CLEVE HILL
SOLAR PARK

Welcome to Our Consultation Event

Who We Are

Cleve Hill Solar Park Ltd is a joint venture between two solar industry specialists – Hive Energy and Wirsol Energy.

HIVE ENERGY

- Founded in 2010, Hive Energy is based in Hampshire.
- Hive has established itself as the second largest developer of solar parks in the UK.
- In the past 5 years, Hive has developed over 26 sites in the UK.

WIRSOL
THE BRAND BELONGING TO WIRCON GROUP

- Wirsol Energy is a highly experienced solar park developer, constructor and operator across the UK and beyond.
- Wirsol has built and operated 24 solar parks across the UK.
- Wirsol has strong experience in using world-class components and implementing rigorous construction, operation and maintenance processes.

Our Vision for Cleve Hill Solar Park

Our ambition is to deliver a scheme that helps to address national and local electricity needs by generating renewable and clean energy without the need for government subsidies.

Cleve Hill Solar Park could be among the lowest cost generator of energy in the UK. At over 350 megawatts (MW), Cleve Hill Solar Park could provide enough affordable and clean electricity to power over 110,000 homes.

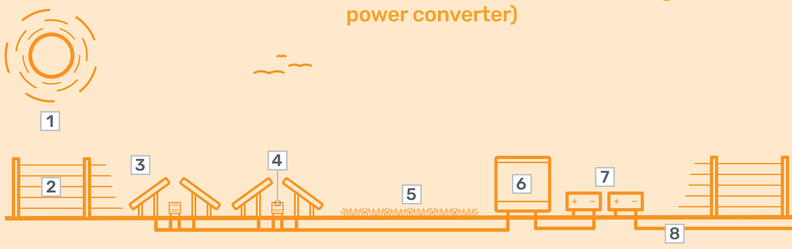
This is at a time when a quarter of the UK's energy generating capacity is due to close. More renewable energy generation is needed to achieve the UK's goal of reducing our carbon emissions by 80%.

We also plan to use battery storage to help ensure that energy is supplied into the grid at the time when it is most needed.

Cleve Hill Solar Park will provide the opportunity for dual-use of land, allowing sheep grazing and providing biodiversity benefits to land previously exposed to intensive farming practices.

Components of a typical solar farm

1. Solar Energy
2. Fencing
3. Solar Panels
4. Inverter (DC to AC power converter)
5. Landscape Area
6. Substation
7. Battery Storage
8. Underground Cable



Proposed Timeline

Cleve Hill Solar Park is a Nationally Significant Infrastructure Project (NSIP) as it is proposed to have a generating capacity exceeding 50MW.

We will be applying for a Development Consent Order (DCO) through the Planning Inspectorate. Any decision to grant the project consent will be provided by the Secretary of State for Business, Energy and Industrial Strategy.

* all dates are indicative and may change

Environmental Impact Assessment

Since our Phase One community consultation we have been undertaking a series of environmental studies and assessments as part of the Environmental Impact Assessment (EIA) process.

We have formed a Habitat Management Steering Group (HMSG) with RSPB, Natural England and Kent Wildlife Trust (KWT) to hold focused talks on ornithology in the area, our approach to the assessment, our findings and our proposals for habitat mitigation and enhancement.

Most of the species that form the wintering bird assemblage of The Swale Site of Special Scientific Interest /Special Protected Area/Ramsar were recorded very rarely or not at all within the solar park site. Important species of The Swale that were recorded in numbers requiring more detailed assessment included:

- Dark-bellied brent goose
- Lapwing
- Golden plover

Golden Plover

Brent Goose

Lapwing

An area of just over 40 hectares of the site has been identified for management specifically for brent geese, lapwings and golden plovers. This area of arable fields may be converted to make a grassland refuge area, providing resources that are constantly available to these three species throughout the winter.

Marsh Harrier

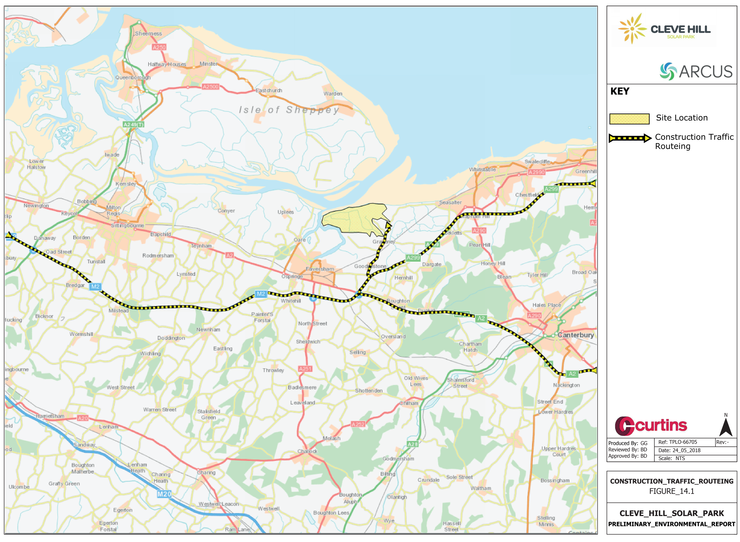
Marsh harriers have primarily been seen hunting their prey along the field boundary ditches and over the adjacent KWT reserve. Our habitat management area includes the management of grassland areas between the solar arrays and enhancement of the ditch habitats for the benefit of foraging harriers. The result may be positive by creating better conditions for their prey.

Traffic and Access

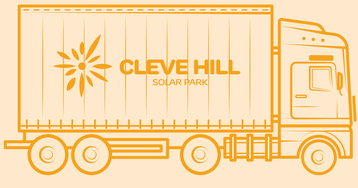
We are aware of the concerns raised locally regarding the construction of the existing Cleve Hill substation. The construction programme will continue to be refined. As we do this, we will be seeking to reduce traffic movements wherever possible.

Currently, our total construction programme is expected to span 12 to 24 months.

The proposed construction access route is from the A299 via Head Hill Road and Seasalter Road to the existing Cleve Hill substation site entrance. All vehicles during construction, operation and decommissioning would access the solar park site via this existing entry point.



At this stage, we anticipate that during the 12 to 24 months construction programme, there may be a peak in activity over a period of approximately 18 weeks, with the highest traffic volumes potentially reaching 75 Heavy Goods Vehicles (HGVs) and 48 Light Goods Vehicles (LGVs) per day. However, our proposals, construction programme and traffic assessment continues to evolve, and we are committed to reducing construction traffic volume as much as possible.



An example of an HGV is a typical delivery truck.

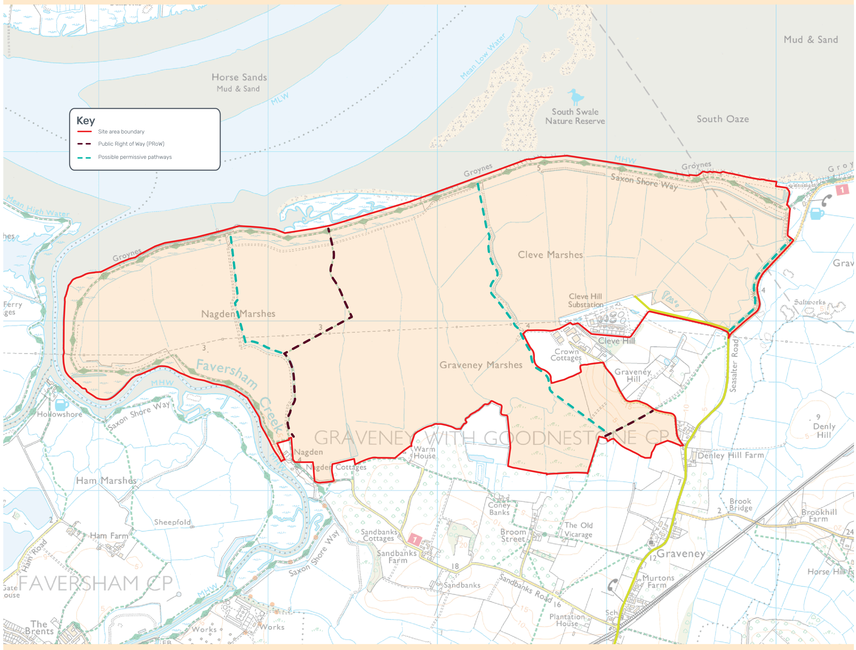
An example of an LGV is a mini bus. For example, mini buses will be used to transport workers to and from site.

Public Pathways

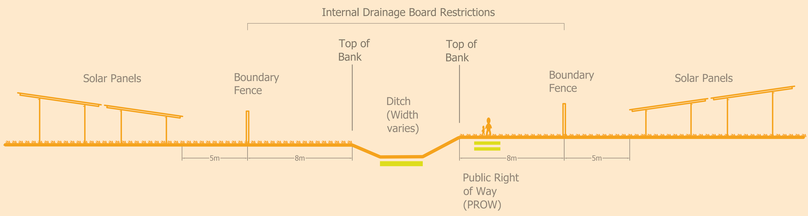
We have been working with Kent County Council (KCC) on plans to enhance Public Rights of Way (PRoW) and extend the existing footpath network. This includes the possibility of permissive pathways, cycleways or bridleways across the site.

We do not intend to permanently close the PRoWs that currently cross the site. It is possible that pathways may need to be temporarily closed or diverted during the construction of the scheme, but if so this will be kept to a minimum. Throughout the construction and operation of the site, the Saxon Shore Way will remain unaffected.

Our objective is to achieve a distance of 60 metres between the Saxon Shore Way and the development.



Cross-section of PRoW through the site:



* Showing average measurements and for illustrative purposes only.

Community

Being a good neighbour is the most important part of delivering a successful project.

The changing world we live in demands us all to reduce our carbon emissions and move to a cleaner and more secure energy mix, including renewable energy generation like solar.

We want to engage with people in the local area on how they view these proposals. Since our first phase of consultation in Winter 2017, we have made some significant alterations to our project in response to consultation. These include reducing the number of panels and proposing screening mitigation in parts of the site near to neighbouring properties.

In response to consultation, we are proposing to include a community orchard at Cleve Hill. A community orchard would enable people in the community to share the benefits of local fruit production close to home.

We want to know how you view these proposals and our proposed community initiatives. Please let us know via one of our feedback forms, or by contacting the details below.

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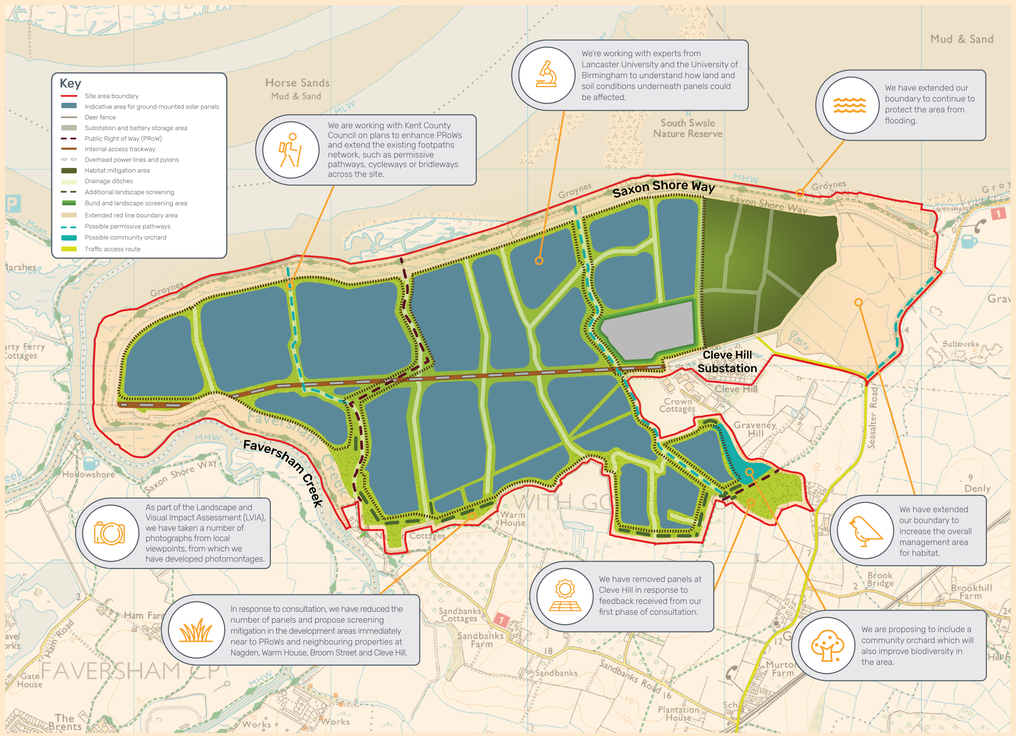
Indicative Site Plan



Using Innovative Technology

Ground-mounted solar panels in the UK have typically been angled to face the southern sky, often resulting in a peak in generation around midday.

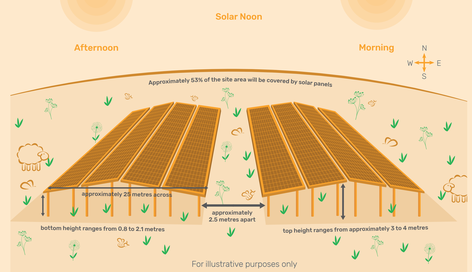
Cleve Hill Solar Park is proposing an alternative layout to this, in an east-west orientation, which will allow a more effective use of the land by producing a larger electricity output over the course of the day.

Cleve Hill Solar Park will also incorporate battery storage technology into the project design. This will allow clean energy generated by the solar panels to be delivered to the grid when it is needed the most.

Approximately 53% of the site area will be covered by solar panels.

There will be a range of panel heights:

- Less than one-third will be between 3.6m and 4m high
- Over two-thirds will be 3.6m high or below, with some as low as 2.6m



Key Benefits

This project is **non-subsidised** so will not receive government funding.

Over **£1 million** in business rates is expected to be generated annually for local authorities.

Cleve Hill Solar Park could save **150,500** tonnes of CO_2 per annum, equivalent to the annual emissions of **29,400** cars.

Cleve Hill Solar Park has the potential to power the equivalent of **110,000 UK homes** per annum.

Traffic and Access

The total construction programme is expected to span 12 to 24 months. The construction programme will continue to be refined. As we do this we will be seeking to reduce traffic movements wherever possible.

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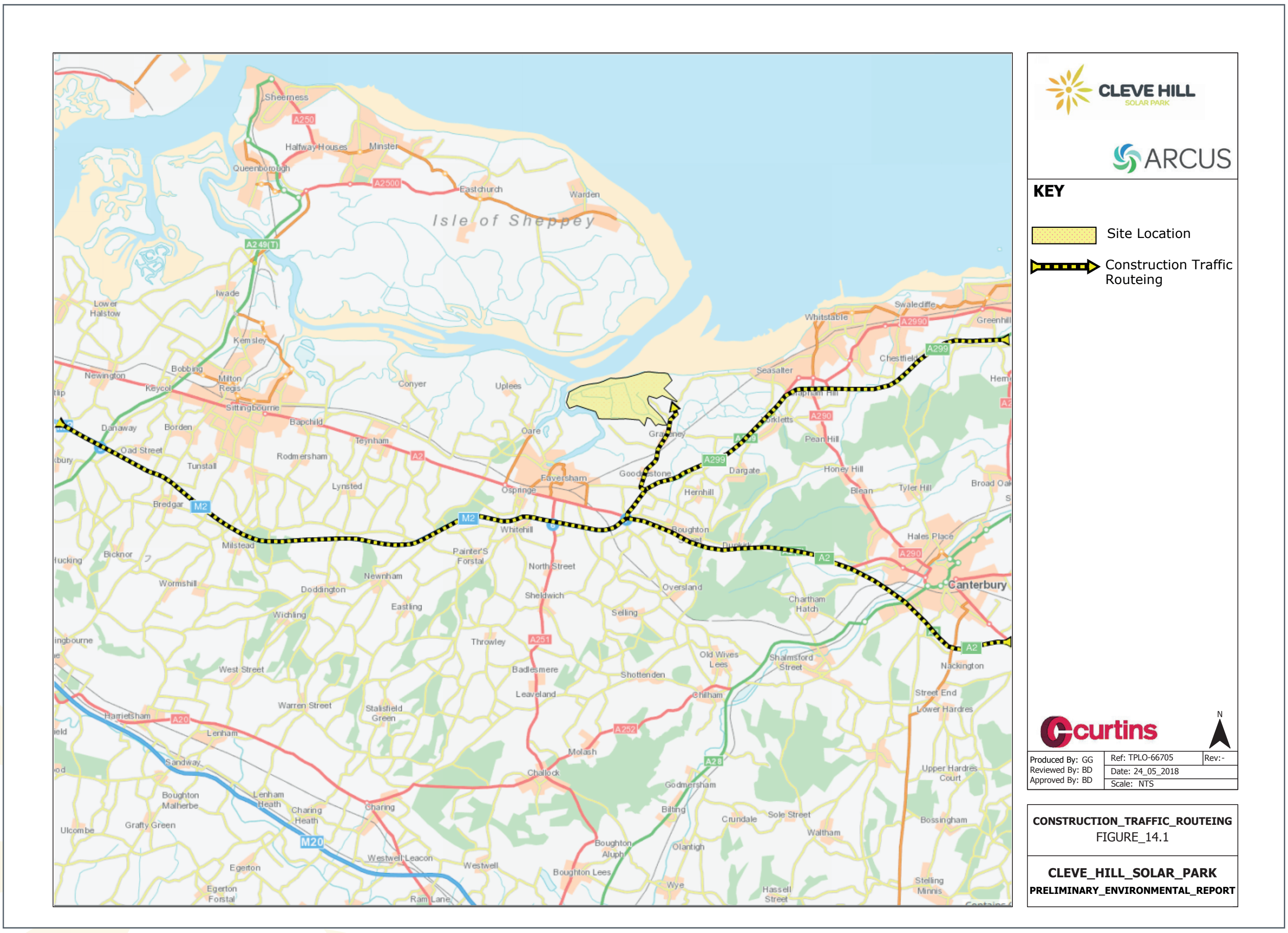
At this stage, we anticipate that during the 12 to 24 months construction programme, there may be a peak in activity over a period of approximately 18 weeks, with the highest traffic volumes potentially reaching 75 Heavy Goods Vehicles (HGVs) and 48 Light Goods Vehicles (LGVs) per day. However, our proposals, construction programme and traffic assessment continues to evolve, and we are committed to reducing construction traffic volume as much as possible.



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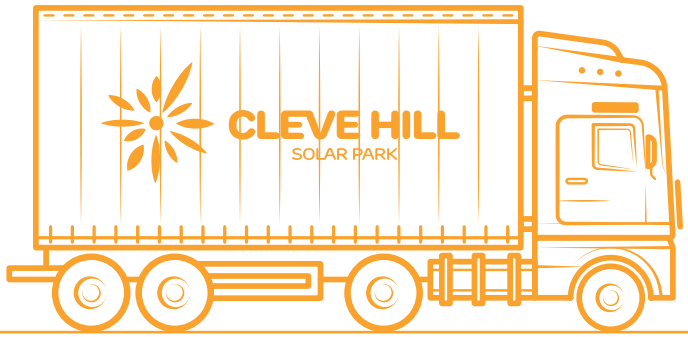

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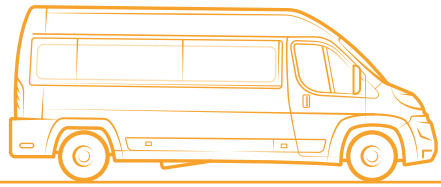

An example of a LGV is a mini bus. For example, mini buses will be used to transport workers to and from site.

A **Construction Management Plan**, as part of our application, lists ways to mitigate the impacts of traffic movements in the local area.

These include:

- Traffic timing and routing strategies
- Staff routing and travel planning
- Public Rights of Way management
- Vehicle cleaning
- Highways conditions surveys
- Speed restrictions
- Delivery management systems
- Temporary signage
- Traffic marshals
- Restriction of construction traffic to outside school opening and closing times, where possible
- Temporary traffic management e.g. traffic lights

Once operational, the project will generate very few vehicle movements.

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Cultural Heritage and Archaeology

Our assessment of local cultural heritage and archaeology has considered:

- Built heritage (e.g. listed buildings, conservation areas, some scheduled monuments)
- Archaeology (e.g. certain scheduled monuments, non-designated heritage assets)
- Historic landscape character

There are no designated heritage assets within the solar park site but we have considered those that are close to the site, including: The Church of All Saints in Graveney (Grade I), Graveney Court Farm (Grade II) and Sparrow Court (Grade II).

Existing and proposed vegetation offers some screening of views from these heritage assets. From the more elevated locations within the Graveney Church Conservation Area there will be views of the development and these have been assessed in terms of the effect on the significance of the heritage assets.

We have incorporated in the design of the solar park measures to mitigate effects to the historic landscape character. This includes the preservation of drainage ditches and the exclusion of panels on large parts of the sloping parts of Cleve Hill and Graveney Hill within the southeast of the solar park site.

We will not be placing panels at Cleve Hill.

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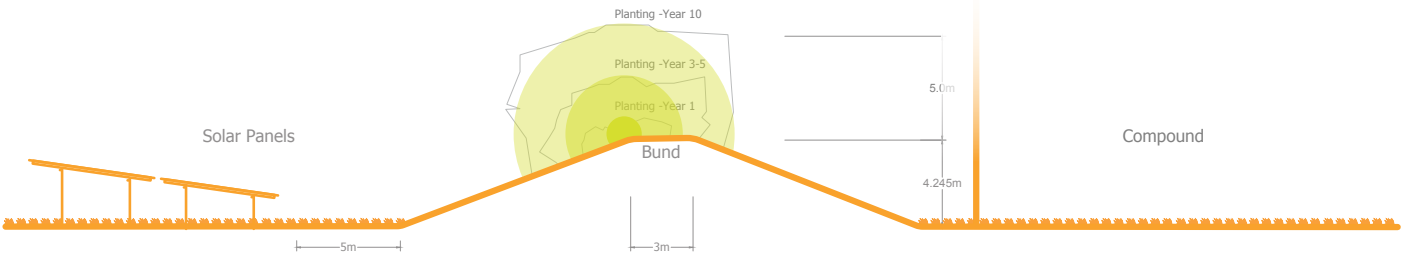
Flood Protection

The development is located in Flood Zone 3a, but in an area that benefits from flood defences. This is in the form of a raised embankment with a concrete wall which offers protection up to the 1 in 1,000-year tidal event.

We are collaborating with the Environment Agency (EA) to ensure we have the ability to continue to maintain the flood defences during the operational lifetime of the project. We are also collaborating with the EA on their plans for the Medway Estuary and Swale Strategy (MEASS) regarding their plans for managed realignment of the coast in the next 20-50 years.

A Flood Risk Assessment has been carried out for the project which concludes that with the implementation of design measures, such as a bund around the critical electrical infrastructure and the raising of the bottom edge of the solar arrays, the project will be safe for its operational lifetime (allowing for sea level rise as a result of climate change). This is even in the event of a breach in the flood defences to the north.

Cross-section of bund around the critical electrical infrastructure:



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Ornithology

We have undertaken bird surveys on site between January 2014 and April 2018. Our surveys have included gathering data on birds in the local area over four winter seasons and three breeding seasons.

We have formed a Habitat Management Steering Group (HMSG) with RSPB, Natural England and Kent Wildlife Trust (KWT) to hold focused talks on ornithology in the area, our approach to the assessment, and our findings and our proposals for habitat mitigation and enhancement.

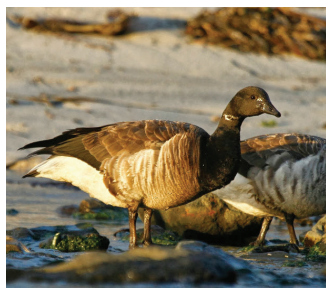
No direct effects on the habitats within The Swale Site of Special Scientific Interest (SSSI)/Special Protected Area (SPA)/Ramsar (including all other designations contained within this) will occur as no development is proposed in these areas and no negative effects on the water environment are predicted.

Most of the species that form the wintering bird assemblage of The Swale SSSI/SPA/Ramsar were recorded very rarely or not at all within the solar park site during the surveys and negligible effects are predicted in respect of those species. Important qualifying species of The Swale that were recorded in numbers requiring more detailed assessment included:

- Dark-bellied brent goose
- Lapwing
- Golden plover

Lapwing

Golden Plover



Brent Goose

An area of just over 40 hectares of the site has been identified for management specifically for brent geese, lapwings and golden plovers. This area of arable fields may be converted to make a grassland refuge area, providing resources that are constantly available to these three species throughout the winter.

Marsh harriers breed in reedbeds in the local area and regularly hunt over the site. Important consideration must be given to this species in our assessment.

Marsh Harrier

Marsh harriers have primarily been seen hunting their prey along the field boundary ditches and their margins and over the KWT reserve located along the northern and western boundary of the site. Our habitat management area includes the management of extensive grassland areas between the arrays of solar panels and enhancement of the ditch and ditch margin habitats for the benefit of foraging harriers. The result may be positive, creating better conditions for their prey.

Barn Owl

A number of barn owls breed locally outside the solar park site and at least some of these birds are known to hunt within the site.

There will be no direct disturbance to nest sites of barn owls. The habitat management proposals will create good conditions for small mammals which barn owls hunt and it is expected that this may result in a positive effect for the species.

The Barn Owl Trust states:

"...solar [photovoltaic] PV 'farms' have the potential to be of great benefit to barn owls as the array frameworks are typically at a height from which barn owls can perch-hunt."

Ecology

Important ecological features have been identified for detailed assessment, including:

- The Swale SSSI/SPA/Ramsar Wetland
- Other designated sites
- Invertebrates
- Great crested newt
- Bats
- Water vole

The Landscape and Biodiversity Management Plan includes draft implementation and management prescriptions for the following new habitats proposed to be created onsite on the existing arable land:

- Grassland (overwintering bird habitat management area)
- Grassland (grazing marsh)
- Lowland grassland
- Hedgerow (with trees)
- Shelterbelt
- Electrical compound buffer planting
- Scrub
- Bat roost creation

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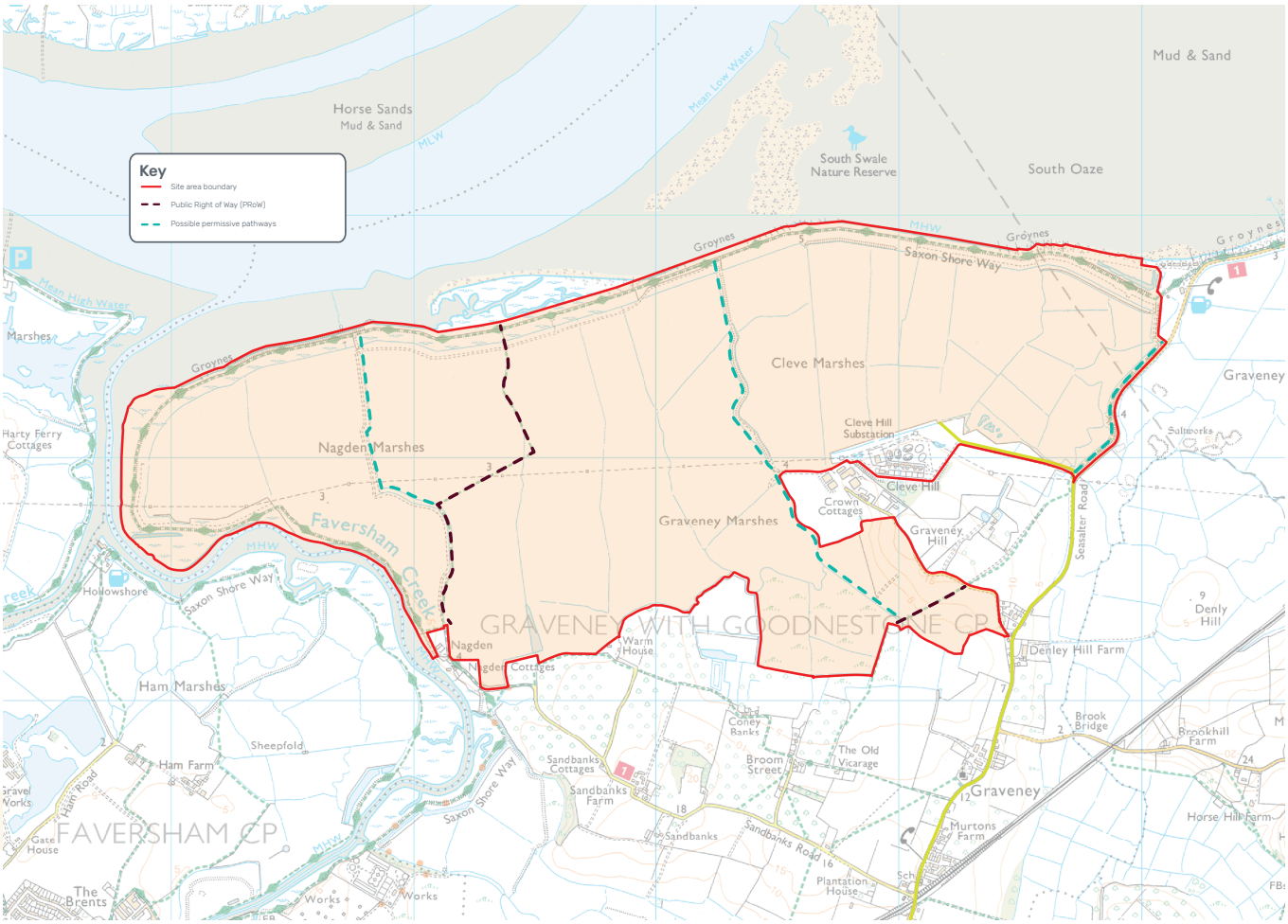

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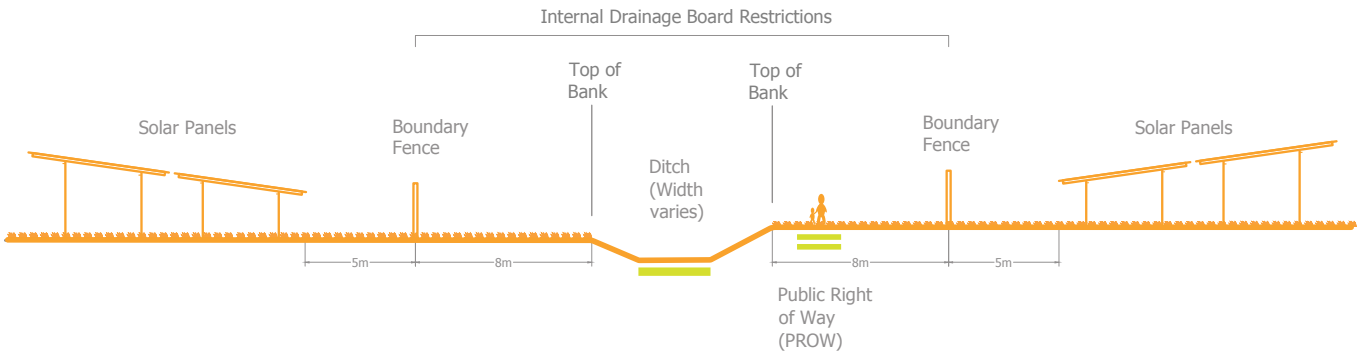
Cross-section of PRoW through the site:



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Key

- Site area boundary
- Indicative area for ground mounted solar panels
- Deer fence
- Substation and battery storage area
- Public Right of Way (PRoW)
- Internal access trackway
- Overhead power lines and pylons
- Habitat mitigation area
- Drainage ditches
- Additional landscape screening
- Bund and landscape screening area
- Extended red line boundary area
- Possible permissive pathways
- Possible community orchard
- Traffic access route

Saxon Shore Way

Cleve Hill Substation

Faversham Creek

Horse Sands
Mud & Sand

Mean Low Water

MLW

South Swale Nature Reserve

Mud & Sand

South Oaze

MHW

Groynes

Saxon Shore Way

Groynes

Groynes

Marshes

Harty Ferry Cottages

Hollowshore

Saxon Shore Way

Faversham Creek

MHW

Ham Marshes

Sheepfold

Ham Farm

Ham Road

Gravel Works

FAVERSHAM CP

Gate House

The Brents

Works

Works

MHW

Saxon Shore Way

Warm House

Cottages

Sandbanks Cottages

Sandbanks Farm

Sandbanks

Sandbanks Road

Coney Banks

Broom Street

The Old Vicarage

Plantation House

Graveney

Murtons Farm

Cleve Hill

Crown Cottages

Graveney Hill

Seasalter Road

Denley Hill Farm

Denly Hill

Brook Bridge

Brookhill Farm

Horse Hill Farm

Graveney

Saltworks

CLEVE HILL SOLAR PARK

ARCUS

- Core Landscape Study Area
- 5 km Wider Landscape Study Area
- 2 km Principal Landscape Study Area
- Viewpoint Location
- Viewpoint and Photomontage Location

1:60,000 Scale @ A3

0 1 2 km

NORTH

Produced By: SC	Ref: 2238-REP-063
Checked By: HL	Date: 24/05/2018

Viewpoint and Photomontage Locations
Figure 7.9

Cleve Hill Solar Park Preliminary Environmental Information Report

P:\Projects\Landscape\Landscape EIA\2238 Cleve Hill EIA.aprx\2238-REP-063 Fig07.9 Viewpoint and Photomontage Locations