

# WHO IS ETHICAL POWER?

- ✓ Ethical Power is the only independent British renewable energy company with competency across the entire life cycle of a project, from design through to construction, grid connection and asset management.
- ✓ Ethical Power has a track record of over 100 solar and energy storage projects across the UK and a growing international presence.
- ✓ Ethical Power is committed to delivering renewable energy projects which help tackle the climate and ecological emergency.
- ✓ The development team is responsible for finding suitable locations for new projects, securing a grid connection and managing the planning, design and community engagement processes.



Visit [www.ethical-power.com](http://www.ethical-power.com) to find out more.



# WHY DO WE NEED SOLAR PARKS AND ENERGY STORAGE?

1

## Reduced Carbon Emissions

Urgent action is required due to the devastating effects climate change is already having on our planet. Solar and storage parks help tackle the climate emergency and contribute to the UK Government's target of Net Zero carbon by 2050.

2

## Energy Security

Introduction of solar parks and energy storage systems into the UK energy infrastructure reduces our reliance on fossil fuel generation, including imported gas. Solar PV is also one of the cheapest energy generating technologies to develop and it contributes to keeping electricity costs lower for consumers.

3

## Network Stability

Energy storage systems (utility-scale batteries) store the generated energy when demand is low and release it back to the grid when it is needed. They also enable new renewable energy stations to connect onto the national grid and supports its decarbonisation by 2050.

4

## Increased Biodiversity

An ecological emergency has been declared due to the dramatic decline in wildlife species. Solar parks can deliver significant biodiversity net gain on-site through native hedgerow, wildflower meadows and species-rich grassland planting, all of which create new habitats for wildlife.





# PROPOSED GLEBE PROJECT



## Size of the project

10MW solar photovoltaic (PV) array with co-located energy storage scheme within a 40-acre site comprising 4 fields.



## Planting

Hedgerow and wildflower planting to significantly increase on-site biodiversity and screen the development from public view.



## Site Access

Internal access track comprising permeable crushed-stone. Safe access provided from the existing private road off Curdridge Lane.



## Energy Generation

Enough energy to power around 5,320 homes each year or 10% of the total homes within Winchester City Council district.



## Site Security

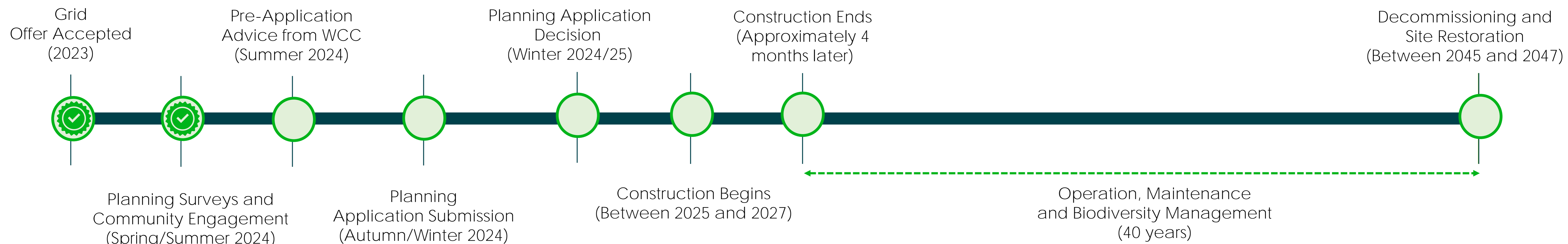
Fencing and 24hr remotely monitored infrared CCTV cameras pole-mounted and directed inside the fence line.



## Lifespan of project

Temporary development which would be decommissioned after 40 years of operation, and the fields restored to their current use.

## Estimated Project timeline



Visit [www.ethical-power.com/projects/glebe-solar-bess/](http://www.ethical-power.com/projects/glebe-solar-bess/) for the latest project updates.





# WHY THIS LOCATION?

## A viable grid connection has been secured

There are significant grid constraints at a national level which means it is extremely challenging to secure a grid connection for new solar and energy storage developments. The Glebe project benefits from a viable grid connection onto the new Netley Common – Bishops Waltham 33kV circuit.

## The proposed location protects more sensitive areas

The site is not subject to any statutory ecology, heritage or landscape designations. The scheme avoids areas of high flood risk and the best and most versatile agricultural land.

## There are limited visual and amenity impacts

There are many large trees at the site which provide natural screening from public view. Hedgerow planting is proposed to strengthen the existing field boundaries and obscure view into the site from the footpath. The site is located away from residential properties so there will be no amenity impacts such as noise and glint and glare.

## Safe and suitable access exists

A safe and suitable access can be provided through all stages of the proposed development. The local highway network can adequately accommodate the relatively small increase in traffic movements during the 4-month construction stage.

## A willing landowner has been identified

Crucially, the landowner is willing to host a solar and energy storage development on their land.

For recent news about the project visit:

[www.ethical-power.com/projects/glebe-solar-bess/](http://www.ethical-power.com/projects/glebe-solar-bess/)

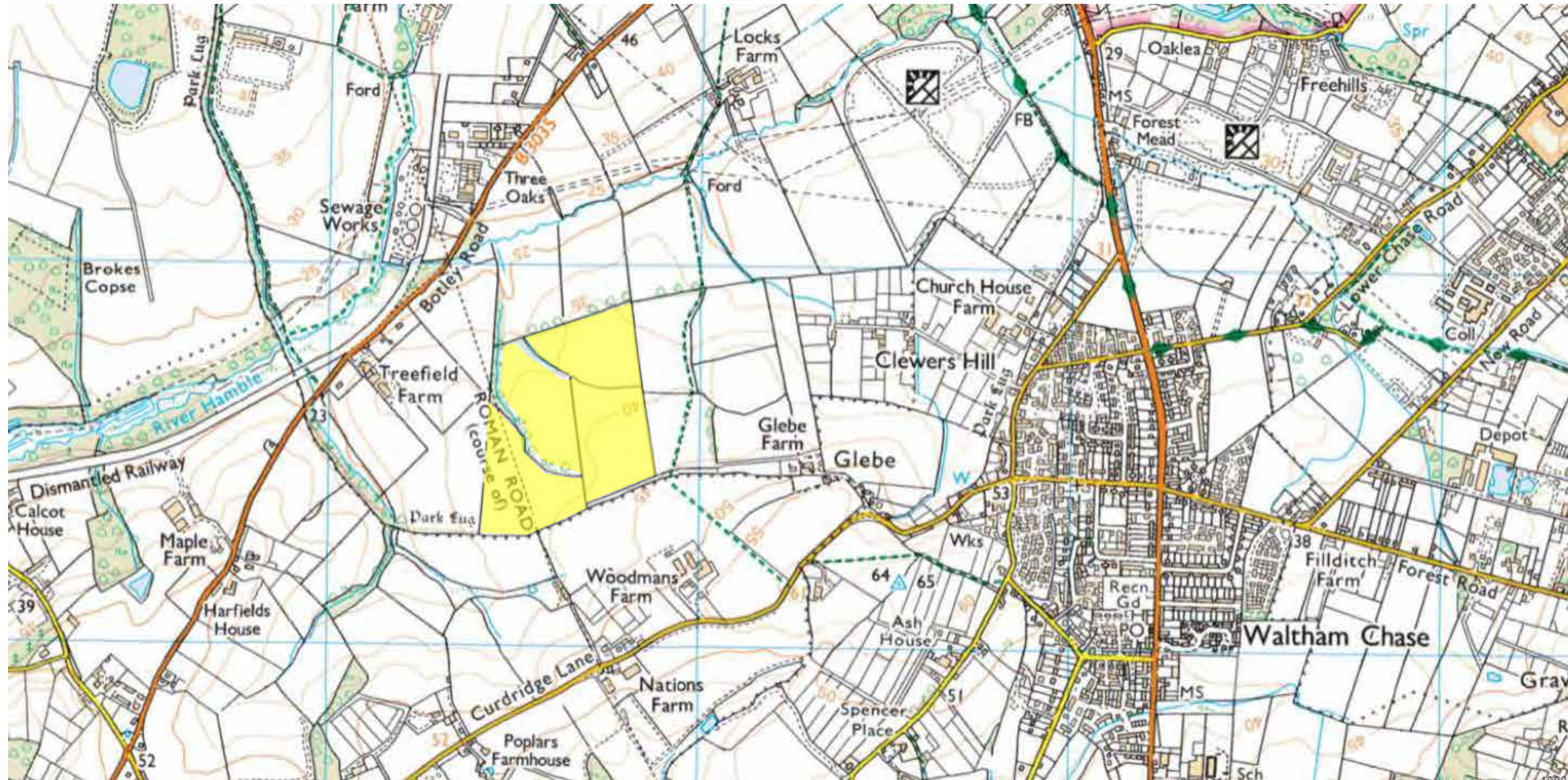
## Proposed Glebe Project location



The project location and access is outlined in red.



# PROPOSED GLEBE PROJECT LOCATION



The proposed solar and energy storage project location is shaded in yellow on the Ordnance Survey map above.



# BIODIVERSITY AND ENVIRONMENTAL BENEFITS

Our proposal achieves a significantly greater biodiversity net gain than the minimum 10% required by The Environment Act 2021 whilst protecting and enhancing wildlife in the surrounding area.



## Addressing the Climate Emergency

- ✓ Generation of clean renewable energy
- ✓ Reduces need for alternative forms of energy generation derived from burning fossil fuels
- ✓ Contributes towards meeting the UK's legally binding commitment to net-zero carbon by 2050
- ✓ Increased planting and vegetation cover



## Habitat Creation and Enhancement

- ✓ Enhanced hedgerow planting along existing field boundaries using a mix of native species
- ✓ Wildflower meadow and species-rich grassland planting across the site
- ✓ Installation of bat and bird boxes if appropriate
- ✓ Sheep grazing opportunity within the solar array
- ✓ Designed in collaboration with local ecologists following extensive survey work



## Addressing the Ecological Emergency

- ✓ Allows natural 'rewilding' of field boundaries
- ✓ Supports pollinators and insect species
- ✓ Protects tree roots from agricultural machinery
- ✓ Increases foraging opportunities for wildlife
- ✓ Protects and supports wildlife in surrounding areas
- ✓ Provides a measurable biodiversity net gain



# SOCIO-ECONOMIC BENEFITS



Using the land more efficiently  
The proposal would enable the existing agricultural use to continue by enabling sheep grazing alongside the renewable energy generation scheme.



Supporting the local economy  
The scheme provides opportunities to support local businesses during the construction and operational stages. We also aim to use local supply chains and contractors where possible.



Contributing to Council funds  
The project would contribute approximately £40,000 per annum in business rates to Winchester City Council (WCC) which can be used to support public services and progress WCC objectives.



Providing a Community Benefit Fund  
A community benefit fund of approximately £12,000 per annum would be set up and could be used to support local community, educational or environmental projects.

Please let us know your suggestions on how a Community Benefit Fund could be used in the local area!



# WHAT IS INCLUDED IN THE PROJECT?



Solar Panels

Photovoltaic (PV) panels collect solar energy from the sun by absorbing sunlight.



Inverters

An inverter converts the direct current from the solar panels into alternating current.



Transformers

Transformers increase the voltage to 33kV so it can be distributed onto the grid.



Battery Storage Units

Battery units store the electrical energy generated and release it to the grid in response to demand.



Maintenance Cabins

Shipping container style cabins are required for site maintenance and storage of equipment.



Switch Gear Cabins

The cabins contain components which control the power supply and safety functions.



Livestock Fencing

Livestock fencing is used to secure the site and make it suitable for sheep grazing.



Access Track

A permeable crushed-stone access track provides access for bi-weekly site maintenance.



CCTV

Remotely monitored infrared CCTV cameras along the fence line.

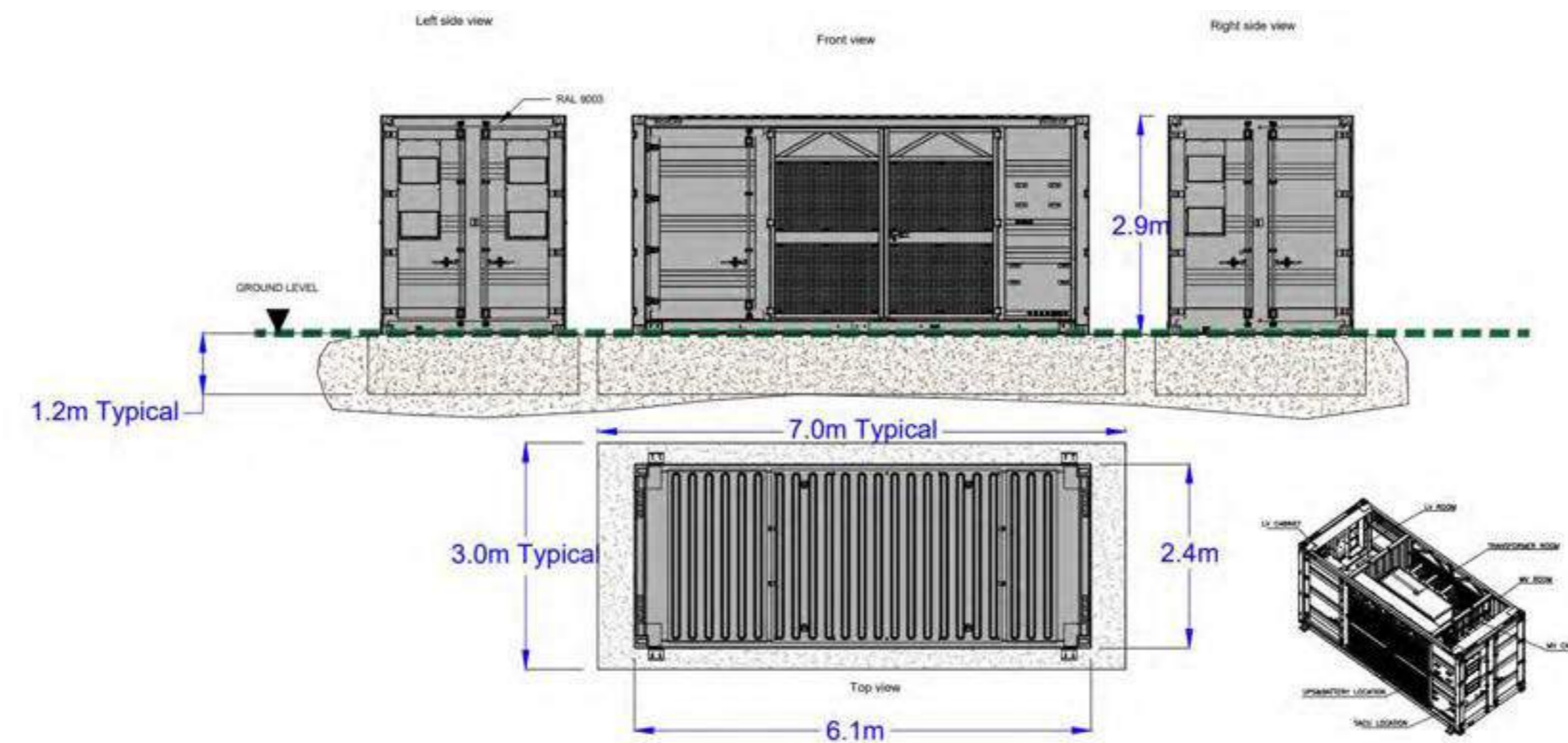


# TECHNICAL DRAWINGS

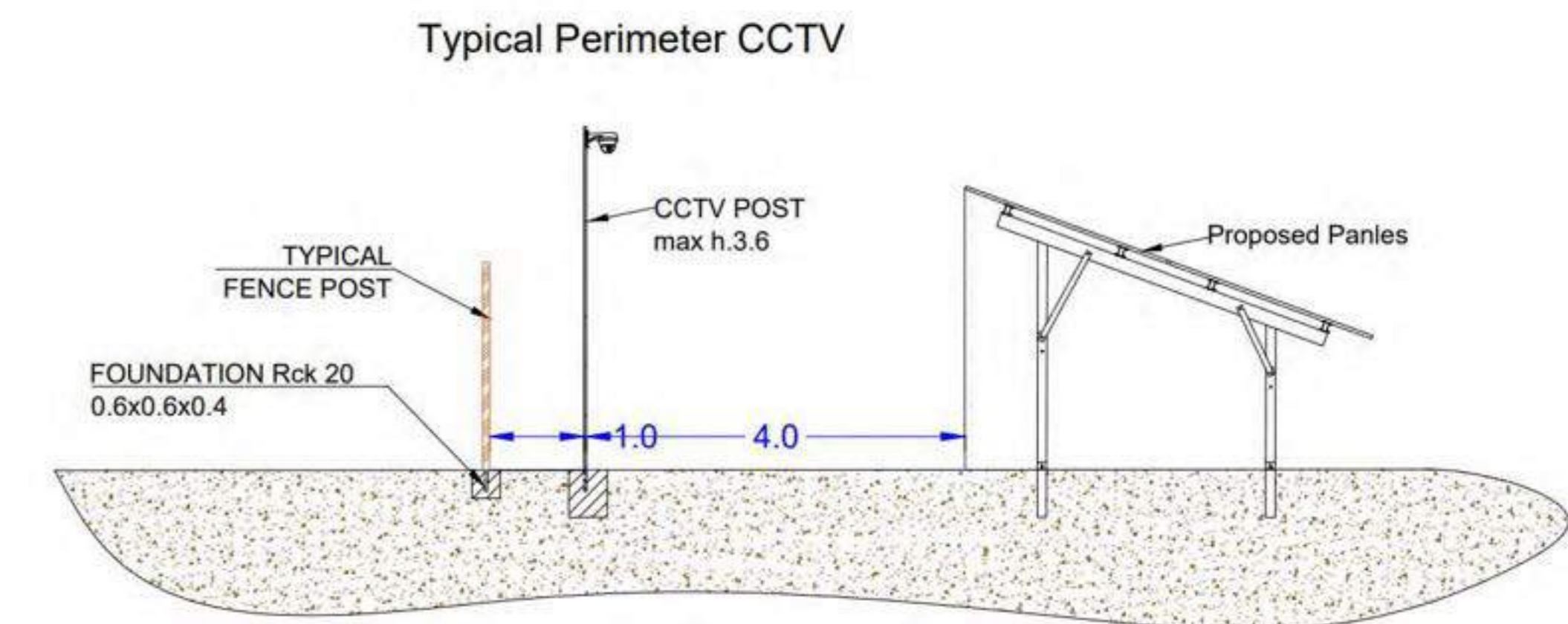
Our projects are designed in-house by our engineers, designers and planners, in collaboration with a team of expert consultants.

Our community engagement activities enable local communities and interested parties to input into our proposals.

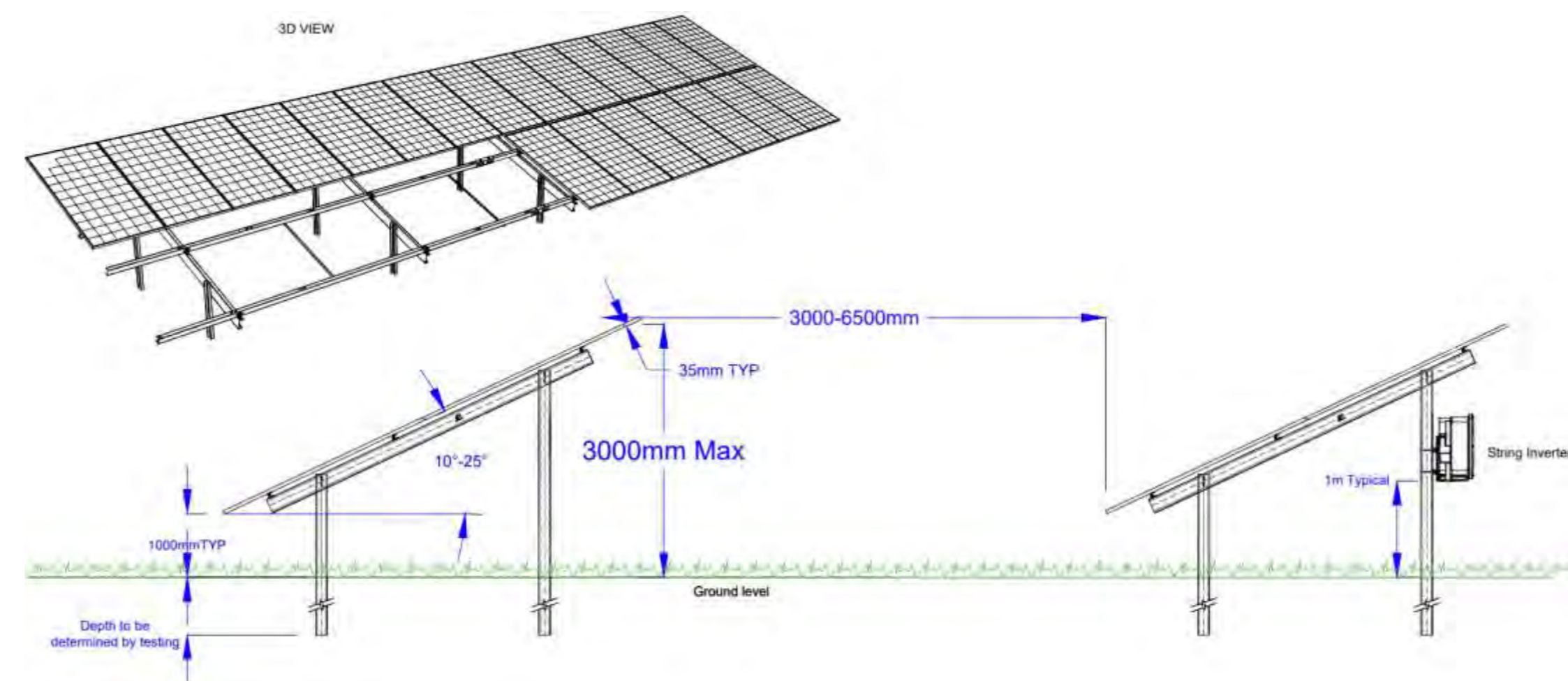
## Cabins



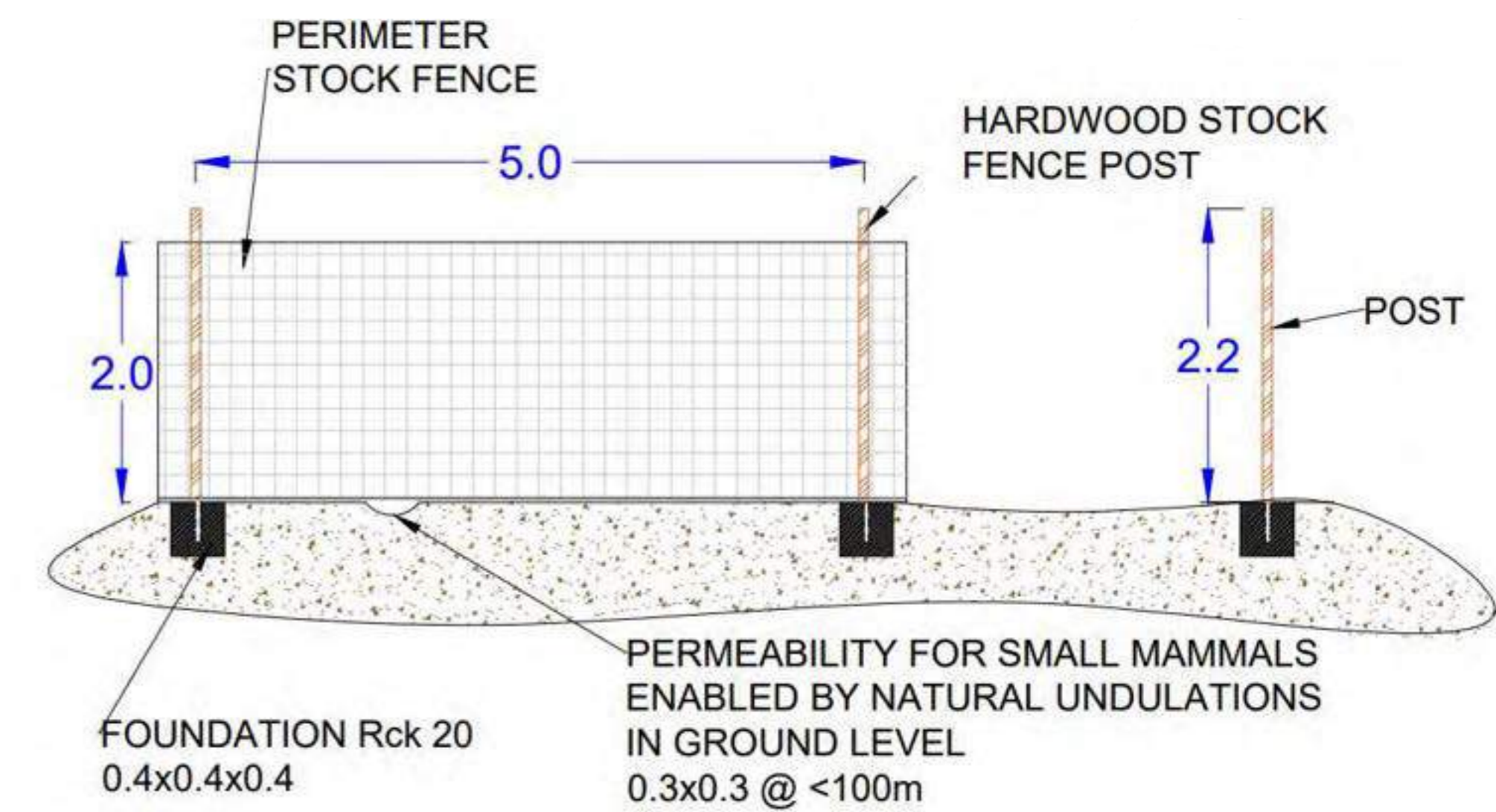
## CCTV



## Solar Panels



## Stock Fencing

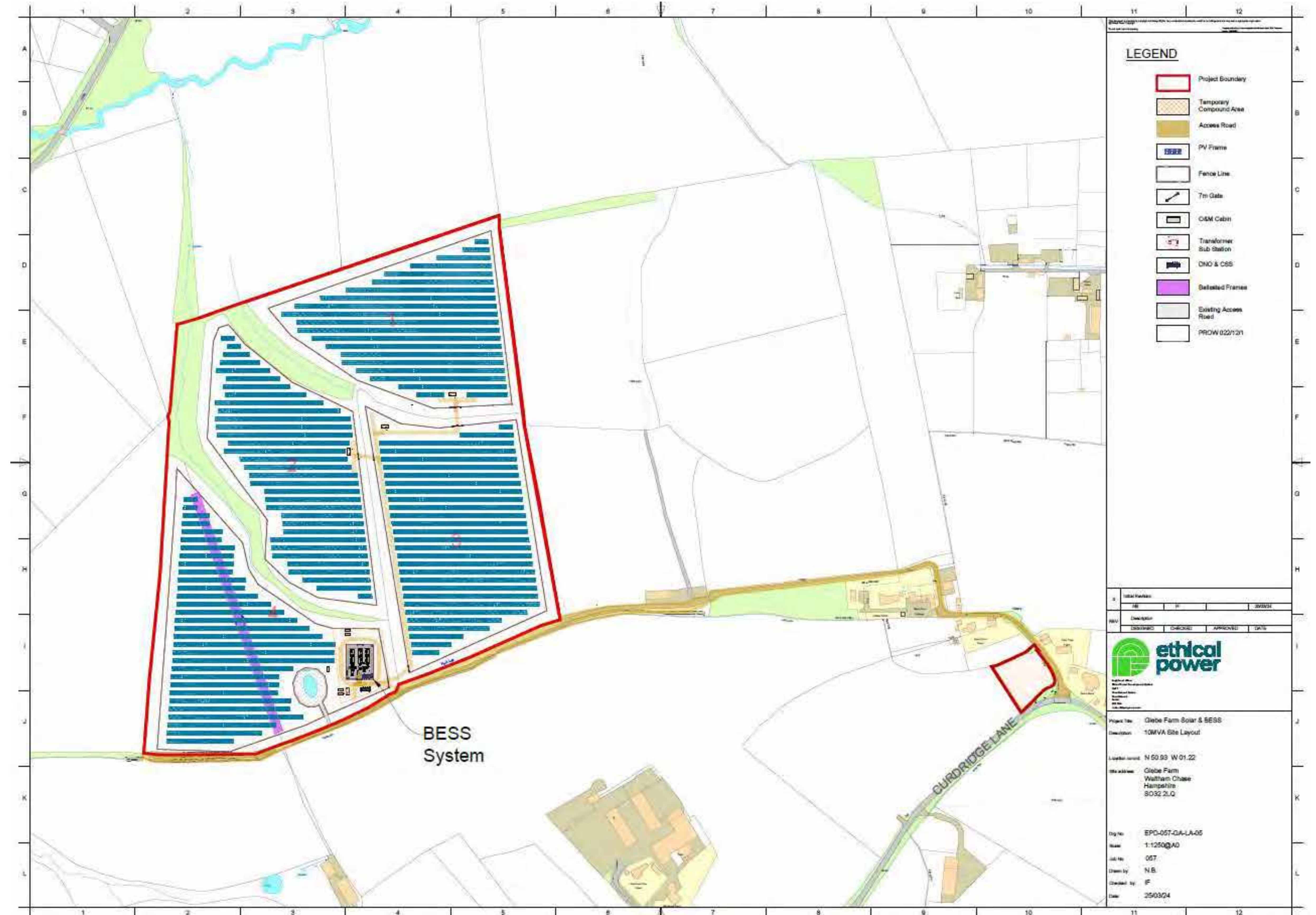




# PROPOSED LAYOUT PLAN (DRAFT)

The proposed layout includes a solar array within four existing field boundaries and an energy storage scheme located in the south-western field.

The site access would utilise the existing private lane off Curdridge Lane.





# ASSESSING THE IMPACTS

## Would the development have a detrimental impact on local wildlife?

All existing trees and hedgerows would be retained. Additional hedgerows would be planted along with species-rich grassland to significantly increase habitat areas and foraging opportunities for a range of species compared to the existing conditions. There is no credible evidence to confirm that solar parks have a detrimental impact on birds or other wildlife. Conversely, solar parks provide a significant and measurable biodiversity net gain and help slow species decline. A comprehensive Ecological Impact Assessment and Habitat Management Plan would be submitted with a planning application.

## Would the development create significant noise impacts?

Air conditioning (AC) units are required to enable the battery units to be operated at a safe temperature. The transformers and AC units create a low humming sound which is inaudible beyond 200 metres. The noise would not be heard from the nearest residential properties (c.300m west) or from the public footpath (c.200m east). A comprehensive Noise Impact Assessment would be submitted with a planning application.

## Would the solar panels create glint and glare impacts?

Solar panel reflections are only be geometrically possible in areas to the south of the site due to the orientation of the panels. Residential properties and road users would not be subject to any reflections due to existing screening by way of local topography and vegetation. A comprehensive Glint And Glare Assessment would be submitted with a planning application.

## Would the development impact highway safety or cause congestion on the local road network?

A small increase in the number of vehicle movements would be generated by deliveries during the relatively short construction phase of approximately 4 months. During the operational phase, the site would be visited twice a month by engineers in a small van for routine maintenance. A detailed Construction Transport Management Plan would be submitted with a planning application.

## Would the development impact on agriculture and food security?

The agricultural land has recently been used for grazing or making hay which represents a small contribution toward food production. The fields are currently financially unviable for arable farming due to factors which include soil quality and field size. Sheep grazing is highly compatible with solar parks and can provide additional benefits such as shelter. The existing fields would not be lost to development and the contribution to food production would continue through sheep grazing. The effects of climate change and their threat to global food security can be reduced by generating significantly more energy from renewable sources such as solar. A detailed Agricultural Land Assessment would be submitted with a planning application.

## Would the development have a detrimental impact on any heritage assets?

The proposed development would not cause harm to any built heritage assets. Appropriate archaeological mitigation measures can be implemented if required by the county archaeologist. A Heritage Impact Assessment would be submitted with a planning application.



# EXISTING VIEWS TOWARD THE SITE

The site is entirely screened from private views due to the topography and existing vegetation.

Partial public views are possible from a small section of footpath east of the site, at distances between 50m and 200m.



View north-west from the public footpath



The closest viewpoint from the public footpath is c.50m east of field 3.



View from the public footpath/kissing-gate c.200m east of field 1.



View from public footpath c.180m east of field 1.



View west from the public footpath.



# FUTURE VIEWS TOWARD THE SITE

The development would be very well screened all year round from public and private views due to the local topography and the existing and proposed vegetation.

Views from the public footpath toward the solar park would be obscured by infill hedgerow planting, as illustrated in the photomontages (right).



Existing Winter View

Year 1 Winter View (Photomontage)



VPO3 - Photomontage [Year 1]



Year 7-15 Winter View (Photomontage)



# FIRE RISK & PREVENTION

The energy storage scheme would adopt the following Battery Safety elements:

- 1** Safety Standards - using battery technology which has been robustly tested to the highest industry standards and proven to be at low risk of thermal runaway/fire.
- 2** Engagement with the Fire & Rescue Service – a Fire Risk Management Plan would be prepared by an expert consultant and agreed with the local fire service.
- 3** Fire suppression systems – if fire, smoke, or other gases are detected, then systems are in place to suppress any ignition and prevent a thermal runaway event.
- 4** 24hr monitoring of equipment – monitoring of operational parameters, such as temperature, to promptly respond to warnings and prevent faults.
- 5** Remote access and control – ability for engineers to remotely shut down the battery system when required.
- 6** Inspection and Maintenance – regular inspection and maintenance of the system allows for early fault detection and prevention.





# FAQs

## Why **don't you put the solar panels on the roofs** of houses or previously developed land?

Ethical Power strongly supports installations on new buildings and all suitable existing rooftops, but it is recognised that ground-mounted solar is also required if we are to meet the Government's Net Zero targets. Previously developed land (brownfield) is also prioritised in our site searching process, but we are not aware of any such sites in the local area that are capable of hosting a viable solar and energy storage project. Additionally, many brownfield sites are identified by local Councils or housing developers as potential development opportunities which means renewable energy developers are priced out of the market. A comprehensive Site Alternatives Assessment would be submitted with a planning application.

## What is the environmental payback time of a solar park?

Studies show that on average a solar park pays back its energy and carbon footprint within the first 2-3 years of operation.

## How can you be sure that the proposed biodiversity net gain will be achieved?

The biodiversity net gains are calculated using a metric provided by Natural England. A comprehensive landscaping scheme would be implemented and diligently maintained throughout the duration of the project. A 40-year Biodiversity Management Plan would be submitted with a planning application.

## How do you ensure that the supply chain is monitored?

Ethical Power closely monitors its supply chain through each stage of the project. We use our trusted Tier 1 suppliers who are carefully and regularly audited. We ensure the best industry standards are always maintained with stringent due diligence procedures.

## What happens to the redundant equipment after it is decommissioned?

Solar panels and battery storage units have a lifespan of around 20-30 years meaning many schemes have yet to reach the decommissioning stage. However, there is an emerging market for recycling battery units and companies already exist in Europe which recycle the glass fronts and aluminium frames as well as recover precious materials contained within the panels, such as silver and copper, which are typically some of the hardest materials to extract.

## Is the project '**just a money-making scheme**' for Ethical Power?

The privately owned scheme would provide electricity and essential grid balancing services to the national grid. Energy storage schemes also mitigate some of the high costs to upgrade the grid infrastructure across the country and therefore contributes to better value for money for consumers as Britain's energy usage continues to increase.

Please speak to a member of the team if you have any further questions or email [glebe@ep-development.com](mailto:glebe@ep-development.com)