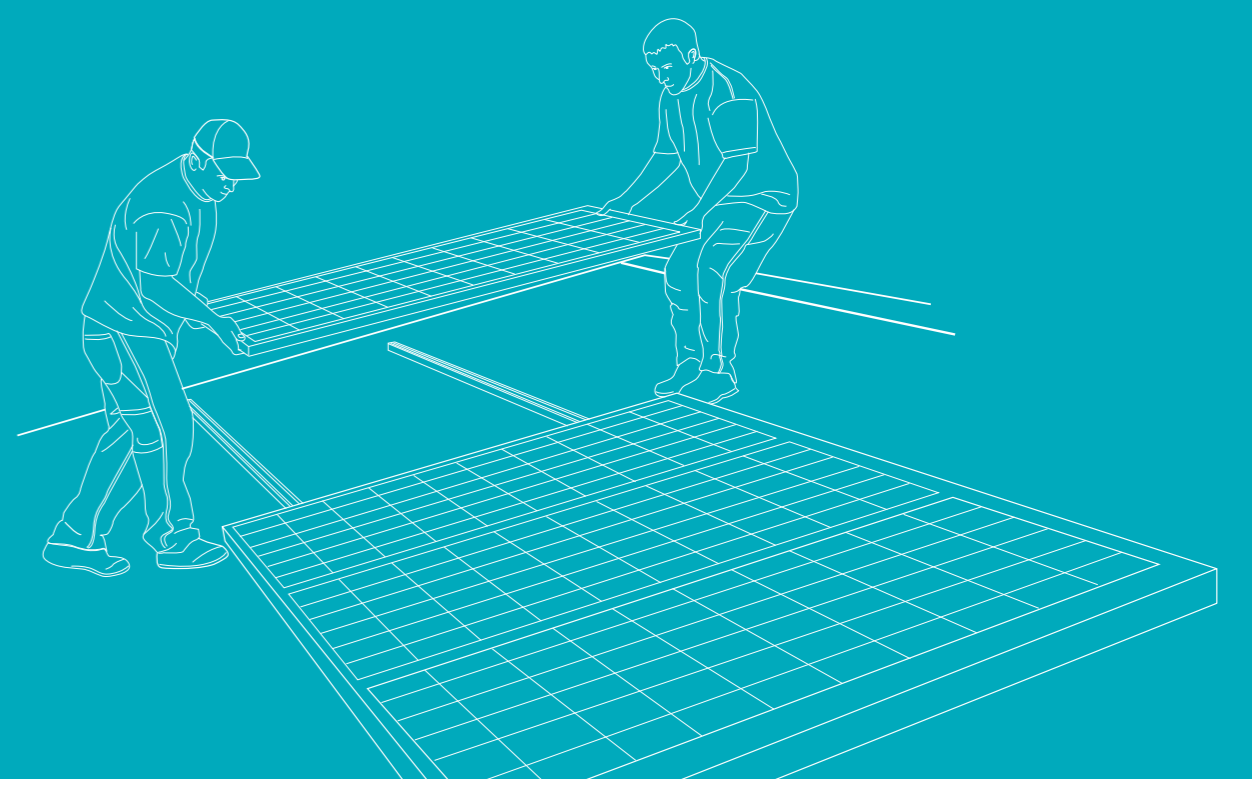


Land to the East of Church Street, Thriplow Solar Photovoltaic Farm Proposal



1. Introduction

Thank you for attending this public exhibition of proposals by GR Smith (Thriplow) Ltd and Thriplow Farms Ltd for the development of a Solar Photovoltaic Farm on land to the east of Church Street, Thriplow.

GR Smith (Thriplow) Ltd and Thriplow Farms Ltd are the landowners of the application site, which can be seen on the plan on the opposite, edged red. The applicants have signed an in principle agreement with a specialist solar developer called Lightsource who intend to build the scheme should planning permission be granted.

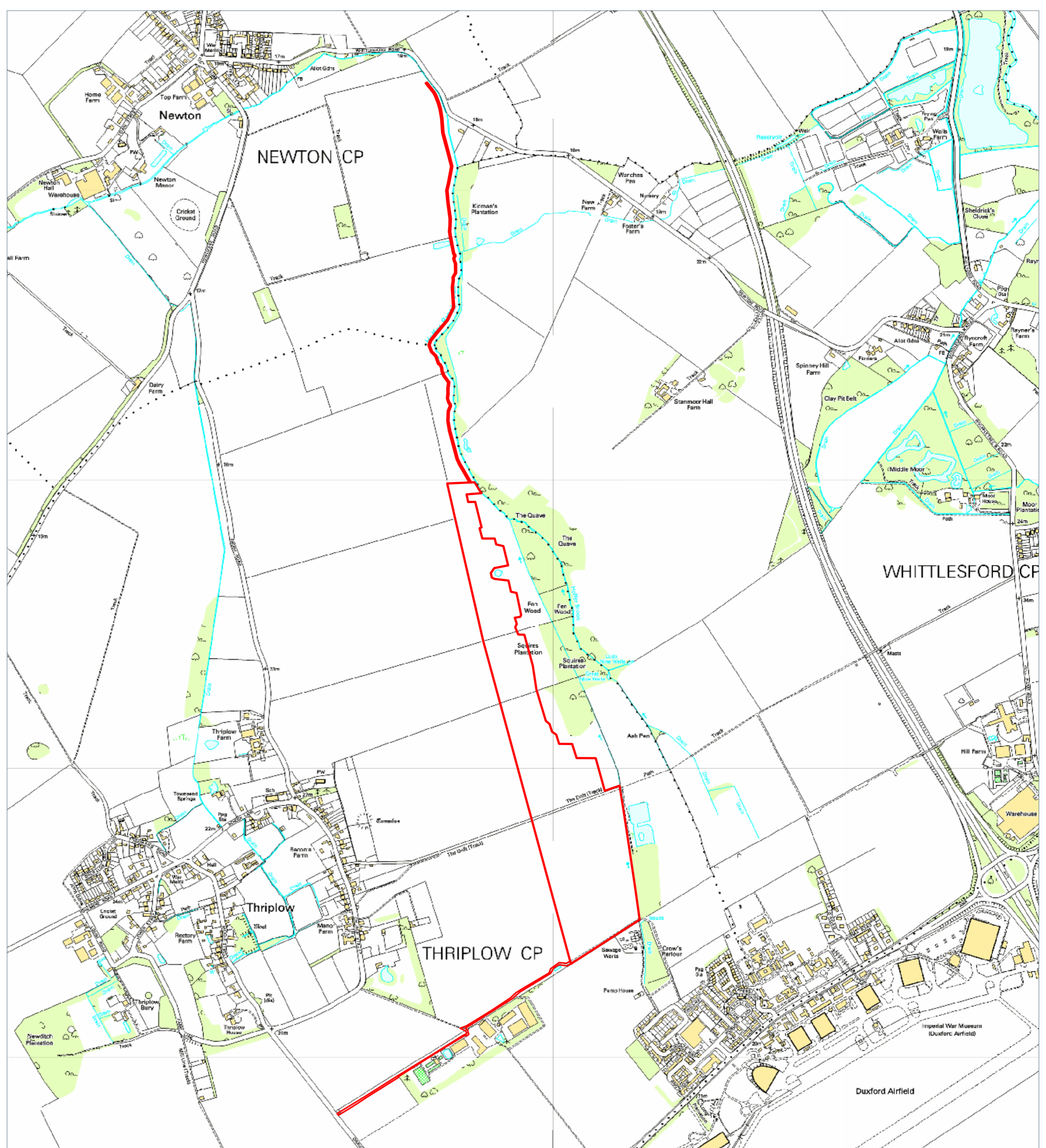
A planning application was submitted to South Cambridgeshire District Council for the development of this site for a solar farm in September 2013 (application reference S/2080/13/FL). Following a public exhibition of that proposal in October 2013 and a review of comments received at the exhibition and those from stakeholders, an amendment and additional information was submitted to the District Council in November 2013. Despite this, a number of matters remained outstanding and the application was withdrawn in January 2014.

Following on from withdrawal of the application, we have considered the outstanding matters and revised the scheme further. The purpose of this public exhibition is to provide the local community with the opportunity to meet with Savills as the planning consultants for the project and also Lightsource to understand how the scheme has been revised. This exhibition also seeks to respond to queries and considerations raised by the local community and the Parish Council through the planning process for the withdrawn application.

The following boards provide more information about why the development is proposed, what the revised proposal involves and how it has been arrived at. More information is also provided about the work that has been undertaken in designing the proposed development.

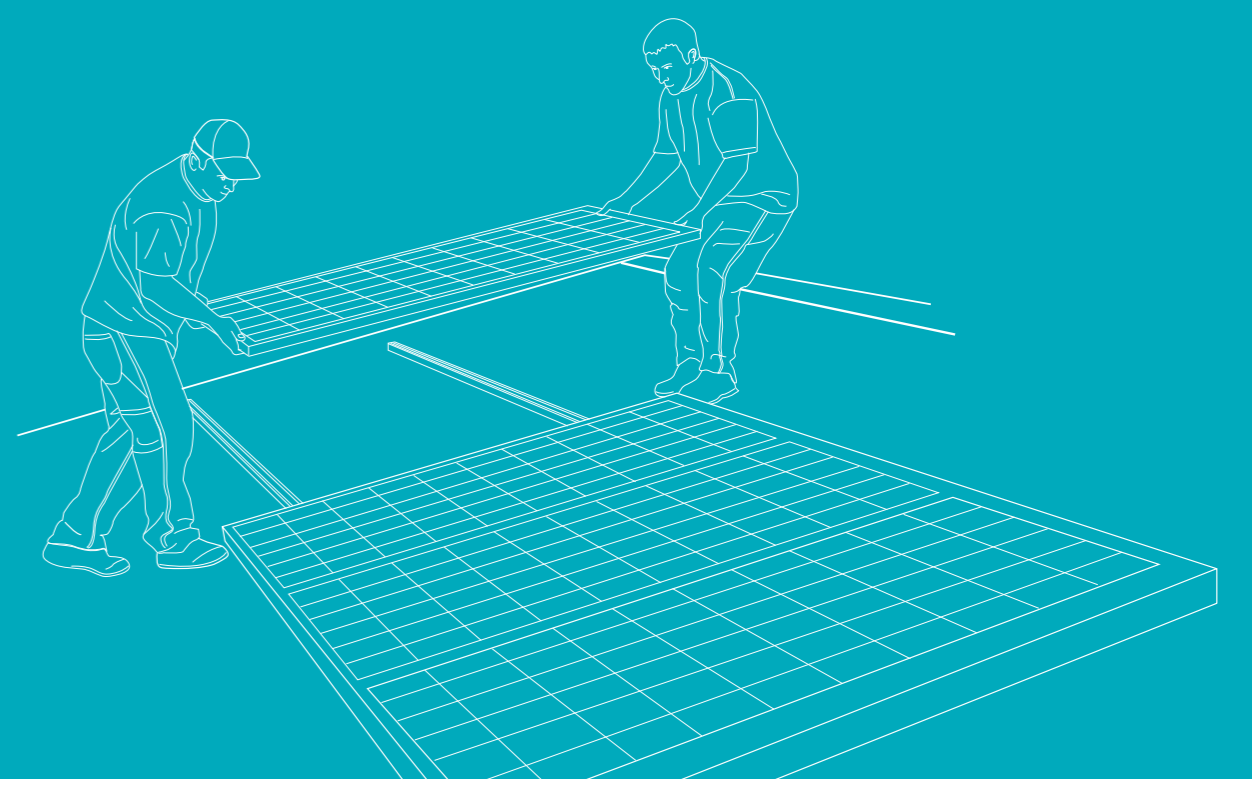
Following on from this exhibition, work will continue in preparing a new planning application that will be submitted to South Cambridgeshire District Council.

Should you have any questions, please ask representatives of Savills and Lightsource who are in attendance here at the exhibition today.



Planning application site boundary

Land to the East of Church Street, Thriplow Solar Photovoltaic Farm Proposal



2. Climate Change, Renewable Energy and Solar Photovoltaics

There is a global imperative to address global climate change by reducing the emission of greenhouse gases, particularly carbon dioxide (CO₂), that contribute to global warming. The importance of addressing climate change is established through various pieces of legislation and policy, both at United Kingdom Government level and at a European level. Indeed, under the Climate Change Act of 2008 there is a legal obligation in the United Kingdom to reduce greenhouse gas emissions to at least 80% below 1990 levels by 2050.

In planning policy terms, the legislative agenda to deal with climate change translates into support for the principle of renewable energy development. This support is within the National Planning Policy Framework at the national Government level and within South Cambridgeshire District Council's planning policies at the local level. Proposals must however be acceptable in site specific terms.

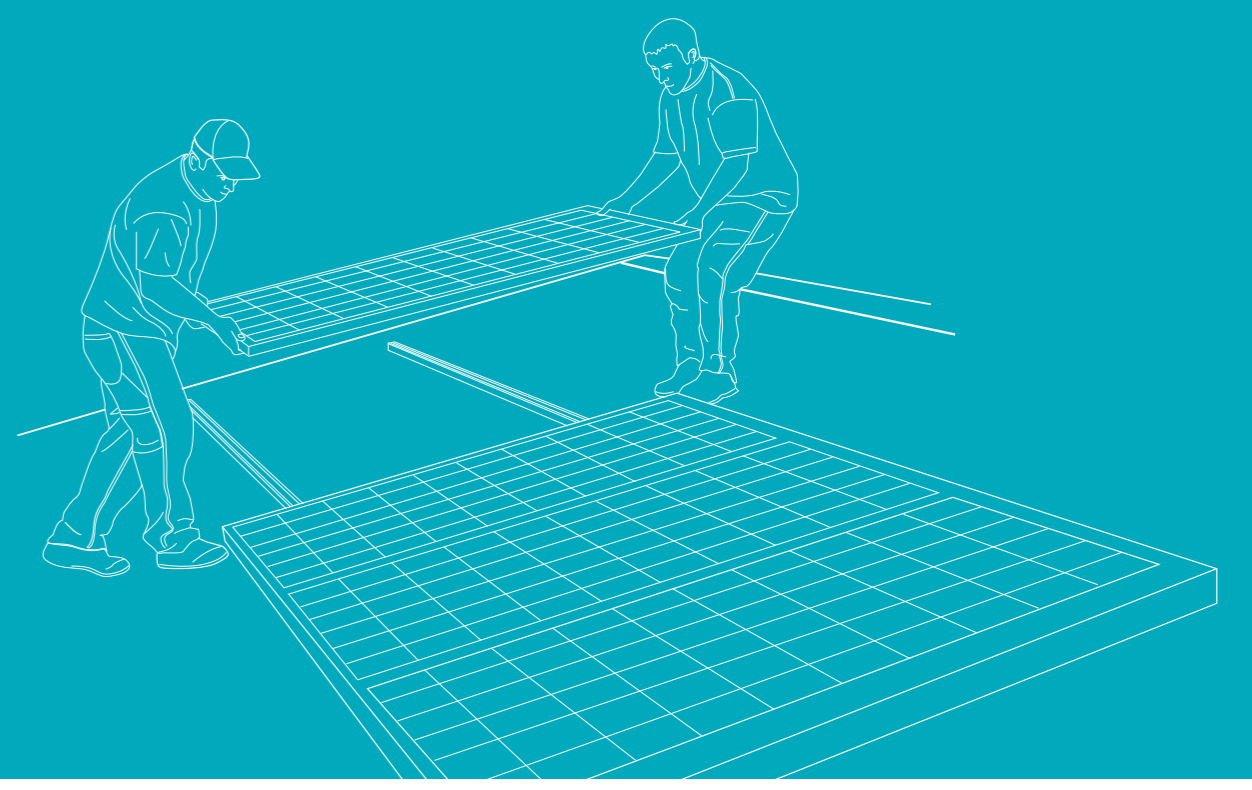
Solar Photovoltaics is a specific type of renewable energy technology that captures solar radiation or sunlight for conversion into electricity. Solar radiation is captured by photovoltaic modules, also known as solar panels. These panels convert this radiation into a direct electricity current. This direct current (DC) is then converted by an 'inverter' into a usable alternating current (AC). This current can then be used for domestic purposes in such cases where panels are mounted on the roofs of domestic properties, for example. In the case of this development, the proposal is to capture solar radiation on a large scale and then to return this to the National Grid for consumption by multiple customers. The photograph opposite shows a typical solar farm development in Norfolk. To give an idea about the size of the scheme shown in the photograph, this totals approximately 25 Ha in area, whereas the scheme at Thriplow totals 32 hectares in area including the access route and the cable route. However, the revised scheme will result in a reduction the area covered by panels and associated fences and structures by nearly half.

In summary, the reason for this proposal is to provide for renewable energy in helping to achieve targets for reduction of greenhouse gases, as required by policy and legislation. The following provides more information about the specifics of the proposed development, why we have selected the application site for the development and how the scheme has been revised in seeking to address concerns that have been raised.



Aerial view of a completed solar farm scheme

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3. The Revised Proposal

The design of the specific elements of the proposed development, such as the rows of the panels themselves, the inverter house, site fencing etc. will remain the same as that proposed by the withdrawn planning application. However, the layout of the proposal has changed and the amount of solar panels has been significantly reduced.

Notwithstanding planning policy support for the principle of renewable energy development, such proposals must be acceptable in site specific terms. Within that context, this board explains why the application site has been selected and how the revised proposal has been designed, so to address concerns that have been raised.

Site Selection Considerations

An important factor in the selection of the application site has been to locate the development where impacts on agricultural production are minimised, as this is an important planning consideration. Much of the application site has not been used for agricultural production for a number of years. An assessment of the agricultural land classification of the site has been carried out and submitted as part of the planning application. This assessment has found that the site is partly Grade 3a and partly 3b. The NPPF considers 'the best and most versatile agricultural land' to be Grades 1, 2 and 3a. Therefore, under the NPPF, planning authorities are required to direct development to areas of poorer quality land. Although around two thirds of the site is Grade 3a, this is the poorest grade of those grades defined as best and most versatile.

Agricultural Land Considerations

As we explained at the public exhibition in October, an important factor in the selection of the application site has been to locate the development where impacts on agricultural production are minimised, as this is an important planning consideration. Much of the application site has not been used for agricultural production for a number of years. An assessment of the agricultural land classification of the site has been carried out and will be submitted with the new planning application. This assessment has found that the site is partly Grade 3a and partly 3b. The NPPF considers 'the best and most versatile agricultural land' to be Grades 1, 2 and 3a. Therefore, under the NPPF, planning authorities are required to direct development to areas of poorer quality land. Although around two thirds of the site is Grade 3a, this is the poorest grade of those grades defined as best and most versatile.

Proximity to the National Grid

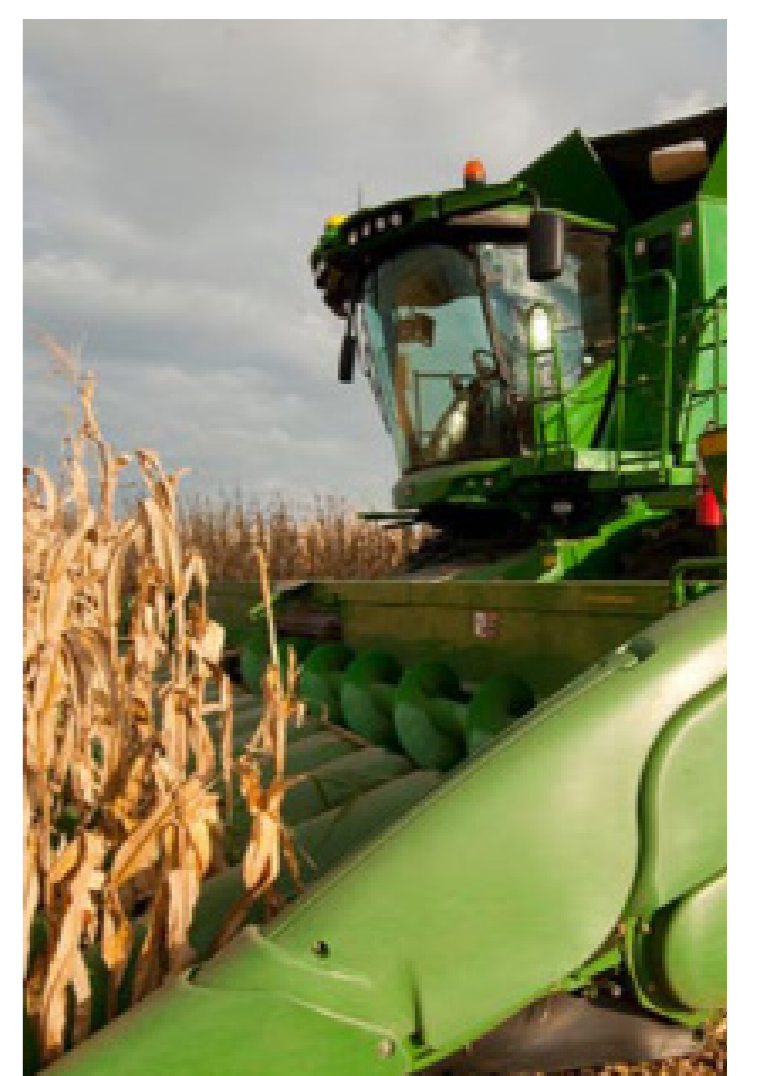
A further important factor in the selection of the site is its proximity to a point at which it can be connected to the National Grid. A power line lies to the north of the site near Newton into which the solar farm will be connected at a point approximately 2 km from the northern boundary of the site. If the site lies too far from the Grid, then this can make it prohibitively expensive to develop a solar farm. Also relevant in this regard is that the further the development is located from the Grid, the power returned to the Grid and therefore the efficiency of the scheme therefore significantly diminishes. It is therefore important to locate the development as close as possible to the Grid, but whilst balancing all other considerations in the selection of the site.

Green Belt Considerations

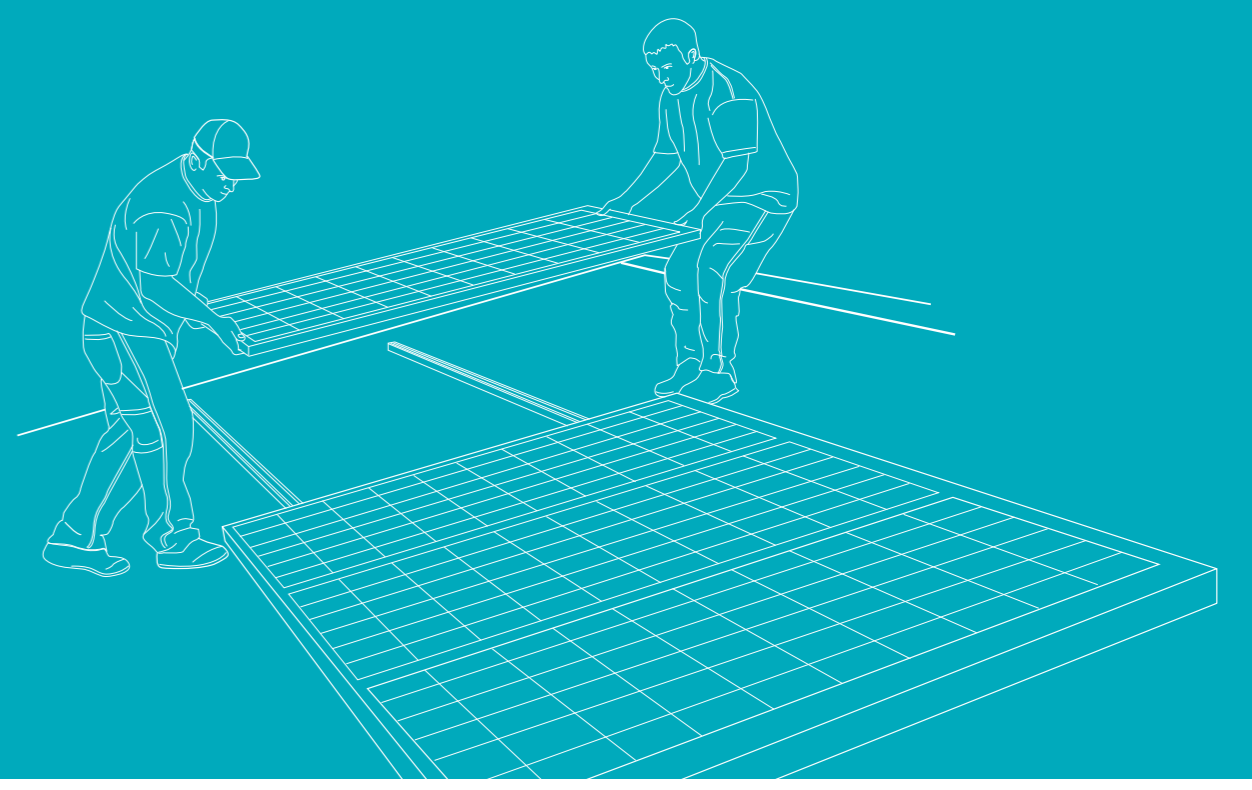
Government planning policy contained within the National Planning Policy Framework makes it clear that the need for proposals for renewable energy should not be questioned. However, because the site is located within the Green Belt, it is necessary to demonstrate that there are 'very special circumstances' to outweigh the harm that is caused by the development to the Green Belt, by way of impact arising from its inappropriateness and upon the openness of the Green Belt. Clearly, the need to address climate change is a weighty consideration when evaluating whether there are very special circumstances and the proposal will help to address climate change impacts.

In addition, we have considered whether there is a need for the development to be located within the Green Belt. Information made available by UK Power Networks (UKPN) who run and operate the local distribution network shows that there is no further capacity available in the Grid in South Cambridgeshire to accommodate further large scale renewable energy projects. In order to provide for additional capacity, there would need to be significant investment in infrastructure and as such, it is unlikely that further capacity will be made available in the short term. It is important to note that the information made available by UKPN about grid capacity accounts for any schemes where an application has been successfully made to UKPN to connect developments to the Grid, but where these schemes have not been built for whatever reason, such as this scheme at Thriplow. It is likely that any schemes that have been granted approval to connect to the Grid, but which have not yet been built will already be known to the District Council, because the promoters of those schemes would most likely have sought to engage with the District Council within the context of the planning process, whether that be at an informal stage, or through a formal planning application. It is therefore unlikely that there are any potentially available sites outside of the Green Belt which could accommodate this development.

It is therefore considered that because the proposal will contribute towards addressing climate change and because it is unlikely that any suitable sites exist outside of the Green Belt to accommodate this development, these considerations amount to very special circumstances that outweigh the harm caused by the development to the Green Belt.



Land to the East of Church Street, Thriplow Solar Photovoltaic Farm Proposal



3. The Revised Proposal

Landscape and Visual Impact Considerations

As was explained at the public exhibition in October last year, a further factor in the selection of the application site and in turn, the configuration of the development, has been the concern to design the development with minimal impact on the landscape and visual amenity. The long, thin north to south configuration of the development adjacent to the woodland to the east is considered to be the most appropriate way in which to position and locate the development in this regard. In doing so, the adjacent woodland serves as a screen to avoid views from the east of the application site and impacts upon Thriplow are minimised by ensuring that the development is as far as possible from the village.

In addition to locating and positioning the development so to minimise landscape and visual impact, landscape planting is also proposed to screen the development. A new hedgerow is proposed along the entirety of the western boundary of the site, so to screen the development from views from the west and Thriplow village.

One of the matters that remained outstanding at the time the application was withdrawn was that of the landscape and visual impact of the proposal. Indeed, a particular concern raised through the community consultation was that of the visual impact of the development and the impact it would have upon users of the bridleways along the Drift and the southern boundary of the site respectively. In seeking to address these concerns, we have omitted panels from the entirety of the field immediately to the north of the Drift and also from part of the southernmost field. The omission of panels from these parts of the site will ensure that views of the church in Thriplow village from the Bridleways will be retained. There were also concerns about panels being positioned on either side of the Drift and the impact this would have upon users of the Drift. Clearly, with panels only positioned immediately to the south of the Drift, this impact will be much reduced.

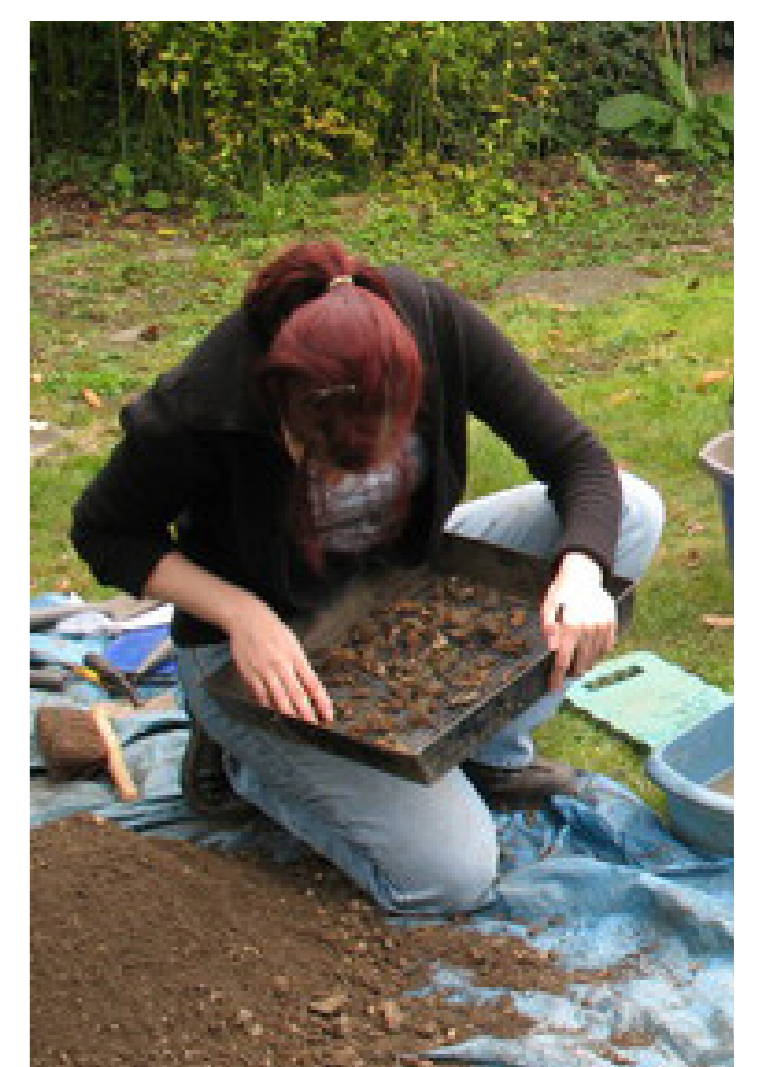
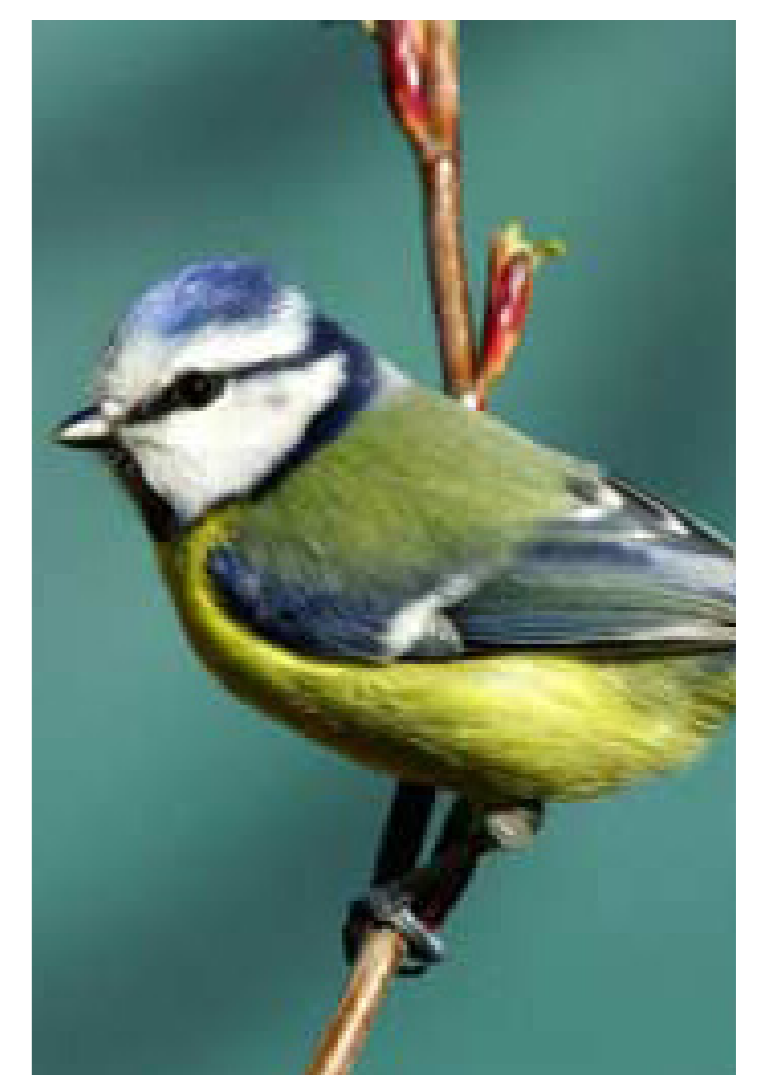
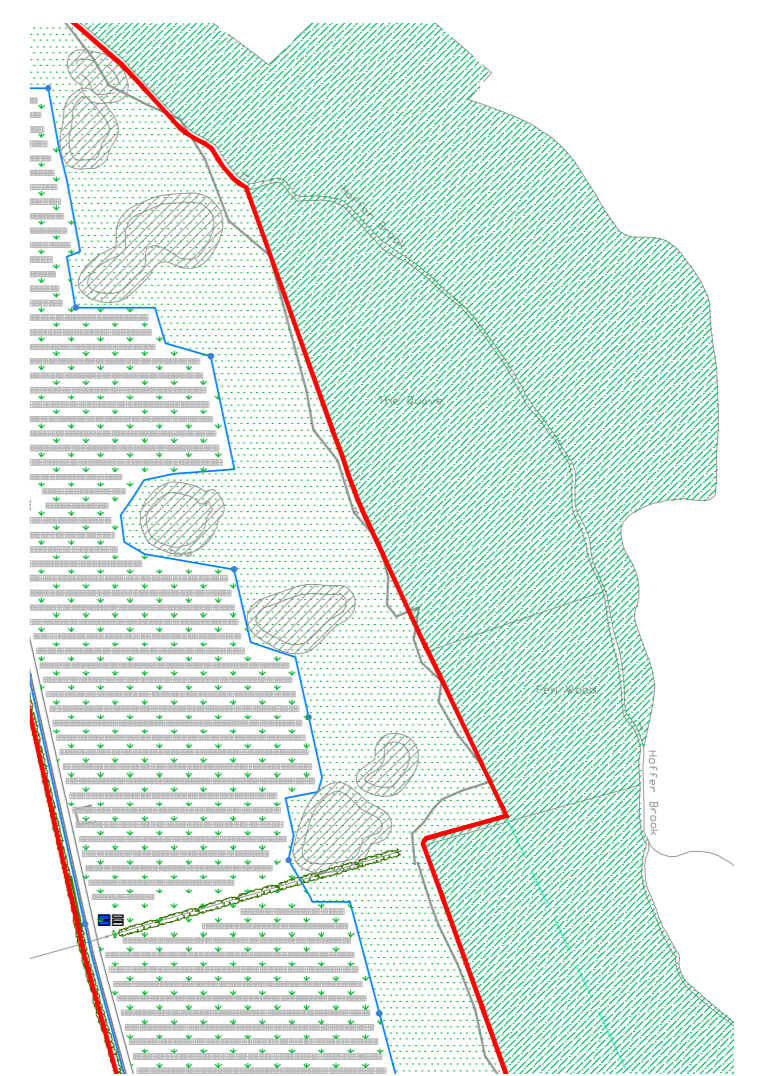
The above changes have resulted in the provisional revised layout for the new planning application.

Ecological and Biodiversity Considerations

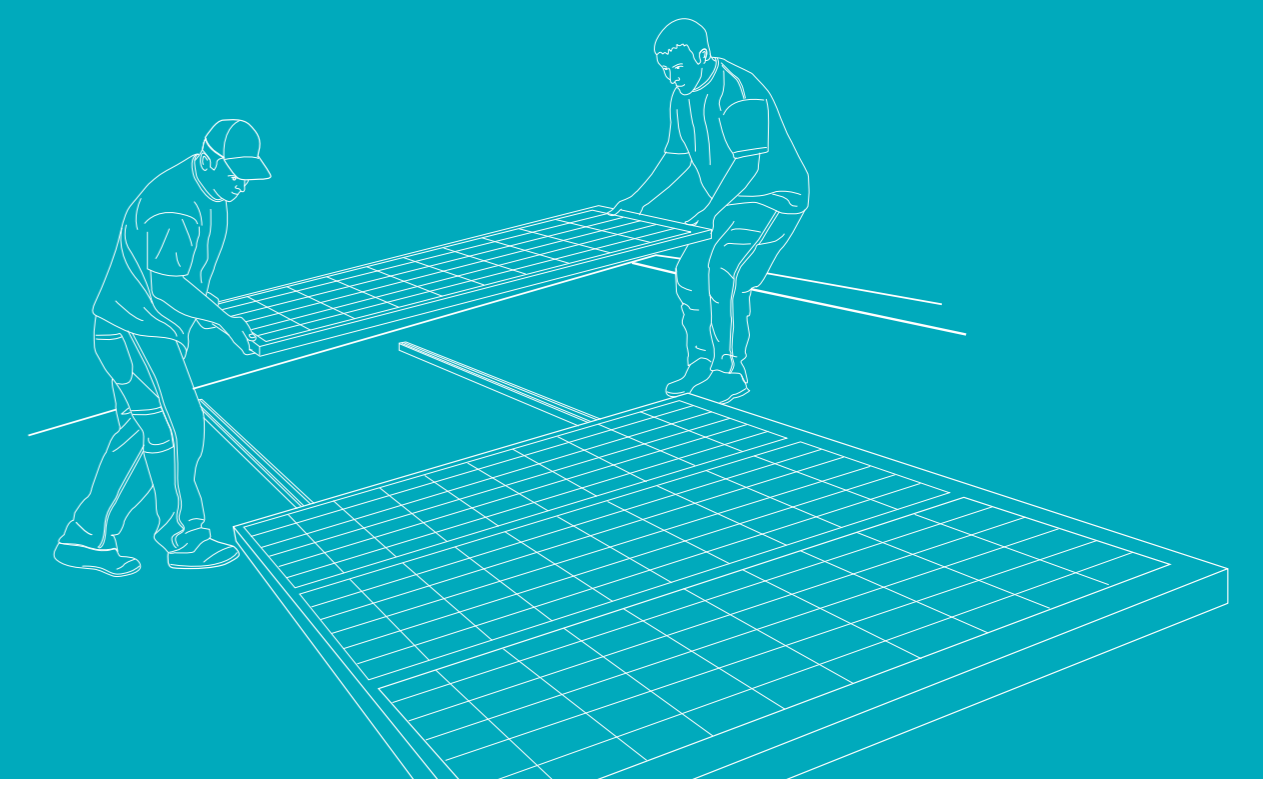
Having identified the application site, a significant amount of work was undertaken to understand ecological constraints affecting the site. This work found that the site presents potential habitat for fairy shrimp, grass polychaete and breeding birds. In seeking to ensure that the impact of design upon fairy shrimp and grass polychaete is minimised, the appointed ecologist surveyed the site and identified areas that may provide as a suitable habitat. The scheme continues to be designed so that no physical development takes place within these potential habitats. Site Layout Plans showing the proposed development before and after areas of potential habitat were identified can be seen opposite. Discussions will take place with the Council about mitigation for breeding birds and as such, construction of the development will need to take place outside of the bird breeding season. In view of the careful consideration of ecological matters, Natural England, the District Council's statutory advisor about ecological matters, had no objection to the planning application.

Archaeology Considerations

A further matter that will need to be addressed by the new planning application is the potential impact of the development upon archaeology. A desk based archaeological assessment was submitted with the withdrawn planning application. Further discussions are taking place with the County Archaeologist to agree a programme of archaeology fieldwork. The findings of the fieldwork will then be submitted to the District and County Councils as mitigation for any archaeological impact. If any significant remains are found, this could require that they are preserved 'in-situ'. This would mean that the scheme would need to be designed so to ensure that these remains are unaffected by the development, either by the omission of further areas of panels, or by 'non-intrusive' mounting of the panels on the ground.



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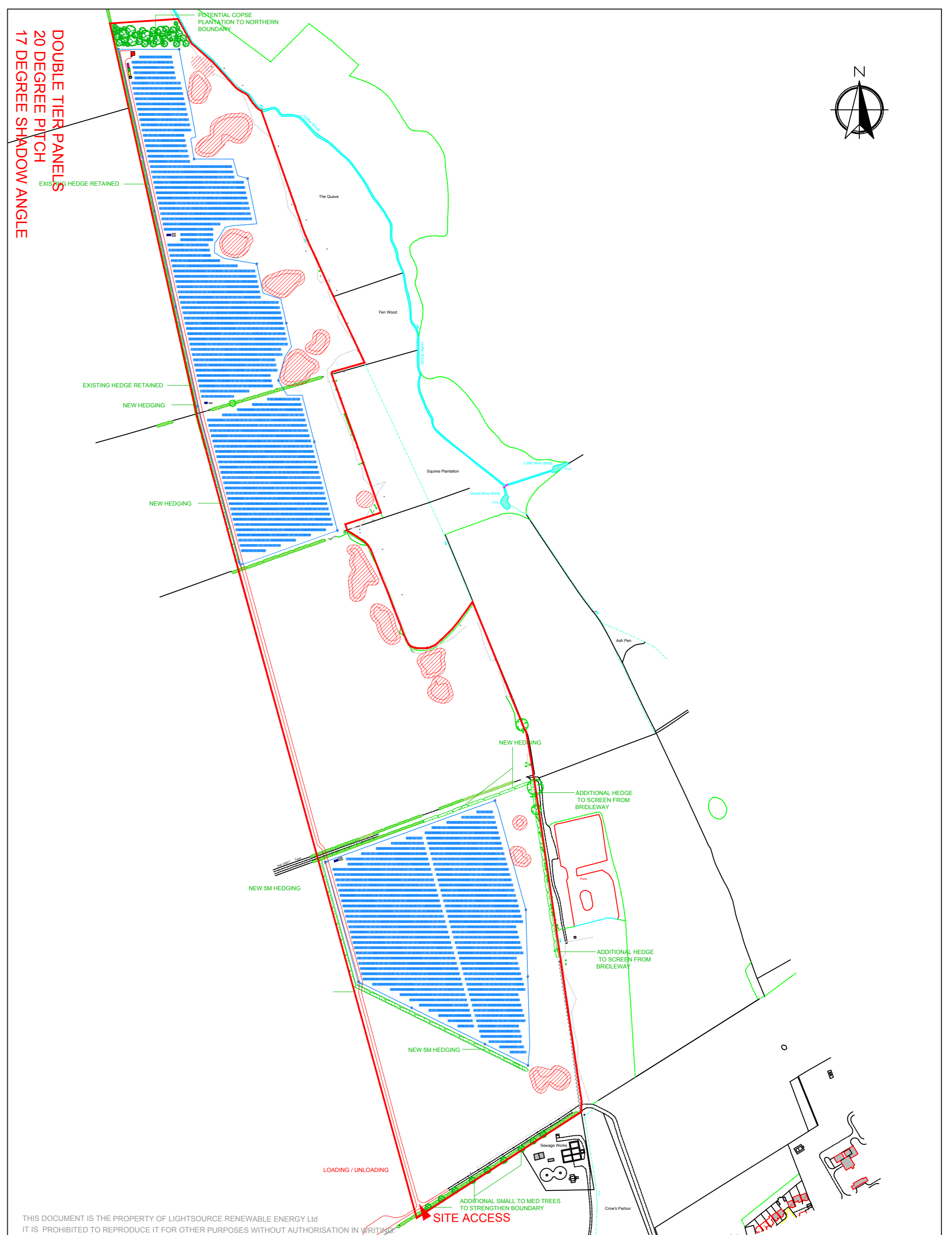


3. The Revised Proposal

Glint & Glare and Aircraft Safety

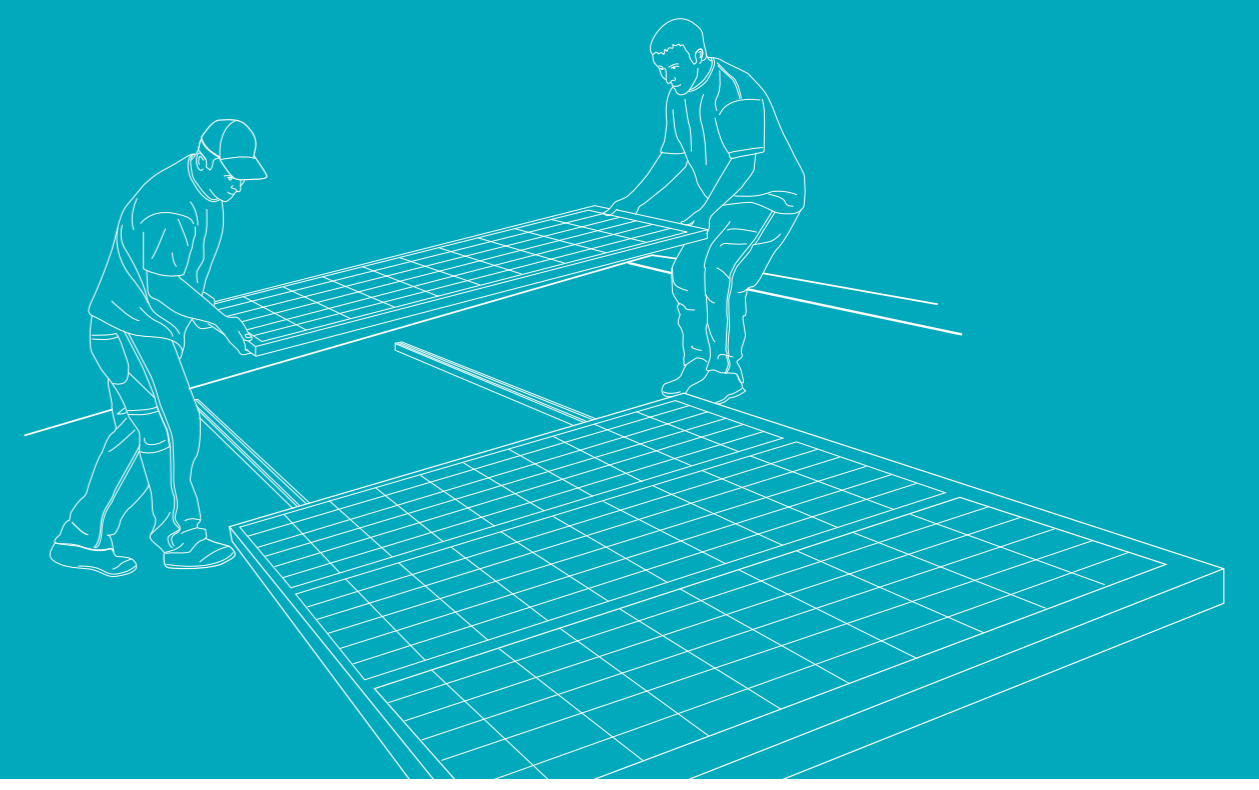
Since the withdrawal of the planning application in January, we have met with the Imperial War Museum Duxford as operators of Duxford Airfield, to fully understand their comments in respect of the withdrawn planning application. A specialist consultant is now preparing a report to consider matters of glint and glare in detail and this will be submitted with the new planning application. Because of the relatively low level of reflection from the surface of a solar panel (similar reflection from the surface of water) and the orientation of the runway at Duxford relative to the proposed solar farm, we anticipate that it will be possible for the report to demonstrate that the development is acceptable with regard to glint & glare and aircraft safety considerations, although the report will need to be awaited to confirm this.

	Site Boundary
	Site Access
	Security Fence
	Field Boundary
	Module Table 11 x 2
	Module Table 22 x 2
	Field Transformer
	Inverter Station
	DNO Substation
	Client Side Substation
	Communications Building
	Site Transformer (Aux)
	DNO Meter
	Storage Shed
	Access
	Compound Area
	Overhead Line
	Tree
	Access Gates
	CCTV



Revised proposed site layout

Land to the East of Church Street, Thriplow Solar Photovoltaic Farm Proposal



4. Other Matters Raised to Date

Noise

Solar farms are not noisy developments. There are cooling fans within the inverter cabins which generate a small amount of noise whilst the solar farm is operating during the day. Transformers also have an audible hum when stood right next to them. However, the cabins in which they are housed trap the majority of noise generated. The noise arising from the invertors and transformers is not picked up by noise monitoring equipment at a distance of 100m and the distance at which noise is perceptible to the average human is somewhat less. Given that the nearest dwelling is approximately 600m from the nearest dwelling it can be concluded that the noise impact of the development will be acceptable.

Cleaning of the Panels

Lightsource has advised that solar panels do not need regular cleaning, as rain is usually sufficient to keep them clean to an acceptable level. The panels are manually cleaned approximately twice a year with water. The water is brought on to site in water cubes on the back of a flatbed 4 x 4, and the panels are sprayed with a medium pressure nozzle to remove any dust or bird muck built up. Cleaning chemicals and high pressure spraying are avoided as they have the potential to damage the panels.

Traffic Impact and Coexistence of this with Bridleway Users

There will be a temporary period when construction traffic will need to share part of the Bridleway in the vicinity of the site. However, vehicles will moving at slow speeds and it is proposed to construct a passing bay. It is considered that there is sufficient grass verge width for vehicles to safely pass non-vehicular users of the Bridleway. Once the site is operational, there will be a very low level of traffic arising from the site.

Restoration of the Site if the Development Becomes Redundant

If the development becomes redundant the site will be reinstated to its original agricultural condition in a reasonably short timescale and it is expected that the Council will attach a condition to this effect.

Magnetic Fields

Lightsource has advised that an electric field is a phenomenon generated by two objects at different voltages, and a magnetic field is generated by current flowing in one or more electrical conductors. Together these constitute electromagnetic fields (EMF's). EMF's are produced by overhead power lines, cables and electric equipment.

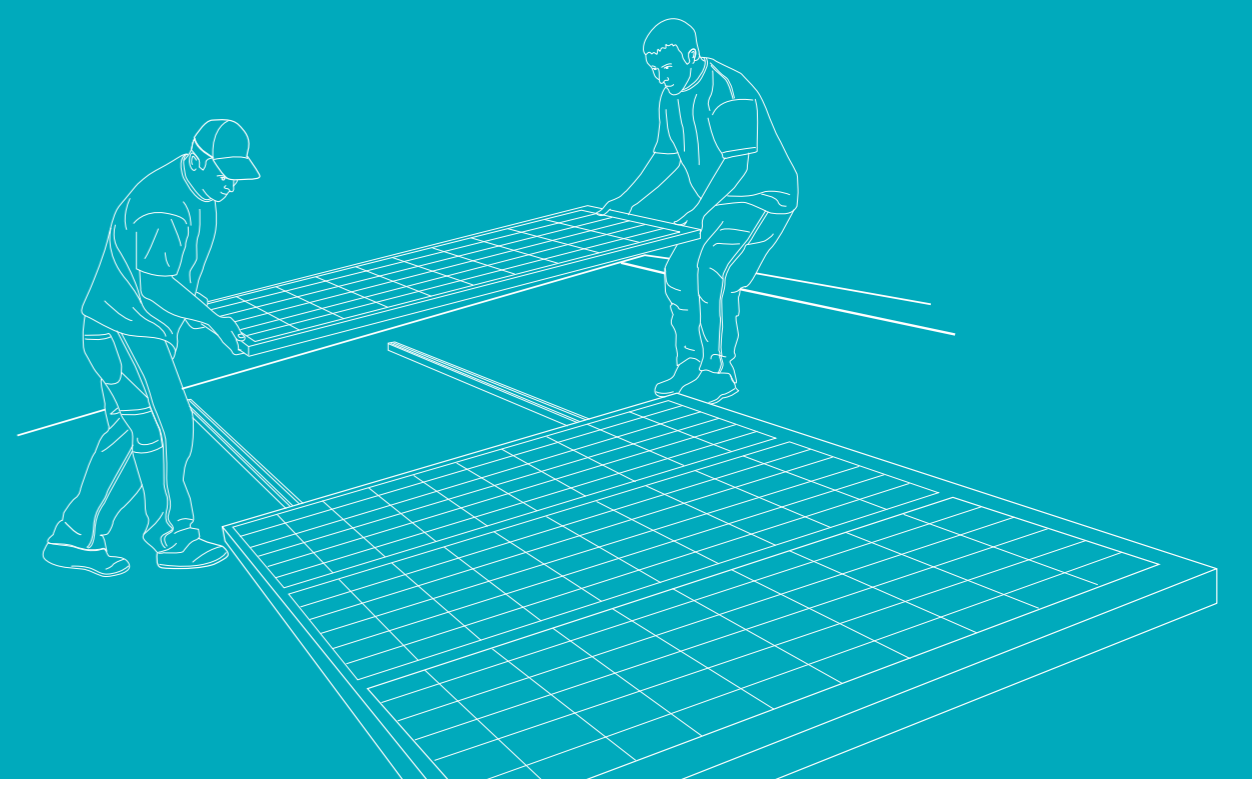
People are constantly exposed to EMF's from a variety of natural and man made sources. Solar panels (which make up the majority of the solar farm) produce Direct Current energy, and have much lower EMF outputs than common household appliances operating off the Alternating Current grid network.

There is no causal link between low level EMF exposure and adverse health effects. Protective guidelines exist to limit exposure to high levels of EMF. The UK Government policy on EMF's is for developments to comply with the ICNIRP (International Commission on Non-Ionizing Radiation Protection) 1998 Guidelines, in line with EU recommendations. This all equipment installed within the solar farm must meet European (CE) and UK electrical standards and legislation.

The ICNIRP guidelines for public exposure are 100Ut for Magnetic Fields and 5kV/m for Electric Fields. The levels of EMF's produced by solar farms are many times lower than these guidelines.

Land to the East of Church Street, Thriplow

Solar Photovoltaic Farm Proposal



5. Conclusion

In conclusion, we have sought to revise the proposal so to account for concerns that were raised through the planning application process for the withdrawn planning application. We are also preparing additional information in relation to matters such as glint and glare and archaeology and this will be submitted as part of the new planning application.

It is considered that the proposal will provide a source of renewable energy, which accords with local national planning policy and also relevant legislation. The specifics of the proposals have then been designed through understanding of the context of the application site and the surrounding area, in seeking to ensure that it is sound from an environmental perspective and in site specific terms. We would however welcome the comments of the local community and details of how to comment are provided on the next board.

Your comments

We would welcome your comments upon the revised proposal. Please leave your comments in the comments box provided.

We will respond to these comments within a further version of the Statement of Community Involvement that will be submitted to South Cambridgeshire District Council as part of the new planning application.

Your comments will also be made immediately available to the Parish Council.

