: <https://www.gov.uk/government/speeches/gregory-barker-speech-to-the-large-scale-solar-conference> (Accessed 12/11/2020)

¹⁵ Ministry of Housing, Communities and Local Government and Mr Eric Pickles (2015) *Written Ministerial Statement: Planning Update* [Online] Available from: <https://questions-statements.parliament.uk/written-statements/detail/2015-03-25/HCWS488> (Accessed 12/11/2020)

¹⁶ Department of Energy and Climate Change (2011) *The UK Renewable Energy Roadmap* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48128/2167-uk-renewable-energy-roadmap.pdf (Accessed 14/05/2019)

¹⁷ Department for Energy and Climate Change (2013) *UK Renewable Energy Roadmap Update 2013* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATION_.pdf (Accessed 14/05/2019)

the Roadmap. The Roadmap Update re-iterates Central Government's commitment to renewable energy (paragraph 1):

"The Government strongly supports renewable energy as part of a diverse, low carbon and secure energy mix. Alongside gas, low-carbon transport fuels, nuclear power and carbon capture and storage, renewable energy offers the UK a wide range of benefits from economic growth, energy security and climate change perspective"

The Roadmap Update also recognises that a number of barriers continue to present challenges, including pre-consent delays.

The Roadmap Update also identifies that solar PV has the potential to form a significant part of the renewable energy generation mix and that solar received the highest public approval rating of all renewable energy technologies, at 82% in 2012 and 85% in 2013.

6.3 UK Solar PV Strategy

6.3.1 UK Solar PV Strategy Part 1: Road Map to a Brighter Future

Part 1 of the UK Solar PV Strategy was published in October 2013¹⁸ and sets out four guiding principles which form the basis of the Government's strategy for solar PV. These principles are:

- Support for solar PV should allow cost-effective projects to process and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals;
- Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15% renewable energy from final consumption by 2020;
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them; and
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives.

Part 1 establishes the principles for solar PV deployment in the UK and states that solar PV can be deployed in a variety of locations, including on the ground on greenfield sites.

6.3.2 UK Solar PV Strategy Part 2: Delivering a Brighter Future (2014)

Part 2 of the UK Solar PV Strategy was published in April 2014¹⁹ and focuses on the Government's ambition for the key market segments, how they will be realised through innovation and partnership and the benefits that this will bring for jobs and investment in the UK, in addition to vitally important emissions reduction.

Part 2 of the Strategy recognises, in respect of ground mounted solar PV installations, the opportunities for greater clean energy generation and how solar farms can be beneficial for wildlife. Part 2 of the UK Solar PV Strategy also recognises there is a need for ground mounted solar schemes to be well planned and screened and to avoid harm to biodiversity. It emphasises that innovation and clean energy are at the centre of the Government's economic plan. One of the key topics is the delivery of commercial and

¹⁸ UK Government (2013) *UK Solar PV Strategy Part 1: Roadmap to a Brighter Future* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/249277/UK_Solar_PV_Strategy_Part_1_Roadmap_to_a_Brighter_Future_08.10.pdf (Accessed 14/05/2019)

¹⁹ UK Government (2014) *UK Solar PV Strategy Part 2: Delivering a Brighter Future* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/302049/uk_solar_pv_strategy_part_2.pdf (Accessed 14/05/2019)

industrial onsite generation. With the falling costs due to technology innovation, there is an ambition for continuous growth in the solar PV capacity in line with the 2020 target for renewables.

6.4 UK Clean Growth Strategy: Leading the Way to a Low Carbon Future

The UK Clean Growth Strategy (2017)²⁰ conveys the Government's objective of achieving clean growth, whilst ensuring an affordable energy supply for businesses and consumers. The strategy is in-line with the 2015 Paris Agreement where 195 countries agreed to stretch national targets to keep the global temperature rise below 2C degrees. Therefore, further actions and investment will be needed to ensure the shift to clean growth in the coming years, where the clean growth plays a central role in the UK's Industrial Strategy.

To meet the fourth and fifth carbon budgets (2023-2027, and 2028-2032), there will be a need for a significant acceleration in the pace of decarbonisation, while ensuring a secure energy supply at minimum cost to both industry and domestic consumers.

6.5 Net Zero – The UK's Contribution to Stopping Global Warming

In May 2019 the Committee on Climate Change ('the CCC') published Net Zero – The UK's Contribution to Stopping Global Warming. This report responds to a request from the Governments of the UK, Wales and Scotland, asking the Committee to reassess the UK's long-term emissions targets. The report recommends a new target for the UK of net zero emissions by 2050. The Report highlights the falling cost of key renewable technologies including solar PV, which is now generally comparable or low cost than power from fossil fuels, while bringing significant co-benefits such as reduced air pollution.

On 27 June 2019, the Climate Change Act 2008 was amended to introduce a target for at least a 100% reduction in greenhouse gas emissions (compared to 1990 levels) in the UK²¹ by 2050. This 'net zero' target is likely to affect and increase future Government renewable and low carbon energy targets and create a more positive policy environment for solar energy.

6.6 Reducing UK Emissions – 2020 Committee on Climate Change Progress Report to Parliament

The 2020 Committee on Climate Change Progress Report to Parliament²² was published in June 2019 and provides a review of Government efforts over the previous 12 months with regards to Climate Change. This Report highlights that the UK has not made sufficient progress towards meeting the 2050 Net Zero commitment over the past year. The power sector accounted for 12% of UK carbon emissions in 2019 and as such, the CCC recommends the decarbonisation of the power system, including the increased use of large-scale solar farms. In 2019, solar power made up only 3% of the UK energy supply. However, the cost of solar PV panels has decreased by 82% since 2010 and the proportion of energy derived from solar sources is expected to rise significantly as a result.

²⁰ UK Government (2017) *Government reaffirms commitment to lead the world in cost-effective clean growth* [Online] Available at: <https://www.gov.uk/government/news/government-reaffirms-commitment-to-lead-the-world-in-cost-effective-clean-growth> (Accessed 14/05/2019)

²¹ UK Government (2019) *The Climate Change Act 2008 (2050 Target Amendment) Order 2019* (2019 No. 1056) [Online] Available at: <http://www.legislation.gov.uk/ukxi/2019/1056/made> (Accessed 19/08/2019)

²² Committee on Climate Change (2020) *Reducing UK Emissions – 2020 Progress Report to Parliament* [Online] Available at: <https://www.thNCCc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/> (Accessed 26/06/2020)

6.7 Government Response to Committee on Climate Change 2020 Progress Report to Parliament: Reducing UK Emissions

In October 2020, the Government issued a response to the CCC 2020 Progress Report. The response²³ summarises progress to date, sets out plans for further policy action to meet the commitments in the Clean Growth Strategy and responds to the CCC's recommendations. In its response, the Government reaffirms its support for decarbonisation across the power sector and to phase out coal power by 2024. To this end, the Government aims to increase the proportion of energy supplied by renewable sources and to accelerate the deployment of onshore wind and solar, which are acknowledged to be key to delivering net zero greenhouse gas emissions by 2050.

6.8 The UK's Draft Integrated National Energy and Climate Plan

The UK draft National Energy and Climate Plan ('NECP')²⁴ was produced in January 2019 and sets out the UK Government's climate and energy objectives, targets, policies and measures covering the five dimensions of the Energy Union. The NECP highlights the role of advanced solar PV technologies in the delivery of cost efficient, clean and secure supplies of electricity.

6.9 Renewables, Recovery, and Reaching Net Zero

The National Infrastructure Commission ('the NIC'), whose remit is to advise the Government on major long-term infrastructure challenges, published Renewables, Recovery and Reaching Net Zero in August 2020. The report states that delivering a 'highly renewable electrical system is the best way to deliver low cost, low carbon electricity' and predicts that the demand for electricity in the UK will increase in the coming years. The NIC advises that in order to tackle the climate crisis and provide low cost electricity for consumers, 65% of Britain's electricity should be provided by renewable sources by 2030. The report emphasizes the importance of ensuring that there is an energy generation mix of both wind and solar to effectively balance supply and demand throughout the day and across the year.

6.10 Assessment of Relevant Material Considerations

With reference to the PPG on Renewable and Low Carbon Energy, the Development is located on non-agricultural land and has been designed to minimise visual impact, glint and glare impacts and impacts on the setting of heritage assets as set out in Section 5 above. Security measures such as fencing and CCTV cameras have been incorporated into the design. At the end of the operational lifespan of the solar development, the solar PV arrays and associated infrastructure will be removed and the restoration of the Site will be completed. The Development will make use of the significant energy generating potential of the Site to export approximately 7 MW of low carbon energy per year.

The Development will make a substantial contribution to the overall supply of affordable low-carbon renewable energy, making a contribution to the aims of the Paris Agreement, the UK Renewable Energy Roadmap, UK Solar PV Strategy, UK Clean Growth Strategy, Draft Integrated National Energy and Climate Plan and the legally binding Net Zero 2050 emissions target.

²³ HM Government (2020) *The Government Response to the Committee on Climate Change's 2020 Progress Report to Parliament: Reducing UK Emissions* [Online] Available at: <https://www.gov.uk/government/publications/committee-on-climate-changes-2020-progress-report-government-response> (Accessed 12/11/2020)

²⁴ Department for Business, Energy and Industrial Strategy (2019) *The UK's Draft Integrated National Energy and Climate Plan* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774235/national_energy_and_climate_plan.pdf (Accessed 14/05/2019)

As acknowledged in the 2020 Committee on Climate Change Progress Report to Parliament, solar parks such as this Development will play an essential role in decarbonising the UK's energy supply.

7 CONCLUSION

The Development is an opportunity to provide a significant amount of low carbon renewable energy in an appropriate location. Considerable care has been taken in the design of the Development to avoid unacceptable environmental and amenity effects, whilst ensuring that the Development can make a contribution to the UK's requirement for renewable energy generation.

The Site comprises previously disturbed land which is currently in use for energy generation in the form of CLM extraction, which is to continue for the lifetime of the Development. The Development would therefore complement the existing use of the Site and would maximise the benefits of energy generation at the Site.

The Development is considered acceptable with regards to landscape and visual; ecology; the historic environment; hydrology and hydrogeology; glint and glare; noise; access, transport and traffic; and public rights of way. The Development is considered to accord with Development Plan policies which concern these environmental and amenity matters.

The landscape, visual and ecological aspects have formed a key consideration for the design and layout of the Development. The Development has sought to avoid important features in the local landscape and proposed mitigation and enhancement measures including additional planting to minimise views of the Development and to provide biodiversity benefits.

The Site and wider study area is within the setting of the Broads. The LVIA finds that there would be no direct landscape effect on the Broads Landscape. The LVIA finds that the Development would not detract from the overall existing landscape quality, features and characteristics of the Broads given the extensive tree and vegetation cover surrounding the site and within the immediate landscape context. The Development would not harm or make the existing situation worse and with mitigation may alleviate and improve the current landscape condition.

There are no significant hydrological, hydrogeological or ecological effects on The Broads and with appropriate traffic management measures in place as proposed in the Transport Statement there would be no significant traffic and transport effects associated with the Development.

The location of the Development on a closed landfill site has been selected to minimise the loss of high-quality open space or agricultural land and to avoid disturbance to residential properties.

It is integral to planning decision-making that a balancing exercise has to occur in respect of considering the benefits of development against the impacts. In this case, there are clear benefits which arise from the renewable energy credentials of the Development which clearly outweigh the modest impacts.

Taking into account all policies relevant to the Development and material considerations, the Development is in compliance with these policies and considerations, and planning permission should therefore be granted. The Council is therefore respectfully invited to approve this planning application.