The countryside charity
Cambridgeshire
and Peterborough

The Town Hall, Market Hill
St Ives, Cambridgeshire
PE27 5AL
www.precambs.org.uk
Tel: 01480 396698
Email: office@cprecambs.org.uk

The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

16 Nov 2023
Submitted via website.

Dear Sir/Madam

Ref: EN010127 Application by Mallard Pass Solar Farm Limited for an order granting development consent for the Mallard Pass Solar Farm

Introduction
The Cambridgeshire and Peterborough branch of the Campaign to Protect Rural England (CPRE Cambs. & Peterborough) is an independent charity which works to maintain the thriving and beautiful countryside of Cambridgeshire and Peterborough, to encourage strong rural communities and to prevent urban sprawl into, and other damage to, the countryside.

Although this site is north of the Cambridgeshire & Peterborough county borders, we have been asked to respond by concerned local residents.

The purpose of this submission is to summarise points made by CPRE Cambs. and Peterborough in previous written submissions and in conference sessions. Therefore, this document will include repetition of previous points made.

My name is Alan James. I am the chairman of CPRE Cambs. & Peterborough. My profession is in the development and supply of specialist software management systems, including the management of environment, health and safety in industry. I have a PhD in materials science from the University of Sheffield and I am a Chartered Environmentalist.

CPRE Cambs. & Peterborough objects strongly to this proposal for the reasons set out below.

Background and Principle
CPRE Cambs. & Peterborough is fully aware of the accelerating effects of climate change and the need for rapid change to a low carbon economy using suitable sources of renewable energy. In our opinion, all such projects must be considered in terms of their true, life-time, environmental impact, including carbon emissions during construction, operation and decommissioning just as any other item of new infrastructure.

National Planning Policy
The National Planning Policy Framework (NPPF) states that renewable energy projects should be part of the Local Plan process, should not cause cumulative landscape or visual effects and that the only acceptable projects outside of Local Plan boundaries should be those supported by communities through the Neighbourhood Planning process.

The NPPF, para 148, states:
"The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It 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.",

and in para 151:

"To help increase the use and supply of renewable and low carbon energy and heat, plans should:
a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);"

and in para 152:

"Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning."

This project does not meet these criteria and the applicant is attempting to force this project onto local communities and landowners.

Local Planning Policy
This project is inconsistent with the Local Planning policies of South Kesteven District Council, (SKDC).

SKDC, Local Plan 2011-2036, page 78, Renewable Energy Generation, para 2.152, states:
"….. The Government has also made it clear in its Solar PV Strategy that regarding renewable energy from Solar PV it sees the greatest potential being from roof-mounted panels on the estimated 250,000 hectares of south-facing industrial and commercial roofs in England. The Council recognises this approach as having the greatest potential, with significantly less adverse impacts (such as the loss of agricultural land) compared with large scale ground mounted panels and therefore wishes to encourage such provision."

CPRE Cambs. & Peterborough agrees strongly with this statement.

Para 2.155, states:

"A crucial context to consideration of renewable energy projects will be the importance of agriculture and food production in South Kesteven. This sector is not only key in the local economy but also the District, as part of Lincolnshire, provides a strategic role in national food production. This strength is rooted in the quality of the District's farmland. Renewable energy projects that displace, sterilise or conflict with this economic asset will be unlikely to be considered favourably."

CPRE Cambs. & Peterborough agrees strongly with this statement.

Based upon clearly formulated argument, SKDC has derived Policy RE1: Renewable Energy Generation which states:

"Proposals for renewable energy generation will be supported subject to meeting the detailed criteria as set out in the accompanying Renewable Energy Appendix 3 and provided that:
a. *The proposal does not negatively impact the District's agricultural land asset;*

b. The proposal can demonstrate the support of affected local communities;
c. The proposal includes details for the transmission of power produced;
d. The proposal details that all apparatus related to renewable energy production will be removed from the site when power production ceases; and
e. That the proposal complies with any other relevant Local Plan policies and national planning policy."

CPRE Cambs. & Peterborough believes the current application demonstrates complete non-compliance with SKDC Local Plan Policy RE1.

Furthermore, the document "Appendix 3 – Renewable Energy Appendix" of the SKDC Local Plan sets out the criteria which SKDC believes should be used to judge applications for solar installations. CPRE Cambs. & Peterborough supports all of these criteria and we would draw particular attention to this extract from Criterion 9:

"The Council requires that any proposals in this District on agricultural land for solar farms will:
- *first be required to carry out an extensive search for derelict or brownfield sites – these could for example be former industrial sites, old quarries or former airfields. This test should not necessarily be confined to the District, in line with the Wherstead appeal decision;*
- *second be required to carry out a search for poorer agricultural sites i.e., of Grades 4 and 5. This test should also not necessarily be confined to the District;*
- *third be required to prove the MAFF agricultural grade classification for the proposed site and if it is Grade 3 whether or not it is Grade 3A or 3B. As there is no national mapping of these sub divisions, this will require a site survey using trail holes/augers produced by a qualified expert;"*

We do not believe this application complies with Criterion 9.

Use of Agricultural Land
Considerable weight is given by the NPPF to protecting "best and most versatile" land from development. CPRE Cambs. & Peterborough considers this proposal to be inconsistent with the NPPF in its use of best and most versatile agricultural land.

Examination of the Agricultural Land Classification Map East Midlands Region (ALC010), shows that the majority of the land to be affected by this proposal is Grade 3, with some Grade 2, the highest grade outside of the Fens and other peatlands.

The land grading system is frequently mis-used by developers to denigrate highly productive farm land which is not necessarily classed as 'best and most versatile' (Grades 1, 2 and 3a).

A favourite trick is to forget to mention that Grade 1 is reserved for exceptionally productive peatlands such as the Fens and that Grades 2 and 3 are in fact the highest-quality land outside the Fens.

The UK imports 40-60% of its food supply. Taking such a large area of highly productive land out of use is not in the national interest or in the interest of the environment. It will probably cause more food miles and greenhouse gas generation than it will save.

These views were endorsed by the Secretary of State's statement in Parliament in response to questions about the shortage of imported fresh foods in UK shops in winter 2022/23, that people should be looking to eat more seasonal fresh food such as root crops like carrots, parsnips and turnips.

The pretence that these sites will be grazed by sheep is just that, a pretence. In our experience, the vegetation under and between solar panels is not controlled by grazing sheep. Sheep have thick coats which encourage insect parasites and itching. Itching makes sheep want to rub and scratch and where better than a solar panel support or low-mounted corner frame for a good scratch?

It is well known that maintenance of solar panel installations on open land requires regular cleaning with chemical cleaners or distilled/de-ionised water, regular mechanised mowing and treatment of roadways and sub-panel areas with weedkiller, usually glyphosate.

Companies which specialise in providing solar panel maintenance services are now commonplace. Here are just a few examples of professional organisations with an online presence:

- Optisol Services Ltd
- MLR Solar-tech Solutions
- Tugwell Contracting
- Clean Solar Solutions Ltd
- CGM Group Ltd

The long-term, cumulative, impact of damage to the soil over the lifetime of the installation from a combination of shielding from daylight, regular spraying with weedkiller and routine tracking of panel-cleaning and grass-cutting vehicles and equipment does not appear to have been properly considered.

Commercial Roof Space

CPRE Cambs. & Peterborough considers that there should be an urgent change of national policy in relation to solar parks and farmland. There are thousands of acres of space on the roofs of warehouses, factories, office blocks and other industrial buildings in this country. It should be mandated that these are fitted with solar panels where practicable and any further take-up of agricultural land should be halted in the interest of national food security.

The national CPRE report "Rooftop Revolution" published in May 2023, demonstrated clearly that installing solar panels on existing rooftops and other areas such as car parks could provide at least 40-50GW in England by 2035; and longer term to 2050, and with further investment, there is potential for up to 117GW of low carbon electricity to be generated from roofs and other developed spaces.

In Cambridgeshire, the County Council is setting a national example by installing solar panels on its car parks. The St Ives busway car park is an example.

Nationally, responding to the Government's UK plan to reach net zero goals in March 2023, the Chief Executive of the UK Warehousing Association (UKWA), Clare Bottle, expressed mounting frustration that the potential offered by industrial properties in contributing to UK's solar capacity is being ignored. Warehousing accounts for approximately a third of all commercial roof space.

"While we welcome renewed commitment to solar power, the focus has been on homes rather than on industrial buildings like warehouses, many of which have huge roof space. At a time when warehousing and logistics is transitioning to electrification, consumption is rising along with prices. Our recent report into Solar PV on warehouse rooftops confirms that not only would this provide a reliable source of energy at lower cost for businesses, but it could also generate sufficient extra power to double UK's solar capacity in line with net zero targets."

Ms. Bottle added, *"The UK's 20% largest warehouses can provide 75 million square metres of roof space, equivalent to the footprint of 500,000 houses."*

An independent research report, commissioned by the UK Warehousing Association in 2022, and produced by specialist consultancy Delta Energy & Environment (Delta-EE), shows UK warehousing has the roof space for up to 15GW of new solar power, which could:

- Double UK's solar capacity
- Reduce carbon emissions by **2 million tonnes/year**
- Cut warehousing electricity costs from between 40-80%
- Save the warehousing sector £3bn/year
- Provide a more secure power supply
- Enable the sector to become a net producer of green electricity

The UKWHA has published a paper to this effect, *"Investment-Case-for-Rooftop-Solar-Power-in-Warehousing"*, and has started lobbying Parliament for support for this welcome approach to solar energy generation by holding a meeting with the House of Lords.

CPRE Cambs. and Peterborough is in absolute agreement with Ms. Bottle, not least because just a few miles south from the Mallard Pass site, there are many acres of warehousing whose roofs could be used for solar generation instead of destroying good, productive farm land. It is clear that this applicant has not researched the alternative of using commercial roof space for its solar panels.

Food Security

CPRE Cambs. & Peterborough considers this proposal to be inconsistent with current national food security policy.

In 2019, the Environmental Audit Committee, (EAC), of Parliament in their document *"Our Planet, Our Health"*, warned the UK government that it must reduce dependence on imported foods and produce more home-grown food and produce because climate change will reduce import availability.

This warning was repeated in the "*UK Food Security Report 2021"* issued by DEFRA in May 2022, along with much other data. Further data has been issued in 2023.

Droughts, wildfires and floods across Europe during the past 2 years have demonstrated that the EAC was correct in its warning. Fresh-food growing areas in the Netherlands and Spain, which are the sources of 30% of UK fruit and vegetable imports, have suffered badly and UK food prices have risen accordingly.

The summer drought of 2022 had a significant impact on UK food production and, coupled with climate-related issues in Spain, Portugal and Morocco, led to winter shortages of fresh foods in UK shops. With more droughts likely in future years, maintaining good land in production is an increasing priority. Furthermore, increasing flood risk to the Fens presents an additional threat to national food supply.

For example, due to the tidal nature of the river Great Ouse, any flooding brings with it nematodes from the saline water and these can cause crop damage for up to seven years.

Newly published research into the increasing likelihood of rapid sea-level rise due to uncontrolled melting of South Polar ice and Greenland ice leads to the conclusion that current official estimates of

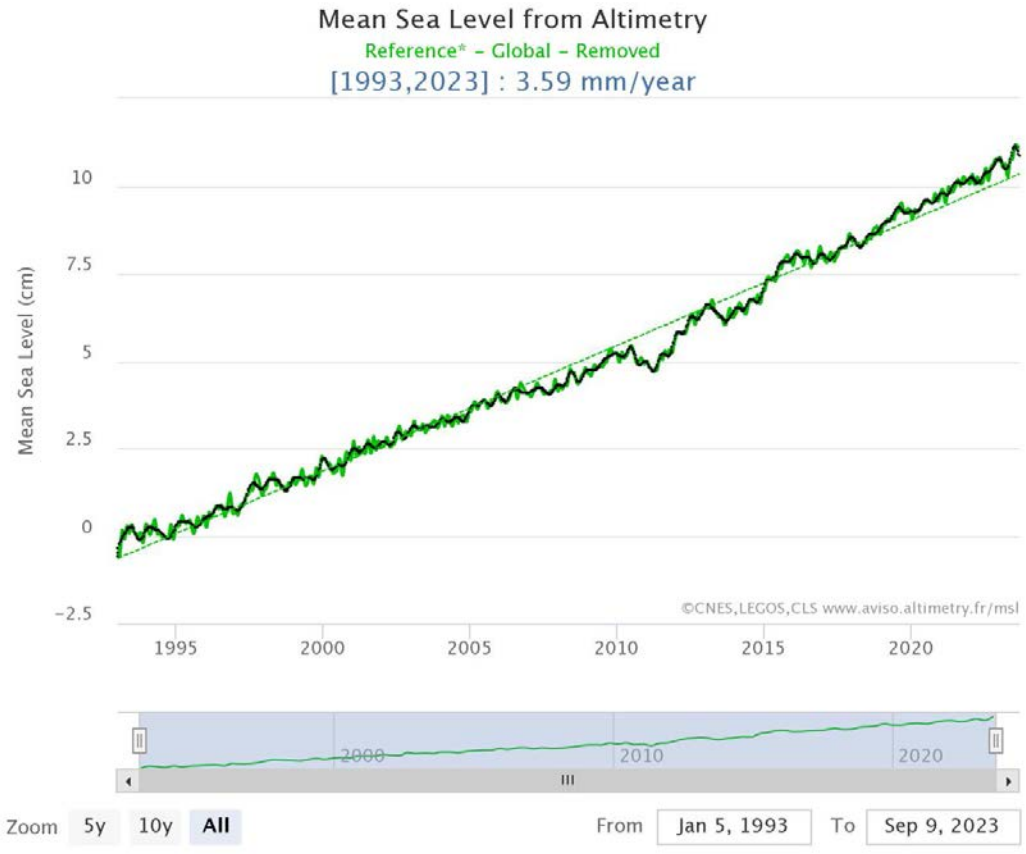
projected sea level rise and hence flood risk, are too low and that serious flooding of the Fens is almost inevitable sooner rather than later.

The current official statistics of sea level rise used in flood protection estimation and planning are based on either IPCC 2014, 1 metre by 2100, or IPCC 2019, 1.1 metre by 2100.

For example, using IPCC 2014, the South Bank of the river Great Ouse is currently being raised to protect against 1 in 80-year events, a very low level of protection.

Due to timing, neither IPCC 2014 or IPCC 2019 takes into account the accelerated melt rate of the Greenland ice sheet leading to an estimated additional 10 inches of sea level rise, as recently announced by researchers, or the increasing risk of the collapse of the Thwaites glacier in the Antarctic, leading to an estimate of up to 10 feet of sea level rise, or an estimated potential 0.5 metre sea level rise from the Pine Island ice sheet as studied by the British Antarctic Survey.

Satellite measurements collated by the Copernicus Marine and Environment Monitoring Service (CMEMS) and published on its Aviso web site show that the rate of annual global sea level rise is increasing steadily and inexorably. In September 2023, averaged over 30 years, the annual rate of sea level rise had reached 3.59 mm per annum. Averaged over 5 years, it had reached 4.34 mm per annum. See graphs below.



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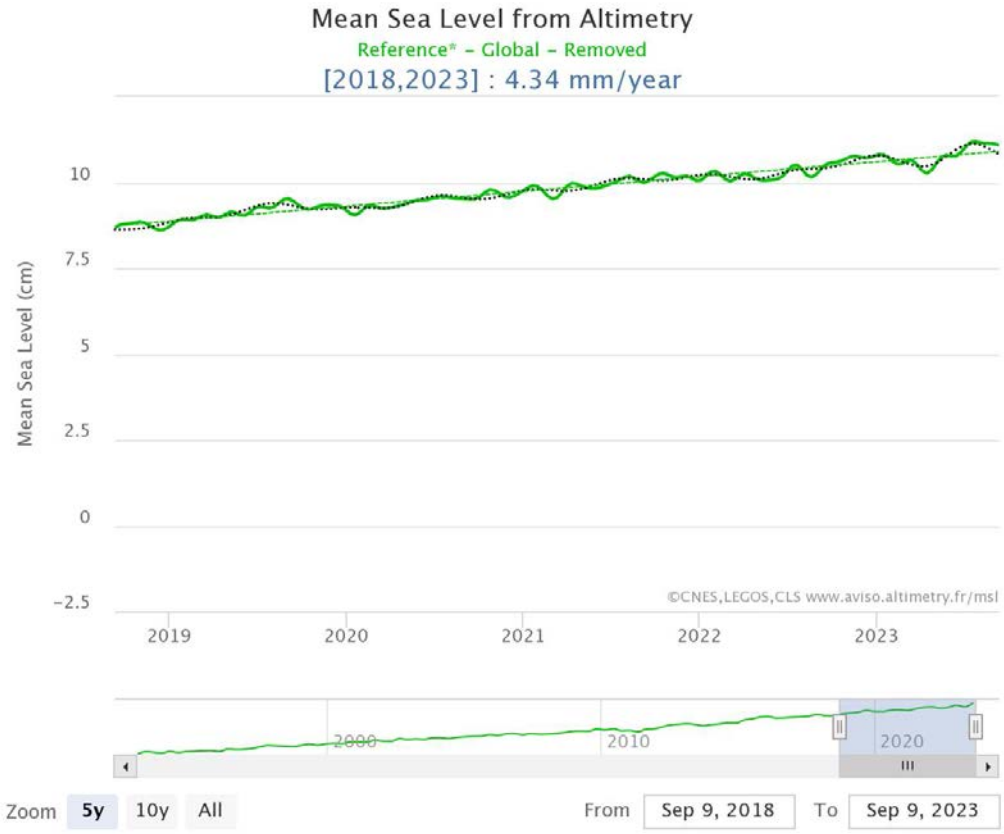

These measurements indicate a rapid increase of flood risk to the Fens and bring forward its timing. That is without taking into account the effects of high-tide and increased tidal surges due to more extreme weather events. Neither does it take into account the increased run-off being caused by unwise developments in upstream flood plains which can no longer be vetoed by the Environment Agency.

This increased risk likely compounds the food supply issue that climate change is already causing whereby countries to the south, which supply much of UK foodstuffs, will no longer be able to supply the same quantities, something which, as mentioned above, the EAC has drawn attention to.

In simplistic terms, it is CPRE Cambs. & Peterborough's view that the UK should look back at the actions it was forced to take during and after World War II in order to maintain food security and that it should be ready to implement similar actions again if forced to do so.

The issue of food security is now recognised globally at the highest levels because it is not only a risk to food security. It is also a risk to population safety. The seriousness with which this issue is now being taken is witnessed by the recent address on global sea-level rise to the UN Security Council by the Secretary General, António Guterres.

Therefore, CPRE Cambs. and Peterborough maintains its view that it would be very unwise indeed and even irresponsible to reduce the availability of productive land outside the Fens by covering large areas with solar panels.

Landscape & Design

CPRE Cambs. & Peterborough have already expressed very real concerns for the local landscape in the context of the policies of the SKDC Local Plan. However, additionally, it must be recognised that this is a quiet and relatively unspoilt area of rolling agricultural countryside.

It is our opinion that the applicant has completely misunderstood, or deliberately ignored, the characteristics of the local landscapes. The applicant has failed to comprehend the significance of these characteristics historically, visually or as the settings for local villages and farms.

Ranks of solar panels will turn the current vibrant landscape into a dead area, visibly industrial and totally unnatural.

There will be a range of large industrial box-like structures varying in height from 3 metres to 6 metres, 10 metres and 12 metres at several visible locations within the sites and accompanied in some places by unsightly office and control buildings.

The organised theft of solar panels and equipment has become a significant rural crime, leading to the use of pole-mounted security cameras, security fences and lighting around such sites.

We note that, to prevent cable and panel thefts, Cambridgeshire Police are requesting solar installers to take the following security measures:

- security rated weldmesh fencing/gating to meet LPS1175 SR2 to be installed,
- installed CCTV to be continuously monitored, and any recordings stored should they be required for evidential purposes,
- a fully qualified lighting engineer to be assigned to design in the safety and security element as well as having the ecology and wildlife in mind.

We understand that other police forces are now taking a similar approach.

CPRE Cambs. & Peterborough considers that the use of CCTV in the manner being recommended by the police will be visually intrusive in this rural landscape and completely out of character with the surrounding countryside.

It also represents a significant privacy intrusion and any such use must be in accordance with the General Data Protection Regulation, GDPR, and registered with the Information Commissioner, in accordance with the Information Commissioner's Office (ICO) document *"In the picture: A Data Protection Code of Practice for Surveillance Cameras and Personal Information".*

CPRE Cambs. & Peterborough fear that the combination of 2-metre-high security fencing, CCTV mounted on 2.5 metre poles plus security lighting will have a major adverse effect upon the landscape. We are particularly concerned by the security lighting which will negatively impact wildlife and residents.

No level of tree planting in mitigation will hide the visual harm. Trees will take time to grow and, as usual, the applicant seems to conveniently forget that trees lose their leaves in Autumn and are bare until Spring.

Public Rights of Way and Public Safety
The sites are criss-crossed by a network of Public Rights of Way (PRoWs). It is promised that these will be retained during the life of the sites except for some during construction.

CPRE Cambs. & Peterborough is concerned by the effects upon views for those using the PRoW network. We are extremely concerned at how safe the PRoW network will be following construction, especially for children and horse riders.

It is one thing to fall or be thrown from a galloping horse onto grass. It is quite another to hit a metal security fence, or a metal and silicon solar panel, or to be tossed into high voltage electricity apparatus.

How will the fences be monitored and properly maintained so as to prevent incursions?

If an accident does occur, how will emergency services safely access any injured persons in remote areas of the sites?

It will not be possible for MAGPAS to land an emergency helicopter on a sea of silicon and metal.

Effects on Ecology
We recognise that undisturbed hedgerows and verges may well bring some ecological benefits.

However, these will be semi-industrial sites with large central areas where the mess that wildlife can make may not be welcome.

What will happen when a badger family sets up home under a solar array?

Will over-flying birds, scattering panels with their mess, be welcomed or shot?

What effect on wildlife movement and corridors will the security fencing have?

How will growing trees over-hanging and shading the site be managed? By removal?

Many modern farming practices have had a negative effect on the ecology of our countryside. This is something that is now recognised and that the government, the farming industry and various environmental bodies are seeking to change through various measures. These include a new structure for farm support payments and the encouragement of wildlife areas, tree-planting and re-wilding.

Many of these changes we support.

Although many claims are made by the solar panel industry, we remain sceptical at best that an industrial landscape of solar panels will be good for the ecology of the countryside in the long term.

As a professional planning ecologist contact said "*The best way of ensuring bio-diversity net gain is not to cover the land in man-made artifacts in the first place.*"

We consider that the alternative of solar generation on roof-tops and car parks is a much better solution. It has no effect on farmland or the countryside and its ecology and alternative solar generators can be used, such as light-weight thin-film solar, solar tiles and solar roofing panels according to the location.

It appears that government supports the view that rooftop solar should be increased. An email recently received from one of our local MPs stated:

"You may be interested to know that the Government held a consultation seeking views on simplifying planning for installing rooftop solar. This includes proposals for a new permitted development right, which would enable the construction of solar canopies in ground-level non-domestic car parks without a full planning application. In addition, the Government is seeking to bring more properties into the scope of existing permitted development rights to install rooftop solar panels on domestic and non-domestic buildings. I look forward to reading the consultation outcome."

Sustainability

CPRE Cambs. & Peterborough are very concerned about the long-term sustainability of silicon solar panels. These are made, like silicon chips, in high energy processes using particular types of silica sand which, according to the Institute of Materials, Metals and Mining of which I am a member, is in increasingly short supply globally.

There is serious doubt that the solar panels will continue to operate effectively and efficiently over the now extended lifetime of the site and it is therefore likely the panels will need to be replaced during that time. For the reason given above replacement material may not be available.

Furthermore, speaking as a person with a degree and a doctorate in materials science which included considerable study of metallurgy, I believe that over the proposed lifetime of the site it is probable that the metal frames and stands on which the panels will be mounted will suffer serious corrosion, probably leading to structural collapse and a further need for replacement with all the additional carbon emissions that this will entail. This requires full independent investigation.

As far as we are aware there is no established process or industry for dealing with disposal and/or recycling of waste solar panels. Although it is possible that such a new industry may emerge. Currently, it is just an aspiration that by the time these sites cease to operate, an industry that recycles solar panels might exist.

We consider that formal carbon lifecycle analysis (CLA) should be used to prove that during their whole lifecycle - construction, operation, decommissioning and disposal/recycling - this installation will actually save more carbon emissions than it creates.

This study should include decommissioning with and without recycling and replacement at least once during the proposed lifetime. The standard evaluation used by the applicant is not a complete CLA. Without a robust carbon lifecycle analysis, the development cannot be said to be sustainable.

We believe that a clear, funded, plan for the decommissioning, removal and recycling/disposal of the materials from these sites must be in place before their development is allowed to proceed.

CPRE Cambs. & Peterborough are very concerned by the statements made by the applicant concerning the removal of facilities and reinstatement of the sites, should they cease to operate. This is a further example of lack of compliance with Policy RE1 of the SKDC Local Plan.

There are statements to the effect that panels and their frames will be removed and that the land can then be returned to agricultural use, but will a guaranteed decommissioning fund be lodged independently to ensure that there will be sufficient resources for this to happen in 40 years time?

We believe that such a fund should be lodged in escrow by the applicant.

Conclusions

This proposal is not compliant with national planning policy.

This proposal is not compliant with local planning policy.

This proposal will take out of production a large area of good quality agricultural land currently used for growing valuable food crops.

This proposal is inconsistent with required responses to the national and international issue of dwindling food supply due to climate change and conflict as being currently experienced by UK consumers.

This proposal is in direct opposition to the advice of the Environmental Audit Committee to government to increase the proportion of food grown within the UK.

There will be significant harm to local agricultural businesses, especially those which may be made the subject of compulsory purchase.

There will be significant adverse impact on residential and visual amenity.

This proposal will have a cumulative effect on local roads.

It will increase risks of disruption to the East Coast main railway line.

There will be unacceptable levels of harm to local landscapes and to views across the countryside, and significant harm to the historic landscape pattern.

There will be increased risks to the safety of walkers and riders using the existing Public Rights of Way.

There is no detailed, resilient plan for the safe decommissioning of the site and the recycling or re-use of the materials removed.

A decommissioning fund must be available, sufficient and placed in escrow in advance of any construction commencing.

A full carbon lifecycle analysis must be carried out for this installation, without which it cannot be claimed to be sustainable.

Cont'd.

CPRE Cambs. & Peterborough urge the Planning Inspectorate not to recommend approval of this application.

Yours faithfully,

Alan James BScTech, PhD, MBCS, CITP, MIMMM, CEnv

Chairman - CPRE Cambridgeshire and Peterborough