PLANNING STATEMENT:
PROPOSED KELHAM SOLAR FARM AND BATTERY ENERGY STORAGE SYSTEM

KELHAM | NEWARK-ON-TRENT

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Assured Asset Solar 2 Ltd |

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1. INTRODUCTION

1.1 FORWARD

1.1.1 Climate change is generally considered to be the greatest existential threat to the environment, our way of living and humanity in general. Addressing this huge challenge requires a sea change in how we live our lives in the future and the decisions we make.

1.1.2 In order to address this challenge, the UK Government have set a target to decarbonise the power grid and ensure all cars are zero emissions capable by 2035 thus moving away from fossil fuels and replacing this capacity with renewable energy.

1.1.3 In addition to this, recent months have brought into stark focus the need for the UK to improve its energy security to ensure both continuity of supply, reduced costs to the consumer and avoid future price spikes causes by geo-political events. In response to this additional challenge, the UK government has published The British Energy Security Strategy which commits to developing a low-cost net zero consistent electricity system, supported by large scale, long duration electricity storage.

1.1.4 This transition is predicted to result in an increase in electricity demand by 40%-60% all of which must be met from renewable energy sources.

1.1.5 In March 2023 the UK Government launched 'Powering Up Britain' a blueprint for the future of energy. The blueprint draws together the "Energy Security Plan, and Net Zero Growth Plan, it explains how we will diversify, decarbonise and domesticate energy production by investing in renewables and nuclear, to power Britain from Britain".

1.1.6 In 2021 solar PV's share of renewable capacity stands at 28% in the UK[1]. By June 2021 there was circa 13.5GW of installed capacity of solar energy in the UK[2].

Solar

1.1.7 Solar farms are an effective and unobtrusive way of creating the electricity we all use – with the panels having a low visual impact on the local landscape and creating no noise, pollution, by-products or emissions. Additionally, solar farms result in minimal disturbance to the ground and can significantly enhance local biodiversity, for example through planting a species rich wildflower mix in field margins, creating a more diverse habitat.

1.1.8 It is also noted that the non – intrusive nature of the proposal means that after the 40-year lifespan of the panels, they can be lifted and removed from the site and the land can continue to be used for agriculture.

Battery Energy Storage Systems

1.1.9 The National Grid experiences a large fluctuation of demand throughout the day and throughout different times of the year. During periods of high demand, the National Grid aim to increase supply to maintain a 20% supply margin which is essential in eliminating, as far as possible, the risk of power shortages and blackouts, when there is an unexpected change in demand, or a sudden loss of supply. Historically, conventional power stations could be operated with some certainty. However, as the UK moves towards a more environmentally sustainable energy supply system, with an increase in renewable energy sources, there is an increased risk of electricity supply fluctuations, depending on prevailing weather conditions, and therefore an increased need for facilities to store energy, to try and

[1] Digest of UK Energy Statistics (DUKES): renewable sources of energy
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840014/Chapter_6.pdf
[2] Capacity of, and electricity generated from, renewable sources (DUKES 6.4)
https://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes

match the supply to the demand. Such storage facilities include Battery Energy Storage Systems (BESS).

1.1.10 BESS do not create carbon emissions or generate electricity but provide a balancing mechanism drawing electricity (charging) when levels of the network are above that of demand. When levels of electricity on the grid are below that of demand the electricity stored in the batteries can be fed back (discharged) onto the network to meet the demand so that there is no loss of power to end users. Smooth grid operation relies on the provision of rapid reactive power services either by generation or dedicated facilities to enable frequency stabilisation. BESS provides sub-second response times, so offer a reliable solution to a number of the Grid's balancing issues thus supporting the development and deployment of low carbon intermittent energy technologies upon which society must increasingly rely on to satisfy its energy requirements.

1.2 THE APPLICANT

1.2.1 Assured Asset Solar 2 Ltd is a special purpose vehicle (SPV) managed by Peridot Solar; a leading utility-scale solar company delivering competitive and clean electricity. Peridot Solar is developing an expanding portfolio of low carbon energy projects throughout the UK, including solar and battery energy storage systems.

1.3 SUMMARY OF SITE AND PROPOSAL

1.3.1 It is proposed to construct and operate a solar farm and battery energy storage system on approximately 65ha of land located to the west of Kelham. **Drawing HC1002/05/01** identifies the location of the site.

1.3.2 There are no ecological or historical statutory designations within the application site. Overhead cables cross the northern area of the site in a northeast/southwest alignment. The nearest statutory designations include Kelham Conservation Area, adjacent to the eastern boundary of the proposal site and a Grade II listed Farm Buildings at Home Farm located within Kelham, approximately 300m to the east of the site.

1.3.3 The proposed solar farm at Kelham will have an export capacity of 49.9MW of electricity, enough to power over 12,600 homes per year[3] and offset approximately 13,400 tonnes of CO_2 every year, the equivalent of taking over 5,100 cars off the road. [4]

1.4 PURPOSE OF THIS STATEMENT

1.4.1 This planning statement has been prepared by Sirius Planning on behalf of Assured Asset Solar 2 Ltd, in support of an application for planning permission for the construction and operation of 49.9MW (export) solar farm and 50MVA battery energy storage system to the west of Kelham.

1.5 PRE-APPLICATION DISCUSSIONS

1.5.1 Pre-application advice was sought from Newark and Sherwood District Council regarding the likely key issues of the proposal. The pre-application advice (ref. PREAPM/00198/22) was issued on 2nd September 2022 and is presented in **Appendix 4.2**.

1.5.2 In summary, the pre-application response considered the principle of the proposal with regards to the relevant planning policies. The key areas for consideration included the quality of the agricultural land, potential landscape and visual effects, heritage/archaeology and neighbour amenity. As well as

[3] Average electricity consumption based on BEIS (May 2020) Review of the average annual domestic gas and electricity consumption levels https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886473/annual-domestic-gas-electricity-consumption-levels-review-methodology-note.pdf

[4] Based on the UK Government Conversion Factors for greenhouse gas (GHG) reporting https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/715425/Conversion_Factors_2018_-_Condensed_set__for_most_users__v01-01.xls

concerns over the possible impact on the countryside.

1.6 SCREENING REQUEST OPINION

1.6.1 A screening opinion, presented in **Appendix 4.1**, issued by Newark and Sherwood District Council on 12th September 2022 considered the proposal to be non-EIA development and therefore no Environmental Statement will accompany this planning application.

1.7 COMMUNITY ENGAGEMENT

1.7.1 The purpose of community involvement is to improve the quality of the application by actively engaging with stakeholders and interested parties. The aim of the consultation is to identify and inform the local community, elected representatives and interested parties about the proposals to provide sufficient information to allow stakeholder feedback.

1.7.2 A Statement of Community Involvement has been prepared and is presented as part of the application see **Appendix 5.1**. This document provides details of the pre-application consultation exercise and is accompanied by appendices which contain evidence of the consultation process undertaken by the applicant and documents the outcome of the feedback from respondents.

1.8 SCOPE AND FORMAT OF PLANNING STATEMENT

1.8.1 This Planning Statement has been organised into the following chapters:

- The Site and Surroundings;
- The Proposed Development;
- Site Selection and Environmental Considerations;
- Planning Policy Appraisal; and
- Summary and Conclusions.

1.8.2 The Environmental Considerations chapter will include descriptions of the technical assessments that have been considered, these are:

- Ecology and Nature conservation;
- Landscape and Visual Impact Assessment;
- Historic Environment;
- Noise and Vibration;
- Flood Risk and Drainage;
- Agricultural Land Quality; and
- Traffic and Transport in the form of a Transport Statement and Traffic Construction Method Statement.

1.8.3 Baseline information has been gathered for each environmental topic assessed. This is to ensure that a comprehensive technical assessment of the potentially significant effects of the proposed development is considered.

2. THE SITE AND SURROUNDINGS

2.1 INTRODUCTION

2.1.1 This chapter provides a description of the site in terms of its location, history, and surrounding land uses.

2.2 LOCATION

2.2.1 The application site is located between the villages of Kelham (to the east) and Averham (to the south). The market town of Newark-on-Trent is located approximately 2.8km to the east of the proposal site. The site location is illustrated on **drawing HC1002/05/01** and **Figure 2.1** below.

Figure 2.1: Site Location

2.3 SITE AND SURROUNDINGS

2.3.1 The site comprises three fields and part of a fourth, totalling approximately 65ha of flat land located between the villages of Kelham and Averham. The crops grown on site are energy and animal food crops. A small irrigation pond is located in the eastern corner of the site.

2.3.2 From the Nottinghamshire County Council Definitive Map there is a single public right of way that enters the north eastern boundary of the site, part of this is shown in **Figure 2.2**. The public footpath runs in a westerly direction and once it meets the western boundary of the application site it splits into two public footpaths, one heads north west and the other south west.

2.3.3 There is a high voltage overhead power line that runs across the north western corner of the site in a northeast/southwest alignment. This is shown in the distance of **Figure 2.2** and **Figure 2.3**.

2.3.4 The site is bounded by a network of hedgerows and ditches, with copses of broadleaved woodland. The the surrounding area consists mainly of agricultural land. Along the south eastern edge of the site is Main Road (A617), beyond which is the village Averham and the River Trent.

2.3.5 To the east of the site, beyond the established plantation, is Kelham House, a handful of secluded residential properties and the village of Kelham. Broadgate Lane bounds the site to the north east, beyond which is a row of residential properties that overlook the site. To the west and south is a continuation of agricultural land.

Figure 2.2 View of the proposal site from the north eastern boundary looking south west, overlooking the public right of way and electricity pylons in the distance

Figure 2.3 View of the proposal site from the southern entrance off A617 looking north

2.4 SITE ACCESS

2.4.1 The site is currently accessed via three separate field gates, two entrances from the A617 along the eastern and south eastern boundary. The third entrance is from Broadgate Lane on the north eastern boundary.

2.5 IDENTIFIED RECEPTORS AND DESIGNATIONS

2.5.1 The nearest residential properties to the application site, are along Broadgate Lane, located along the

site's northeastern boundary, and to the east lies a small, gated cul-de-sac of detached dwellings, known as 'The Rutlands'. There are also residential properties in the nearby villages of Kelham and Averham.

2.5.2 The nearest non-residential property to the application site is Kelham House, located beyond the established plantation to the east of the site's boundary.

2.5.3 There are no statutory ecological designations within 5km of the application site, the nearest non statutory designation is Kelham Hills Local Wildlife Site (LWS), located approximately 160m to the west of the site. There are a further 4 LWS within 1km of the application site.

2.5.4 The application site does not lie within any historic environments, however Kelham Conservation Area is adjacent to the eastern boundary of the proposal site. There are 13 Listed Buildings within the 1km study area. The nearest Listed Building is the Grade II listed Farm Buildings at Home Farm located within Kelham, approximately 130m to the east of the site. The nearest Scheduled Monument is 'Averham moat and enclosure' located approximately 420m south of the site.

2.5.5 Environment Agency Flood Risk Maps advise that the site is largely within Flood Zone 1 with an area of Flood Zone 2 along the eastern boundary.

2.5.6 The Newark and Sherwood Local Development Framework identifies the site as being in the countryside.

2.6 SITE HISTORY

2.6.1 A review of the planning application search facility on Newark and Sherwood District Council's website identifies no planning applications relating to the site. However, a Targeted Consultation was conducted by National Highways as part of their application for a Development Consent Order (DCO) for flood compensation land as part of the proposed A46 Newark Bypass improvements. This Targeted Consultation red line boundary includes part of the application site. The applicant continues to have dialogue with National Highways Project Management Team regarding both schemes and a Letter of Comfort has been agreed that confirms both schemes can function together, see **Appendix 4.3**.

2.6.2 A Screening Request was submitted to Newark and Sherwood District Council who confirmed on 12th September 2022 the proposal as non-EIA development, **Appendix 4.1**.

2.6.3 Two separate planning applications for battery energy storage systems on land c. 400m to the west (22/01840/FULM) and c. 1.4km to the south west (23/00317/FULM) of the application site. 22/01840/FULM was refused in July 2023 and 23/00317/FULM awaits determination.

3. THE PROPOSED DEVELOPMENT

3.1 INTRODUCTION

3.1.1 The proposed development is for the construction and operation of a solar farm and BESS on land located to the west of the village Kelham.

3.2 OUTLINE OF THE PROPOSAL

3.2.1 The proposal will comprise the following:

- Photovoltaic (PV) panels;
- Mounting frames - matt finished small section metal structure;
- Battery container units;
- Scheme of landscaping and biodiversity enhancement;
- Permissive public access
- Inverters (accommodated on the mounting frames) and transformers (housed in prefabricated containers) and associated cabling (largely below ground);
- Separate Distribution Network Operator (DNO), communication mast(s) and customer substations and meter points for the solar and BESS;
- Deer fencing and infra-red CCTV (CCTV cameras would operate using motion sensors and would be positioned inward only to ensure privacy to neighbouring land and property);
- Temporary construction set down and storage area;
- Internal service roads; and
- Site access for the construction and operational phases.

3.2.2 The solar facility will have an export capacity of 49.9MW, i.e. the amount of power that is supplied to the local grid. The BESS element will have a capacity of 50MW, i.e. the amount of power than can be stored and distributed back to the grid when needed. The scheme will have a lifespan of 40 years after which all equipment will be removed from site.

3.2.3 The solar panels will be connected to small inverter units typically located on the racking of the frames. The inverters will connect to transformer stations which converts the electricity from Direct Current (DC) to Alternating Current (AC). The transformers ensure that electricity can be transferred to the substation and then to the 'local grid' more efficiently. Details of the transformers are presented in **drawing HC1002/05/08**. For comparison metering of the electricity generated by the solar farm, 'customer' substation will also be provided.

3.2.4 The panels will be arranged in rows in an east-west alignment across the deployment area and will be angled at approximately 15˚ to the horizontal and orientated south. All panels will be mounted on metal frames and have a maximum height of 2.0m above ground level; the lowest part of the panel will be circa 0.6m above ground level.

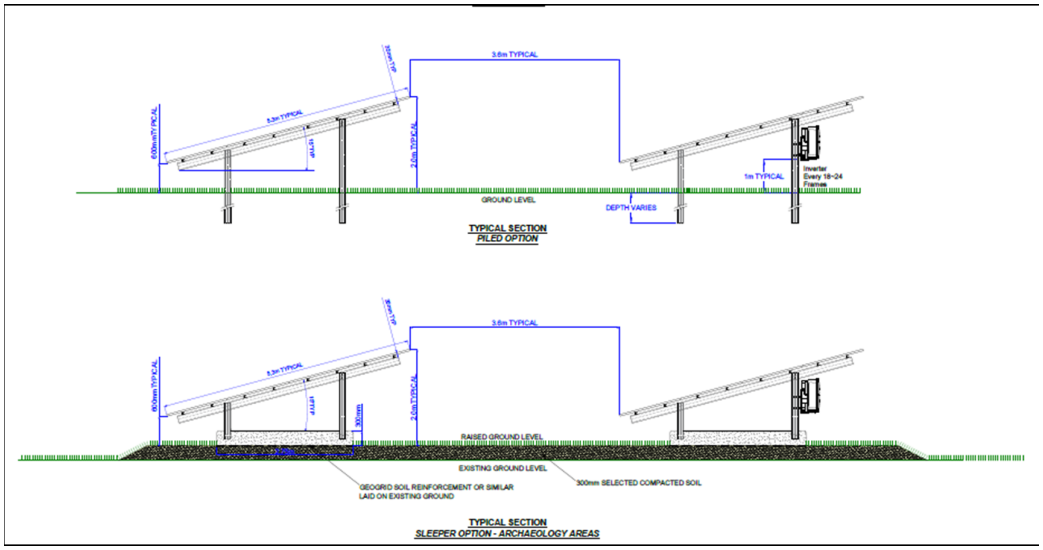
3.2.5 The rows of panels will be set to between 3m and 5m apart to avoid shadowing and allow for scheduled maintenance. Substations and Switchgear Cabin details are approximately 3m in height, as show in **drawings HC1002/05/06** and **HC1002/05/07.**

3.2.6 During construction, operation and decommissioning a buffer zone where no development will take place will be established from hedgerows, ponds and ditches.

3.2.7 There will be two types of mounting frames used on site. The majority will be matt finished galvanised steel that will be fixed to the ground employing a pile mounting system, the piles will be pushed into the round via a mobile piling rig. Where there is known archaeological features on site, the panel frames will be mounted on ballast blocks to ensure stability of the panels and frames without disturbing heritage features. A geo-grid system will be installed beneath each ballast block to reduce soil cohesion to the block when it is moved. In some of archaeological mitigation areas, the ground height will be raised by 300mm to increase the soil depth to avoid potential compaction of the archaeological feature.

The soil used to create the raised areas will be site won material. **Drawing HC1002/05/05** and **Figure 3.1** below provide a specification of the panel and frames.

Figure 3.1: Panel and Frame Specification

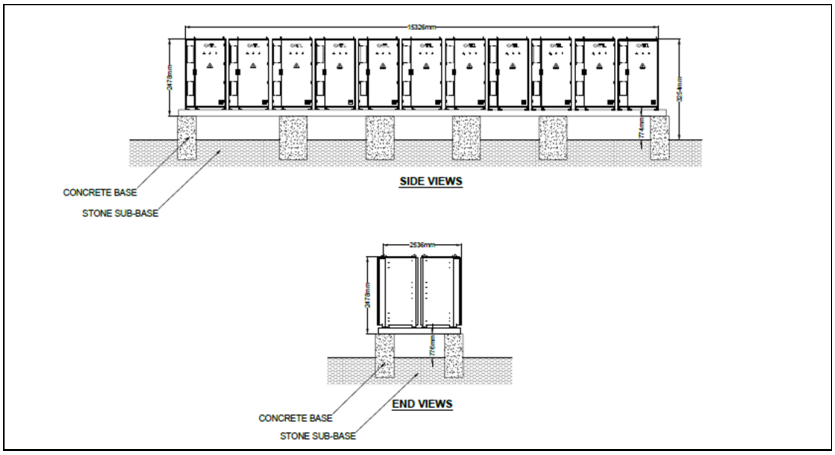


3.2.8 The DNO operates the local electricity transmission network. They are obliged to ensure that the electricity supply system runs within specified limits. Many factors change these operating conditions, but none more so than the balance between the electricity being demanded by customers connected to the national network and the electricity generators available to produce the electricity they require.

3.2.9 The proposed Battery Energy Storage System (BESS) will have a capacity to charge, store and export up to 50MVA of electricity from/to the distribution network. The facility will provide balancing services to National Grid to ensure the future security of the country's electricity supply. The facility will provide power to the local distribution network in a short space of time when demand is greater than available supply.

3.2.10 The BESS compound measures approximately 0.36ha and will have a gravel surface. The BESS will comprise 20 battery-clusters that contain 22 smaller modules. Each battery cluster will measure typically 15.3m in length, 2.5m wide and 3.2m in height. **Drawing HC1002/05/11** and **Figure 3.2** below provide a specification for the battery clusters.

Figure 3.2: Battery Cluster Specification



3.2.11 The battery clusters will sit in bays of two surrounded by 3m high concrete firewalls. The batteries will operate whenever called upon by the DNO. But as electrical demand is greatest in the morning and early evening this is when the facility is most likely to be delivering power to the grid.

3.2.12 The BESS compound also comprises two switchgear cabins, substations for both the BESS and solar farm, two spare storage cabins and four containers, details of which are shown on **Drawing HC1002/05/07.**

3.2.13 The Distribution Network Operator (DNO) requires communication mast(s) to be provided as part of the substation arrangement. However, the DNO have yet to confirm the position and size of the mast(s). Indicative positions have been provided on **drawing HC1002/05/04** and a suggested specification is provided in **Appendix 4.11**. Details of the mast(s) will be confirmed by way of a condition.

3.2.14 A c.4m high acoustic fence will surround the BESS compound, details of which are provided on **Drawing HC1002/05/21**.

3.3 POINT OF CONNECTION

3.3.1 The proposed point of connection is at Staythorpe Substation, located approximately 1.4km to the south of the site. The cable route will run underground within the highway. Any reinforcement works necessary at Staythorpe Substation to facilitate the connection will be carried out by the statutory undertaker using permitted development rights.

3.3.2 The indicative cable route is presented in **Drawing HC1002/05/14**. The drawing show a 'corridor' within which the cable will be laid. The exact alignment of the route is to be confirmed at the detailed design stage via separate authorisation from the Local Highway Authority.

3.4 SITE SECURITY

3.4.1 Once operational, the solar farm deployment areas will be secured by a c. 2m high stock fence or similar. Infra-red (non-visible at night), inward facing pole mounted CCTV cameras (c. 2.5m – 3m in height) will also be provided at regular intervals along the boundary fence. These will enable remote surveillance of the site. Fencing and CCTV camera details are presented on **Drawing HC1002/05/17**. The CCTV cameras will be positioned to avoid views of any private property.

3.4.2 The proposed access from the A617 will be secured by a gate to prevent unauthorised vehicular access, however, pedestrian access will be available. A detailed design of the gate will be confirmed by way of condition. The existing gate off Broadgate Lane will be retained.

3.4.3 The BESS compound will be secured by a 2.4m high paladin fencing as illustrated on **Drawing HC1002/05/22**. The substations will be secured by a 2.4m high palisade fencing. A 4m high acoustic fencing will surround the substation on the western, southern and eastern elevation, see **drawings HC1002/05/19 and 21.**

3.5 LANDSCAPING AND BOUNDARY TREATMENT

3.5.1 Biodiversity and landscape enhancements are at the forefront of the Kelham solar and BESS proposals. In addition to land between and beneath the panels, there will be some areas of non-development land located within the application site that will be brought under formal management for the life of the scheme.

3.5.2 As part of the proposal, a scheme of landscaping and biodiversity enhancement will be provided. The landscape and visual impact appraisal and ecology and nature conservation chapters provide full details of the enhancement proposals, but in summary these include:

- Where solar panels are being installed, a buffer of a minimum 7m is present between the woodland and hedgerows. This will ensure woodland is protected and retained;
- All existing boundary hedges will be allowed to grow to at least 3m.

- Semi Native low scrub planting will be implemented along the proposed bunds and the eastern corner of the application site,
- Beneath the panels a low maintenance grass mix will be provided for added ecological benefit, a tussock grassland mix, suitable for ground nesting birds.
- In the min. 4m gap between the boundary hedges and site security fence, a General Purpose Meadow Mix will be used but left to grow longer to provide additional cover and wildlife habitat adjacent to woodland blocks and hedgerow corridors.
- Existing hedgerows will be gapped up to strengthen the existing landscape structure, mitigate through views into and across the site and where appropriate hedgerow trees planted to help screen long range views
- As all hedgerows are to be left for biodiversity purposes, annual cutting is not required, through active management there is the potential to cut at less frequent intervals providing improvements to screening and wildlife benefits.

3.5.3 A Landscape Masterplan is included at **drawing HC1002/05/16.**

3.6 SITE ACCESS

3.6.1 During the construction and operational phases of the proposed development, the existing field entrance off the A617 to the south of the site will be utilised. The entrance off Broadgate Lane will not be used in association with the solar farm and BESS. Details of the proposed access arrangements during construction are presented in the Transport Statement, see **Appendix 3.3.**

3.6.2 As part of the construction phase a temporary construction compound will be provided on site towards the south, near to the access off the A617. Vehicles will make deliveries here, be able to turn around and leave the site in a forward gear.

3.6.3 The access during the operational phase will be as per the construction routes. Service tracks are required to the substations and BESS area, as well as within and around the solar farm deployment areas which will provide vehicular access around the site as part of inspections and maintenance.

3.6.4 The existing public right of way through the application site will remain open throughout the life of proposal. A detailed CEMP will provide (prior to commencement of the development) a strategy to ensure the safety of footpath users will not be adversely affected.

3.6.5 A permissive bridleway will be provided along the perimeter of the development site as part of the proposals. The bridleway will have a grass surface, be 4m to 5m wide typically from the proposed security fence to the existing hedgerow/woodland and will measure 4.5km in length. The permissive route will be removed on decommissioning of the scheme. **Drawing HC1002/05/27** shows the alignment of the permissive bridleway.

3.7 EMPLOYMENT

3.7.1 During construction of the solar farm, there will be a maximum of 50 people employed to construct the frames, panels, battery units and associated infrastructure.

3.8 CAR PARKING

3.8.1 During construction of the development, it is proposed the temporary construction compound on site will provide parking for all staff vehicles, as a result there will be no parking on public highways.

3.8.2 Once operational, the site will be managed remotely. However, the site will require monthly maintenance checks.

3.9 SITE WASTE MANAGEMENT PLAN

3.9.1 A Construction Environmental Management Plan (CEMP) will be prepared prior to the development works commencing on site. A Site Waste Management Plan (SWMP) will be prepared as part of the CEMP. The SWMP will detail:

- Actions to meet the waste hierarchy;
- Identify the person with responsibility for the SWMP;
- Details of the types and quantities of waste that will be produced by the Contractor as part of the construction phase; and
- Details of all consignments made for example a WRAP waste recording and reporting spreadsheet.

3.10 SURFACE WATER MANAGEMENT

3.10.1 Although the solar panels will divert the downward path of falling rain, being raised off the ground on frames, they will not reduce the permeable area where they are sited. Rainfall that does fall onto the site will, as now, infiltrate into the soil substrate. Therefore, the surface water runoff from the developed site will be no different pre and post-development. There will be no increase in surface water run-off or exacerbation of off-site risk as a result of the proposals.

3.11 CONSTRUCTION PROGRAMME

3.11.1 The construction of the proposed solar farm and BESS is expected to last around 6 to 12 months, however, the majority of vehicle movements will be carried within the first six months. The remaining 6 months will be commissioning and 'snagging' works which typically do not generate HGV movements. The construction of the solar farm is expected employ up to 50 staff. A Transport Statement accompanies the application at **Appendix 3.3**. The Transport Statement provides details of proposed access arrangements, the anticipated build programme, construction vehicle numbers and type, construction worker numbers and the proposed construction hours.

3.11.2 Construction is expected to take place during the hours of 0800 to 1800 (Monday to Friday) and 0800 to 1600 hours (Saturday).

3.12 OPERATIONAL PROGRAMME AND DECOMISSIONING

3.12.1 Once operational, the solar farm and BESS will be unmanned and access for occasional maintenance will be typically made by light goods vehicles, e.g. vans or 4x4 vehicles. Maintenance will occur once a month.

3.12.2 Solar farms and BESS developments require little maintenance, monitoring of such sites will be done remotely and will not need for everyday inspection of the site.

3.12.3 After 40 years of operation the panels, battery units and associated infrastructure will be removed from site and the land returned to agriculture.

4. ENVIRONMENTAL CONSIDERATIONS

4.1 INTRODUCTION

4.1.1 This section sets out the environmental assessments that have been undertaken in support of the planning application. Where necessary they have also informed the design and management of the proposed solar farm and BESS. Several environmental topics areas have not been considered in detail; this section provides a justification for this.

4.1.2 The following environmental considerations have been undertaken:

- Ecology **(Appendix 4.7.1 to 4.7.3)**;
- Landscape and Visual **(Appendix 4.6 to 4.6.3);**
- Heritage **(Appendix 4.8.1 to 4.8.4)**;
- Noise and Vibration **(Appendix 4.9)**;
- Flood Risk **(Appendix 4.5)**;
- Agricultural Land Quality **(Appendix 4.4)**; and
- Traffic and Transport **(Appendix 3.3)**

4.1.3 These environmental and technical assessments are summarised below.

4.2 ECOLOGY AND BIODIVERSITY

4.2.1 Five Local Wildlife Sites (LWS) have been identified within 1km of the application site. Owing to the nature of the proposals and the distance from these LWSs, it is considered unlikely that the proposal will result in any adverse direct or indirect impacts to these non-statutory designated sites.

4.2.2 Given the nature of the proposals it is considered likely that the majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) can remain unaffected during construction and operation of the proposal. However, in order to allow for the formation of pedestrian and vehicular access to the site, proposals require two small breaks within existing hedgerows, which will be compensated for through the planting of new native hedgerows through the site.

4.2.3 The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. These enhancement and management prescriptions are described in **paragraph 3.5.2** above and have been designed to provide ecological enhancements only (they do not constitute mitigation or compensation measures).

4.2.4 A Biodiversity Net Gain Assessment has been undertaken (**Appendix 4.7.3**) which concludes a potential net gain of 61% to be secured through the proposed Landscape Masterplan (**Drawing HC1002/05/16**). In addition, additional hedgerow units of 16% will be delivered through 'gapping up' planting of existing hedgerows and the planting of new species rich native hedgerow and trees.

4.3 LANDSCAPE AND VISUAL

4.3.1 Effects from the Solar Farm and BESS development upon landscape character are restricted to the site and immediate context which are inclusive of adjacent fields to the south west, west, north and northwest of the site area only.

4.3.2 The site is comprised of an existing commercial arable farm surrounded by mature landscape features which limit the scale of effect upon the wider area of the character area and remainder of the study area. Landscape effects are restricted to the site area and immediately adjoining areas forming the prevailing setting to the site only. The development would have minimal effect upon the existing landscape structure but would be placed within it upon arable fields.

4.3.3 The level of landscape effect is determined by consideration of the landscape sensitivity and the magnitude of landscape effect. With reference to the conclusions, a Medium landscape sensitivity and a Medium magnitude of change and in accordance with the methodology, the Kelham Solar Farm and BESS is considered to result in a Moderate level of landscape effect overall, these are 'Not Substantial'

landscape effects.

4.3.4 The visual assessment demonstrates that the area over which the proposed Solar Farm and BESS would be visible from would be considerably smaller in reality than illustrated by the ZTV. This is due to localised reductions where intervening vegetation not included as visual barriers in the model would reduce the extent and number of panels visible. Visibility is generally very localised to the areas immediately adjoining the site boundary only. Visibility of the development (up to 2m high solar panels and 3m BESS infrastructure) is screened by a combination of rural fringe undulating topography, mature vegetation around the site and the limited number of receptors. The two nearby villages of Kelham and Averham are both well screened by vegetation within the site's immediate context so that views do not extend beyond the very edges of the settlement facing towards the site (up to c.200m).

4.3.5 With regard to residential receptors and settlements there is only one residential receptor (single detached property) which has the potential to be subject to substantial visual effects prior to any mitigation measures being implemented. Most available views from properties will be partial and or glimpsed views from first floor level due to garden and site boundary vegetation effectively screening ground floor views. The majority of the other properties assessed were found to experience no more than a Minor magnitude of visual effect which is a 'Not Substantial' level of effect with some also Neutral and subject to No Change. The nearby villages of Kelham and Averham have very limited visibility towards the site and their nucleated settings would not be subject to any substantial changes.

4.3.6 With regard to recreational routes and recreational destinations, no substantial visual effects are concluded for any vehicle users within the study area, with visibility to the proposed development limited from surrounding transport routes.

4.3.7 Road users will experience Moderate-Major effects at Year 1 when passing the site to the immediate east on A617 for a 500m section of the route due to some breaks in the roadside hedgerows. These effects would reduce to at most Moderate once the mitigation hedgerow at the east side of the deployment matures which will substantially screen low level views into the site from the road corridor. Although walkers will still be able to see over into the solar farm the scheme will not appear overbearing with views to distant woodland still remaining intact.

4.3.8 The viewpoint assessment considered a range of representative viewpoints within the ZTV and 2.5km study area. These demonstrated that the largest magnitude of effects (High) would occur for PRoW users from Viewpoint 3 within the site followed by Viewpoints 4 and 5 adjacent to the site where road users would experience a Medium-High Magnitude (Year 1 only) from the road corridor to the east.

4.3.9 It is unavoidable that the footpath NT Kelham FP 4 which heads through the site (VP3), crossing the deployment area, along the existing access track between the northern and central fields will experience a High magnitude of visual change leading to 'Substantial' visual effects. These effects are however limited to the obstruction of ground cover and low level vegetation at the far sides of the site, by the rows of arrays. But views to distant woodland are retained with only partial obstruction of views to the foot of woodland on the nearby embankment at Kelham Hills, such that the defining visual character enclosing the site is largely retained. The effects whilst considered long term (40 years) would also be reversible upon decommissioning of the scheme.

4.3.10 The remainder of the viewpoint locations (no.s 6-11) set away from the immediate setting c.200m+ will be subject to a no more than Low magnitude of visual effects which are Minor effects and of a 'Not substantial' nature.

4.4 ARCHAEOLOGY AND HERITAGE

4.4.1 A Desk Based Assessment, Geophysical Survey, Evaluation Trenching and Heritage Impact Assessment have been undertaken to determine the archaeological potential of the application site as well as the

potential impact the development may have on known heritage assets.

Archaeological Desk Based Assessment

4.4.2 No Scheduled Ancient Monuments (SAM) or listed buildings fall within the application site. One SAM is located c. 400m to south in Averham village and 21 listed buildings were noted in the 1km study area. The Kelham Conservation Area is adjacent to the site to the east, the Averham Conservation Area is located 100m to the south of the application site.

4.4.3 The DBA recognises that the River Trent floodplain was inhabited during prehistoric chronologies. Furthermore, Roman occupation of the area away from the floodplain west of Kelham – is also evidenced and imprinted on the land in the form of numerous cropmarks recorded by the National Mapping Programme and by previous geophysical initiatives. While the date and function of many cropmarks has yet not been proven, their value must be considered as a whole as they represent the remains of past landscapes. Therefore, the value is likely to be High. As a result, further investigation was necessary.

Geophysical Survey

4.4.4 The aim of the geophysical survey was to determine the nature and extent of any buried archaeological features located within the application site area.

4.4.5 The survey identified anomalies of probable archaeological origin within the site, which directly link to cropmarks evidenced in aerial photography and recorded in the Historic Environment Records (HER) and National Mapping Programme (NMP). No archaeological activity was recorded within the NE part of the application site.

Evaluation Trenching (Interim) Report

4.4.6 **Appendix 4.8.3** presents an interim report of an archaeological field evaluation. The full report will be submitted to the LPA on completion of the specialist assessment work and reporting.

4.4.7 A total of 106 trenches were excavated across the 3 fields that made-up the site. Of these 36 contained no archaeological features. There were 278 features excavated across the site, which ranged in date from the Neolithic to the post medieval period. The NMP data and geophysical survey suggested at least three discrete areas of settlement across the site, which appears to have been confirmed by the evaluation. An area of settlement was recorded along the northern edge of the application site, with two other settlements located along the western and eastern edges. These settlements are thought to be of Iron Age and Romano-British date, although the full assessment of the artefacts will need to be concluded before these dates can be confirmed.

4.4.8 The evaluation trenching identified areas across the application site where archaeology was recorded and at what depth. Using this information, a sympathetic design allows panel deployment over the majority of the site. In some areas however, mitigation is needed to ensure identified archaeology is not adversely affected, measures include surface mounted frames and raising the ground levels in localised area. See **drawing HC1002/05/28** for the extent of archaeological areas across the site.

Heritage Impact Assessment

4.4.9 The proposed development lies in the vicinity of numerous heritage assets. Scoping using both ZTV mapping and a site visit established that due to the flat topography of the area and low height of the proposed development, seven assets had potential to be impacted by these proposals. These are Averham Conservation Area, Kelham Conservation Area, The Old Rectory, Kelham Hall, the Church of St. Wilfrid, Averham Park, Averham Park House, and South Farm.

4.4.10 The Heritage Impact Assessment established that of the seven assets assessed, the development would

have a negligible significance of impact on two (The Old Rectory and Averham Park) and a Minor impact on five (Averham Conservation Area, Kelham Conservation Area, Kelham Hall, the Church of St. Wilfrid, Averham Park House, and South Farm). These impacts are considered to be less than substantial.

4.4.11 The design proposals include embedded mitigation to minimise heritage impacts and no further mitigation is recommended.

4.5 NOISE IMPACT

4.5.1 Following a study of the local area the nearest sensitive residential receptors were determined and baseline sound monitoring was carried out over a weekday and weekend period to determine representative background and residual sound levels.

4.5.2 Site operational noise has been calculated using empirical noise data for the transformers and inverters obtained from similar solar farm sites operating in the UK. The predicted noise contribution from the proposed development using noise modelling software shows that the noise contribution from maximum site operations would be well below the representative background sound level during daytime and early morning periods. During night-time under maximum operational noise conditions, the noise level would be well below night-time recommended limits.

4.5.3 During the construction period, it is predicted that construction noise would indicate no significant impacts and best practicable means would be applied. In addition, the maximum levels of vibration during the construction phase would be well below the threshold of perceptibility and therefore not significant.

4.6 FLOOD RISK

4.6.1 All sources of flooding have been considered, these are fluvial (river) flooding, tidal (coastal) flooding, groundwater flooding, surface water (pluvial) flooding, sewer flooding and flooding from artificial drainage systems/infrastructure failure. Environment Agency data shows that the site has not historically flooded.

4.6.2 A review of the Environment Agency's Flood Zones indicates that the site is located within Flood Zone 1, with a localised area of Flood Zone 2 along the eastern boundary.

4.6.3 It is generally accepted that the presence of solar panels on site may slightly change the pattern of runoff with the potential for minor erosion at the base of the panels. Empirical evidence demonstrates that solar development with well-maintained grass underneath the panels do not have a significant impact on the runoff volumes, peaks or time to peak.

4.6.4 The FRA demonstrates that the proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. The development should not therefore be precluded on the grounds of flood risk.

4.7 AGRICULTURAL LAND QUALITY

4.7.1 As part of the application submission for the proposed solar farm and BESS, a soil resource and agricultural quality survey was carried out and concluded that the land is a combination of grade 2, subgrade 3a and 3b agricultural quality, variably limited by wetness and droughtiness restrictions.

4.7.1 Land that is assessed as being grade 3a and above is considered best and most versatile. The soil survey confirms that the grade 2 and 3a land covers the majority of the site. A justification for selecting the location of the application site is provided in **section 5.2** of this Planning Statement.

4.8 TRAFFIC AND TRANSPORT

4.8.1 A Transport Statement considers the predicted transport impact of the proposed development, including the likely trip generating potential of the site, the likely vehicles needing access to the site and how this will be achieved.

4.8.2 The application site will be accessed from the A617 via an improved field access. The access has been designed to accommodate the required vehicles. Appropriate signage will be provided to warn road users, cyclists and pedestrians of the presence of construction vehicles. The Transport Statement demonstrates that there are no collision trends, clusters of collision or collisions with common causality on the highway network surrounding the site which would give rise to any highway safety concerns.

4.8.3 As the deliveries are expected to be spread out over the first 6 months of the construction period (an average of five deliveries expected a day during the peak activity month) and with staff arriving in 'crew cars', the construction period is not expected to have a detrimental impact on the highway safety. After construction has been completed, the site will be unmanned with occasional visits undertaken by a transit sized van for maintenance.

4.8.4 It is concluded that this section of the highway is operating safely and there are no highway safety concerns which are likely to be exacerbated by the proposed development or the vehicular traffic it will generate during the construction phase.

4.9 ADDITONAL ENVIRONMENTAL AND TECHNICAL CONSIDERATIONS

4.9.1 Below is a justification as to why the following topic areas have not required detailed assessment.

Air Quality

4.9.2 Solar and BESS developments have no direct point source of emissions to atmosphere during the operational phase. Possible impacts to local air quality only have the potential to occur during the short construction phase through vehicular and plant emissions or through the creation of dust.

4.9.3 The potential dust generation activities of the construction phase may arise through vehicle movements and any earthworks (in advance of concrete bases for ancillary equipment or cable trenching), in any event these activities will be minor and temporary in nature and will be restricted to certain times. Excessive dust is unlikely to be generated through anchoring of the frames to the ground as the frames will be secured by piles pushed into the ground. Excavation is limited to trenching thus minimising the potential for ground disturbance and the entrainment of dust. Vehicle movements on site will be limited to transportation of equipment from the set down area to solar array development areas.

4.9.4 Given the limited duration of the proposed construction works and the nature of works during the construction phase the potential for dust creation will be low.

Glint and Glare

4.9.5 It is considered that a glint and glare assessment is not required to support this planning application. Residential properties that bound the site that would have potential visibility of the PV panels would be positioned to the north of site. As the PV panels are orientated south there is little or no opportunity for sunlight to be reflected northwards. It should be noted that a 2m high screening bund with associated scrub planting will be positioned along the northern boundary of the application site.

4.9.6 Residential properties are also located to the east and south of the application site. However, these properties are sufficiently screened by existing vegetation (woodland and hedgerow) to prevent glint or glare incidences.

4.9.7 Similarly, there is an existing hedgerow along the A617 which will provide a screen to road users that will prevent/minimize the incidences of glint and glare from the proposal. Furthermore, a secondary hedgerow is proposed along the eastern boundary which, after time, reinforce the screening of the site.

4.9.8 As such it is considered that a glint and glare assessment is not required.

5. SITE SELECTION AND JUSTIFICATION

5.1 INTRODUCTION

5.1.1 The application site was selected through an extensive criteria based search exercise. A range of technical, environmental and economic factors are considered when assessing a site for ground-mounted solar development including BESS. Key factors for consideration include:

- Availability and proximity of the local distribution network (grid);
- Solar irradiation levels;
- Proximity to local population;
- Topography;
- Field size and shape;
- Potential for overshadowing;
- Development Plan Policy;
- Access;
- Agricultural land quality;
- Landscape designations;
- Nature conservation and potential for enhancement;
- Flood risk; and
- Land availability.

Availability and Proximity to Distribution Network

5.1.2 An important aspect of solar farm and BESS development is having access to the local distribution network, or 'grid'. To export electricity generated by a solar farm there must be sufficient capacity on the network to accommodate the additional power from the development. If there is insufficient capacity or the distribution network infrastructure is substandard the network will fail.

5.1.3 As part of the grid application process, the distribution network operator (DNO) provides a point of connection on the network or grid where the power from the solar farm and BESS must connect. It is important that these developments are close to the point of connection, due to:

- Excessive costs of the cable and the trenching works;
- Requirement for easements to enable the crossing of third-party land, and necessary works in the highway which may disrupt local communities; and
- Voltage drops and unwanted energy losses resulting from long cable runs which cause further difficulties for the distribution network operators.

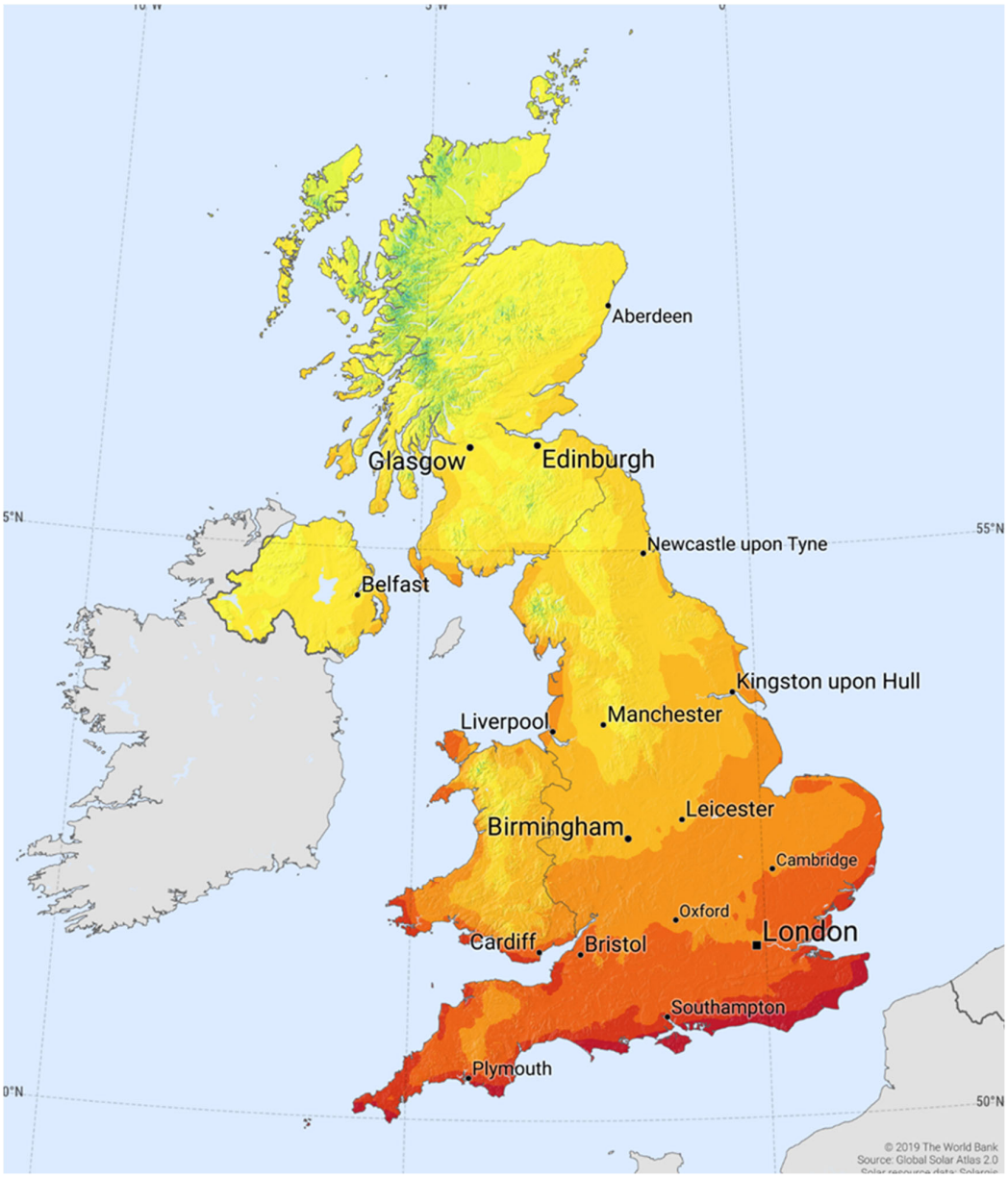
5.1.4 The industry-standard approach is to secure sites within 3.5km of a grid connection. The cable run from the deployment area to the point of connection is less than 1.5km, or circa 1km 'as the crow flies.'

5.1.5 Consideration of land closer to the point of connection has been given but discounted as there are significant areas of higher flood risk, proximity to built-up areas and limited availability of landowners willing to lease their land.

Solar Irradiation Levels

5.1.6 UK irradiation levels are illustrated below in **Figure 5.1**. It shows that the area around Newark receives good irradiation levels. This presents a particularly favourable area for solar development as it allows for higher electricity generation.

Figure 5.1: UK Irradiance Levels



Proximity to Local Population

5.1.7 For any development, minimising potential impacts to residential amenity is a key aspect. Therefore, distance from centres of population is a key locational factor for proposed solar farms. In some cases, it is not possible to be distant from the curtilage of every residential property however it is an important element of the site selection process to minimise impacts on local residences.

5.1.8 The nearest residential properties to the proposal site are located along Broadgate Lane, located north east of the site. Although it was not completely possible to be distant from these properties, the PV panel deployment area has been moved approximately 75m away from residential property boundaries. In addition, a bund and planting are proposed as part of the development to provide additional screening from Broadgate Lane properties.

5.1.9 The low height of the PV panels (2m above ground level), the proposed screening landscaping and the

flat topography means that longer distance views from nearby villages are limited as confirmed in the Landscape and Visual Impact Appraisal presented in **Appendix 4.6**.

Topography

5.1.10 Flat land is preferred for solar and BESS development as construction is more straightforward, shading between arrays is minimised and more consistent. Furthermore, flat land is generally less visible than an undulating topography. All the site is flat, with little or no gradient and so is well suited to the proposed development.

Field Size

5.1.11 Sites with numerous smaller fields including multiple field boundaries, such as hedges, fencing and ditches affect the overall amount of land required tending to use more land.

5.1.12 The deployment area of c, 65ha comprises 3 large fields and part of a fourth field, all of which have minimal obstructions which allows a more efficient use of land.

Development Plan Allocation

5.1.13 The adopted Newark and Sherwood District Council Local Plan Policy Map identifies the site as outside defined development limits and is therefore considered to lie within the 'countryside'. Spatial Policy 3 has regard for rural areas and whilst the policy does not explicitly mention energy developments it does state *"Development not in villages or settlements, in the open countryside, will be strictly controlled and restricted to uses which require a rural setting"*. Further, Policy DM4 provides that permission shall be granted for renewable energy generation schemes unless there are adverse impacts that outweigh the benefits.

Access

5.1.14 Appropriate access to the solar development areas must be available for the construction, operational and decommissioning phases.

5.1.15 The application site will be accessed from the A617 via an improved field access. The Transport Statement demonstrates that there are no collision trends, clusters of collision or collisions with common causality on the highway network surrounding the site which would give rise to any highway safety concerns.

Agricultural Land Quality

5.1.16 The application site was assessed as having a high proportion of best and most versatile agricultural land. However, as demonstrated in section 5.2 of this Planning Statement it is not possible to use land that was of a lower grade due to other environmental constraints.

5.1.17 As such is it considered that the proposal site is the most suitable site that can viably connect into the substation at Staythorpe.

Landscape Designations

5.1.18 Consideration of national and local landscape designations such as National Parks, Areas of Outstanding Natural Beauty, and Special Landscape Areas was undertaken when assessing the potential solar and BESS site.

5.1.19 The application site is not subject to any national or local level landscape designations. Potential effects on landscape character and visual amenity have been assessed in the landscape and visual impact assessment presented in **Appendix 4.6**.

Nature Conservation Designations

5.1.20 Consideration of national and international ecological designations such as Sites of Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites were undertaken when assessing the potential solar sites.

5.1.21 It should be noted that no national or international designations for ecology are located on or near to the application site.

Flood Risk

5.1.22 Although solar farm developments are not strictly flood sensitive infrastructure, some ancillary elements of a solar PV array are such as the associated electrical infrastructure including substations and transformers. The application site is predominantly located within Flood Zone 1, with isolated areas of Flood Zone 2 and therefore considered to be at little or no risk of fluvial flooding. Tidal/coastal is not a consideration in this instance.

Land Availability

5.1.23 Having established the area's potential to accommodate the development it was then necessary to investigate whether sufficient land would be available to allow the development to proceed. To this effect, discussions were held with landowners to determine interest.

5.1.24 The proposed development presents an attractive proposition to the landowners due to the comparative uplift in returns that could be achieved from the land. Commercial terms have been agreed with the landowners for the construction and operation of a solar farm and BESS subject to the necessary consents. This established the fundamental deliverability of the development on these sites.

Conclusion

5.1.25 A key determinant in identifying the location and suitability of a solar farm is proximity to available grid capacity. Once grid capacity has been identified, the distribution network operator provides a point of connection. It is from this point onwards that the developer has some control to determine the best location for the solar farm. Distance from the point of connection, potential planning and environmental constraints and a willing landowner will then determine the location and extent of an application site.

5.2 JUSTIFICATION OF SITE LOCATION

5.2.1 This section sets out the justification for the location of the proposal site, that has been undertaken in support of the planning application. This is supported by **Drawing HC1002/01/03, Constraints Mapping.**

5.2.2 A detailed soil survey has determined that the majority of the proposal site is Best and Most Versatile (BMV) Agricultural Land having 92% as grade 2 and grade 3a. The remaining 8% of land is grade 3b and non-agricultural.

5.2.3 In justifying the location of the proposal site consideration has been given to other locations with lower or equivalent BVM grades. Please note that whilst the proposal site was subject to a detailed soil survey, off site BVM grades have been identified by the 'MAFF map'.

Point of connection (Staythorpe Substation)

5.2.4 The key determining factor to identifying the location of a solar farm and BESS is proximity to available grid capacity. The Distribution Network Operator (DNO) determines where energy generation projects can connect on the network as this is based on complex technical and operational criteria. In this case the DNO identified the existing substation at Staythorpe as being suitable for such a connection. For

the project to be financially viable due, in part, to the cost of the reinforcement works at the point of connection to the network, the location of the PV deployment needed to be within 3km of Staythorpe Substation. Connection would become too costly and long cable runs introduce voltage drops and unwanted energy losses at greater distances. Therefore, a 3km radius of the substation set the foundation for the site selection process.

5.2.5 Within this radius, the following constraints were mapped to identify potential locations, remembering that approximately 65ha of land is needed for 49.9MW of capacity.

Flood Risk

5.2.6 Higher flood risk areas (zones 2 and 3) are best avoided. Whilst subject to the exception and sequential tests PV deployment in such areas may have increased potential to adversely affect flood events. Given the proximity of Staythorpe Substation to the River Trent, there is a significant area of higher flood risk areas with the 3km search radius, as shown on the attached constraints plan.

Railway line and River Trent

5.2.7 To the south of Staythorpe Substation is the Newark to Nottingham railway line, which runs in a west / east alignment. The River Trent is located to the east of the substation which runs in a north/south alignment. Crossing either the river or the railway with a connecting cable is considered finically prohibitive Therefore the land to the east of the River Trent and the land to the south of the railway line were considered unsuitable for solar development within this search area. In addition, the majority of this land is within Flood Zone 2 and 3 and has been discounted previously.

Topography

5.2.8 Flat or gently south sloping land is preferred for solar development as construction is more straightforward and reduces the potential for overshadowing between the PV arrays, thus using land more efficiently. As per **drawing HC1002/01/03**, one area to the west of the proposal site was considered to have unsuitable gradient.

Ecological designations

5.2.9 Consideration of national and international ecological designations such as Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites was undertaken when assessing the potential for a solar proposal. However, none of these designations were found within the search area. At a local level, 7 LWSs and one ancient woodland was identified within the search area. It is key that locally recognised ecological designations are preserved and enhanced, the proposed development wishes to enhance the ecological benefits within the area. In addition, existing woodland within the search area has been discarded from the search.

Current Use

5.2.10 It is understood there are a number of Environmental and Countryside Stewardship Schemes within the search area. It is unlikely that a landowner would terminate any such agreements as this may incur the repayment of grants received so far. Whilst there are varying tiers of stewardship it is unlikely a solar farm would be accepted on stewardship land.

Field size

5.2.11 The use of smaller fields is an inefficient use of land as they contain more intervening hedgerows/vegetation, requiring a greater number of buffer zones to the deployment areas. This can be finically prohibitive. The smaller fields patterns located around the village of Upton also contains a number of below and above ground services which would constrain deployment.

Available Land

5.2.12 Applying the desktop search criteria within the 3km radius the amount of land with a lower BVM grade than the proposal site that is not constrained is limited to land south of Averham Park.

5.2.13 This land is towards the edge of the 3km search area with several residential properties, public rights of way and below ground services. Applying nominal off sets from these known constraints (similar to the known proposal site constraints) the area of potentially available land is less than 50ha. This may be insufficient land to deliver the required capacity to ensure financial viability given the longer cable run back to the Staythorpe substation.

5.2.14 Furthermore, from discussions with some of the landowners a significant proportion of this land would not be available for renewables.

Conclusion

5.2.15 It is clear from the constraint plan and above that there is no unconstrained within the search area that is of a lower BMV grade.

5.2.16 As such is it considered that the proposal site is the most suitable site that can viably connect into the substation at Staythorpe.

6. PLANNING POLICY APPRAISAL

6.1 INTRODUCTION

6.1.1 This section sets out the local and national planning policies as well as material considerations which are relevant, both to the application site, and the type of development proposed.

6.1.2 Given the primacy of the development plan in the decisions-making process, this planning statement identifies and summarises those planning policies of relevance to the determination of the planning application.

6.1.3 In addition to local planning policy, this section of the planning statement also summarises the material considerations at a national and local level.

6.2 NATIONAL ENERGY CONTEXT

Climate Change Act

6.2.1 The Climate Change Act 2008 required long term targets for the UK to achieve an 80% reduction in greenhouse gases by 2050 against 1990 levels. In June 2019, the Climate Change Act 2008 (2050 target Amendment) Order came into effect which required the net UK carbon account for the year 2050 to be 100% of 1990 levels.

6.2.2 The UK Act requires governments to set legally binding 'carbon budgets'. Each budget provides a five-year cap on total greenhouse emissions; in order to meet the UK's emission reduction commitments caps should not be exceeded.

6.2.3 The first carbon budget (2008-12) and the second (2013-17) have been met and the UK is on track to outperform the third (2018-22). However, it is not on track to meet the fourth (2023-27) or the fifth (2028-32).

COP26 and the Net Zero Strategy

6.2.4 As highlighted during the COP26 event in Glasgow, "We cannot afford to wait to act against the threat of climate change. We must work together to protect our planet and people and ensure a greener, more resilient future for us all".

6.2.5 The Governments 'Net Zero Strategy' commits the UK to be powered entirely by clean electricity by 2035, subject to security of supply. In order to meet this target a key component is the deployment of new flexibility measures including energy storage to help smooth out power supply and future price spikes.

6.2.6 The British Energy Security Strategy was published in April 2022. This commits to a fivefold increase in solar deployment, with up to 70GW installed capacity by 2035. The paper sets out that by 2050, the Government ambition is to have a low-cost net zero consistent electricity system, most likely to be composed of predominantly wind and solar generation.

The Clean Growth Strategy: Leading the Way to a Low Carbon Future

6.2.7 The strategy sets out a comprehensive set of policies and proposals that aim to accelerate the pace of clean growth. In order to meet the fourth and fifth carbon budgets (covering the periods 2023-2027 and 2028-2032) the Government will need to drive a significant acceleration in the pace of decarbonisation and this Strategy sets out policies that keep the UK on track to meet the carbon budgets.

6.3 NATIONAL PLANNING POLICY CONTEXT

National Planning Policy Framework

6.3.1 National Planning Policy Framework (NPPF) was updated in September 2023 and sets out the planning policies for England and how these are expected to be applied. It recognises the contribution the planning system makes to the achievement of sustainable development, identifying that sustainable development consists of economic, social and environmental roles.

6.3.2 Paragraph 10 is the single most important paragraph in the NPPF, which provides for "a presumption in favour of sustainable development".

6.3.3 NPPF makes specific reference to renewable energy generation and climate change in paragraph 152:

"It [the planning system] should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."

6.3.4 Paragraph 158 of NPPF states:

"When determining planning applications for renewable and low carbon development, local planning authorities should:

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, … and

b) approve the application if its impacts are (or can be made) acceptable. …"

Planning Practice Guidance

6.3.5 The Planning Practice Guidance (PPG) provides web based and constantly updated advice across a variety of planning matters. The PPG supports the policies set out in the NPPF, providing additional information for Local Planning Authorities and Applicants.

6.3.6 The category 'Planning for Renewable and Low Carbon Energy' identifies the importance of planning and how the role involves the delivery of renewable and low carbon energy infrastructure. Whilst stating that need does not automatically override environmental protection.

6.3.7 The PPG supports the need for renewable and low carbon energy projects in that:

"Increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses."

The UK Renewable Energy Roadmap

6.3.8 The UK Renewable Energy Roadmap, published by DECC in July 2011, provides a clear direction on how to achieve the 2020 targets whilst driving down the costs of renewable energy technologies.

6.3.9 The Roadmap sets out a series of measures aimed at ensuring the UK meets the target to deliver 15% of the country's energy consumption from renewable energy sources by 2020. The Roadmap was updated again in November 2013. This update highlights that renewable energy production was 47.5TWh in Quarter 2 of 2013. However, the current energy production is still falling significantly short of the estimated 216- 225TWh required to meet the national 15% energy consumption target in 2020. The requirement for a diverse mix of energy sources including renewables is reinforced in this update.

6.4 LOCAL PLANNING POLICY

6.4.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town and Country Planning Act 1990 require that planning applications are determined in accordance with the provisions of the adopted Development Plan unless other material considerations indicate otherwise.

6.4.2 The proposed development site falls within the administrative boundaries of Newark and Sherwood District Council. The adopted Local Development Framework (LDF) for the application site comprises:

- Amended Core Strategy
- Allocations and Development Management Development Plan Document (DPD)
- Policies Map

Amended Core Strategy

6.4.3 The Amended Core Strategy was formally adopted in March 2019 and sets out the District Council's spatial policy framework for delivering the development and change needed to realise the Council's vision for the District up to 2033. The majority of decisions on planning applications in the area will be based on the contents of the Plan.

6.4.4 The adopted LDF Policies Map identifies the site as outside defined development limits and is therefore considered to lie within the 'countryside'.

6.4.5 The following table appraises the policies of the Amended Core Strategy against the proposed development.

Table 6.1: Policy Appraisal – Amended Core Strategy

Amended Core Strategy Policy	Commentary
Spatial Policy 3 – Rural Areas *"The District Council will support and promote local services and facilities in the rural communities of Newark & Sherwood. Local housing need will be addressed by focusing housing in sustainable, accessible villages. The rural economy will be supported by encouraging tourism, rural diversification, and by supporting appropriate agricultural and forestry development. The countryside will be protected and schemes to enhance heritage assets, to increase biodiversity, enhance the landscape and, in the right locations, increase woodland cover will be encouraged* *…* *Development not in villages or settlements, in the open countryside, will be strictly controlled and restricted to uses which require a rural setting. Policies to deal with such applications are set out in the Allocations & Development Management DPD. Consideration will also be given to the re-use of rural buildings of architectural merit."*	The proposal, through the lease of the land, will provide a guaranteed income to the landowners for the next 40 years which will allow significant investment into the local family owned business. The extensive scheme of archaeological evaluation and heritage assessment has not only significantly increased our understanding of the site, but it has also informed the design of the scheme to preserve on site archaeology and off site heritage. Such measures included non-intrusive ground mounts for the panels for targeted areas on site and strategic bunding and screening planting. The Heritage Impact Assessment (Appendix 4.8.4) confirms that the embedded mitigation minimises the potential impacts to identified heritage receptors. The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. Whilst the development would have an impact on the landscape characteristics it was concluded that due to the limited vertical scale of the solar arrays and BESS and the relatively flat farmland landscape, with hedgerow field boundaries and woodland blocks, the effects on landscape are concentrated to the site and its immediate setting. It is considered that the landscape effects as a result of the development would be Moderate at Year 1 reducing to Moderate/Minor at Year 10 (following successful establishment of mitigation hedgerows and tree planting) which are 'Not Significant' Landscape effects. It is considered that the proposal accords with the objectives of this policy.
Spatial Policy 7 – Sustainable Transport	The application is accompanied by a Transport Statement which considers the transport impacts of

"Development proposals should contribute to, the implementation of the Nottinghamshire Local Transport Plan and should: • *provide safe, convenient and attractive accesses for all, including the elderly and disabled, and others with restricted mobility, and provide links to the existing network of footways, bridleways and cycleways, so as to maximise opportunities for their use;* • *be appropriate for the highway network in terms of the volume and nature of traffic generated, and ensure that the safety, convenience and free flow of traffic using the highway are not adversely affected;* • *provide appropriate and effective parking provision, both on and off-site, and vehicular servicing arrangements in line with Highways Authority best practice; and* • *ensure that vehicular traffic generated does not create new, or exacerbate existing on street parking problems, nor materially increase other traffic problems, taking account of any contributions that have been secured for the provision of off-site works."*	the development during the construction and operational stages. The Transport Statement demonstrates that there are no collision trends, clusters of collision or collisions with common causality on the highway network surrounding the site which would give rise to any highway safety concerns. Temporary mitigation measures will be put in place during the construction phase (as detailed in the TS) to ensure the safety of highways users. As the deliveries are expected to be spread out over the whole 6 month construction period (an average of five deliveries expected a day during the peak activity month) and with staff arriving in 'crew cars', the construction period is not expected to have a detrimental impact on the highway safety. After construction has been completed, the site will be unmanned with occasional visits undertaken by a transit sized van for maintenance. The existing public right of way through the application site will remain open throughout the life of proposal. A permissive bridleway will be provided along the perimeter of the development site as part of the proposals. The bridleway will have a grass surface, be 4m to 5m wide typically from the proposed security fence to the existing hedgerow/woodland and will measure 5km in length. It is concluded that this section of the highway is operating safely and there are no highway safety concerns which are likely to be exacerbated by the proposed development. As such, the proposal is in accordance with the objectives of this policy.
Core Policy 9 – Sustainable Design *"The District Council will expect new development proposals to demonstrate a high standard of sustainable design that both protects and enhances the natural environment and contributes to and sustains the rich local distinctiveness of the District. Therefore all new development should:* • *Achieve a high standard of sustainable design and layout that is capable of being accessible to all and of an appropriate form and scale to its context complementing the existing built and landscape environments;* • *Through its design, pro-actively manage surface water including, where feasible, the use of Sustainable Drainage Systems;* • *Minimise the production of waste and maximise its re-use and recycling;* • *Demonstrate an effective and efficient use of land that, where appropriate, promotes the re-use of previously developed land and that optimises site potential at a level suitable to local character;* • *…* • *Provide for development that proves to be resilient in the long-term. Taking into account*	The proposed layout takes into consideration the context of the surrounding area, and incorporates appropriate stand-off from nearby sensitive receptors, and incorporates a sensitive yet extensive scheme of landscaping to mitigate any potential for adverse impacts, whilst also seeking to enhance and strengthen the existing landscape character. Existing trees are to be retained and hedgerows will be reinforced Further detail is contained within the accompanying Landscape and Visual Impact Appraisal. Accompanying the application is a Flood Risk Assessment and Drainage Strategy, which notes how surface water will be managed. A Site Waste Management Plan will be prepared as part of the detail Construction Environmental Management Plan. This plan will confirm how waste material on site will minimised and managed in accordance with the waste hierarchy. Section 5 of this Planning Statement demonstrates there is no previously used land available that would accommodate the proposal.

the potential impacts of climate change and the varying needs of the community." • …	Fencing and CCTV are proposed as part of the site security that will reduce the opportunity for crime. It is considered that the proposal accords with the objectives of this policy.
Core Policy 10 – Climate Change *"The District Council is committed to tackling the causes and impacts of climate change and to delivering a reduction in the Districts carbon footprint. The District Council will work with partners and developers to:* • *Promote energy generation from renewable and low-carbon sources, including community-led schemes, through supporting new development where it is able to demonstrate that its adverse impacts have been satisfactorily addressed. Policy DM4 'Renewable and Low Carbon Energy Generation' provides the framework against which the appropriateness of proposals will be assessed."*	The proposed solar farm will generate enough 'green' electricity to power over 12,600 homes per year and offset approximately 13,400 tonnes of CO_2 every year. Solar farms are a simple and established technology, providing a source of safe and clean energy which produce zero emissions when in operation. Solar energy is adapted to anticipated future changes as it is not only sustainable; it is renewable meaning that we will never run out of it. The proposed battery energy storage system will provide balancing requirements essential to support the grid as UK electricity generation shifts to more intermittent renewable energy sources such as wind and solar. The FRA demonstrates that the proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. Whilst a small area of the application site is within flood zone 2, section 5 of this Planning Statement justifies the site location. It is considered that the proposal accords with the objectives of this policy.
Core Policy 12 – Biodiversity and Green Infrastructure *"The District Council will seek to conserve and enhance the biodiversity and geological diversity of the District by working with partners to implement the aims and proposals of the Nottinghamshire Local Biodiversity Action Plan, the Green Infrastructure Strategy and the Nature Conservation Strategy. The District Council will therefore:* • *Expect proposals to take into account the need for continued protection of the District's ecological, biological and geological assets. With particular regard to sites of international, national and local significance, Ancient Woodlands and species and habitats of principal importance identified in Section 41 of the Natural Environment and Rural Communities Act 2006 and in the Nottinghamshire Local Biodiversity Action Plan* • *Seek to secure development that maximises the opportunities to conserve, enhance and restore biodiversity and geological diversity and to increase provision of, and access to, green infrastructure within the District."* …	Five Local Wildlife Sites (LWS) have been identified within 1km of the application site. Owing to the nature of the proposals and the distance from these LWSs, it is unlikely that the proposal will result in any adverse direct or indirect impacts to these non-statutory designated sites. The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. It is considered that the proposal accords with the objectives of this policy.
Core Policy 13 – Landscape Character	The site comprises existing commercial arable farms surrounded by mature landscape features which limit

"Based on the comprehensive assessment of the District's landscape character, provided by the Landscape Character Assessment Supplementary Planning Document, the District Council will work with partners and developers to secure: • *New development which positively addresses the implications of relevant landscape Policy Zone(s) that is consistent with the landscape conservation and enhancement aims for the area(s) ensuring that landscapes, including valued landscapes, have been protected and enhanced."*	the scale of effect upon the wider area of the character area and remainder of the study area. Landscape effects are restricted to the site area and immediately adjoining areas forming the prevailing setting to the site only. The development would have minimal effect upon the existing landscape structure but would be placed within it upon arable fields that would revert to tussock grassland with solar panels upon it. The LVIA concludes, a Medium landscape sensitivity and a Low magnitude of change and in accordance with the methodology, the Kelham Solar Farm and BESS is considered to result in a Minor level of landscape effect on the wider study area overall, these are 'Not Substantial' landscape effects. It is considered that the proposal accords with the objectives of this policy.
Core Policy 14 – Historic Environment *"Newark & Sherwood has a rich and distinctive historic environment and the District Council will work with partners and developers in order to secure:* • *The continued conservation and enhancement of the character, appearance and setting of the District's heritage assets and historic environment, in line with their identified significance as required in national policy;* • *The preservation and enhancement of the special character of Conservation Areas including that character identified through Conservation Area Character Appraisals which will form the basis for their management."*	The Heritage Impact Assessment established that of the seven assets assessed, the development would have a negligible significance of impact on two (The Old Rectory and Averham Park) and a Minor impact on five (Averham Conservation Area, Kelham Conservation Area, Kelham Hall, the Church of St. Wilfrid, Averham Park House, and South Farm). These impacts are considered to be less than substantial. The design proposals include embedded mitigation to minimise heritage impacts and no further mitigation is recommended. It is considered that the proposal accords with the objectives of this policy.

Allocations and Development Management DPD

6.4.6 The Allocations and Development Management DPD was formally adopted in July 2013. The DPD sets out allocations of land for new housing, employment and other development in the main settlements in the District. It also sets out Development Management policies for use in the consideration of Planning Applications.

6.4.7 The adopted LDF Policies Map identifies the site as outside defined development limits and is therefore considered to lie within the 'countryside'.

6.4.8 The following table appraises the policies of the DPD against the proposed development.

Table 6.2: Policy Appraisal – Allocations and Development Management DPD

Allocations and Development Management DPD Policy	Commentary
Policy DM4 – Renewable and Low Carbon Energy Generation *"In order to achieve the commitment to carbon reduction set out in Core Policy 10, planning permission will be granted for renewable and low carbon energy generation development, as both stand*	The proposed development is to construct and operate a 49.9MW solar farm and 50MVA BESS located between the villages of Kelham and Averham. The primary purpose of this development is to provide a clean source of renewable energy in a time

alone projects and part of other development, its associated infrastructure and the retro-fitting of existing development, where its benefits are not outweighed by detrimental impact from the operation and maintenance of the development and through the installation process upon: 1. *The landscape character* 3. *Heritage Assets and or their settings;* 4. *Amenity, including noise pollution, shadow flicker and electro-magnetic interference;* 5. *Highway safety;* 6. *The ecology of the local or wider area;"*	when action is needed more than ever to tackle climate change. The battery element will ensure that the variable nature of solar power does not harm grid parity and security. It will improve energy security by diversifying the areas energy supply mix and help to protect the local communities from potential blackouts. The site comprises existing commercial arable farms surrounded by mature landscape features which limit the scale of effect upon the wider area of the character area and remainder of the study area. Landscape effects are restricted to the site area and immediately adjoining areas forming the prevailing setting to the site only. The development would have minimal effect upon the existing landscape structure but would be placed within it upon arable fields that would revert to tussock grassland with solar panels upon it. The Heritage Impact Assessment established that of the seven assets assessed, the development would have a negligible significance of impact on two (The Old Rectory and Averham Park) and a Minor impact on five (Averham Conservation Area, Kelham Conservation Area, Kelham Hall, the Church of St. Wilfrid, Averham Park House, and South Farm). These impacts are considered to be less than substantial. The design proposals include embedded mitigation to minimise heritage impacts and no further mitigation is recommended. The predicted noise contribution from the proposed development using noise modelling software shows that the noise contribution from maximum site operations would be well below the representative background sound level during daytime and early morning periods. During night-time under maximum operational noise conditions, the noise level would be well below night-time recommended limits. The Transport Statement demonstrates that there are no collision trends, clusters of collision or collisions with common causality on the highway network surrounding the site which would give rise to any highway safety concerns. Temporary mitigation measures will be put in place during the construction phase (as detailed in the TS) to ensure the safety of highways users. The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. It is considered that the proposal accords with the objectives of this policy.

Policy DM5 – Design

"In accordance with the requirements of Core Policy 9, all proposals for new development shall be assessed against the following criteria:

1. ***Access***

Provision should be made for safe and inclusive access to new development. Where practicable, this should make use of Green Infrastructure and as many alternative modes of transport as possible.

…

3. ***Amenity***

The layout of development within sites and separation distances from neighbouring development should be sufficient to ensure that neither suffers from an unacceptable reduction in amenity including overbearing impacts, loss of light and privacy. Development proposals should have regard to their impact on the amenity or operation of surrounding land uses and where necessary mitigate for any detrimental impact. Proposals resulting in the loss of amenity space will require justification.

…

4. ***Local Distinctiveness***

The rich local distinctiveness of the District's landscape and character of built form should be reflected in the scale, form, mass, layout, design, materials and detailing of proposals for new development. In accordance with Core Policy 13, all development proposals will be considered against the assessments contained in the Landscape Character Assessment Supplementary Planning Document.

5. ***Trees, Woodlands, Biodiversity and Green Infrastructure***

In accordance with Core Policy 12, natural features of importance within or adjacent to development sites should, wherever possible, be protected and enhanced. Wherever possible, this should be through integration and connectivity of the Green Infrastructure to deliver multi-functional benefits.

6. ***Crime and Disorder***

The potential for the creation or exacerbation of crime, disorder or antisocial behaviour should be taken into account in formulating development proposals. Appropriate mitigation through the layout and design of the proposal and/or off-site measures should be included as part of development proposals.

7. ***Ecology***

Where it is apparent that a site may provide a habitat for protected species, development proposals should be supported by an up-to date ecological assessment, including a habitat survey and a survey for species

The existing public right of way through the application site will remain open throughout the life of proposal. A permissive bridleway will be provided along the perimeter of the development site as part of the proposals. The bridleway will have a grass surface, be 4m to 5m wide typically from the proposed security fence to the existing hedgerow/woodland and will measure 5km in length.

Following the 6 month construction phase there will be limited vehicular access requirements to and from the site once operational. The Transport Statement concludes that this section of the highway is operating safely and there are no highway safety concerns which are likely to be exacerbated by the proposed development.

The predicted noise contribution from the proposed development using noise modelling software shows that the noise contribution from maximum site operations would be well below the representative background sound level during daytime and early morning periods. During night-time under maximum operational noise conditions, the noise level would be well below night-time recommended limits.

The visual assessment (of the LVIA) demonstrates that the area over which the proposed Solar Farm and BESS would be visible is limited, due to intervening vegetation. Visibility is generally very localised to the areas immediately adjoining the site boundary. Visibility of the development is screened by a combination of undulating topography, mature vegetation around the site and the limited number of receptors. The two nearby villages of Kelham and Averham are both well screened by vegetation within the site's immediate context so that views do not extend beyond the edges of the settlement.

The site comprises existing commercial arable farms surrounded by mature landscape features which limit the scale of effect upon the wider area of the character area and remainder of the study area. Landscape effects are restricted to the site area and immediately adjoining areas forming the prevailing setting to the site only. The development would have minimal effect upon the existing landscape structure but would be placed within it upon arable fields that would revert to tussock grassland with solar panels upon it.

The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme.

Fencing and CCTV are proposed as part of the site security that will reduce the opportunity for crime.

The scheme includes a number of enhancement measures that will be implemented within the site

listed in the Nottinghamshire Biodiversity Action Plan. Significantly harmful ecological impacts should be avoided through the design, layout and detailing of the development, with mitigation, and as a last resort, compensation (including off-site measures), provided where significant impacts cannot be avoided. *…* *9. **Flood Risk and Water Management*** *The Council will aim to steer new development away from areas at highest risk of flooding. Development proposals within Environment Agency Flood Zones 2 and 3 and areas with critical drainage problems will only be considered where it constitutes appropriate development and it can be demonstrated, by application of the Sequential Test, that there are no reasonably available sites in lower risk Flood Zones."*	during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. The FRA demonstrates that the proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. Whilst a small area of the application site is within flood zone 2, section 5 of this Planning Statement justifies the site location. It is considered that the proposal accords with the objectives of this policy.
Policy DM7 – Biodiversity and Green infrastructure *"New development, in line with the requirements of Core Policy 12, should protect, promote and enhance green infrastructure to deliver multi functional benefits and contribute to the ecological network both as part of on site development proposals and through off site provision.* *On sites of regional or local importance, including previously developed land of biodiversity value, sites supporting priority habitats or contributing to ecological networks, or sites supporting priority species, planning permission will only be granted where it can be demonstrated that the need for the development outweighs the need to safeguard the nature conservation value of the site.* *All development proposals affecting the above sites should be supported by an up-to date ecological assessment, involving a habitat survey and a survey for protected species and priority species listed in the UKBAP. On SSSI's and sites of regional or local importance, significantly harmful ecological impacts should be avoided through the design, layout and detailing of the development, with mitigation, and as a last resort, compensation (including off-site measures), provided where they cannot be avoided."*	Ecological survey work included a desk study, extended Phase 1 habitat survey, great crested newt (GCN) presence absence surveys and ground level assessment of trees for potential to support roosting bats. Following the initial survey undertaken in April 2020 an updated walkover was carried out in October 2021 and April 2023 with GCN surveys undertaken in 2020 and 2022. Five Local Wildlife Sites (LWS) have been identified within 1km of the application site. Owing to the nature of the proposals and the distance from these LWSs, it is unlikely that the proposal will result in any adverse direct or indirect impacts to these non-statutory designated sites. The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. It is considered that the proposal accords with the objectives of this policy.
Policy DM8 – Development in the Open Countryside *"In accordance with the requirements of Spatial Policy 3, development away from the main built up areas of villages, in the open countryside, will be strictly controlled and limited to the following types of development;* *…* *6. **Rural Diversification*** *Proposals to diversify the economic activity of rural businesses will be supported where it can be shown that they can contribute to the local economy. Proposals should be complimentary and*	Section 5 of this Planning Statement justifies the location of the proposed development, which is largely determined by the point of connection offered by the Distribution Network Operator, availability of sufficiently large areas of land that have little or no constraints. The proposed development presents an attractive proposition to the landowners due to the comparative uplift in returns that could be achieved from the land. The proposal will directly maintain and enhance the rural economy through the lease of the land, as it will provide a guaranteed income to the landowners for the lifetime of the proposed development. This will provide significant investment into the local family-

proportionate to the existing business in their nature and scale and be accommodated in existing buildings wherever possible." *…* *Proposals resulting in the loss of the most versatile areas of agricultural land, will be required to demonstrate a sequential approach to site selection and demonstrate environmental or community benefits that outweigh the land loss.*	owned farm businesses; subsequently becoming essential to funding agricultural activities in the area. Section 5.2 of the Planning Statement justifies use the best and most versatile agricultural land. Drawing HC1002/01/03 maps constraints to development within a 3km radius of the point of connection. The assessment confirms there is no unconstrained within the search area that is of a lower BMV grade. As such is it considered that the proposal site is the most suitable site that can viably connect into the substation at Staythorpe. It is considered that the proposal accords with the objectives of this policy.
Policy DM9 – Protecting and Enhancing the Historic Environment *"In accordance with the requirements of Core Policy 14, all development proposals concerning heritage assets will be expected to secure their continued protection or enhancement, contribute to the wider vitality, viability and regeneration of the areas in which they are located and reinforce a strong sense of place.* *1. Listed Buildings* *Proposals for the change of use of listed buildings and development affecting or within the curtilage of listed buildings requiring planning permission will be required to demonstrate that the proposal is compatible with the fabric and setting of the building. Impact on the special architectural or historical interest of the building will require justification in accordance with the aims of Core Policy* *14.* *2. Conservation Areas* *Development proposals should take account of the distinctive character and setting of individual conservation areas including open spaces and natural features and reflect this in their layout, design, form, scale, mass, use of materials and detailing. Impact on the character and appearance of Conservation Areas will require justification in accordance with the aims of Core Policy 14.* *…* *4. Archaeology* *Development proposals should take account of their effect on sites and their settings with the potential for archaeological interest. Where proposals are likely to affect known important sites, sites of significant archaeological potential, or those that become known through the development process, will be required to submit an appropriate desk based assessment and, where necessary, a field evaluation. This will then be used to inform a range of archaeological mitigation*	The Heritage Impact Assessment established that of the seven assets assessed, the development would have a negligible significance of impact on two (The Old Rectory and Averham Park) and a Minor impact on five (Averham Conservation Area, Kelham Conservation Area, Kelham Hall, the Church of St. Wilfrid, Averham Park House, and South Farm). These impacts are considered to be less than substantial. The design proposals include embedded mitigation to minimise heritage impacts and no further mitigation is recommended. The extensive scheme of archaeological evaluation and heritage assessment has not only significantly increased our understanding of the site, but it has also informed the design of the scheme to preserve on site archaeology and off site heritage. Such measures included non-intrusive ground mounts for the panels for targeted areas on site and strategic bunding and screening planting. The Heritage Impact Assessment (Appendix 4.8.4) confirms that the embedded mitigation minimises the potential impacts to identified heritage receptors. It is considered that the proposal accords with the objectives of this policy.

measures, if required, for preservation by record and more occasionally preservation in situ." *…*	
Policy DM10 - Pollution and Hazardous Materials *Development proposals involving hazardous materials or the potential for pollution should take account of and address their potential impacts in terms of health, the natural environment and general amenity on:* *1. Neighbouring land uses;* *2. The wider population;* *3. Ground and surface water;* *4. Air quality; and* *5. Biodiversity* *Proposals for potential point source polluters and other activities that have potential to lead to increased deposition of nitrogen should, as part of any planning application, consider the potential for effects on European sites and the scope for avoiding or mitigating these.* *…*	A Noise Impact Assessment has been prepared and accompanies the planning application. This demonstrates that there will be no adverse noise impact both during the construction and operational phases of the proposed development. The FRA considers flood to and from the proposal and demonstrates there will be no adverse effect. Noise, smell, dust, light and fumes associated with construction works will be carefully managed to minimise the scope for any adverse impacts. Measures to deal with these matters are outlined in the Outline Construction Environmental Management Plan (OCEMP). The potential impact on residential amenity has been considered as part of the design process and landscape mitigation measures have been incorporated into the proposal where appropriate. The presence of solar panels on site may slightly change the pattern of runoff with the potential for minor erosion at the base of the panels. Empirical evidence demonstrates that solar development with well-maintained grass underneath the panels do not have a significant impact on the runoff volumes, peaks or time to peak. The majority of the boundary habitats for the site and the field compartments (hedgerows and woodland edge) will remain unaffected during construction and operation of the proposal. The scheme also includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. Key to this is the cessation of fertilliser inputs which currently takes place as part of agricultural practises. It is considered that the proposal accords with the objectives of this policy.
Policy DM12 – Presumption in Favour of Sustainable Development *"A positive approach to considering development proposals will be taken that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. Where appropriate, the Council will work pro-actively with applicants jointly to seek solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions within the district.* *The Development Plan is the statutory starting point for decision making. Planning applications that accord with the policies in the Development Plan for Newark and Sherwood (including, where relevant, policies in*	The proposal will improve the economic, social and environmental conditions in the area. The proposed development will generate temporary jobs for local people during the construction phase. In creating opportunities for employment this will increase the local economic prosperity. The proposal would support growth and prosperity in the energy sector. The proposal will contribute to tackling climate change by reducing carbon emissions. It will contribute to allowing the nation to progress towards a decarbonised energy grid by 2035 in line with the Net Zero Strategy. The battery element will ensure that the variable nature of solar power does not harm grid parity and security. It will improve energy security by diversifying the areas energy supply mix and help

Neighbourhood Development Plans) will be approved without delay, unless material considerations indicate otherwise. *Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision, then permission will be granted unless material considerations indicate otherwise – taking into account whether:* • *Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole. Where adverse impacts do not outweigh benefits consideration should be given to mitigation where harm would otherwise occur."*	to protect the local communities from potential blackouts. The scheme includes a number of enhancement measures that will be implemented within the site during the operational phase of the scheme. A biodiversity net gain calculation confirms there would be a 62% increase in biodiversity value across the site resulting from the proposal. The proposal is consistent with the principles of sustainable development and therefore the objective of the policy.

6.5 CONCLUSION

6.5.1 The proposed development clearly accords with the 'presumption in favour of sustainable development' under the NPPF, as it secures environmental, economic and social betterment. The potential impacts (with mitigation) of the proposal have been demonstrated to be limited and are significantly outweighed by the renewable energy benefits.

6.5.2 The proposed development will provide renewable energy and will contribute towards reducing the causes of climate change by reducing CO_2 emissions, thereby ensuring future generations have access to low carbon energy and a high quality environment. It is considered that potential impacts from the construction, operation and decommissioning of the proposal are not significant and, when balanced against the pressing need for renewable energy and that local and national government strategies support this, the identified potential impacts following mitigation are considered acceptable. It is therefore considered that the proposal accords with the Development Plan and material considerations and should be granted planning permission.

7. CONCLUSION

7.1 INTRODUCTION

7.1.1 This Planning Statement describes a proposal by Assured Asset Solar 2 Ltd for the installation and operation of a solar farm and battery energy storage system (BESS), on land located to the west of Main Street, Kelham, Newark-on-Trent. The proposed development will connect into local electricity network by connecting to Staythorpe Substation. Below ground cabling will connect the facility to the point of connection.

7.1.2 Renewable energy generation plays an important role within the response to climate change and is recognised at all levels of governance in England. The national economic objective to decentralise energy supply and to lessen dependence on fossil fuels is supported by renewable energy from solar. The Government consequently considers that the wider benefits of renewable energy schemes to society and the economy are significant and must be given weight by decision makers in reaching their decisions on individual planning applications.

7.1.3 The proposed development will support the operation of existing and development of proposed renewable energy projects, essential to delivering the Net Zero Strategy objective of decarbonising the electricity grid by 2035 and meeting the nations carbon reduction targets. The proposal would support growth and prosperity in the energy sector and improve energy security by diversifying the area's energy supply mix and help to protect the local communities from potential black outs.

7.2 PLANNING POLICY

7.2.1 The proposals have been considered in the context of national and local policies as well as material considerations for which there is support for proposals for renewable energy generation and necessary enabling infrastructure. The proposal is in accordance with the relevant planning policies and material considerations in the form of the NPPF and Newark and Sherwood LDF, consisting of the Amended Core Strategy and the Allocations and Development Management DPD. All environmental and technical matters can be successfully addressed. The scheme would deliver economic, social and environmental benefits.

7.2.2 The proposed development clearly accords with the 'presumption in favour of sustainable development' under the NPPF, as it secures environmental, economic and social betterment. The potential impacts (with mitigation) of the proposal have been demonstrated to be limited and are significantly outweighed by the renewable energy benefits.

7.3 ENVIRONMENTAL EFFECTS

7.3.1 The following environmental considerations have been undertaken and are presented as appendices to this Planning Statement:

- Ecology;
- Landscape and Visual;
- Heritage;
- Noise and Vibration;
- Flood Risk;
- Agricultural Land Quality; and
- Traffic and Transport

7.3.2 These consider the potential effects of the proposed development upon the application site and identified receptors within the receiving environment. Due to the iterative design process these environmental considerations conclude that the proposal will not lead to significant adverse environmental effects either locally or upon the wider area.

7.3.3 The facility will deliver significant environmental benefits not only through the generation of renewable energy, but also increased public access with over 5km of bridleways, a significant increase in local biodiversity and substantial investment in the local economy.

7.4 CONCLUSION

7.4.1 Overall, the proposed solar farm and BESS would secure a viable source of renewable energy and economic benefits to the local and wider areas. The environmental assessments carried out demonstrate that the proposal can be sympathetically accommodated on site and provide enhancement for biodiversity whilst not adversely affecting local landscape and amenity.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