

Appendices to PtP's Response to the Site Selection Report ("SSR") submitted in relation to Berden Hall Solar Farm

PINS Reference:

S62A/22/0006

11 April 2024

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Applicant's FAQ document March/April 2022

Appendix 1 Extract from FAQ document published by Statera



Statera Energy Limited, 1st Floor, 145 Kensington Church Street, London, W8 7LP.

Pelham Solar - FAQs

Following the public exhibiton held at Berden Village Hall on Monday 21 March and a number of emails with various questions, we have produced a Frequently Asked Questions document which seeks to address any points raised.

How can we trust Statera to deliver appropriate landscaping given the inadequate planting around the battery installation? A specialist landscape architect has been appointed to design the landscaping for this project and a dedicated site management team will be appointed to manage the landscaping when the site is operational. The Local Planning Authority will ensure compliance with any associated landscaping condition.

Where would the crops produced on this land now come from if the solar development were to be built? 72% of the site is grade 2 and 3a best and most versatile land. The remaining 28% of the site is 3b and poorer quality land. However, of this BMV area, certain areas will be fallow on a rotation basis. The land is not suitable for high value crops and has principally been used for cereal production. The land will contribute to the UKs energy generation and energy security. Its loss from food production will be balanced against this energy benefit. The Government is balancing multiple demands on farmland food, energy, and environmental schemes (see - Farming is Changing, DEFRA June 2021).

During construction which route would be used for the vehicles to gain access to the site, how many vehicle movements would there be and for what length of time? What size will the vehicles be? The current proposal is for the vehicles to travel west on the A120 up to Little Hadham, and through Clapgate and Patmore Heath on Albury Road. It is then proposed that the vehicles will turn onto Ginns Road and travel through Stocking Pelham before arriving at the site access point just before the entrance to Berden. The types of vehicles used in the construction traffic will include 15.4 metre artics, 10m tipper trucks, 10m rigid trucks, 12m rigid trucks and a front end JCB. On average there will be approximately 16 two-way movements per day.

What happens at the end of the scheme's operational life? It is a common misconception that once the life cycle of a solar farm comes to end, that the land becomes 'brownfield'. If planning permission is granted, it is temporary, usually between 25 and 40 years. The metal poles supporting the panels are driven into the ground, but the topsoil is not removed during construction or operation of the development. Once the planning permission term has lapsed, the land reverts to its original use, in this case agricultural. There is no obligation on the Local Authority to consider the land as previously developed.

How many solar developments have Statera Energy built to date and where are these sites situated? Statera has not developed any solar projects to date. However, the founders of the company and members of the project construction team have had extensive experience of developing and building solar projects in the UK since 2011.

What steps are you planning that will assure people that battery storage plants erected by your company will be safe and well screened from view? This application is for a solar development and not a battery storage facility. It is proposed that the solar development will be screened with hedging and trees.

Statera Energy has already built a battery storage facility at Pelham substation. Why has this facility not been adequately screened? The trees planted around the perimeter of the Pelham battery storage facility did not take and grow as expected having undertaken various maintenance visits. A solution to this is being considered internally at Statera.

Which company supplies solar panels to Statera Energy and what precautions have been taken to ensure there are no human rights issues in their production? Statera acknowledges the imperfect and complex nature of the global supply chain. The supplier of solar panels for this project will be determined at the procurement phase and is therefore yet to be decided.

Appendix 1 (cont'd) Extract from FAQ document published by Statera



What other locations did you consider? None. Statera Energy has selected this site on its merits alone and believes it is a good site to promote. There are no sites in the local area which are classed as grade 4 ALC or brownfield which would be commercially viable to promote that make use of the grid connection available.

Why have you chosen this location? The high irradiance levels in the area combined with the site's close proximity to the Pelham substation makes it suitable for a solar development. We think the site is well screened and its impact is lessened by the presence of the existing National Grid substation and overhead power lines.

How are the solar panels recycled at the end of their life? The industrial process by which solar panels are recycled differs depending on whether the panels are silicon-based or thin-film based. In both cases, the parts are separated, and components are re-used where possible.

How efficient is solar power? Generally, solar farms operate at a capacity factor in the range of 10-25%.

How many acres of solar panels would be required to produce the same output of electricity per annum as one offshore wind turbine? Offshore wind is a great solution which operates very effectively. A significant land take for solar is undoubtedly needed to match an offshore wind turbine. However, a system built primarily on renewable energy sources needs to incorporate a range of different technologies so that it is not overly dependent on a single intermittent resource (e.g. wind, solar or hydro). In this case, it is not always windy, and when the wind doesn't blow, the system needs other technologies like solar to fill the gap. In September-2021 for example, wind generation was at historically low levels. It was solar energy (as well as, amongst other sources, fossil fuel plant such as coal and gas that prevented the UK from experiencing service disruption (i.e. blackouts).

Farmers in the countryside protect their land, crops and livestock with well-tended mixed hedging. Why is it necessary to protect solar panels with high security fencing and CCTV cameras? (The farmland growing crops and livestock is likely to be of greater value than with solar panels) It is standard industry practice to install fencing and CCTV cameras around a solar farm. This helps to ensure the owner and operator of the scheme can monitor the site to protect the value of the equipment, ensure no damage is being done by larger mammals and the site is operating in a safe manner. Without this infrastructure the project will not to be financeable and/or insurable.

Who will be making the profit from the electricity generated? The development of energy assets is a commercial endeavour and therefore several parties including Statera, its investors, contractors and energy suppliers should make money from developing the solar farm. Government and the UK relies entirely on the private sector to develop and operate generation assets.

When will it be built? If consent was given the aim would be to build the scheme out the following year (i.e. Spring/summer 2023) this might slip to 2024. Winter construction would be avoided, if possible, but this is all subject to change.

How long will it take to build the site? A scheme of this size would typically take 4-6 months for summer construction and 6-9 months to build out in the winter.

Will it affect walkers access? No, if planning is granted legal public rights of way will not be moved or closed during construction or operation. Following feedback at the 21 March 2022 exhibition, we are also investigating the possibility of proposing additional public access routes as part of the proposals.

Will the project be noisy? No, there is a small noise from the inverters, but this is not expected to be a notable impact.

Plan of Clavering Hall Farm (800 acres)

Appendix 2: Land at Clavering Hall Farm (over 800 acres)

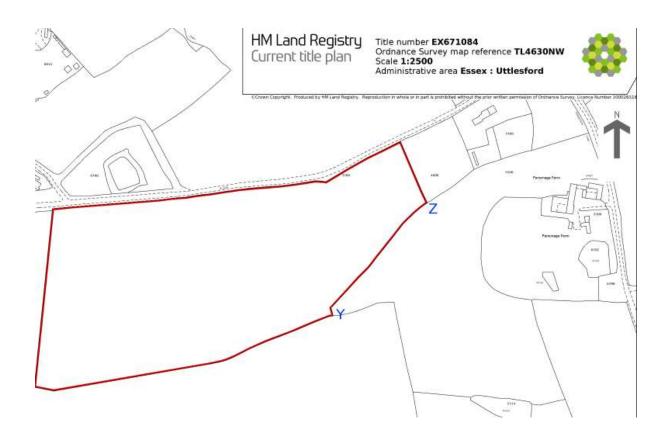


Location relative to Berden:



Land forming part of alternative site IS 1 registered under title number EX671084

Appendix 3 – Land included within Alternative Site IS1



Satellite view of parcel of land included within Alternative Site IS1





Search for land and property information

Title register for:

land on the south side of Pelham Road, Clavering (CB11 4PN) (Freehold)

Title number: EX671084

Accessed on 06 April 2024 at 15:05:19

This information can change if we receive an application. This service can not tell you if HM Land Registry are dealing with an application.



This is not an official copy. It does not take into account if there's a pending application with HM Land Registry. If you need to prove property ownership, for example, for a court case, you'll need to order an official copy of the register.

Register summary

Title number	EX671084
Registered owners	
Last sold for	£135,000 on 19 October 2011

A: Property Register

This register describes the land and estates comprised in this title.

Entry number Entry date

1	1990-11-19	ESSEX: UTTLESFORD
		The Freehold land shown edged with red on the plan of the above Title filed at the Registry and being land on the south side of Pelham Road, Clavering (CB11 4PN).
2	2003-02-03	The points mark Y and Z on the filed plan are no longer of any significance and should be ignored since the entry in the register which gave rise to this reference has been cancelled.

B: Proprietorship Register

This register specifies the class of title and identifies the owner. It contains any entries that affect the right of disposal.

Class of Title: Title absolute

Entry number	Entry date	
1	2011-11-14	PROPRIETOR:
2	2011-11-14	The price stated to have been paid on 19 October 2011 was £135,000.
3	2011-11-14	RESTRICTION: No disposition of the registered estate (other than a charge) by the proprietor of the registered estate is to be registered without a certificate signed by a conveyancer that the provisions of Clause 11.2.4 of a transfer dated 19 October 2011 made between (1) have been complied with or that they do not apply to the disposition.

A Transfer dated 19 October 2011 made between

(1)

NOTE: Copy filed.

Site Selection document prepared in connection with Lullington Solar Farm

Issue Sheet

Report Prepared for: Lullington Solar Farm Ltd., a subsidiary of Island Green Power.

Lullington Solar Farm
Site Selection Assessment

June 2021

Prepared by:

Signature:

Name: Sarah Clinch

Title: Associate Planner

Approved by:

Signature:

Name: Ian Douglass

Date: June 2021

Title: Head of Planning MRTPI

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1 Introduction

- 1.1.1 This Site Selection Assessment (SSA) has been prepared by Lanpro Services to support the full planning application for a proposed 50MW ground mounted solar farm which will cover an area of 70.18 hectares on land north of the village of Lullington, on behalf of Lullington Solar Park Limited. The development includes associated infrastructure namely solar panels, conversion units, a substation and associated landscaping and swales.
- 1.1.2 The site is currently in arable/pastoral agricultural use.
- 1.1.3 The applicant has instructed an Agricultural Land Classification Report from a suitably qualified professional (M W Palmer of Land Research Associates Ltd) to assess the site. The assessment was surveyed in accordance with the Ministry of Agriculture, Fisheries and Food Agricultural Land Classification of England and Wales (Revised Guidelines and Criteria for Grading the Quality of Agricultural Land) published in 1998. The report accompanies the planning application and should be referred to for full details.
- 1.1.4 The Agricultural Land Quality Classification Report has found that the site is made up of 15% grade 2, 34% grade 3a and 48% grade 3b agricultural land. The remaining 3% is defined as "other land" (blocks of woodland or water bodies). Therefore, the site consists of 49% of best and most versatile and 48% of moderate quality agricultural land. The report notes that the site has some limitations with regard to slight 'droughtiness' caused by the combination of the relatively dry local climate and restricted moisture storage in deeper subsoil layers.
- 1.1.5 The purpose of this assessment is to set out the selection process that the applicant went through to choose a suitable application site. The selection process evaluated potential sites located on previously developed/non-agricultural land and lower grade agricultural land (i.e. 100% grade 3b, 4 or 5) that is not of high environmental value.
- Paragraph 170 of the National Planning Policy Framework (NPPF) advises that planning policies and decision should contribute to and enhance the natural and local environment through a number of measures, with one of them being "recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland".
- 1.1.7 The Governments Planning Practice Guidance (PPG) which was published in March 2014 and further updated in March 2015, provides further guidance on renewable energy and in particular on large scale ground mounted solar farms. Paragraph ID 5-013 states that:
 - "The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in 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."
- 1.1.8 It acknowledges that the site selection of any large scale solar farms should be carefully considered "where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays."
- 1.1.9 A Ministerial Statement in March 2015 advises that where a proposal of a solar farm involves the best and most versatile agricultural land, it will need to be justified by the most compelling evidence. It goes on to say that every application needs to be considered on its individual merits, with due process, in light of the relevant material considerations.
- 1.1.10 The Ministerial Statement states that an assessment is only required to be carried out for "large scale solar developments". Neither the PPG or the Ministerial Statement define large scale, so in line with best practice and similar reports which have been carried out on similar development proposals, it is assumed that a development of larger that 1MW

- should be considered as 'large scale' as legislation was introduced in March 2016 which allows up to 1MW of roof mounted solar PV panels to be erected on non-domestic buildings without the need for planning permission.
- 1.1.11 There is no explicit requirement through either the development plan or the NPPF, that applicants are required to undertake this type of assessment or how to undertake it. Paragraph 151 of the NPPF states that:
 - "To help increase the use and supply of renewable and low carbon energy and heat, plans should:b) consider identifying suitable areas for renewable energy and low carbon energy sources, and supporting infrastructure, where this would help secure their development".
- 1.1.12 In the designated "Southern Villages" area within South Derbyshire District, the Local Plan has one allocation for renewable energy, this being for the extant planning permission for a Combined Cycle Gas Turbine Power Station, Renewable Energy Centre and Solar Park at the former Drakelow Power Station. This is allocated under Policy E1F.

2 Proposed Development

2.1 Accompanying Material

2.1.1 Please refer to the accompanying Planning, Design and Access Statement for a full description of the site location and the development proposals (which are summarised below).

2.2 The Site

- 2.2.1 The full planning application site covers ('the site') an area of 70.18 hectares (please refer to the Site Location Plan submitted with this application).
- 2.2.2 The Site is located within the administrative area of South Derbyshire District Council located north of the village of Lullington and falls within the parish of Lullington.
- 2.2.3 The site comprises and is surrounded by agricultural fields.
- 2.2.4 Lullington Road runs in a north/south direction through the site. Unnamed roads run along the east and west boundaries of the site. Parts of the road running along the western boundary of the site appears to be called 'Little Liverpool' in some sources, and 'Coton Road' in others.
- 2.2.5 There is well established natural vegetation around the site, with the boundaries being made up of a mix of hedgerows with scattered trees. The boundaries between the fields are also made up of hedgerows. There is a Public Right of Way (PRoW) crossing the site north to south.
- 2.2.6 There are existing field accesses across the site.

2.3 Development Proposal

- 2.3.1 The proposal will comprise of the installation of photovoltaic (PV) panels laid out in arrays of rows running east/west across the site as shown on the layout. The height of the panels will be at a maximum of 3 meters.
- 2.3.2 The mounting structure for the panels is a metal frame securely fixed to the ground. It is capable of withstanding appropriate environmental stresses for the location, such as wind or snow loading. The solar farm will consist of a ground mounted structure with solar panels on top,.
- 2.3.3 The mounting posts will be pile-driven approximately 1.5 metres into the ground for support, dependent on ground conditions and will easily be retrieved using similar hydraulic equipment when the solar farm is decommissioned and the land reinstated back to agricultural land. Such supporting systems are designed to avoid the use of mass concrete foundations on site. Only around 0.5% of the site would be disturbed by the proposed development.
- 2.3.4 The solar panels will then be installed at 15° from the horizontal and face in a southerly direction. The rows will be placed an appropriate distance apart, again in order to optimise solar collection per unit land area.
- 2.3.5 The development will also require the installation of associated infrastructure required for the running of a solar farm. This will include:
 - A substation;
 - Security fence and CCTV cameras; and
 - A buried grid connection on site.
- 2.3.6 Landscaping and swales are also proposed across the site.

2.4 Grid Connection

- 2.4.1 The substation will connect to the DNO's existing 132kV overhead line running through the site. It will be positioned on hardstanding and enclosed within a security fence. The substation is proposed to be located in the south-west section of the Site, as shown on the proposed layout plan, more than 300 metres from the nearest house.
- 2.4.2 The substation would be located within a compound measuring 52 metres long by 25 metres wide. The compound would comprise a 2.4m high galvanised security palisade fence and enclose the substation gear. Details of the design are shown on proposed plans submitted with this application. A control room would be located just outside the entrance to the compound.
- 2.4.3 Buried cables would cross Lullington Road connecting the solar array east of the road to the substation and grid connection point.

3 Methodology

3.1 Overview

- 3.1.1 As noted in **Section 1**, there is no standard guidance available in relation to preparing this form of assessment to meet the requirements of the PPG and Ministerial Statement. The methodology used in this assessment is therefore based on current best practice for similar development proposals. This assessment also has regard to criteria set out in PPG paragraph ID 5-013 which include:
 - Identification of the study area;
 - Assessing that the use of agricultural land is necessary;
 - Assessing that there is no poorer quality land available; and
 - Assessing that the proposal allows for continued agricultural use where applicable and/or encourage biodiversity improvements around the arrays.
- 3.1.2 As discussed in paragraph 1.1.4 above, the site consists of 15% grade 2, 34% grade 3a and 48% grade 3b agricultural land. Therefore, the site consists of 49% of best and most versatile and 48% or moderate quality agricultural land. Given that less than half of the site is classed as best and most versatile land this assessment will consider the use of lower agricultural grades (i.e grades 3b, 4 and 5), previously developed (PDL)/brownfield land and commercial rooftop.
- 3.1.3 The assessment is not going to consider sites which were former landfill sites as the NPPF glossary defines the term 'previously developed land ' and excludes "land that has been developed for minerals extraction or waste disposal by landfill, where provision for restoration has been made through development management procedures;"

3.2 Study Area

- 3.2.1 In order to carry out the SSA it is necessary to identify and define a reasonable search area. As noted previously, there is no guidance on how to define a study area in which the criteria can be assessed.
- 3.2.2 It is widely acknowledged that restricting the search area to the local planning authority administrative area is not appropriate. Instead each case should be considered on its own merits and taking account of planning and operational constraints.
- 3.2.3 This assessment has identified the study area by the requirement to connect to the local electricity network and ensuring that the connection is viable, as without this being viable the solar farm cannot proceed.
- 3.2.4 The applicant has established a viable connection point with UKPN, who are the Distribution Network Operator in this area. This point of connection is into the 132kV overhead lines which cross over the western end of the site which then connects into the major substation at Drakelow, approximately 6km from the connection point.
- 3.2.5 In order to further define the study area, the applicant has undertaken an assessment to establish the cable costs to determine where the development could take place and still have a connection which is commercially viable. The result of this is that the development site would need to be within 2km of the 132kV overhead line, at a distance no more than 8km from Drakelow substation. Any site further than this from the substation would be commercially unviable as the connection costs would be too high.
- 3.2.6 The study area has therefore been identified using a 2km offset around the 132kV overhead line for its first 8km from Drakelow electricity substation. The full study area can be seen on the plan at **Appendices 1 and 2**. The 132kV overhead lines are labelled on the Plan. An extract from the adopted policy maps for South Derbyshire District Council, Lichfield District Council, and East Staffordshire District Council are also contained at **Appendix 1**. This shows local planning policy designations across the areas within 2km of the overhead line.

3.2.7 An annotated diagram showing the 2km offset to the line is contained at **Appendix 2**.

3.3 Site Size

3.3.1 The PPG states that this assessment is only required to be carried out for "large scale solar developments". There is no definition of large scale, so in line with current best practice and similar reports which have been carried out, development which proposes 1MW or larger should be considered 'large scale'. A 1MW solar development would require, on average, an area of 2.5 hectares. Therefore, no areas of Previously Developed Land (PDL)/brownfield or rooftops less than 2.5 hectares will be considered.

3.4 Site Selection Process

3.4.1 The applicant goes through a site selection process when identifying potential sites and there are a number of operational, developer and development control considerations which guide the location of development proposals. These considerations, and consideration of the application site, are indicated in **Table 1** below.

Table 1: Site Selection Process

Consideration	Discussion	Application Site
Suitable location which benefits from sunlight intensity levels	The whole of the Midlands is moderately-well located geographically for solar gains.	The site is located in the centre of the Midlands.
A site with suitable grid connectivity	A viable grid connection is an essential material consideration and is instrumental in defining the search area. Grid connection costs vary dependant on scheme size, grid capacity and local grid infrastructure. The applicant's assessment has concluded that it is likely to be viable to install a cable up to 2km long in this instance.	The applicant has secured a grid offer in April 2020 following their application in November 2019. There is significant deficit in energy generation capacity going into the Grid at the now decommissioned Drakelow Power Station. The proposed development would assist in meet some of the deficit.
A site of a suitable shape, orientation and size that can accommodate the development proposal	To accommodate a development of circa 50MW a site size of approximately 75 hectares is required. The size requirement applies when the site is clear of obstructions (or can be made clear of obstructions) and benefit from a level or gentle sloping topography. It is important to note the following: I. Where potential sites are subject of physical obstructions which cannot be removed (such as Public Rights of Way, field boundaries, woodlands, rivers, highways and topography) the site area can be significantly increased. II. A fragmented site would have an adverse effect on the scheme's viability and deliverability. Furthermore, it would significantly increase the size of the development footprint. As such the focus is on delivering a single scheme as opposed to several smaller scheme which collectively total 50MW. Two or three smaller separate sites that cumulatively deliver 50MW would be unviable as each scheme generates additional infrastructure and create unviable costs associated with grid connection and easements over land etc. III. The preference is for a site with a southerly aspect; however sites with other aspects cannot be dismissed. If a site with another aspect is pursued there is likely to be a need to increase the overall	The site covers an area of 70.18 hectares which is suitable for this level of energy generation (50MW). The site has minimal obstructions and has an open aspect within it which means that the layout can be highly efficient (reducing the amount of land take required). The site levels are predominantly flat which mean that the gaps between the rows of panels can be kept to a minimum to make the layout as efficient as possible.

	development featherint as there	
	development footprint as there would be an operational need to increase the distance between arrays in order to avoid overshadowing.	
Previously developed land; non- agricultural land and agricultural land	The NPPF and the PPG encourages the effective use of land by sequentially focusing large scale solar farms on previously developed and non-agricultural land then agricultural land. Re-using previously developed land/non-agricultural land for new development can make a major contribution by reducing the amount of countryside and undeveloped greenfield land that needs to be used.	The site is agricultural land. Solar farms do not necessarily remove sites from agricultural production. Sheep can graze below panels.
Agricultural land classification	Solar farms are temporary structures and as such they do not lead to the sterilisation of agricultural land. Accordingly, unlike most built development and other renewable energy proposals (such as energy from waste plants) they do not constitute significant permanent development resulting in the loss of agricultural land. For ground mounted solar farms the NPPG on Renewable Energy sets out a sequential system whereby preference is given to the use of 'poorer agricultural land quality' before 'higher land quality agricultural land'.	The site contains 15% grade 2, 34% grade 3a and 48% grade 3b agricultural land. The remaining 3% is defined as "other land" (blocks of woodland or water bodies). Therefore, the site consists of 49% of best and most versatile agricultural land with the remainder poor quality.
	National policy and guidance do not stipulate what constitutes 'good quality agricultural land' and 'poor quality agricultural land'. However, for the purposes of this Assessment it is assumed that land comprising Grade 3a and above is considered 'good quality' and land comprising Grade 3b and below is considered 'poor quality'.	
	Sites entirely within the 'Best and Most Versatile' land (grades 1, 2 and 3a) should only come forward when there are no other sites available which either entirely or proportionately comprise poorer land quality.	
Sensitive areas as defined by the Environmental Impact Assessment (EIA) regulations	The EIA regulations 2017 identify a sensitive area as land notified under Section 28 (1) (sites of special scientific interest) of the Wildlife and Countryside Act 1981(23); a National Park within the meaning of the National Parks and Access to the Countryside Act 1949(24); the Broads(25); a property appearing on the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage(26); a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979(27); an	The site is not located within any of these designations.

	area of outstanding natural beauty designated as such by an order made by Natural England under section 82(1) (areas of outstanding natural beauty) of the Countryside and Rights of Way Act 2000(28) as confirmed by the Secretary of State; a European site; A number of these designations can be	
	found across South Derbyshire, Lichfield and East Staffordshire. It is not appropriate to locate development in these designated areas.	
Location which is served by appropriate highway infrastructure	Appropriate highway infrastructure is a material consideration as there needs to be appropriate provision to allow for the HGV's required during the construction process.	The site sits within a rural road network, however is approximately 7-8km from the primary A-road network. A construction traffic route will be implemented as part of a Construction Management Plan.
A site which is available for the duration of the development proposal	One of the fundamentals of whether to pursue a site is having a single ownership and the landowner being content to lease their land to the application for the required period of time, which in this case is 40 years.	The land is in a single ownership and the applicant has a lease for lifetime of the solar farm.
Site specific allocation	Consideration to be given to any site specific allocations or strategic visions for the area set out in the adopted Development Plan. For example, land which is allocated or safeguarded for residential or employment uses it would be deemed inappropriate and a departure from the local plan. A departure would also require a significant economic and social benefit to outweigh the harm of approving contrary to the development plan.	The site is not subject to any land use designation and is classed as countryside.
Flood Risk	Having a site in a flood risk zone is not unacceptable as solar panels are water resistant but some of the associated infrastructure is not compatible. Therefore, entire sites which are located within flood zone 2, 3a or 3b should be avoided.	The site is located in flood zone 1.
Landscape and ecological designations	Outside of the designations identified as sensitive in the EIA regs, there are local and regional designations of landscape and ecological significance such as areas of high landscape value, county wildlife sites.	The site is not located within a designated identified as sensitive or a local or regional designation. The potential impacts on the River Mease Special Area of Conservation have been assessed as part of the formulation of the proposals, and measures such as swales and a soil handing strategy are included within the planning application,

		proposed to manage the potential impacts.
Landscape and visual considerations	The landscape and visual effects of energy projects will vary on a case by case basis but the applicant seeks to find well contained sites which have a good level of existing screening in the form of boundary hedgerows and trees without having to rely heavily on new planting.	The site currently benefits from a moderate level of screening due to existing hedgerows, trees and areas of woodland, however views from highways and from the south tend to be more open. New screening planting will therefore be required in these areas.
		It is possible to provide new planting in keeping with the existing landscape character, which includes planting woodland to improve the National Forest.
Sensitive human receptors	Consideration of the proximity of nearby sensitive human receptors which include residential dwellings, populated areas/villages and Public Rights of Way.	There is one Public Right of Way which runs through the site. It adjoins other routes in the surrounding area. There are a limited number of residential dwellings near the site. The site is set back from the closest village of Lullington.
Heritage considerations	Proposals should be able to demonstrate that there would be less than substantial harm caused to heritage assets. This includes built heritage and below ground archaeology.	There are no known heritage assets on site. The impacts on heritage assets in the surrounding area is considered to be acceptable. Please see the Planning Design and Access Statement and the Heritage Statement submitted with the application for further details.

4 Alternative Sites

4.1 Overview

- 4.1.1 This section considers why agricultural land is to be used for this development and will assess the opportunities available on, previously developed land (PDL)/brownfield land, commercial rooftops, and lower grade agricultural land.
- 4.1.2 This assessment has used the following sources to provide evidence for assessment:
 - South Derbyshire District Council Brownfield Register;
 - Lichfield District Council Brownfield Register;
 - East Staffordhire District Council Brownfield Register;
 - Natural England Regional Agricultural Land Classification maps;
 - Adopted Development Plans;
 - Previously Developed Land (PDL)/Brownfield Sites.

4.2 Previously Developed Land (Brownfield Sites)

4.2.1 In 2017, it became a requirement for each LPA to keep a register of PDL/brownfield suitable for residential development. The latest data for all three authorities in the search area is from October-December 2020. For the three subject Districts, all sites smaller than 2.5ha have been discounted. Of the remaining sites, there are a total of 20, of which 12 benefit from planning permission (mostly for residential, and none for solar). The remaining 8 sites are considered below in **Table 2** below.

Table 2: Brownfield sites without planning permission on the South Derbyshire, Lichfield, and East Staffordshire Brownfield Registers

Site Name and	Area (ha)	Current Status	Comments
Reference			
South Derbyshire	•		
Land at Montracon, Swadlincote Policy H23M	5.02	The site is allocated in the development plan (H23M) for 90 homes.	The site is allocated for residential development and would not be appropriate to development the site for an alternative use.
Lichfield			
Land off Gorse Lane, Fradley Park LDC-BLR-29	12.00	Site is currently pending a decision on outline permission for residential development (17/00686/OUTM). Site is anticipated to have capacity for 250-300 dwellings.	Permission for residential would mean it is unlikely to be desirable for another purpose.
East Staffordshire			
Branston Depot, Burton-on-Trent ESBC-BR5	19.27	The site is allocated under Policy 4 in the development plan for 483 dwellings. Site is currently pending a decision on outline permission for residential development (P/2012/00920).	The site is allocated for residential development and would not be appropriate to develop the site for an alternative use.

Coors Middle Yard, Burton-on-Trent ESBC-BR2	9.08	The site is allocated under Policy 4 in the development plan for 300 dwellings.	The site is situated in a conservation area, and as such is a sensitive location for development. The site is allocated for residential development and would not be appropriate to develop the site for an alternative use.
Derby Road, Burton- on-Trent ESBC-BR6	8.09	The site is allocated under Policy 4 in the development plan for 250 dwellings.	The site is allocated for residential development and would not be appropriate to develop the site for an alternative use.
Brookside Business Park, Uttoxeter ESBC-BR8	4.40	The site is allocated under Policy 4 in the development plan for 90 dwellings. Site is currently pending a decision on permission for mixed-use business development (P/2018/01547).	The site is allocated for residential development and would not be appropriate to develop the site for an alternative use. Given permission awaiting for employment use, site would constitute loss of employment land.
Coors High Street, Burton-on-Trent ESBC-BR3	2.91	The site, along with then neighbouring "Bargates" site are allocated under Policy 4 in the development plan for 350 dwellings.	The site is situated in a conservation area, and as such is a sensitive location for development. The site is allocated for residential development and would not be appropriate to develop the site for an alternative use.
Bargates, Burton-on- Trent ESBC-BR4	2.64	The site, along with then neighbouring "Coors High Street" site are allocated under Policy 4 in the development plan for 350 dwellings. Site is currently pending a decision on outline permission for mixed use: residential and B1 development (P/2020/01454).	The site is allocated for residential development and would not be appropriate to develop the site for an alternative use.

Additional Sites Referenced During Public Consultation

- 4.2.2 Coton-in-the-Elms Parish Council and Heather Wheeler MP suggested that development may be better placed at the former Drakelow Power Station. The site has been vacant since the main buildings and cooling towers were demolished over 15 years ago, it is naturally of great significance in the local area as an area of brownfield land.
- Part of the site was included within the South Derbyshire Brownfield Register 2020, but has been discounted from our search due to it being partially committed for mixed housing and employment development as part of the larger Drakelow Park (LP Policies H6 and E1F) allocation. Permission was granted in 2012 (ref 9/2009/0341) for a total of 2,239 houses at Drakelow Park, of which approximately 1,500 are on the previously developed sections of the former Power Station and nearby yards. The site is already beginning to be built out (from the NE corner).

- The part of the Drakelow Power Station site has also been subject to planning permission for the development of an 18MW Renewable Energy Centre for electricity and local heating generation, which was permitted by Derbyshire County Council in March 2021 (ref: CW9/0420/7). An 11ha solar farm was also permitted and built out to the north of the power station site, next to the River Trent in 2017. The remaining circa 40ha is allocated for business uses (Former Use Class Order Uses B1,B2 & B8) in Local Plan (Part 2) Policy BNE12 'Former Power Station Land, plus a buffer zone for Drakelow Nature Reserve. Solar development does not fall within those use classes. The land value, due to its allocation for commercial development, is considered to make it economically unviable for solar development. In addition, the land is partially within Flood Zone 3, it and is too small to accommodate the Development.
- 4.2.5 Former gravel pits adjacent to the A38 and River Trent (near Barton-under-Needwood) were also recommended by Coton-in-the-Elms Parish Council. Where no longer operational, many of these pits have since been intentionally flooded to provide ecological benefit, such as those at Tucklesholme Nature Reserve. As such, these sites are no longer suitable for conversion to solar farms. They are also outside the search area and across the Rover Trent, crossing which would be a prohibitive cost.

4.3 Commercial Rooftop Sites

- 4.3.1 As noted previously, sites are only being considered which are 2.5ha or larger, to find a rooftop that covers that size of area which equates to around 25,000sqm.
- 4.3.2 The context is, that the application site is largely rural. Likewise, the study area (defined in Section 3.2) is predominantly rural in character, although does include the southern periphery of the town of Burton-on-Trent. The Branston Depot Site in Burton-on-Trent has a combined total roof area of approximately 90,000sqm. Whilst this could potentially house a large rooftop solar farm, the site is allocated for strategic housing growth and is currently pending a decision on outline permission for residential development (P/2012/00920). As this site is allocated for residential development and would not be appropriate to develop the site for an alternative use.
- 4.3.3 No other buildings or locations within the assessment area offer an adequate rooftop area to facilitate a large-scale solar farm.
- 4.3.4 As such, there are no viable commercial rooftop sites within the search area.
- 4.3.5 In response to comments raised during the public consultation, a review of rooftops beyond the search area has been undertaken. Beyond the study area, in the wider context of South Derbyshire, Lichfield, East Staffordshire, and North West Leicestershire, there are commercial rooftop sites with an area greater than 25,000sqm that would be able to accommodate solar panels. These sites have been assessed through visual roof area only, and so do not necessarily reflect availability, allocation for different uses, or availability of connections to the grid.

Table 3: Commercial Rooftop Sites Outside Study Area

Site Name and Location	Approximate Roof Area (sqm)	Distance to Potential Connection to Overhead Line (km)
Boots Distribution Centre, Burton-on-Trent	42,000	3.2
DHL Distribution Centre / Molson Coors Brewing Company, Burton-on-Trent	33,000	3.5
Palletforce, Burton-on-Trent	35,000	3.9
Pirelli Distribution Site, Barton-under- Needwood (A38 corridor)	33,000	4.2
Argos, Barton-under-Needwood	51,000	4.3

(A38 corridor)		
McVitie's Site, Ashby-de-la-Zouch	28,000	12.2
(A42 corridor)		
Toyota Factory, A38/A50	235,000	12.5

4.4 Availability of Lower Quality Agricultural Land

- 4.4.1 In considering where to site a solar farm, consideration has been given to preserving the Best and Most Versatile agricultural land (BMV). BMV is typically categorised as Grades 1, 2 and 3a land. Lower quality agricultural land is typically classified as Grades 3b, 4 and 5 land.
- The sources that have to be relied on without testing is data from the Natural England Agricultural Land Classification (ALC) and MAGIC map. The Natural England plans (shown at **Appendix 2**) do not differentiate between grades 3a and 3b. MAGIC maps is an online data layer mapping tool which is a partnership of Natural England, DEFRA, Environment Agency, Historic England, Forestry Commission and Marine Management Organisation. It maps a number of layers of information including rural, urban, coastal and marine environments across Great Britain. The data on agricultural land classifications is the same as Natural England. It has limited data on site where it does distinguish between grades 3a and 3b. The closest sites to the application site with any data to that level are at Swainspark Wood, south of Swadlincote, 4.1km away and outside of the study area.
- 4.4.3 The majority of the search area as shown on the ALC map at **Appendix 2**, comprises Grade 3 land. The remainder comprises a roughly even split between urban areas and higher Grade 2 land, and a very small proportion of Grade 2 lower quality land. Urban areas and higher Grade 2 land (comprising around 40% of the search area) were therefore discounted from further search.
- There is no Grade 5 land within the study area. The very small proportion of Grade 4 lower quality agricultural land is split across three disparate locations across the search area (these are the areas shaded yellow on the ALC map at **Appendix 2**). The potential for using land around these three locations is examined below.
- 4.4.5 Without undertaking intrusive investigations across the search area, it is not possible to determine the sub-grading make up of Grade 3 land, and the proportions of Grade 3a, 3b and any other grading they comprise. It is established that it is not appropriate for applicants to undertake what would be a logistically difficult and financially unviable exercise.
- 4.4.6 It is considered the Grade 3 land within the search area is likely to have a similar make up to the site (for which intrusive investigations have been undertaken as described in Paragraph 1.1.4). Referring to the ALC map at **Appendix 2**, the site is distinct from the areas of higher Grade land. It seems unlikely other potential Grade 3 sites within the search area would have a significantly lower percentage of BMV than the site.

Assessment of Grade 4 land within the search area

- 4.4.7 There are 3 areas of Grade 4 land within the search area. The potential suitability of these is discussed below. They are indicated in yellow shading on the ALC map at **Appendix 2** of this report.
 - Area 1: Floodplain to the west of the River Trent, and the east of the railway line on the edge of Burton on Trent
- 4.4.8 This area lies to the west of the River Trent, comprising part of its floodplain, to the east of the railway line, south of Burton on Trent, and the north of ex-quarry/pits, which have recently been flooded for ecological benefit. The areas measures around 40ha.

- 4.4.9 The area is discounted for the following reasons:
 - There is not enough land for the Development, and there is not adjoining land to build on (the land is bounded by an ecological enhancement area, railway and river).
 - The area is on the edge of the 2km search area, where financial viability is already marginal. The additional cost of a river crossing to reach overhead cables would be prohibitive.
- 4.4.10 In addition, the land is within flood zone 3. It is unclear without detailed modelling to understand flood depths, frequency and potential flood water velocity. Notwithstanding, this land would not be sequentially preferable to the proposed site.
- 4.4.11 There may be other reasons why the area is not suitable for a solar farm, should further investigations be undertaken.
 - Area 2: Land alongside river corridors, near Stanton Sewage Works
- 4.4.12 This area lies west of Stanton Sewage Works, alongside two rivers, straddling a railway line. The Grade 4 classified land within the search area extends to around 40ha. As with Area 1, because the area is on the edge of the 2km search area, where financial viability is already marginal, the additional cost of a railway crossing to reach overhead cables would be prohibitive. The remaining fragmented land to the south-west of the railway line, located north-west and south east of Burton Building Solutions, measures around 30ha.
- 4.4.13 The area is discounted for the following reason:
 - There is not enough land for the Development, and the adjoining land (on the west of the railway line) is classified as Grade 2, which is BMV.
- 4.4.14 There may be other reasons why the area is not suitable for a solar farm, should further investigations be undertaken.
- 4.4.15 Area 3: River Mease Valley between the villages of Haunton and Clifton Campville
- 4.4.16 This area lies directly south of the meandering River Mease (A site of Special Scientific Importance (SSSI) and a Special Area of Conservation (SAC)). It comprises the vast majority of land that is not the homes and farmsteads within the villages of Hornton and Clifton Campville, between the River (to the north), Main Road (to the south), and Lullington Road (to the east) (the river and Main Road join to the west).
- 4.4.17 The area measures around 90ha in total. There are a number of significant constraints with the site, which resulted in it being discounted as having potential for the development, as follows:
 - The site forms a steep north-facing slope down from Main Road to the River Mease. Engineers have advised this would result in a sub-optimal layout for panels, meaning around 40% more land would be required for the solar array. This would increase the land requirement to approximately 98 ha. This would result in a more significant land cost, which may alone, or in combination with other abnormal costs (discussed below) be prohibitive.
 - The proximity of the area to the River Mease SAC and SSSI, a sensitive environmental area, mean it is likely the area will be abnormally ecologically rich. Initial ecology advice suggests that Development would be required to provide larger areas for habitat conservation/mitigatory habitat, potentially alongside other measures. This could both create the need for a larger site to accommodate these requirements, and introduce additional abnormal costs from both the land and mitigation measures themselves. These costs may alone, or in combination with other abnormal costs (discussed in this section) be prohibitive.
 - The River Mease SAC and SSSI is sensitive to the potential for contamination from soils/leaching. Initial desktop drainage advice indicates that rather than a limited number of discharge points to the drainage network (as is typical with sites of this

- size), the area's location next to the river means it is likely overland flows discharge directly into the river. As such it is likely significant drainage features would be required to protect the environment as part of any development on site. This is exacerbated by the long and narrow shape of the area. For example, a swale along the riverside would take up a significant portion of the site. This would represent a significant and potentially prohibitive cost, either alone, or in combination with other costs discussed in this section.
- The site is not well suited for Development from a landscape character or visual amenity perspective. Initial landscape advice is that it is unlikely to be acceptable to have the solar array so close to the two villages. It unlikely that more than 60ha of land would be potentially useable. Once smaller fields likely to be inappropriate for arrays are also removed, this would reduce the potential useable area to less than 55ha. It is also possible some of this land is part of the gardens for a care home. In summary, the potential useable area would be too small.
- 4.4.18 In summary, there is not sufficient useable land to accommodate a less efficient array layout (which would be required due to site topography) and there are likely to be significant prohibitive abnormal development costs.
- In addition, unlike other areas of the search area, this landscape character area is not typified by woodland blocks in and around fields (they are reserved to the river edges). Initial landscape advice considers that it would potentially be unacceptable to change the character of the gap between the villages, which at present is open, with views across the river valley. Whilst planting new woodland/substantial planting around the perimeters of the area may substantially screen proposals, landscape advise is that there would be harm to the landscape character.
- In conclusion, there are no sites within Grade 4 agricultural land (the only type less sequentially preferable within the search area) that are suitable for development. The Development must therefore be directed towards the land within Grade 3.

4.5 The supply of agricultural land

- 4.5.1 Whilst the development of solar farms does not remove land from agricultural use either temporarily or on a permanent basis as 1) the land is reinstated once the development is decommissioned after a temporary (in this case 40 year) period; and 2) the land can be used for pastoral farming: grazing sheep; consideration of the proportion of land that would be used in the Development is undertaken below.
- 4.5.2 The Government Department for Environment, Food & Rural Affairs keep records of agricultural land. According to the latest update at the time of writing (March 2021) The total farmed area in England is 9,206,000 hectares. In the East Midlands Region (in which the Site is situated) there are 1,192,000 hectares of farmed land. The site size requirement at 70 hectares represents less than 0.006% of farmland within the East Midlands region, and less than 0.0008% of farmland within England.
- 4.5.3 It is considered that the temporary restriction of agricultural land to either pastoral farming (sheep grazing) for a temporary period, or the temporary use of the land outside of agricultural production would not have any notable impact on the supply of agricultural land either within England or the East Midlands region.

4.6 Other Site Specific Considerations

4.6.1 The study area, which comprises a 2km offset from the first 8km of overhead line originating from Drakelow Substation is shown at **Appendices 1 and 2**. The existing lines to which the development would connect are labelled on the Plan. Extracts from the relevant Policy Maps from each of the three subject District Councils are contained at **Appendix 1**. This shows local planning policy designations across the areas within the search area.

- An annotated diagram showing the 2km offset to the overhead line is contained at **Appendix 2**. The annotations show the locations within the subject search area that would not be suitable for a solar farm for environmental reasons (green shading) or because of existing land uses such as residential/existing solar farm (brown shading). The application site is shown in red. The plan shows that around one third of the search area surrounding the connection would be unsuitable for a solar farm.
- 4.6.3 The remaining areas on the plan, which may (or may not) be suitable for solar farms, comprise agricultural fields or woodland. These sites are no more preferable for use than the selected site to the north of Lullington when land grade, landscaping, topography, legal agreements and other factors are considered.
- 4.6.4 Much of the land near Rosliston, Caldwell and Drakelow features more undulating topography, and is therefore likely to have more of a landscape impact, or is likely to have less favourable orientation for the placement of solar panels. The study area also features large tranches of Common Land, which would not be suitable for solar farms.
- 4.6.5 Approximately 95% of the search area falls within the National Forest. Whilst this is a significant landscape consideration, it is not a limitation to the principle of solar farm development.

5 Conclusion

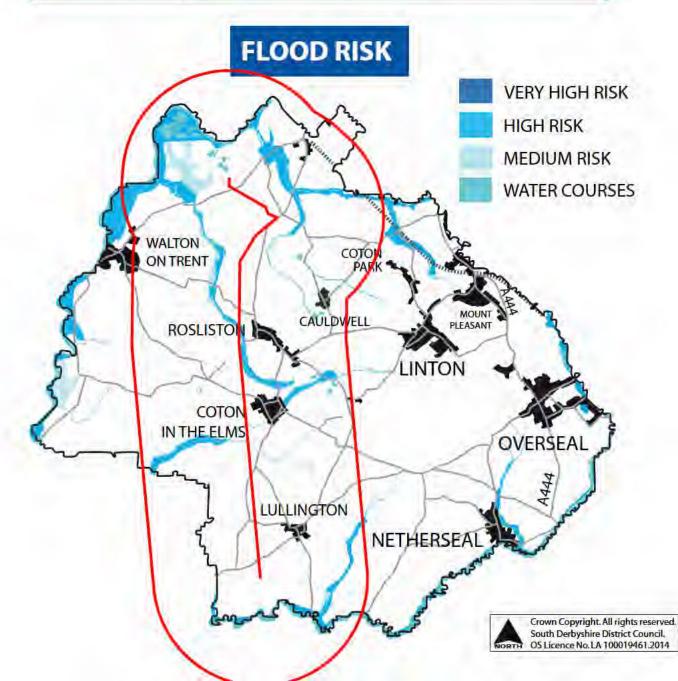
- 5.1.1 This Site Selection Assessment has described the method in which the applicant selected a suitable site for the development proposals, by discounting sites that were not appropriate for development of a solar farm.
- 5.1.2 The assessment included review of brownfield sites and previously developed land within the district council areas of South Derbyshire, Lichfield, and East Staffordshire. **Table 2** in the report shows the sites that were considered. None of the sites were considered to be suitable for the solar farm.
- 5.1.3 The site is shown as Grade 3 Agricultural Land on the Natural England Agricultural Land Classification Maps.
- There are only very small areas of lower grade agricultural land within the search area. These comprise Grade 4. There is no Grade 5 land within search area, nor within 30km of the site. The three areas of Grade 4 land within the search area have been assessed as not suitable for the Development. There are however, significant areas of higher land value (Grade 2) within the north and south of the search area. The site is therefore considered to be appropriately situated to assist with the planning objective of maintaining a supply of agricultural land whilst promoting renewable energy projects.
- 5.1.5 The proposals accord with the PPG as this statement demonstrates (i) the proposed use of the agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal encourages biodiversity improvements around arrays.

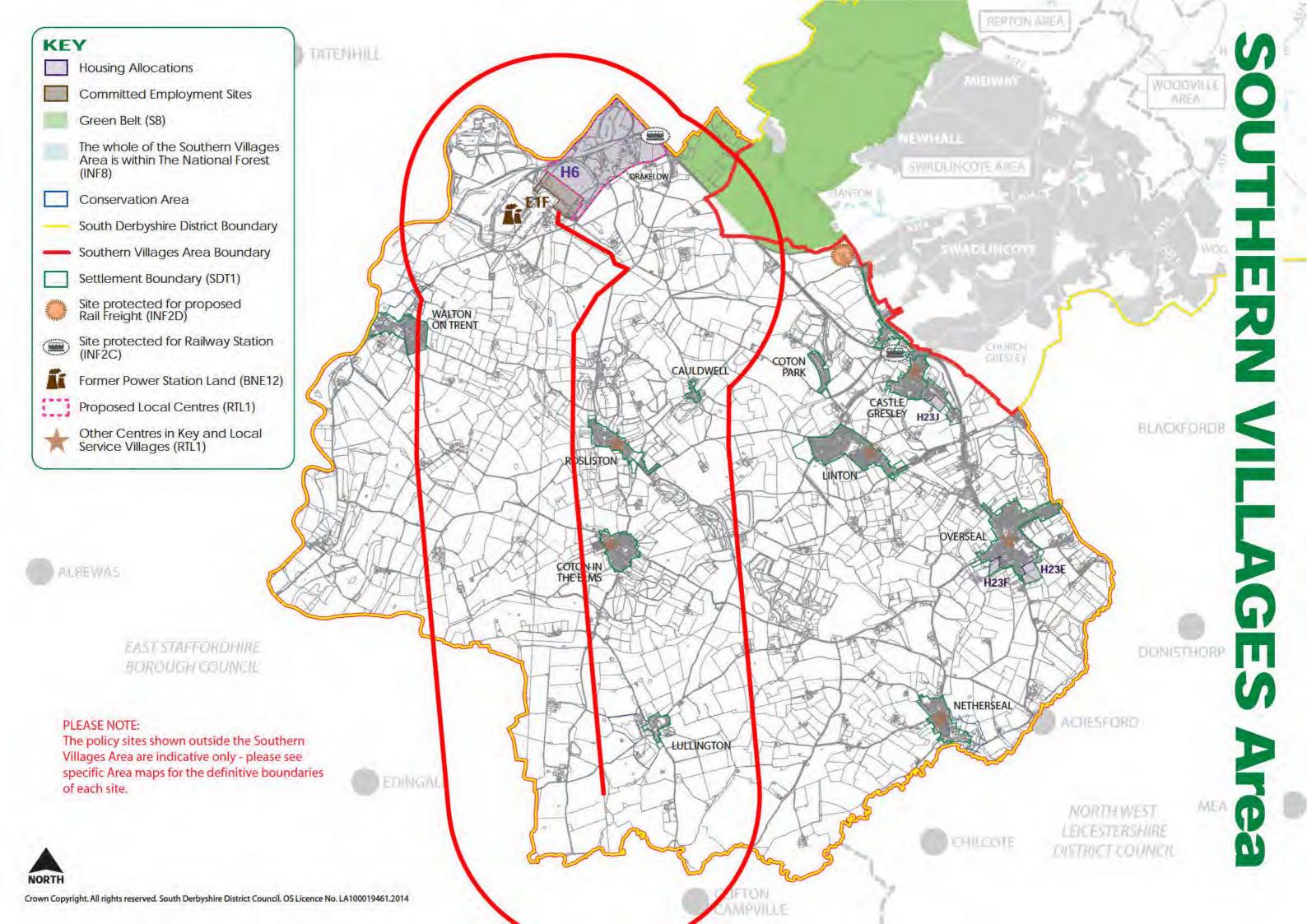
Local Plan Policies Maps:

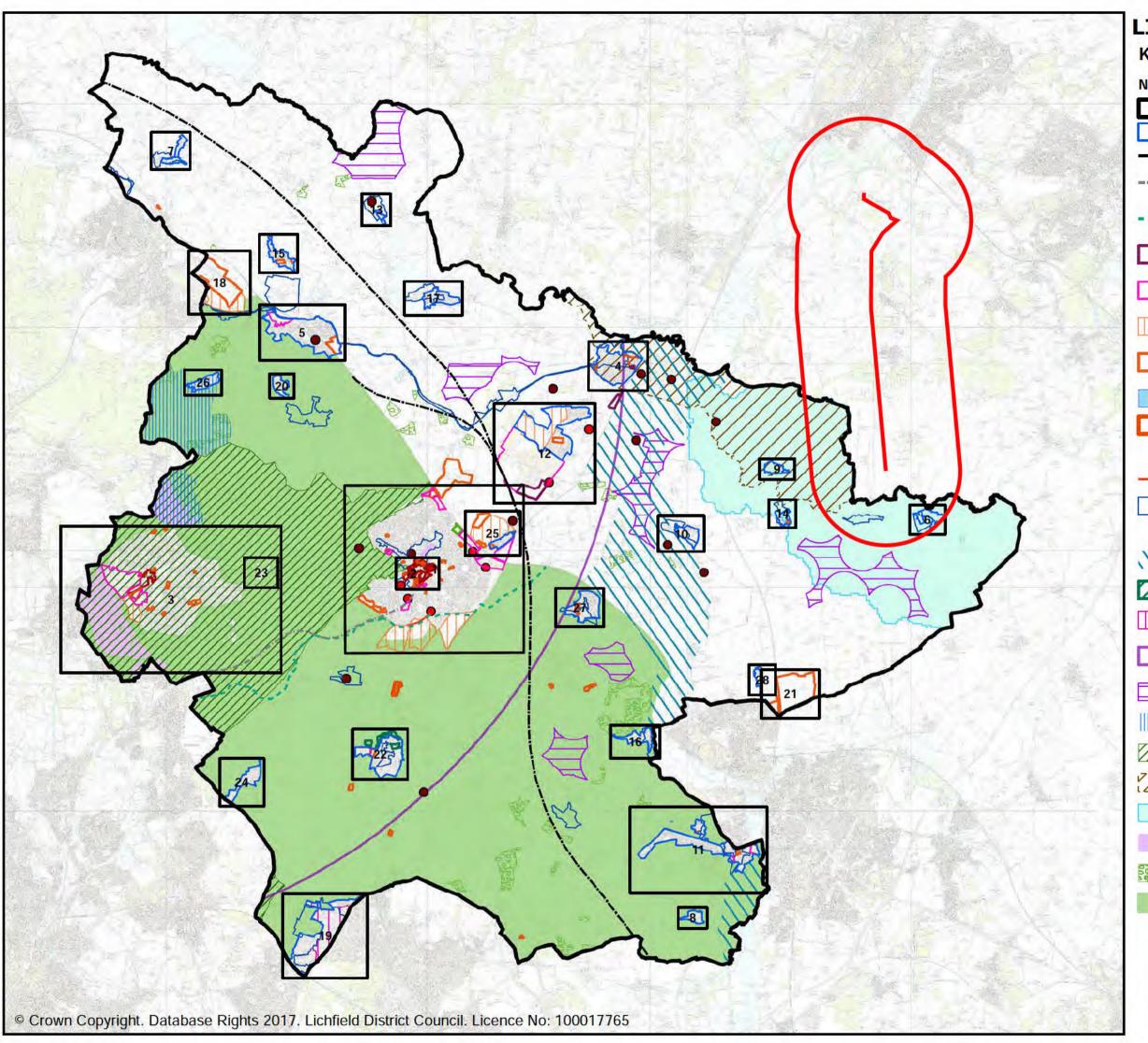
- South Derbyshire
- Lichfield
- East Staffordshire

SOUTHERN VILLAGES Area

HOUSING POLICY	HOUSING SITE
H6 H23E H23F H23J	Drakelow Park Acresford Road, Overseal Valley Road, Overseal Oak Close, Castle Gresley
EMPLOYMENT POLICY	EMPLOYMENT SITE
E1F	Former Drakelow Power Station







LICHFIELD DISTRICT LOCAL **Key PLAN POLICIES MAP**

NAME	
	Lichfield District
	Village settlement boundaries
	HS2 Route
	Walsall - Lichfield Rail Line (Core Policies 1, 5)
	Route for a restored Lichfield Canal (Core Policies 1,9,13, Policies HSC1, Lichfield 1 Lichfield 2, IP2)
	Employment land allocations (Core Policies 1,7, Policy EMP1)
	Existing employment areas (Core Policies 1,7, Policies Lichfield 3, Burntwood 3, EMP1)
	Strategic development allocations (Core policies 1,4,6)
	Housing land allocations (Policies LC1, B1, NT1, R1, F1, A1, AH1, FZ1, S1, W1, OR1)
	Gypsy & traveller site allocation (Policies H3, GT1)
	Proposed office allocation (Lichfield 3)
•	Road and junction improvements (Policies ST4, ST5)
	Road line safeguarding (Policy ST3)
	Conservation areas (Core Policies 1, 14, Policy BE1)
•	Ancient Monuments (Core Policy 14)
111111	Central Rivers Initiative (Core Policies 1,9,13, Policies NR5,NR6,Alr1,Alr3)
	Local green space (see Shenstone Neighbourhood Plan)
	Little Aston Park Density Policy (see Little Aston Neighbourhood Plan)
	Cannock Chase SAC policy area (Core Policies 1,9,13, Policies SC2,NR3,NR5,NR7, Burntwood 1)
	Wind energy areas of opportunity (Core Policy 3, Policy SC2)
	Area of Outstanding Natural Beauty (Core Policies 1, 9, Policy NR10)
//////	Forest of Mercia (Core Policies 1, 13, 14, Policy SC2)
7////	National Forest (Core Policies 1, 13, 14, Policies SC2, NR3, Alr1, NR11)
	River Mease SAC water catchment (Core

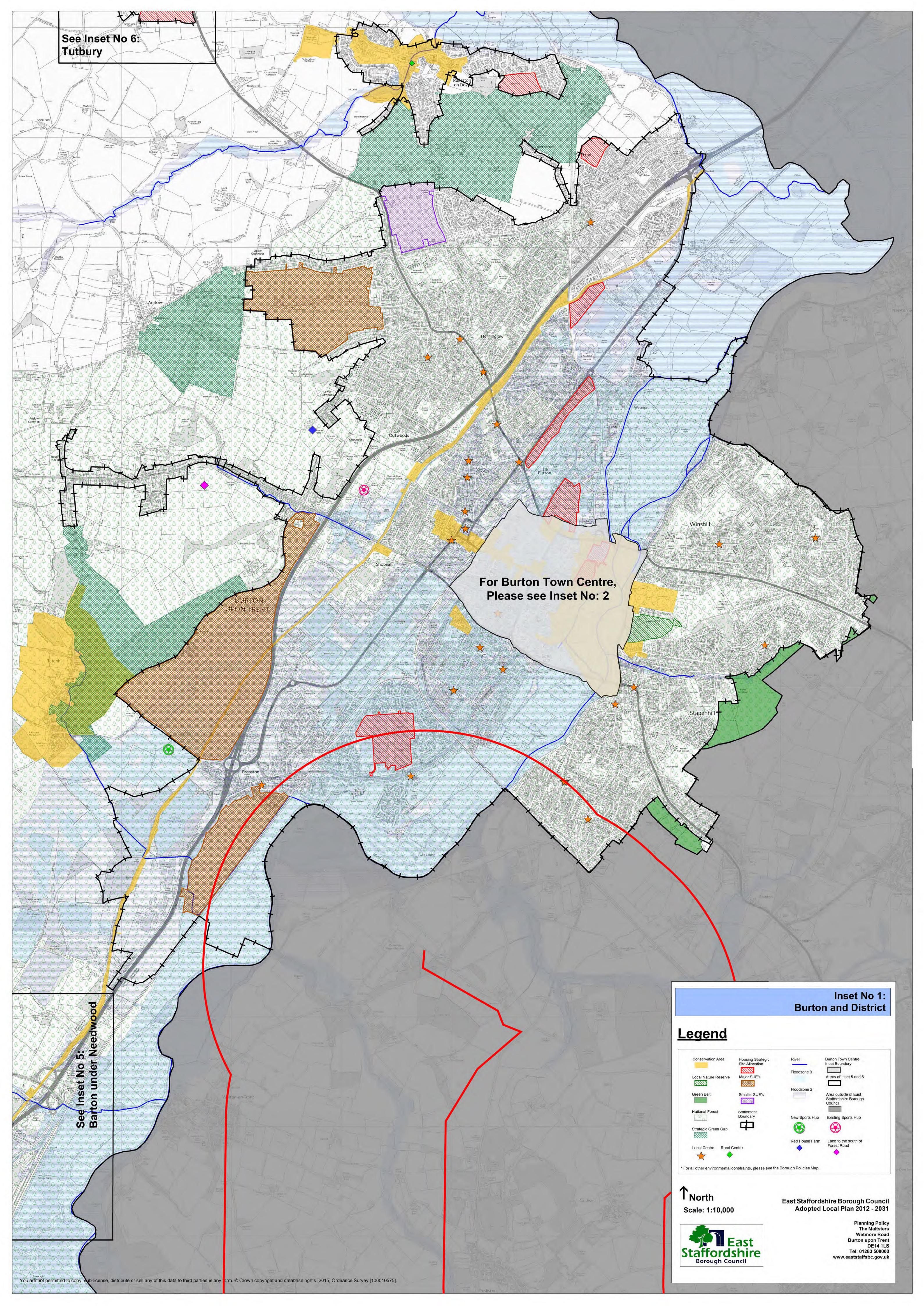
Policy 13, Policies NR8, NR9)

Site of Special Scientific Interest (Core Policy 13, Policy NR9)

Trees & Woodlands (Ancient Woodland) (Core policy 13, Policies SC2,HSC1,NR4)

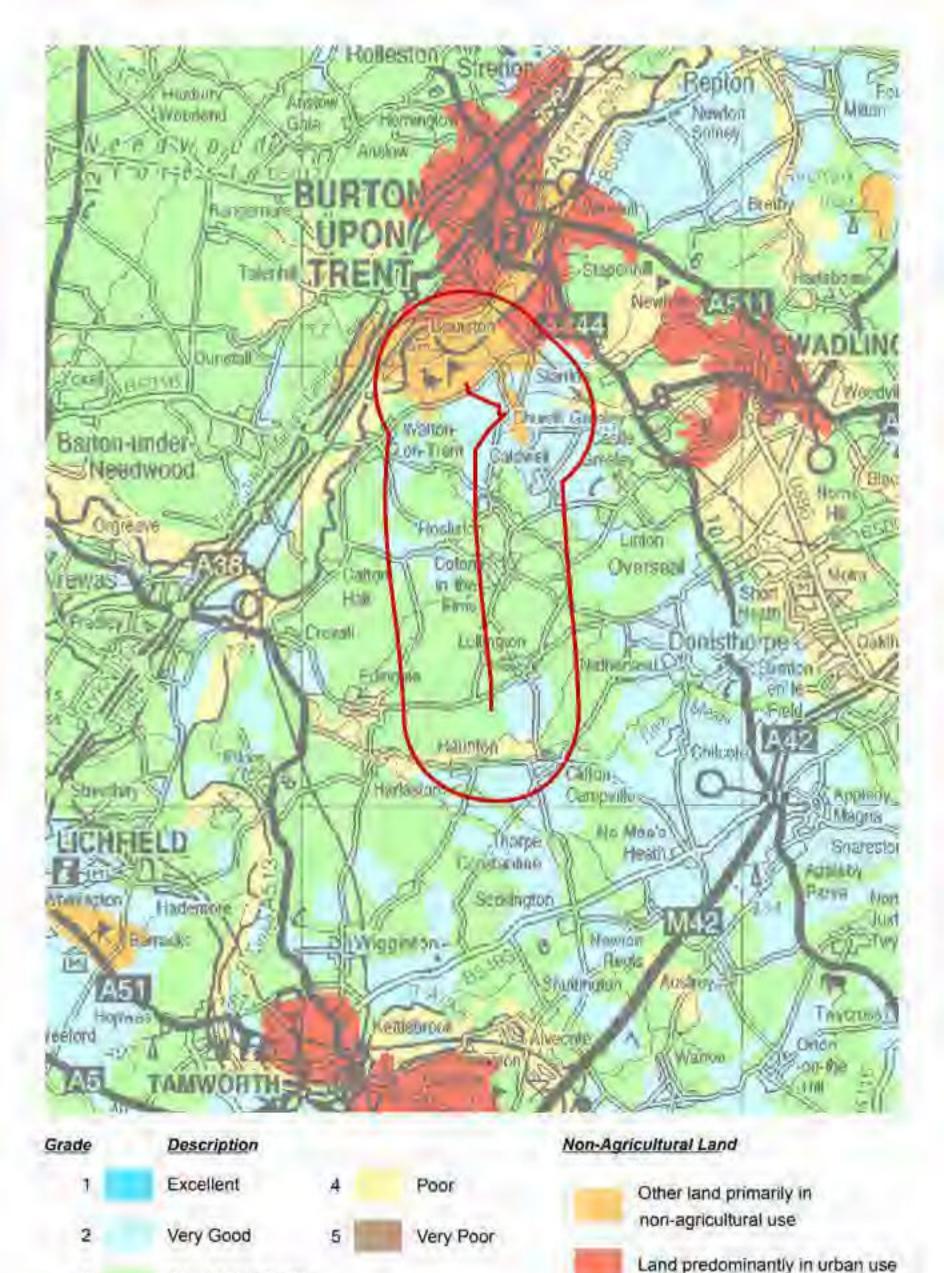
Green Belt (Core Policies 1, 13, Policies NR2, Lichfield 1, B1, FZ1, S1, W1)

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Site Constraints Diagrams:

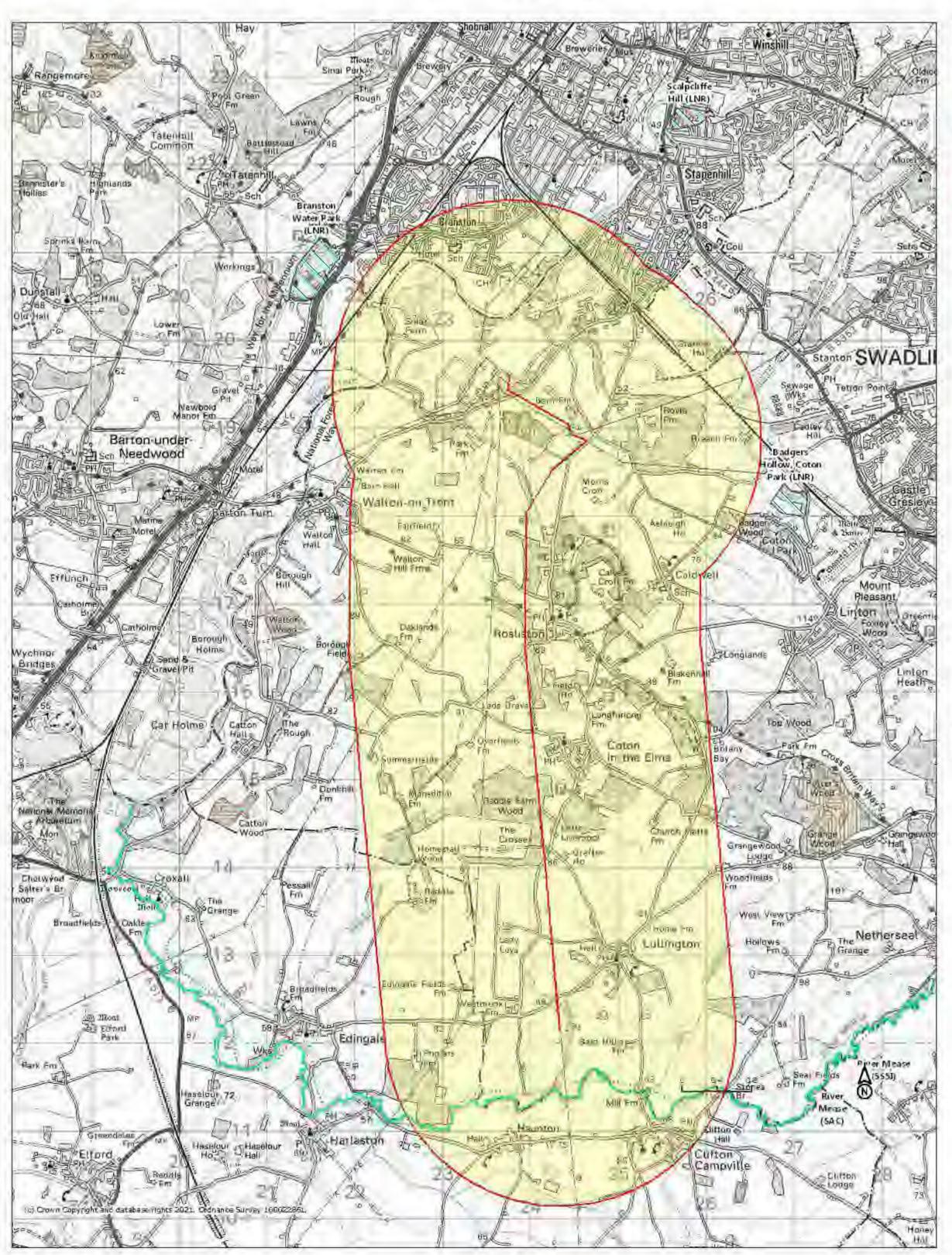
- Agricultural Land Class (Natural England)
- Ecological Designations (MAGICmap, DEFRA)
- Site Selection Diagram



3

Good to Moderate

Magic Map



Legend Local Nature Reserves (England) Mational Nature Reserves (England) Mational Parks (England) Ramsar Sites (England) Proposed Ramsar Sites (England) Sites of Special Scientific Interest (England) Special Areas of Conservation (England) Possible Special Areas of Conservation (England) Special Protection Areas (England) Potential Special Protection Areas (England) Biosphere Reserves (England) National Forest (England) Ancient Woodland (England) Ancient and Semi-Natural Woodland Ancient Regianted Woodland Projection = CISGB36 min = 415500 ymin = 316300 max = 430100 max = 322600 Wap produced by MAGIC on 11 June, 2021. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for

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