**Subject:** Screening Opinion Request - 2.5MW Solar Farm on Land East of The Lane

Dear Sir/Madam,

We wish to request a Screening Opinion under Regulation 5 of the Town and Country Planning Act (EIA) (England and Wales) Regulations 2011.

The proposal relates to a 2.5MW solar farm development on land east of The Lane, Kingstanding. Please find attached to this email the supporting documents that outline the details of this proposal.

If you have any queries, please don't hesitate to contact me.

Kind regards,

Nicol Perryman
Director

Windward Renewables Limited

# Environmental Impact Assessment

# Screening Opinion Request



**In relation to**

A proposed development of

a 2.5MWp solar farm

**at**

Land East of The Lane

Kingstanding

Needwood

Burton-upon-Trent

DE13 9PE

**Applicant**

Freewatt Developments

**Prepared by**

WINDWARD
RENEWABLES

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# 1 INTRODUCTION

A Screening Opinion is sought under Regulation 5 of the Town and Country Planning Act (Environmental Impact Assessment) (England and Wales) Regulations 2011 to establish whether an Environmental Statement is required for a proposed 2.5MW solar farm development.

The following document has been prepared by Windward Renewables on behalf of Freewatt Developments, the applicant. It aims to supply sufficient information to East Staffordshire Borough Council in outlining the initial known details of a proposal relating to the installation of a 2.5MW photovoltaic ground array on land east of The Lane, Kingstanding near Burton-upon-Trent.

To aid the Council in determining whether an Environmental Impact Assessment would be required for this proposal, the following information is supplied:

- Description of the existing site and location context;
- The nature of the proposed development;
- The context of the proposal within national and local planning policy;
- Material planning considerations and outline of potential environmental impacts; and
- The criteria in which the proposal falls with regard to the EIA Screening methodology.

## 2 SITE LOCATION AND DESCRIPTION

The proposed site is located adjacent to The Lawn and is surrounded by open countryside to the west, north and east, with the Trent Raceway racetrack to the south. The land is situated approximately 6km west of the edge of Burton-upon-Trent. The central grid reference for the proposed development is SK 16658 24778.

The proposed development is set within the agricultural land outlined in red in Figure 1 below. Although this site boundary equates to a maximum area of 11.25ha, it is likely that when the final design is confirmed, the development will have a total footprint closer to 5ha, which will be contained within this red line boundary. The location of the application site is shown in more detail and to scale in the Location Plan in Appendix 1.

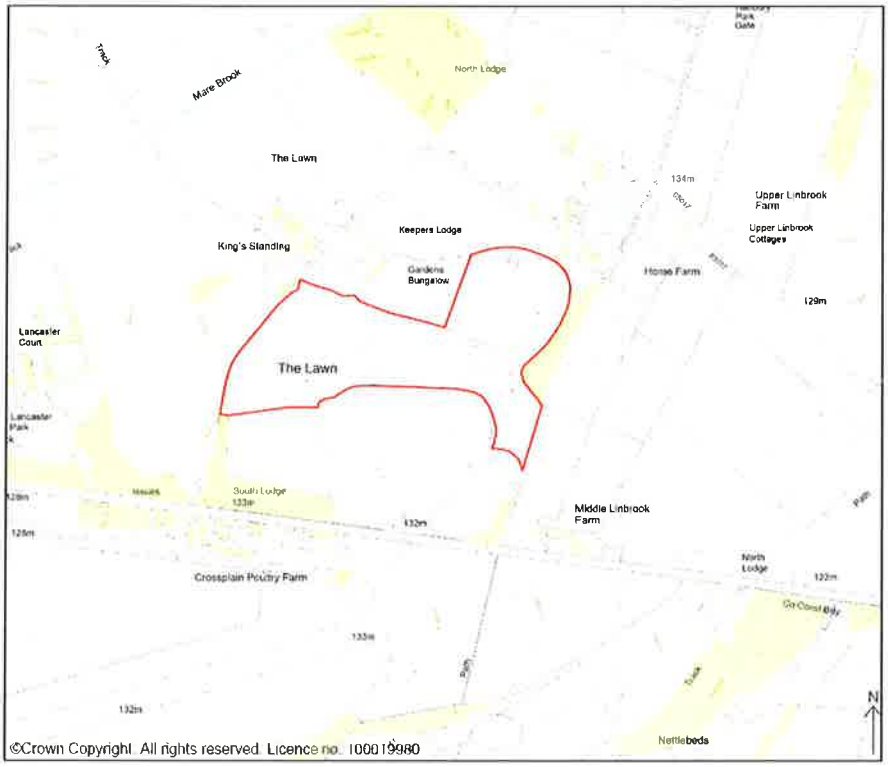



*Figure 1 – Development Location*

The application site comprises of open farmland currently used for agricultural purposes. The Natural England Agricultural Land Classification dataset classifies this land as Grade 3 quality, as shown in the plan contained in Appendix 2.

The solar panels would face in a southerly direction with excellent exposure to the sun. The land in question is bounded on its western and northern edges by hedgerow of varying height and density, which also contains occasional trees. These existing field boundaries would be preserved and any development would be contained within.

The site is ideally located for accessible and sustainable connection to the local electricity distribution network. A DNO point of connection with adequate connection capacity is located to the south-east of the site, with overhead power lines running nearby the application site offering ample opportunity for grid connection.

During the initial stages of the development of the proposal, the selection of the site considered a number of key technical and environmental constraints within the landholding. Upon taking all of these constraints into consideration and applying appropriate exclusions zones, the above location was deemed to be the most suitable site.

It is considered that the benefits of the selected site are as follows:

- Adequate amount of solar radiation free from shadow and obstructions;
- Adequate amount and shape of landtake to accommodate rows of south facing PVs.
- Adequate road network to support component delivery during construction;
- Adequate distance from the local energy distribution network to ensure minimal array loss when exporting energy.
- Suitable separation distances from residential properties;
- Suitable separation distances from public access routes including roads, public footpaths and bridleways;
- Suitable ground conditions that are free from contamination, not in flood risk zones and unlikely to host archaeological interest; and
- Suitable separation distances from sensitive landscapes and heritage designations.

The proposed site was defined after taking all of these considerations into consideration as a minimum.

## 3 THE PROPOSAL

The proposed development comprises a series of ground mounted solar panel arrays within the aforementioned site boundary shown in Figure 1. The application site has the capacity to provide up to 2.5MW of photovoltaic (PV) technology on this Grade 3 agricultural land.

The development would consist of approximately 10,000 individual PV modules. The PV module manufacturer is yet to be confirmed, although it is likely that each individual panel will be rated between 250W and 265W. Details of the candidate PV model will be confirmed within a future planning application.

The PV modules will be arranged in rows on ground mountings oriented towards the south. The proposed mounts accommodate a configuration of two panels high, which would allow the solar arrays to stand up to approximately 2.2m above ground level. The typical elevation of the mounting system is demonstrated in Figure 2 below. Further details of the typical elevation and configuration of the series of panels are contained in the plan in Appendix 3, although these details are provided as a guide at this stage and are subject to the final design of the development being completed. Confirmation of these dimensions will be supplied within a future planning application.

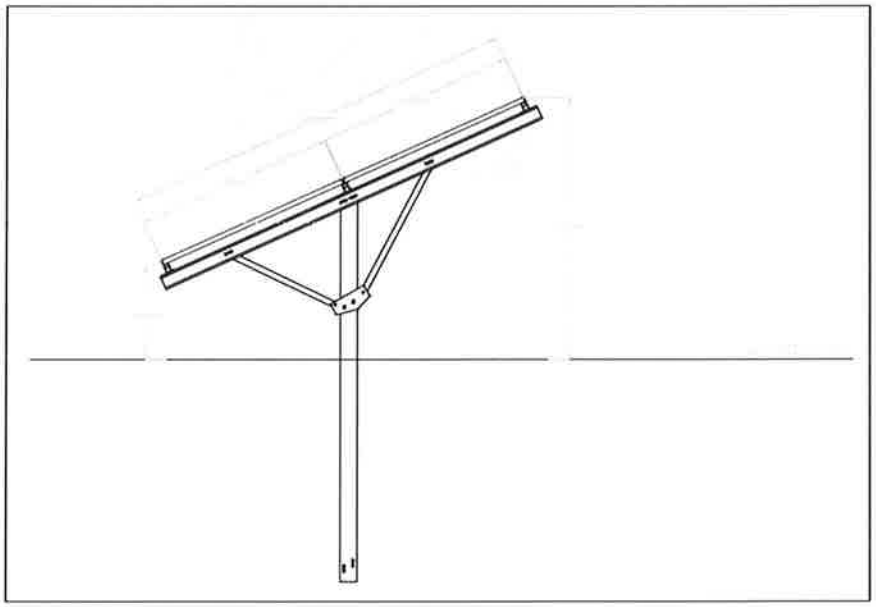


*Figure 2 – Typical Panel and Mounting System Elevation*

The leading edge of the solar panels would stand approximately 0.8m above ground level. This dimension will also be confirmed within a future planning application. Once constructed, the natural areas between the arrays will continue to exist and a wild flower mix would be planted to offer ecological enhancement. In addition, the land will host sheep which will help to maintain the areas between the arrays during the development's operational lifetime.

*Figure 3 – Sheep Grazing in Solar Farm*

In addition to the array of PV panels on mounting systems, the application will incorporate the installation of associated ancillary infrastructure, which will include:

- Underground cabling;
- A number of enclosed temporary buildings containing inverters, transformers and switch gear;
- DNO substation building at the grid connection point;
- Security fencing and landscape planting;

- Pole mounted CCTV security cameras and associated cabling;
- Temporary construction and storage compounds used during installation; and
- Improvements and extensions to the existing access tracks.

The existing road infrastructure surrounding the application site is excellent, with easy links to the main trunk roads for deliveries during the construction period. The application site would be accessed from the public highway via an existing access road that serves the farm on a day to day basis. Any internal access roads that will be proposed will be within the farm's landholding and will be extensions to the access roads already being used. Little additional permanent road infrastructure would be required. The details of the new access tracks through the application site will be detailed in a future planning application.

The installation is expected to have a lifetime of 25 years. Once the development has reached the end of its life, the modules, mounting systems and buildings housing electrical equipment will be removed from the site. The land would then be restored to its original condition and agricultural use would continue.

The preliminary details of the proposal will evolve through the design process and as a result of discussions with the Council and identified stakeholders. Therefore, the above information is provided provisionally based on the current design and subject to amendments.

# 4 WIDER BENEFITS OF THE PROPOSAL

Solar Farms are one of the methods of meeting this country's increasing electrical energy demands. They are an excellent way to reliably generate electricity over at least 25 years.

The UK's electricity demand is set to continue increasing for many decades to come. As the international crude oil and gas costs continue to rise, large-scale power stations will look for alternative fuel sources. Domestic houses will move away from fossil fuels in preference of electrical based heating systems. Any power stations continuing to use fossil fuels will not only have increased running costs but they will also be required to invest in carbon-capture technologies to reduce their carbon output. This is outlined in the UK's stringent Kyoto carbon reduction targets.

The demand for electricity will have to be met by investment in solar photovoltaics, wind turbines, tidal energy, hydroelectricity and nuclear energy.

This proposal would create on average 2,500MWh of energy annually. This would be enough energy to power the equivalent of 625 local homes every year and amounts to a carbon saving of 1,175 tonnes per annum. The application site is ideally situated to serve the surrounding community. In the case of this solar farm all of the electricity will be exported back into the grid for use in the local community's grid network.

The benefits of the proposed development would extend further to the local community in potentially enhancing the local economy. During the construction stage, the services of local tradesmen and businesses would be utilised in the construction of the solar farm. These services include wholesalers, ground workers, architects, electricians, builders, roofers, scaffolders and other specialist suppliers. The approval of a future application for this development would only add to the possibilities of additional local job creation. There would then be on-going work creation through the maintenance of the site. These services would include electricians, cleaners and sheep farmers.

# 5 PLANNING POLICY

National and local planning policy is positive towards renewable energy development. The Government has signed up to legally binding targets on carbon emissions requiring a reduction of carbon emissions of 15% by 2020 and by 80% by 2050. In order to meet these targets, immediate action must be taken in order to provide alternative sources of energy generation. Local renewable energy generation such as this proposal can help in meeting the above targets. In England the national policy context is set out in the National Planning Policy Framework (NPPF)[1], published 27th March 2012.

## 5.1 NATIONAL PLANNING POLICY

The NPPF clearly sets out that: *"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."* (Paragraph 14). For decision taking this means:

*"Approving development proposals that accord with the development plan without delay; and where the development plan is absent, silent or relevant policies are out-of date, granting planning permission unless: Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or Specific policies in this Framework indicate development should be restricted"* (Paragraph 14).

Paragraph 17 sets out a series of core planning principles including the following which state that planning should be,

- *"...not simply be about scrutiny, but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives; proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs. Every effort should be made objectively to identify and then meet the housing, business and other development needs of an area, and respond positively to wider opportunities for growth. Plans should take account of market signals, such as land prices and housing affordability, and set out a clear strategy for allocating sufficient land which is suitable for development in their area, taking account of the needs of the residential and business communities;*

[1] DCLG – National Planning Policy Framework – March 2012

- *support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the use of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy);*

- *contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;*

- *promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production); and*

- *conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations."*

The NPPF states at Paragraph 19 that *"significant weight should be placed on the need to support economic growth through the planning system"*.

Section 3 entitled *"Supporting a prosperous rural economy"* states that planning policies should *"promote the development and diversification of agriculture and other land based rural businesses"* (Paragraph 28).

Section 10 of the NPPF entitled *"Meeting the challenge of climate change, flooding and coastal change"* is the most relevant section of the NPPF to this proposal.

Paragraph 93 states that, *"Planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure."*

Paragraph 94 states that local planning authorities should, *"adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations."*

Paragraph 95 states that in order to support the move to a low carbon future, local planning authorities should:

- *"plan for new development in locations and ways which reduce greenhouse gas emissions;*
- *actively support energy efficiency improvements to existing buildings; and*
- *when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards."*

Paragraph 96 states that in determining planning applications, *"local planning authorities should expect new development to:*

- *comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and*
- *take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption."*

Paragraph 97 states that to help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. They should:

- *"have a positive strategy to promote energy from renewable and low carbon sources;*
- *design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;*
- *consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources;*
- *support community-led initiatives for renewable and low carbon energy, including developments outside such areas being taken forward through neighbourhood planning; and*
- *identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers."*

Importantly Paragraph 98 of the NPPF states that local planning authorities should, *"not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and approve the application if its impacts are (or can be made) acceptable."*

The NPPF requires the planning system to, *"contribute to and enhance the natural and local environment"* (Paragraph 109). However, only if there is *"significant harm resulting from a development"*, should planning permission be refused.

The NPPF also seeks to conserve and enhance the historic environment and requires LPA's to require applicants to assess the impact of a proposal on any heritage assets. However, *"the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance"* (Paragraph 128).

Furthermore, *"where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal"* (Paragraph 134).

Finally, the NPPF requires that LPA's *"should approach decision-taking in a positive way to foster the delivery of sustainable development"* (paragraph 186), *"look for solutions rather than problems"* and *"seek to approve applications for sustainable development where possible"* (Paragraph 187).

## 5.2 LOCAL PLANNING POLICY

The current development plan for East Staffordshire consists of:

- East Staffordshire Local Plan (2006) (Saved Policies)
- Staffordshire and Stoke on Trent Minerals Local Plan (1994-2006, Saved Policies)
- Staffordshire and Stoke on Trent Joint Waste Local Plan (2010-2026)
- Neighbourhood Plans (as and when adopted)

Whilst the saved policies from the 2006 local plan are not considered to constitute an up-to date plan in all respects, it is still the basis for decision making and due weight should be given to it unless specific policies are nor compliant with the NPPF.

Relevant saved policies are as follows:

- NE1 - Development outside development boundaries
- T1 – Transport: General Principles for new Development

In 2007, East Staffordshire Borough Council started work to review the currently adopted 2006 Local Plan and replace it with a new Local Plan (formerly referred to as the Core Strategy). East Staffordshire Borough Council has now submitted the Local Plan to the Planning Inspectorate for independent examination. The Local Plan presents a development strategy and planning policy framework that will meet the development needs of the borough's residents over the period 2012-31.

Policies relevant to the proposed development include:

- SP8 – Development outside settlement boundaries
- SP 26 – National Forest
- SP28 – Renewable and Low Carbon Energy Generation

The Supplementary Planning Document relevant to this proposal is Staffordshire County Council's 'Planning for Landscape Change – Supplementary Guidance to the Staffordshire and Stoke-on-Trent Structure Plan 1996 -2011'.

## 5.3 OTHER MATERIAL CONSIDERATIONS

### 5.3.1 PLANNING PRACTICE GUIDANCE

On 6 March 2014 the Department for Communities and Local Government (DCLG) launched a Planning Practice Guidance web-based resource. This was accompanied by a Written Ministerial Statement which includes a list of the previous planning practice guidance documents cancelled. This includes the Planning Practice Guidance for Renewable and Low Carbon Energy. This document has now been archived and replaced by the 'Planning Practice Guidance' (PPG).

The PPG identifies the planning considerations for a range of renewable sources including solar farms. The PPG states that the deployment of large-scale solar farms can have a negative impact on the rural environment, particularly undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.

### 5.3.2 ENERGY AND CLIMATE CHANGE POLICY

There is now a plethora of guidance at both national and international level which identifies that climate change is the greatest long term challenge facing the world today and there is an urgent need for action.

At the international level, the United Nations Framework Convention in 1992 adopted as a long term objective the need to stabilise greenhouse gases to safe levels. National Governments, including the United Kingdom, sign up to the Kyoto Protocol in 1997 to reduce greenhouse gas emissions.

Since then various United Nations Climate Change Conferences have taken place to further act to reduce emissions. The Durban Climate Change Conference (2011) agreed to commence work on a new climate deal that would require both developed and developing countries, including China, to cut their emissions and be legally bound to do so, and this was further agreed at the recent Doha Climate Change Summit (December 2012). The terms are to be agreed by 2015 and come into force from 2020.

The European Union (EU) has also undertaken work to both commit to further reduce emissions and improve energy security. The EU subsequently introduced the Renewable Energy Directive 2009/28/EC[2] in April 2009 which sets mandatory national targets for the overall share of energy from renewable resources and sets a common framework across the EU for the promotion of renewable energy.

The Climate Change Act (2008)[3] sets a legally binding target to reduce UK carbon emissions by 80% by 2050 and reducing targets of at least 26% by 2020, against a 1990 baseline. The Act also established the Committee on Climate Change (CCC) which is responsible for setting binding 5 year carbon targets on a pathway to achieve the 2050 target.

The UK Renewable Energy Strategy[4] (UKRES) states that the UK needs to increase the use of renewable electricity substantially. The document sets out the means by which the UK can meet the legally binding target of 15% of energy consumption from renewable sources by 2020 as mandated in the Renewable Energy Directive, which includes heat and transport energy as well as electrical. This will mean a very substantial increase in the share of renewables in about a decade. Overall consumption in 2012 was 4.1%. However, growth in renewable energy consumption since 2008 has progressed at an average increase of 0.4%

[2] Directive 2009/28/EC of the European Parliament and of the Council, 'Promotion of the Use of Energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC', European Union
[3] Climate Change Act 2008 - Climate Change Act 2008, HMSO
[4] HM Government – The UK Renewable Energy Strategy – July 2009

per year. If this rate of growth continues to 2020 the overall consumption would only reach half (7.3%) of the legally mandated requirement. To meet with the binding targets an average annual growth rate of approximately 1.4% is required.

To achieve the consumption targets an increase in the amount of electricity generated from renewable sources is required. The UKRES contains a 'lead scenario', which suggests that more than 30% of electricity should be generated from renewables in the UK by 2020. Without a significant increase in renewable electricity generating developments, such as this proposal, the targets set by the Government to meet internationally binding targets will not be met.

### 5.2.1 UK SOLAR STRATEGY

In October 2013 DECC published the UK Solar Strategy: Part 1[5]. The purpose of this document was to set out the guiding principles which inform the Government's Solar PV strategy. The principles set out are:

- Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers.
- Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020 and in supporting the decarbonisation of our economy in the longer term – ensuring that all the carbon impacts of solar PV deployment are fully understood.
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives – ensuring that we address the challenges of deploying high volumes of solar PV.

[5] DECC – UK Solar PV Strategy Part 1: Roadmap to a Brighter Future – October 2013

The UK Solar PV Strategy: Part 2[6] focuses on the Government's ambition for the key market segments, how they will be realise through innovation and partnership and the benefits that this will bring for jobs and investment in the UK, in addition to vitally important emissions reduction.

[6] DECC – UK Solar PV Strategy Part 2: Delivering a Brighter Future – April 2014

# 6 KEY ISSUES

## 6.1 LANDSCAPE AND VISUAL IMPACT

Whilst in general solar farm developments cover a larger area than other renewable energy technologies, their maximum height is limited, which allows for visual impacts to be mitigated through careful screening. Visibility may occur in the immediate vicinity of application sites, however, National Planning Policy is clear in that visibility does not solely make a development unacceptable. An appraisal of the landscape and visual impact assessment of the proposal will accompany a future planning application, which will assess in further detail the considerations set out in the sections below.

### 6.1.1 APPLICATION SITE CONTEXT

This proposal comprises a solar farm development with each panel standing at a maximum elevation of 2.2m above ground. The final application site is expected to be spread across approximately 5ha and this will be contained within the 11.25ha red line area shown in Figure 1. The elevation of the land within the red line area ranges from 128m agl in the south-western corner of the application site to 132m agl at the centre of the site and towards the northern boundary. The elevation of the land decreases slightly and gently from the centre of the site towards the eastern boundary to a height of 130m agl. The site is bordered on its northern and western boundaries by hedgerow of varying height, which also contains occasional trees. These existing field boundaries would be preserved and allowed to grow to a height to screen the development as far as possible. Additional planting would also form part of a landscaping scheme to be agreed as part of a future planning application.

The character of the area surrounding the site is relatively flat with gentle undulations. The area is also characterised by its large intermittent woodland blocks. The topography of the land and the existing screening features would limit visibility of the development even within the immediate area.

Long distance views of the development would be extremely limited due to the size, amount and density of the existing woodland blocks around the application site. It is therefore anticipated that this proposal will have a very limited visual impact on the appearance and character of the wider landscape, from the few places that the site might be visible.

### 6.1.2 RESIDENTIAL AMENITY

The site is located approximately 6km west of the edge of Burton-upon-Trent in a rural location. Due to the rural nature within the immediate area surrounding the application site, there are fewer residential receptors in the vicinity of the proposed development. The nearest residential receptors to the proposed development are sparsely distributed and located to the north. The largest impacts are anticipated to be confined to the local area only, with the properties in the immediate vicinity having the potential to experience the most significant views.

### 6.1.3 LANDSCAPE IMPACT

The proposed development is not located within any statutorily designated landscape site, nor are there any within a 5km radius of the application site. For a development of this scale, it is not anticipated that the proposals would directly impact any statutory landscape designation.

The lack of statutory landscape designations on or around the site is significant is assessing the level of harm arising from the proposal, although it is noted that the application site lies within the National Forest. As such, although it is acknowledged that the land in question is currently undeveloped and that there would be some change to the landscape character of the site, this is not considered to be significant or permanent and that the landscape could accommodate the solar farm proposed without its overall character being significantly harmed.

### 6.1.4 HERITAGE IMPACT

Cultural heritage assets including Scheduled Monuments, Listed Buildings, Conservation Areas, Historic Parks and Gardens, Battlefields and World Heritage Sites were considered fully during the siting of the proposed development. Heritage assets within a 5km radius of the application site are displayed in the plan contained in Appendix 4.

There are no World Heritage Sites, Historic Parks and Gardens, Conservation Areas or Battlefields within the vicinity of the application site. There are no Scheduled Monuments within 2km of the development.

The majority of the listed buildings within proximity to the site are Grade II listed and the nearest three are mileposts located over 600m from the site boundary. These Listed Buildings are also in locations where views into and out of the development site would be limited.

The effects of the development on the above mentioned designated sites, and others deemed necessary in the proximity, would be assessed further within a future planning application. At this stage, due to the size of the site area and the height of the modules above ground, it is anticipated that all assets and designated sites outside of 1km from the application site would experience very limited impacts.

#### 6.1.5 MITIGATION

Due to the minimal height of the proposed development, careful and considered mitigation options can aid in limiting the landscape and visual effects of the proposal further. However, any mitigation measures are only useful if they are consistent with and sensitive to the local landscape character.

Subject to the final design, the proposals will comprise a landscaping scheme within the application site. The landscaping features will aim to mitigate any potential landscape and visual impact of views surrounding the site. The landscaping proposed would also aid in effectively screening the development from the private views of residents in the vicinity of the application site. The details of the landscaping measures will be outlined in full detail as part of a future planning application.

### 6.2 ECOLOGY AND NATURE CONSERVATION

In the selection process of the development of this site, attention was given to both the local and wider ranging potential ecological impacts. The local appraisal related to the potential ecological value of the development site itself, whilst the wider environmental impacts were considered with attention specifically on legally protected sites and species within a search area.

The solar farm development would be contained within the agricultural land outlined in the Location Plan contained in Appendix 1, although the final design of the development is not intended to expand to the full extent which is outlined. The perimeter of the red line development site area is bound in the north and west by hedgerow with intermittent trees.

The existing field boundaries would be preserved and maintained during both construction and operation of the proposed development. Where required, they will be increased in height up to 2.5m in order screen the PV panels and associated equipment. Where required, additional hedgerow planting may be implemented as part of a landscaping scheme which would form part of a future planning application.

The application site is not thought to have any significant ecological merit. The fields in which the development will be contained are predicted to be of low intrinsic ecological value.

Within the wider context, the site does not lie within any statutorily designated ecological site, nor are there any within a 2km radius of the development. A plan showing the statutorily designated ecological sites within a 5km radius of the application site is contained in Appendix 5. It is not anticipated at this stage that the proposed development would have a negative impact on the ecology of any statutorily designated sites.

Furthermore, it is considered that the proposal would create a positive impact on ecology generally. This would be achieved through the introduction of biodiversity measures, as discussed in the following section, and also through the wider and substantial positive contribution in the production of clean, renewable energy that would offset approximately 1,175 tonnes of $CO_2$ every year.

A Phase 1 Ecology Survey will accompany a future planning application to ensure, through robust fieldwork, that any ecological impact of the proposals will be minimised.

### 6.3 AGRICULTURAL LAND AND BIODIVERSITY IMPROVEMENTS

The site is located on Grade 3 agricultural land (see Appendix 2) which is considered to be land that is capable of producing moderate yields of a narrow range of crops. This is considered to be the most limited grade of agricultural land for arable use. The land can also be relatively easily reinstated to its previous agricultural use at the end of the lifespan of the solar farm.

Taken together with the benefits that would accrue from the generation of renewable energy, it is not considered that the loss of this poorer quality land for arable purposes would be a reason to require an Environmental Impact Assessment on these grounds.

Indeed, the temporary change in nature of the agricultural use of the land can aid in enhancing the biodiversity of the site and the local area. The BRE National Solar Centre has produced Biodiversity Guidance for Solar Developments[7] which provides guidance to planners and the solar industry on how they can support biodiversity on solar farms. The Guidance states that solar farms present an excellent opportunity for biodiversity as there is minimal disturbance to the ground. Following construction, there is little human activity apart from occasional maintenance visits.

[7] BRE (2014) Biodiversity Guidance for Solar Developments. Eds G E Parker and L Greene.

A Habitat Management and Enhancement Plan will accompany a future planning application for these proposals. This Plan will outline the positive biodiversity measures that will be implemented as a result of the solar farm development, which may include the planting of grassland, wildflower strips, hedgerows or climbers.

## 6.4 FLOOD RISK

National guidance set out in the NPPF requires development to be directed away from areas at highest risk of flooding, but where development is necessary, making it safe without increasing flood risk elsewhere.

The Environment Agency's indicative floodplain mapping indicates that the site is entirely located within Flood Zone 1. Flood Zone 1 is defined as land where the risk of flooding each year has been assessed to be less than 0.1%.

Solar farm developments are not generally associated with increasing flood risk. The installation of the rows of PV panels does not require any concrete as the posts are simply driven into the soil. Whilst the total development area is estimated to be to 5ha (subject to final design), a negligible amount of this area would comprise of an increase in impermeable surfaces.

Rainfall falling onto the solar panels would runoff directly to the ground beneath and due to the permeability of the underlying soils, partly infiltrate the ground or runoff to the nearest watercourse as it does in the site's existing greenfield state. Even in extreme surface water flood events, the solar farm could remain operational as the panels will be elevated approximately 0.8m from the ground surface.

The development, including all ancillary works, would be constructed with flood resilience measures incorporated into the design as standard. By preserving the existing drainage and watercourse network surrounding the site, the development will not impact on the drainage of this site or the neighbouring fields. This development will therefore have a limited impact on the flood risk at the site or the surrounding areas, as no material changes which will impact the site's flood risk are being proposed.

Although flood risk is not anticipated to be an issue with this proposed development, the site will be in excess of 1ha. As a result, a Flood Risk Assessment following the Environment Agency's Flood Risk Assessment (FRA) Guidance Note 1 will accompany a future planning application.

## 6.5 ARCHAEOLOGY

A review of the information held by the National Record of the Historic Environment identified no records of any archaeological sites within the application site boundary. The groundwork required for this development is minimal and has very little impact on below the soil/subsoil layers. An assessment of archaeological potential will be included as part of a future planning application.

## 6.6 AVIATION

Potential aviation issues have been considered during the development of this proposal. Generally, solar PV panels are designed to avoid adverse effects from reflected light which would cause an impact to aviation activities, thus conforming to the Air Navigation Order 2009. By their very nature, PV panels are designed to absorb as much light as possible in order to yield maximum efficiency, and therefore minimise reflection. Although there will be minor reflection, as experienced with every glass surface, this will certainly not produce enough glare to impact on someone observing the array, even at a very close proximity. Furthermore, the panels incorporate anti-reflective coating to ensure any glare is minimal, therefore mitigating any possible aviation impacts relating to light reflection.

## 6.7 NOISE AND POLLUTION

The construction of the proposed development has the potential to give rise to minor noise and air quality impacts, however, these are considered to be negligible and would have no material planning impact. The noise and air quality impacts generated during the 14 week construction phase would not be significant in magnitude, nor would they be any more unusual to those from farming activities or a typical construction site.

Once installed, the solar panels will operate silently and produce no emissions detrimental to air quality. The only possible noise would arise from the enclosed buildings housing transformer and inverter equipment, which have the potential to emit a slight fan noise. However, this noise would only be audible when standing immediately adjacent to the equipment housing and it would certainly not extend beyond the application site boundary.

Any traffic movements during the operational stage would be light for occasional maintenance and so additional pollution as a result of these movements would be negligible.

## 6.8 ACCESS AND TRAFFIC

The proposed solar farm would be accessed from the public highway via an existing access point used by the farm regularly for deliveries and by large farming vehicles. This would offer an appropriate and secure access to the development site. New access tracks within the development site will be constructed to a design that will be specified as part of a future planning application. The new dedicated access track will not result in the loss of any high value habitat.

Due to the small scale nature of the component parts, the solar panels can be easily transported to the site on standard articulated vehicles. This allows all construction traffic to use existing public access roads regularly used by HGVs and farming vehicles without any modifications to public highways. The wider road network is considered to be more than adequate for the delivery of components to the site during the construction phase of the development.

The construction of the development will involve the intermittent movement of vehicles to the site over a 14 week installation period. Any periods of high frequency HGV movements would be planned outside of peak traffic hours.

During the development's operational lifetime, access is required to the site occasionally for operation and maintenance purposes. Visits to the site will be infrequent and so there will be a limited amount of additional traffic to the site during the operational phase. This would not result in an increase in traffic above what is currently experience on the local road network.

## 6.9 SAFETY

The proposed development will be designed with full consideration given to the incorporation of relevant safety measures.

### 6.9.1 ELECTRICAL SAFETY

The electrical safety of the development will be covered by Engineering Standard G59, which sets out the requirements for the electrical safety of generating systems connected to the grid. All electrical infrastructure will be contained within the secure confines of the development site.

### 6.9.2 SECURITY

To ensure safety and security within the local community, a security fence will be constructed around the external perimeter of the site. The details of any security fence will be outlined in

a full planning application. The fence will be a neutral and natural colour, and any existing (and proposed) hedgerow will be encouraged to grow through it to aid in minimizing visual impact.

A gated entry will be used for the site with access granted only to secure personnel. In addition, a number of CCTV cameras will be installed within the development site area to allow for ongoing site surveillance.

### 6.10 SOCIO-ECONOMIC

The proposed development is for a renewable energy scheme, which would produce clean energy that would contribute towards the District's energy targets. The proposal would create on average 2,500MWh of energy annually. This would be enough energy to power 625 local homes and in turn offset 1,175 tonnes of $CO_2$ every year.

The benefits of the proposed development would extend further to the local community in potentially enhancing the local economy. During the construction stage, the services of local tradesmen and businesses may be utilised in the construction of the solar farm. These services include wholesalers, ground workers, architects, electricians, builders, roofers, scaffolders and other specialist suppliers. The approval of a future application for this development would only add to the possibilities of additional local job creation.

# 7 EIA SCREENING METHODOLOGY

This proposed development site is located within England and so is covered under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. The Planning Practice Guidance provides further guidance on EIA in England.

As the proposed development is an installation for the harnessing of solar radiation for energy production, it does not automatically require an EIA under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. However, the proposed development falls within the definition of a Schedule 2 development, under Section 3 (a) *'Industrial installations for the production of electricity, steam and hot water'*.

Schedule 3 of the 2011 EIA Regulations explains that if a proposed project is listed in Schedule 2 and exceeds the relevant threshold/criteria, the proposal is required to be screened by the local planning authority to determine whether significant effects are likely and hence whether an EIA is required. It provides the selection criteria to do this, which are grouped into three main categories:

- Characteristics of the development;
- Environmental sensitivity of the location;
- Characteristics of the potential impact.

In the classification of such a development, there are a number of threshold criteria to determine whether an EIA is required. The selection criteria for screening a Schedule 2 development is detailed broadly in Schedule 3 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011, which has been considered in full in the following pages of this document.

## 7.1 CHARACTERISTICS OF DEVELOPMENT

As required by Schedule 3, the characteristics of the development are found in the table below.

| | | |
|---|---|---|
| a) | The size of the development | The proposed development consists of rows of PV panels over an estimated total area of 5ha. The PV panels would be approximately 2.2m in height above ground. The total generation capacity is 2.5MW. |
| b) | The cumulation with other development | There are no existing, consented or proposed solar farm developments within the proximity to the site that would result in any negative cumulative impact. |
| c) | The use of natural resources | The proposal aims to the harness natural solar radiation resource to generate electricity. The use of natural resource during the construction of the development will be low. |
| d) | The production of waste | The application's development process will not amount to any significant waste materials. |
| e) | Pollution and nuisances | The application will not cause any pollution during its operational lifetime. |
| f) | The risk of accidents, having regard in particular to substances or technologies used | The risk of accidents is rare and any possible incidents are restricted to the confined surroundings of the development. |

*Table 1 – Characteristics of Development*

## 7.2 LOCATION OF DEVELOPMENT

The more environmentally sensitive a location, the more likely it is that the development should require an EIA. This proposal is not thought to be in a significant location and this is evidenced by the responses to the criteria put forward in Schedule 3, which is contained in the following table.

| | | |
|---|---|---|
| a) | The existing land use | Agricultural. The proposed development would not prohibit continuing agricultural use and the site can be restored to its original condition when the development is removed at the end of its lifespan. |
| b) | The relative abundance, quality and regenerative capacity of natural resources in the area | The proposed application makes use of agricultural land, which is the dominant form of land use in the surrounding area. The proposed development would not prohibit continuing agricultural use. The proposal would utilise a renewable natural resource and local resources would not be depleted by the development. |
| c) | The absorption capacity of the natural environment, paying particular attention to the following areas- | |
| | i. Wetlands | The site is not within a designated wetland area. |
| | ii. Coastal zones | The site is not in a designated coastal zone. |
| | iii. Mountain and forest areas | There are no mountains within the vicinity of the site. The application site is located within the National Forest boundary, however, there are no forested areas within the red line area of the development. |
| | iv. Nature reserves and parks | The site is not located within, or expected to have any impact on, a nature reserve or park. |
| | v. Areas classified or protected under Member States' legislation; special protection areas designated by Member States pursuant to Directive 79/409/EEC and 92/32/EEC | The application site is not inside or within the immediate vicinity of any special protection areas. |
| | vi. Areas in which the environmental quality standards laid down in Community legislation | The application site is not inside or within the immediate vicinity of any areas under environmental quality standards. |

| | | |
|---|---|---|
| | have exceeded | |
| | vii. Densely populated areas | No densely populated areas are directly affected by the proposal. The surrounding area is of a rural nature. |
| | viii. Landscape of historical, cultural or archaeological significance | There are no statutorily designated areas of historical, cultural or archaeological significance in the immediate vicinity of the site. |

*Table 2 – Location of Development*

## 7.3 CHARACTERISTICS OF THE POTENTIAL IMPACT

Schedule 3 states that the potential significant effects of the development must be considered in relation to the criteria set out above, having particular regard to the impacts described in the following table.

| | | |
|---|---|---|
| a) | The extent of the impact (geographical area and size of the affected population) | The extent of the impact is expected to be low due to the local rural population in the immediate vicinity. The visual impact of the proposal would be low as the height of the rows of PV panels is 2.2m above ground level. As such, any visual impact would be a localised effect and the impacts are not likely to be significant enough to warrant an EIA. |
| b) | The trans-frontier nature of the impact | The proposed development is not considered to have any significant trans-frontier impacts. |
| c) | The magnitude and complexity of the impact | The magnitude of the development is not thought to be large or complex. |
| d) | The probability of the impact | The probability of the impact is well defined as the PV panels have no moving parts and would occupy a fixed position, only operating within the defined parameters. |
| e) | The duration, frequency and reversibility of the impact | The duration of the impact is limited to a 25 year lifetime, after which point the impact would be reversed and the land would be reinstated. |

*Table 3 – Characteristics of the Potential Impact*

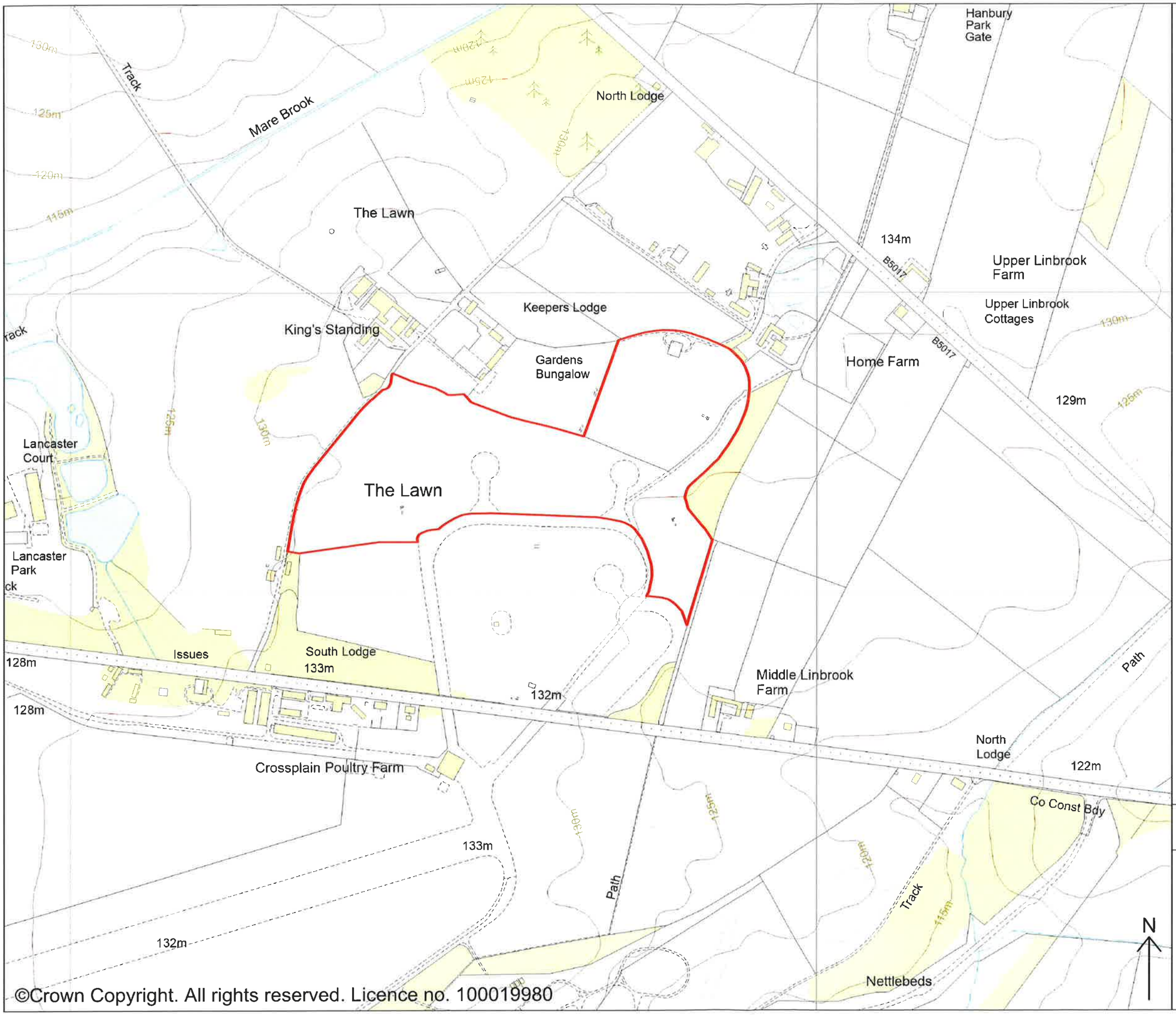
## 8 CONCLUSION

The information supplied above assesses the proposed development with respect to the material considerations and the local and national planning policies. It is considered that the proposal will be fully compliant with national planning policy, current local policy and emerging local policy. Further to this pre-application assessment, it is not considered that the proposed development would have a negative impact on the surrounding area. Sufficient evidence of the proposed development's impacts will be submitted as supporting information to a formal planning application.

The nature of the proposed development is solar energy production, which will give rise to positive environmental effects because the electricity generated will displace the greenhouse gases that would normally be emitted through fossil fuel electricity generation and contribute to climate change. It is considered that as the development site is not in a particularly sensitive location, the benefits of this proposal would outweigh any potential impacts.

This proposal is not for a major development of more than local importance, it is not expected to be particularly environmentally sensitive or within a vulnerable location and it is not considered to have unusually complex or potentially hazardous environmental effects.

Due to the nature and scale of the proposed scheme, and assessed against relevant legislation and development specific criteria, it is our opinion that this proposal would not comprise EIA development. We would request the Local Planning Authority's confirmation that an Environmental Statement would not be required to accompany this planning application.






## Legend

Proposed development site area

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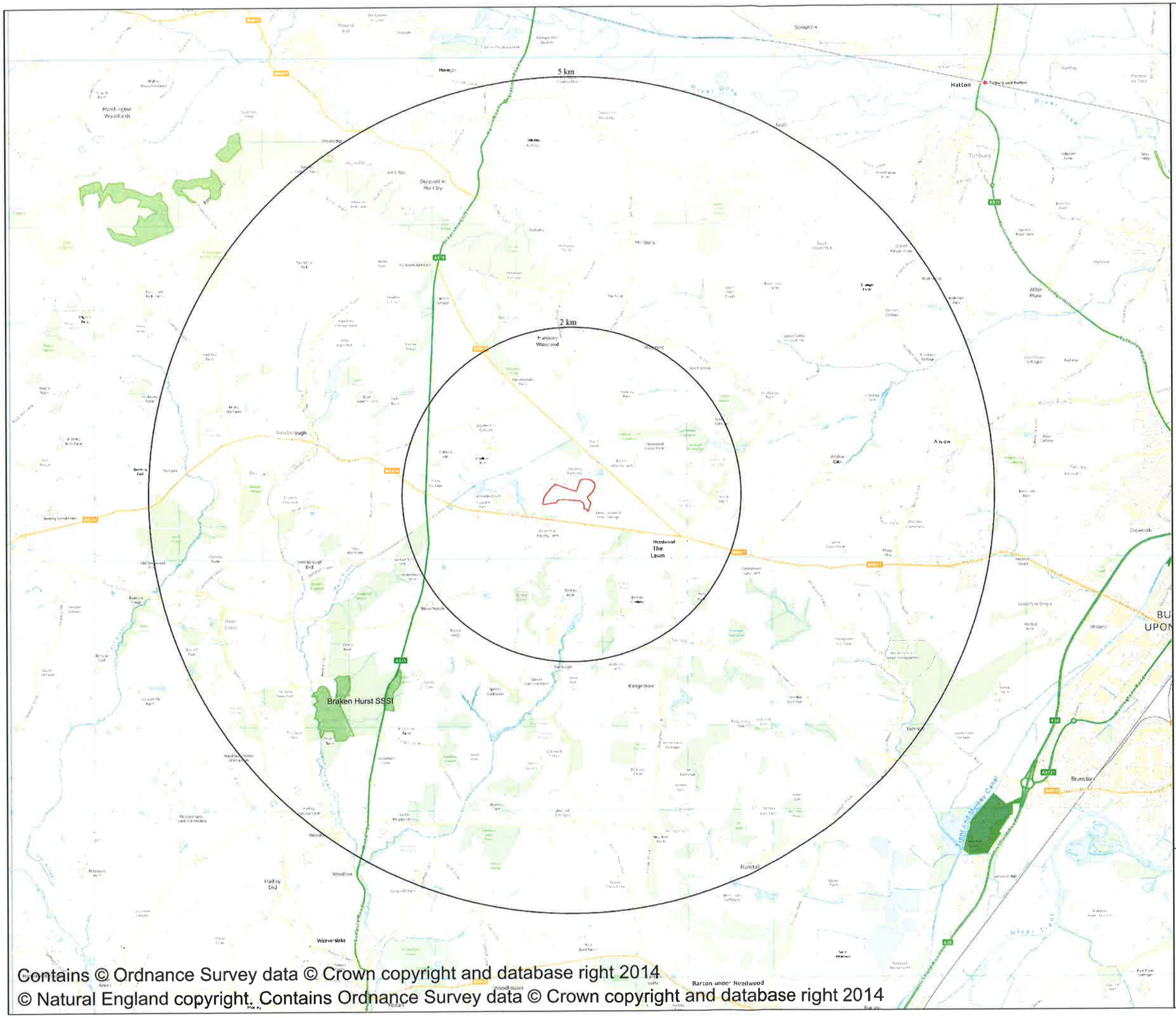
| | |
|---|---|
| **Project**<br>Land East of The Lane Lane, Kingstanding, Needwood, Burton -upon-Trent, DE13 9PE | **Drawing Title**<br>Location Plan |
| | **Scale**<br>1:5,000 @A3 |
| | **Date**<br>10.03.2015 |




## Legend

- Site Boundary
- Local Nature Reserves
- Sites of Special Scientific Interest

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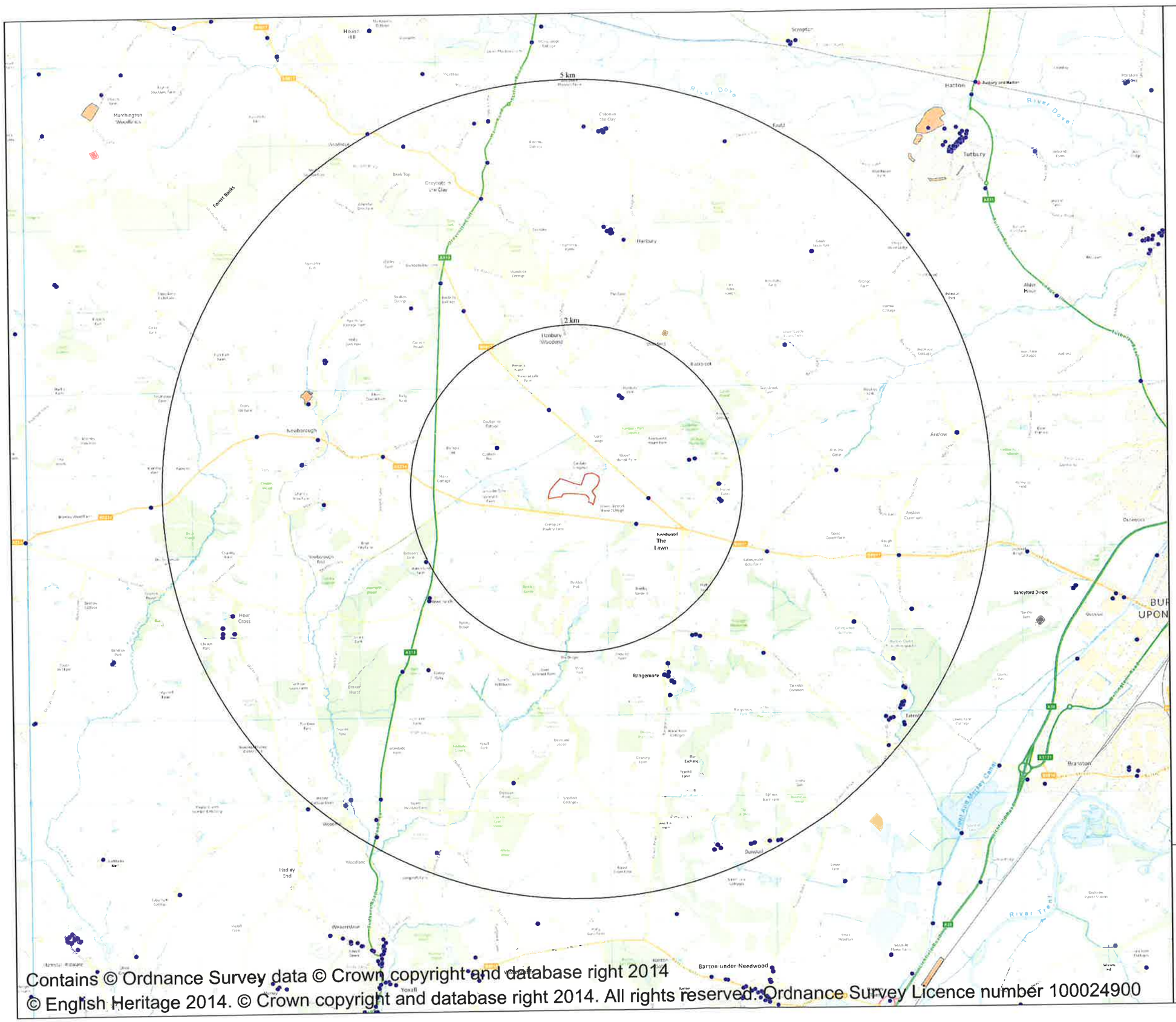
| | |
|---|---|
| **Project**<br>Land East of The Lane Lane, Kingstanding, Needwood, Burton -upon-Trent, DE13 9PE | **Drawing Title**<br>Ecology Plan |
| | **Drawing no.**<br>15-EC002 |
| | **Appendix 5** |




## Legend

- Site Boundary
- Listed Buildings
- Scheduled Monuments

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The English Heritage GIS Data contained in this material was obtained on 23/06/2014. The most publicly available up to date English Heritage GIS Data can be obtained from http://www.english-heritage.org.uk

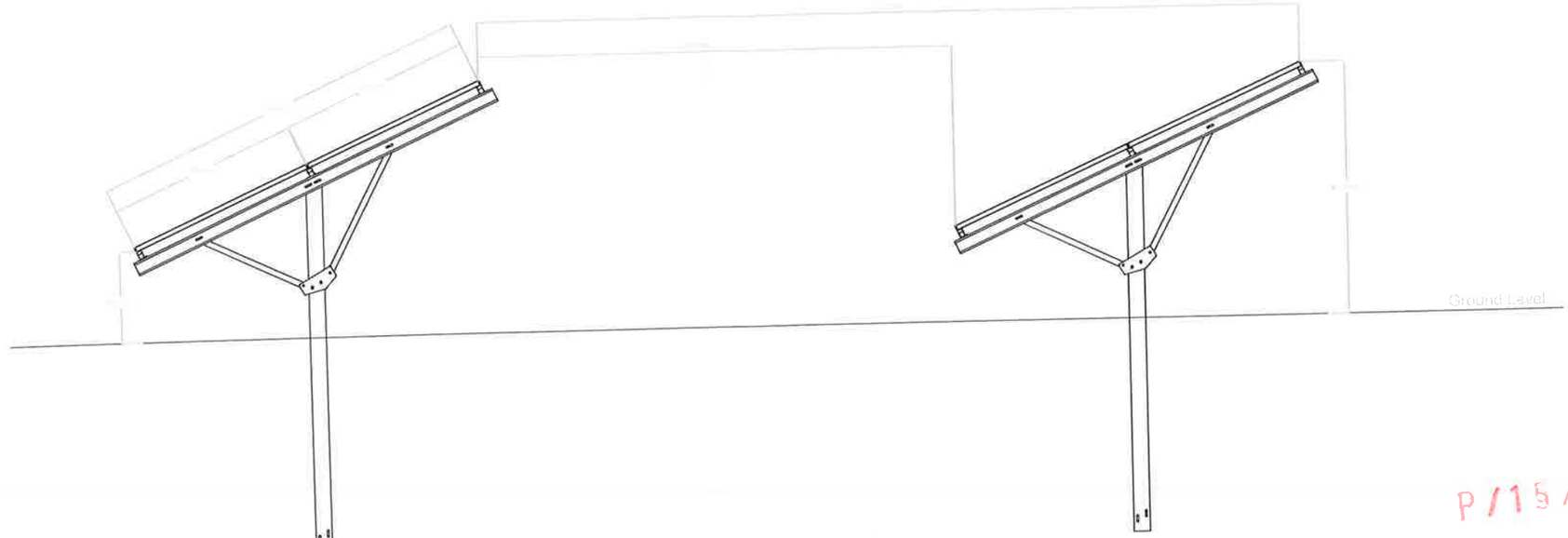
| | |
|---|---|
| **Project**<br>Land East of The Lane Lane, Kingstanding, Needwood, Burton -upon-Trent, DE13 9PE | **Drawing Title**<br>Heritage Plan |
| | **Drawing no.**<br>15-CH001 |
| | **Appendix 4** |


## Legend

- Site Boundary
- Grade 1 Agricultural Land
- Grade 2 Agricultural Land
- Grade 3 Agricultural Land
- Grade 4 Agricultural Land
- Grade 5 Agricultural Land
- Non Agricultural Land
- Urban Land



| | |
|---|---|
| **Project**<br>Land East of The Lane Lane, Kingstanding, Needwood, Burton -upon-Trent, DE13 9PE | **Drawing Title**<br>Land Classification |
| | **Drawing no.**<br>15-EC001 |
| | **Appendix 2** |






| | | |
|---|---|---|
| **Project**<br>Land East of The Lane, Kingstanding, Needwood, Burton -upon-Trent, DE13 9PE | **Drawing Title**<br>PV Elevation<br>**Scale**<br>1:50 @A3<br>**Date**<br>05.03.2015 | **DRAWING FOR INFORMATION PURPOSES ONLY. NOT FOR CONSTRUCTION USE. ALL DIMENSIONS TO BE USED AS A GUIDE ONLY AND SUBJECT TO FINAL DETAILED DESIGN**<br><br>**NOTES**<br>Standard height of 2.2m to tip of PV panels. This may vary slightly dependent on local conditions and minor ground undulations. The maximum height to the tip of each PV module is estimated to be 2.3m |