

Little Crow Solar Park, Scunthorpe

ENVIRONMENTAL STATEMENT NON-TECHNICAL SUMMARY

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On behalf of INRG Solar (Little Crow) Ltd

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1. INTRODUCTION

1.1 This Environmental Statement Non-Technical Summary has been coordinated by Pegasus Group on behalf of INRG Solar (Little Crow) Ltd [the applicant], and forms part of a suite of documents and forms part of a suite of documents supporting an application under Section 37 of the Planning Act 2008 to the Secretary of State for Department for Business, Energy & Industrial Strategy [BEIS] for a Development Consent Order [DCO].

Development

1.2 The development proposal relates to the construction, operation, maintenance and decommissioning of Little Crow Solar Park ("the development") a renewable led energy scheme. The main elements of the development will be the installation of a ground mounted solar panels with an intended design capacity of over 50MWp (megawatts peak) covering an area of approximately 225 hectares. There will also be electrical connection infrastructure and the point of connection into the local electricity grid is directly to the 132kva electricity overhead pylon which already runs through the development site.

What is Environmental Impact Assessment (EIA) and Environmental Statement

- 1.3 An Environmental Statement is a document that sets out the findings of an Environmental Impact Assessment ["EIA"]. An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a Proposed Development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed. In order to determine the extent, or 'scope', of issues to be considered in the assessment and reported in the Environmental Statement, the Planning Inspectorate was asked for its formal opinion on the information to be supplied in the Environmental statement. The Environmental Statement has been prepared in line with the scoping direction.
- 1.4 This NTS covers all disciplines assessed in the Environmental Statement. The Environmental Impact Assessment upon which it has been based has been undertaken by: -



- Pegasus Group: coordination of the EIA, general chapters, technical topics on landscape and visual and socio-economic and baseline data for heritage
- Cotswold Archaeology: technical topic on cultural heritage and archaeology.
- Transport Planning Associates: technical topic on traffic and transportation.
- Daniel Baird Spoil Consultancy Ltd: technical topic of agriculture and soil.
- Clarkson & Woods Ecological Consultants: technical topic on ecology and nature conservation.
- Clive Onions: technical input on drainage and water.
- Integral: technical input on ground conditions and contaminations.
- Clement Acoustics: technical input on acoustics.
- Bureau Veritas: technical input on air quality emissions.

ENVIRONMENTAL STATEMENT AVAILABILITY

- Copies of the Environmental Statement may be obtained from Pegasus Group, South Wing, Equinox North, Great Park Road, Bristol, BS32 4QL. Tel: 01454 625945. Email: <u>Bristol@pegasusgroup.co.uk</u>
- 1.6 The purchase costs are: -
 - Main Report and Technical appendices £150.00
 - Non-Technical Summary (NTS) Free of charge
 - Digital copies of the above documents on a CD or USB stick £15.00
- 1.7 The Environmental Statement and other application documentation will also be available to view on the National Infrastructure Planning website <u>https://infrastructure.planninginspectorate.gov.uk</u>. The site is managed by the Planning Inspectorate, the government agency responsible for examining applications for NSIPs. Documents can also be found on the project website: www.littlecrowsolarpark.co.uk



2. Development Site

2.1 The development site is located between the settlements of Scunthorpe to the west and Broughton to the east. Between the main residential and commercial areas of Scunthorpe, directly adjacent to the western boundary of the site, lies the extensive industrial complex of the Scunthorpe Steel Works. The village of Broughton is separated from the site by an extensive area of dense forestry and woodland. The aerial plan below shows the outline of the development site.



- 2.2 The development site (excluding the area identified for the temporary construction compound) extends to approximately 225 hectares and is comprised largely of arable fields which are bounded and heavily contained by dense woodland to the north, east and south. Phased forestry operations take place in the surrounding woodland. Small pocket broadleaved woodland are also present in the west of the site. Broughton Far Wood Site of Special Scientific Interest (SSSI) and Broughton Alder Wood SSSI are located 820m and 920m east of the order limits respectively. Broughton West Wood Local Wildlife Site (LWS) partially borders the east of the site, and is designated for its woodland habitat.
- 2.3 Adjacent to the north east corner of the development site is a former conventional oil well compound. This was sunk in 1984 by BP Petroleum Development Ltd. The compound is demarked by perimeter fencing and lies outside the development site.



- 2.4 The development site is a considerable distance from the Humber Estuary a Special Protection Area (SPA), Special Conservation Area (SAC) and Ramsar site. The area encompassing the SPA is situated approximately 11km north of the site at the closest point, whilst the SAC and Ramsar site is located 9km west at the closest point. It primarily receives its designation for its estuarine habitats, which support a range of associated species including internationally important assemblages of wintering and migratory birds.
- 2.5 Public Right of Way (Footpath 214 on the Definitive Rights of Way Map) crosses the order limits and follows a mixture of field boundaries and the existing farm track.
- 2.6 The site of the former medieval Gokewell Priory is located within the northern area of the site. This is a non-designated site and survives as above-ground remnant earthworks and potential belowground archaeological remains. The landscape surrounding the site of the former medieval priory has undergone extensive change since the medieval period. The medieval field systems are no longer extant, and the surrounding area is now made up of very large, modern blocks of agricultural land.
- 2.7 The agricultural land classification distribution within the site was found that the majority of the site, at circa. 77% is deemed to be Grade 3b agricultural land.



3. DEVELOPMENT PROPOSAL

- 3.1 The main element of the proposal is the construction, operation, maintenance and decommissioning of a ground mounted solar park and battery storage with an intended design capacity of over 50MWp (megawatts peak). Battery storage will allow the development to fully utilise the network connection capacity when the solar park is not exporting at peak capacity. The batteries would be available to store energy from and release electrical energy to the local electricity network.
- 3.2 An operational lifespan of 35 years would be sought. A substation compound will serve the whole development, and this will be required for the duration of the development and retained thereafter. The substation compound would be located near the norther boundary of the site and to the east of the existing double row of 132kV overhead electricity pylons.
- 3.3 The proposal comprises seven land use zones or works zones, these are: -
 - Work No. 1: Arrays of Ground Mounted Solar Panels
 - Work No. 2A: Battery Energy Storage System
 - Work No. 2B: Battery Energy Storage System (alternative location)
 - Work No. 3: Formation of Ecological Corridors
 - Work No. 4: Substation Building and Compound
 - Work No. 5: Upgrade to Main Access Track
 - Work No. 6: Perimeter Development Buffer
 - Work No. 7: Temporary Construction and Decommissioning Compound

Work No. 1: Arrays of Ground Mounted Solar Panels

- 3.4 The design principles of the solar panels are: -
 - A generating station comprising arrays of ground-mounted solar panels with a gross electrical output of over 50 megawatts peak
 - All solar panels will be located within the Work No. 1 area as defined on the Works Plan



- Total land coverage of the solar panels would be c800,00sq m. Subject to the wattage output of the solar panel selected for construction the potential maximum range for energy generation is between 150MWp and 200MWp.
- An array is a galvanised steel and anodised aluminium mounting structure with the solar panels attached to it
- The maximum top height of the arrays will be 3.5m
- The minimum height of the lowest part of the arrays will be 0.7m
- All solar panels will be south facing
- Solar panels will be dark blue, grey or black in colour
- Indicative slope of the solar panels from horizontal would be 15 degrees
- Internal access track of permeable construction
- Typical minimum distance between edge of the arrays to the 1.8m high perimeter fencing would be 3m
- Biodiversity would be promoted within and around the arrays
- CCTV positioned along the perimeter of the arrays on 3m high poles
- Planting and ecological works incorporating the biodiversity objectives and management prescriptions in accordance with the Outline LEMP

WORK NO. 2A: BATTERY ENERGY STORAGE SYSTEM & WORK NO. 2B BATTERY ENERGY STORAGE SYSTEM

3.5 Two alternative locations are presented for the associated battery energy storage system these are Work No. 2A and Work No. 2B and the Environmental Statement has considered both options. Work No 2B is positioned amongst Work No 1. This option could be utilised if the post-consent detailed design of the ground mounted solar panels allows for a reduction in their development footprint which in turn may allow the battery storage facility to be located within Work No. 2B instead of the location allocated for Work No. 2A. If Work No. 2A is constructed the area identified in the works plan for Work No. 2B will be used to house solar panels (as part of Work No.1). If, however, Work No. 2B is constructed, the area identified in the



works plan for Work No. 2A will be used for the ecological corridor (as part of Work No. 3).

- 3.6 The design principles of the battery energy storage system for either location, namely Works No. 2A or Works No. 2B are:-
 - A battery energy storage system
 - The candidate storage capacity is 90MW
 - Total land coverage of the battery energy storage system compound would not exceed 11,200 m sq
 - The system would be made secure by a 3m high gated palisade fence
 - Battery containers would have a maximum length of 17m, maximum width of 3m and a maximum height of 4m. The maximum storage capacity of a single battery container would be 6MW
 - The battery containers would be dark green in colour.

WORK NO 3: FORMATION OF ECOLOGICAL CORRIDORS

- 3.7 Ecological and biodiversity measures are promoted across the entire Order Limits area and this is enhanced within Work No 3.
- 3.8 Within this area, a number of measures and features are proposed for the benefit of biodiversity. This includes the planting of new hedgerows and bolstering of existing field boundaries to increase coverage of this habitat, provide effective landscape screening, and to improve connectivity of the hedgerow and woodland network across and beyond the order limits.
- 3.9 Several measures have been designed specifically for the benefit of wildlife species which are targeted for conservation both locally and nationally. Circa 10 ha of the Work area will be cultivated annually to promote suitable conditions for uncommon and declining arable plants to thrive. An area totalling approximately 23 ha within the Work area will be managed under a seasonal grazing regime with the aim of providing optimal conditions for ground-nesting farmland birds during the breeding season. Field margins and easements spread across the work area will be sown with a species-rich acid grassland seed mix, which will contain larval food plants



and nectar sources for several pollinating invertebrate species of conservation importance, which are present locally. A considerable number of features for nesting birds and roosting bats, as well as hibernation/sheltering sites for various species, will be installed at the field boundaries.

WORK NO 4: SUBSTATION BUILDING AND COMPOUND

3.10 A single substation compound will be required for the development and this will likely be constructed at the start of the development. Following construction and commissioning the substation compound will be adopted and become the property of the District Network Operator, who will maintain the compound throughout the lifetime of the development. The decommissioning of the substation is not considered as part of the application as this will be the property of the DNO and as such would be outside the gift of the developer to decommission.

WORK NO 5: UPGRADE TO MAIN ACCESS TRACK

3.11 The existing access track fronting the B1207 will be used for the development for all phases, namely, construction, operation & maintenance and subsequent decommissioning. The unbound granular track, with 2 No. passing bays, will be upgraded with similar materials and drainage channels where required. Vegetation will be removed in order to achieve visibility splay at the site access for construction and this would be maintained during the operational period. The vegetation management requirements would be set out in the LEMP in accordance with the outline LEMP.

WORK NO. 6: PERIMETER DEVELOPMENT BUFFER

- 3.12 For the outer edge of the development, a typical development buffer of 10m would be provided between the edge of the order limits and the perimeter fencing. This allows the provision of future mitigation planting should it be required during the lifetime of the development. Development within Work No. 6 include: -
 - security fencing, boundary treatment and other means of enclosure and internal access;
 - bunds, embankments and swales;
 - temporary diversion of public footpath during construction and decommissioning;



- ancient woodland buffer;
- public footpath buffer;
- pond buffer;
- hedge buffer;
- swale buffer; and
- mitigation planting and maintenance corridor. Planting and ecological works incorporating the biodiversity objectives and management prescriptions in accordance with the Outline LEMP.

WORK NO. 7: TEMPORARY CONSTRUCTION AND DECOMMISSIONING COMPOUND

- 3.13 If all elements were constructed as at the same time, then the construction period will take approximately 11 months (up to 47 weeks). During the construction phase (or phases) one main construction compound will serve the development and this will be located off the main site entrance, thus reducing the distance delivery vehicles will need to travel after reaching the site's entrance.
- 3.14 Appendix 1 provides the Works Plan.



4. LANDSCAPE AND VISUAL IMPACTS

4.1 The likely effects on landscape features, landscape character and visual amenity have been assessed.

Baseline Conditions

4.2 Land use within the development site is predominantly agricultural fields laid down to a mixture of arable and managed grassland. The site lies within a farmland area surrounding the town and industry of Scunthorpe. The number of locations which offer the potential for views towards the proposed development are very limited, in part due to the surrounding woodland.

Likely Significant Effects

Landscape Character

4.3 The introduction of the development would represent a direct and notable change to the land use within the site, and notwithstanding that the ground beneath the panels would be managed as grassland, it is acknowledged that for the lifetime of the development there would be a significant effect on landscape character within the site.

Visual Amenity

4.4 Footpath 214 runs through the development site, from the woodland to the east to Santon and the edge of the of the Steel Works to the north west. The effects on walkers using this route as it passes through the development site itself are judged to be significant. The route would be defined on both sides by fencing associated with the solar park, albeit that the effects of the fencing will be softened slightly by new native hedgerows planted adjacent to the path offset to allow wide grassy verges on both sides of the path. Aside from this footpath route, there would be no other significant effects on visual receptors arising from the proposals.

Mitigation and Enhancement

4.5 In order to reduce the likelihood of significant adverse landscape and visual effects, mitigation has been included within the design of the proposals. This included consideration of the location of the development site, which due to its location adjacent to woodland is screened from large parts of the landscape.



4.6 In addition, the design of the proposals has also included for a series of landscape proposals which include the planting of new hedgerows along the security fences adjacent to the public right of way through the development site and the sowing of wildflower seed in the margins between the path and the hedges.

Conclusion

4.7 It is important to appreciate that some effect on landscape character and visual amenity is an inherent consequence of a new development of this type and scale. However, in this case, any potential for adverse effects is limited by existing vegetation as well as the topography of the landscape. As such, for a scheme of its scale the landscape and visual impacts arising are highly limited. Those limited effects which have been identified should therefore be balanced against the benefits of the proposed development.



5. ECOLOGY AND NATURE CONSERVATION

5.1 The likely effects of the development on ecology have been assessed. Ecological impacts cannot be confirmed for decommissioning as the ecological constraints at the point of decommissioning are extremely difficult to predict at this stage. The salient points are identified below.

Baseline Conditions

- 5.2 The suite of ecological surveys undertaken to date identified a range of habitats on/immediately adjacent to the site; however, the majority of habitat within the construction zone (arable and semi-improved grassland) were of low ecological value. The habitats within and adjacent to the site were assessed as being suitable for a variety of notable and protected species. A number of designated sites were present immediately adjacent to the site and/or within the zone of influence of the development.
- 5.3 A total of 21 "Important Ecological Features" (IEFs) were identified: Broughton Far Wood SSSI, Heron Holt LWS, Broughton West Wood LWS, Manby Wood LWS, Broughton Far Wood LWS, Rowland Plantation LWS, Broughton West Wood SNCI, Santon Wood SNCI, arable field margins, semi-natural broadleaved woodland, plantation broadleaved woodland, hedgerows, ponds, ditches, bats, brown hare, breeding birds of open habitats, breeding birds of boundary habitats, wintering birds of open habitats, great crested newts and invertebrates. Mitigation for badgers has also been included due to a requirement for legal compliance.

Likely Impacts

5.4 Impacts were considered at both the construction and operational phases of the project. Key sources of impacts during construction were identified to be habitat loss, fragmentation, disturbance of species through noise and vibration, degradation of habitats by pollution or dust deposition and the incidental mortality of species during construction. Fewer operational phase effects were noted as post construction activity at the site would be minimal. However the loss or modification of the habitat during operation which will occur during the construction phase will persist for certain species throughout the operational phase, potentially having long-term adverse effects. Conversely for other species and habitats the long-term operation of the site is anticipated to be beneficial, even within the implementation of mitigation and enhancement measures.



5.5 Beneficial effects have been identified through cessation of intensive arable farming practices, as well creation and management of a range of difference grasslands and native hedgerows on site which will improve connectivity as well as foraging and nesting/ sheltering habitat for a range of species. The key effects likely to result in significant adverse effects were mainly associated with habitat loss (as a result of construction activities), incidental damage to habitats and mortality of animals during construction, degradation of habitats resulting from dust/runoff/collision and disturbance of species utilising adjacent habitats. Operational phase effects were considered to be generally neutral although uncertainty in the conclusions was noted, in particular with respect to the adverse effects of the development on ground nesting birds.

Mitigation

- 5.6 A number of mitigation measures have been identified that are considered essential to reduce or eliminate potential adverse effects from both the construction and operational phases. The key mitigation measure to minimise construction related effects will be the preparation and implementation of a Construction Environmental Management Plan. This will outline measures to be undertaken to avoid impacts such as runoff, dust deposition and accidental damage. It will also outline habitat manipulation prescriptions in order to avoid impacts on ground nesting birds during construction.
- 5.7 A Landscape and Ecological Management Plan has been prepared in order to outline how the site will be managed post construction in order to maximise its ecological value. This includes conservation management of grassland to increase its species richness and ensure land is available for use by ground nesting birds, and management of hedgerows to maximise their value for wildlife. Other measures include the retention and ongoing management of land for arable plants species. Bat and bird boxes will also be installed and hedgerows in-filled where appropriate.

Conclusions

5.8 With the successful implementation of the mitigation measures adverse impacts upon the ecological features identified can largely be reduced to a non-significant level. The creation of new habitats of greater biodiversity value than the current habitats within the site present the opportunity to enhance the biodiversity value of the area. As such it is anticipated that during the operational phase the



development will result in a minor beneficial enhancement of hedgerows through appropriate management and new planting, as well as minor beneficial impacts on woodland habitats, invertebrates, and non-ground nesting birds.



6. CULTURAL HERITAGE

6.1 The likely significant effects of the development upon the cultural heritage resource, including buried archaeological remains, has been considered within and in vicinity of the site.

Baseline Conditions

6.2 The heritage resource and heritage assets which has been considered includes the known and potential buried archaeological remains which may be affected as part of the construction stage or could potentially be affected as a result of change within the settings of these assets introduced following the completion of the development.

Likely Significant Effects

6.3 It has been established that the Proposed Development has the potential to affect known archaeological remains associated with possible prehistoric and medieval archaeological remains as well as archaeological remains of uncertain date. The excavation of cable trenches and building foundations, the insertion of new roads, and inserting/removing the mounting system structures (and any associated landscaping or services) have the potential to truncate or totally remove the archaeological remains within their footprint. Such effects would result in harm to or total loss of significance of these buried archaeological features, leading to a Significant Adverse Effect.

Mitigation and Enhancement

- 6.4 It has been established that the Proposed Development would not lead to harm to any heritage assets located in the vicinity of the site, including the Scheduled Raventhorpe deserted medieval village, and no further mitigation with regard to these assets is required (Neutral Effect). Likewise, there are not anticipated to be any significant effects to Gokewell Priory as a result of the proposed development within its setting.
- 6.5 The area of the medieval Gokewell Priory has been designated as an archaeological exclusion zone and therefore there will be no impacts associated with installation of the arrays.



- 6.6 The archaeological investigations have identified remains associated with prehistoric activity, as well as features of uncertain date within the site, which may be subject to physical effects as a result of the Proposed Development. In the course of the consultations with the Historic Environment Officer, following the completion of the investigations, the following mitigation strategy was agreed, in addition to the archaeological exclusion zone
 - A no-dig zone within which concrete pads will be utilised, around the potential prehistoric round barrow (ring ditch).
 - In order to avoid the potential barrow recorded as a cropmark, trench cable has been relocated.
 - A programme of archaeological recording to the implemented during any works within the peripheries of the archaeological exclusion zone (i.e. around pylons to the east and during cable trench excavations within the south-east corner).
 - An archaeological monitoring (watching brief) during ground works within sensitive areas and during excavation of the swale to the west of the archaeological exclusion zone.
- 6.7 It was also agreed that the information gathered in the course of the archaeological recording carried out in the course of the investigations provides appropriate and proportionate response with regard to any remaining archaeological features (preservation by record), and no further mitigation is necessary.

Conclusion

6.8 The Proposed Development at the site, if the mitigation measures identified are implemented, is considered acceptable and there would be no adverse significant residual effects. There would be no harm to the heritage assets in the vicinity of the site and harm to archaeological remains within the site can be adequately mitigated by preservation in situ and preservation by record (as applicable).

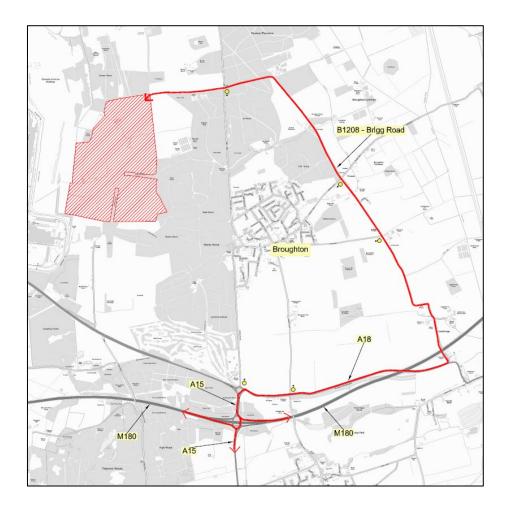


7. TRANSPORT AND ACCESS

The likely significant effects of the development in terms of transport and access have been assessed.

Baseline Conditions

7.1 The roads leading to the site already serve HGVs associated with the Steel Works, which is accessible from Dawes Lane to the north of the site. The proposed construction traffic route is therefore considered to be suitable for use by the relatively low number of HGVs that will be associated with the construction period. The likelihood of background traffic being delayed significantly is low. The proposed route to site is via the A15, A18 and B1208 Brigg Road: -





Likely Significant Effects

Construction

- 7.2 Construction period will take approximately 11 months (up to 47 weeks). Construction activities will be carried out Monday to Friday 0700-1800 and between 0800 and 1330 on Saturdays.
- 7.3 The construction phase for the solar farm includes the preparation of the site, installing the access tracks, erection of security fencing, assembly and erection of the PV arrays, installation of the inverters/transformers and grid connection.
- 7.4 The construction of the battery storage facility will include the preparation of the site, installation of the access roads, erection of security fencing, assembly of the battery system, and installation of the switch-room and grid connection.
- 7.5 The components which are required to construct the solar farm will arrive in 40ft containers by 15.4m long articulated vehicles. The candidate PV design includes 356,670 modules. Based on experience elsewhere, the applicant has confirmed that around 1,903 deliveries will be required. Assuming all deliveries arrive within a 47 week period and Monday to Saturday, this equates to, on average, around seven deliveries (14 movements) per day by the largest vehicle.
- 7.6 Inverter stations will be delivered to the site through the construction period. These are likely to be up to 11m in length. The proposed solar farm will have a total of 48 inverters. It is assumed that the inverters will be transported individually due to their weight and as such this would equate to a total of 48 deliveries.
- 7.7 In addition, the substation buildings will be brick built to house the switchgear to facilitate the connection of the solar farm to the underground grid connection cable which forms part of the distribution network. The internal equipment housed within the substation buildings will be delivered on 3No. 10m rigid lorries. The majority of the external equipment located within the 132kV substation compound will be delivered on 6No. 10m rigid lorries with the exception being the 132kV transformer unit which will be delivered on a 15.4m articulated vehicle.
- 7.8 It is likely that the material required for the access tracks will arrive by 10m rigid vehicles. The precise number will depend on the type and the amount of material required, but for the purpose of this assessment we have assumed that one delivery



is required per five acres, resulting in a total of 104 deliveries. A number of front end JCBs will also be required to transport equipment around the site, and to distribute stone as necessary.

7.9 A maximum of up to 100 construction workers are anticipated to be on site during peak times during the construction period. A temporary construction compound will be provided and will provide storage, parking for contractors and turning for HGVs. The location where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is envisaged that a number of the non-local workforce will stay at local accommodation and be transported to the site by minibuses to minimise the impact on the strategic and local highway network.

Operational Phase

- 7.10 There are anticipated to be around four visits to the site a year (one per quarter) for additional equipment maintenance. These would typically be made by light van or 4x4 type vehicles. Whilst the contractor's compound will have been removed, space will remain within the site on the access tracks for such a vehicle to turn around to ensure that reversing will not occur onto the highway.
- 7.11 As there will only be one vehicle visit for maintenance every three months, it is considered that the effects of the operational phase in terms of transportation will be negligible. The cumulative effect is therefore also considered to be negligible.

Decommissioning Phase

7.12 The equipment of the solar park will have a lifetime of approximately 35 years, upon which they will be replaced. The number of vehicles associated with the decommissioning phase will not exceed the number set out for the construction phase. In light of this, all environmental effects in relation to transportation for the decommissioning phases are considered to be negligible. The effects will also be temporary (short to medium term) and not permanent.

Mitigation and Monitoring

7.13 A Construction Traffic Management Plan (CTMP) will be implemented during the construction phase. The aim of the CTMP is to minimise the effect of the construction phase on the highway network. It will contain a package of standard



mitigation measures including: Installation of signs to direct construction vehicles associated with the development along the route; wheel wash to hoses down vehicles so that no construction vehicles exiting the site compound will take mud or debris onto the local highway network; a road sweeper will be provided for surrounding local roads along the construction traffic route to alleviate any residual debris generated during the construction phase; banksmen will be provided at the site access to indicate to construction traffic when it is safe for them to enter and exit the site; and all residents of Brigg Road, along the construction traffic route, will be provided with contact details of the Site Manager, which will also be provided on a site-board at the entrance to the site.

Summary

7.14 All residual environmental effects in relation to transportation for the construction, operation and decommissioning phases are considered to be negligible.



8. AGRICULTURAL CIRCUMSTANCES

8.1 An assessment of the likely significant effects on agricultural land has been undertaken. Consideration has been given to the resources of agricultural land, the soil resource associated with that land, and the farm businesses operating at and around the site.

Baseline

8.2 Two farm businesses occupy land within the order limits. The soil resource within the site is predominantly light textured (sandy loam to loamy sand) and free drained. Small areas of clayey soils are found scattered across the site, in some instances with a covering of sandy loam topsoil material originating from higher up the slope. The largest continuous block of very light (sand) soils is found in the south western quarter, but pockets of this material are again found scattered across the site. A detailed soil survey found land in agricultural grades 3a and 3b, Grade 3b predominates, with Grade 3a being relatively limited in extent.

Likely Significant Effects

- 8.3 Construction work will start the temporary curtailment of arable production at the site. The land will remain in agricultural production, grazing sheep, but arable land management will stop for the duration of the development, an extended fallow period. Hardstanding, substation and power storage facilities will cover the soil surface for the minor area they occupy. The land resource below the solar panels not lost and therefore has low sensitivity to the proposed development. The resulting effect of the construction work on the Agricultural Land Resource will therefore be short term, reversable, local and have negligible significance.
- 8.4 Solar panel construction work will involve trafficking the land in a similar manner to the current arable land use where high axle load vehicles like combine harvesters and grain trailers are regularly used. Heavy plant use will include excavators for digging trenches and cranes for placing substation and storage modules. Although very little movement of soil will take place, compaction may occur from trafficking by construction vehicles, but this compaction will be broadly similar to the business as usual of arable land management.
- 8.5 The resulting effect of the construction disturbance on the soil resource at the site will be short term, reversible, local and of negligible significance.



- 8.6 As for the agricultural land resource, the start of construction work will mark the start of the temporary curtailment of arable management at the site for Farm Business A and B. While construction work is taking place the land will not be available for grazing livestock either. Noise from construction work near the poultry barns could have the potential to disturb stock, however any such noise will be masked by the forced ventilation of these poultry barns use. Overall the unmitigated effect of the site preparation and construction is short term, reversable, local and of negligible significance.
- 8.7 During operation, grass below and between the solar panels will need to be managed. The most cost effective means of doing this is to graze the land with sheep. The land will therefore remain in agricultural production for the duration of the solar PV development. Neither of the occupying farm businesses have livestock enterprises so the grazing licence is likely to be offered to a local sheep enterprise.
- 8.8 Farm Business A will earn rent from the solar park occupation of their land, a new diversified enterprise. Farm Business B has no security of tenure for the contract farming agreement on the site, and is looking to downscale by giving up the contract farming of land within the site. Rent for the solar park will go to the landowner.

Mitigation Measures

- 8.9 There is no effective mitigation for the loss of best and most versatile agricultural land, and there is no actual loss of agricultural land resource. Therefore, the residual effect of the construction of the Development will remain short term, reversable, local and have negligible significance.
- 8.10 An Outline Soil Management Plan will sit alongside the construction management plan for the development, providing guidance on the sowing of a green cover following the removal of the preceding arable crops, avoidance of trafficking over land when in a wet and plastic condition, and the appropriate stripping and storage of topsoil prior to placing areas of hard standing and concrete rafts.
- 8.11 Stripping and storing topsoil from these small areas will prevent the material being covered and compacted for the duration of the solar farm development. At decommissioning it will also permit deeper and more effective decompaction of the subsoil material before the stored topsoil is replaced. By following an appropriate soil management plan the effect of site preparation and construction on the soil



resource will remain short term, reversible, local and of negligible adverse significance. The soil management pan also covers decommissioning.



9. SOCIO ECONOMIC ISSUES

9.1 The likely socio-economic effects of the development have been assessed.

Baseline Conditions

9.2 North Lincolnshire has an older population when compared with the regional and national picture, while jobs growth has been flat over the last five years. Wages are also below the UK average, but higher than Yorkshire and The Humber as a whole. North Lincolnshire is also faced with the issue of having a net outflow of commuters who work in other parts of the region. The flat labour market and net out-commuters would suggest that more developments that create new employment opportunities are needed to support growth in the District.

Likely Significant Effects

- 9.3 In respect of the construction phase, the assessment indicates that the Proposed Development will have the following temporary effects:
 - 233 direct and indirect/induced construction jobs and indirect/induced supply chain jobs over the six-month construction programme.
 - £6.3million of gross value added over the six-month construction programme.
 - £160million of direct capital investment during the six-month construction programme.
- 9.4 In EIA terms, these impacts are considered to have a minor beneficial effect in the short-term.
- 9.5 In respect of the operational phase, the assessment suggests that the Proposed Development will have the following permanent effects:
 - 13 net additional jobs in the North Lincolnshire economy.
 - £660,000 of gross value added per annum in the North Lincolnshire economy or £5.7million over ten years (present value).
- 9.6 The significance of the permanent effect is therefore considered to be a long-term moderate positive impact.



Mitigation and Enhancement

9.7 There are no identified negative effects associated with the development. When considered in isolation it may generate a small number of additional commuting flows although this is considered to be outweighed by the other positive effects that the development would have on the economy.

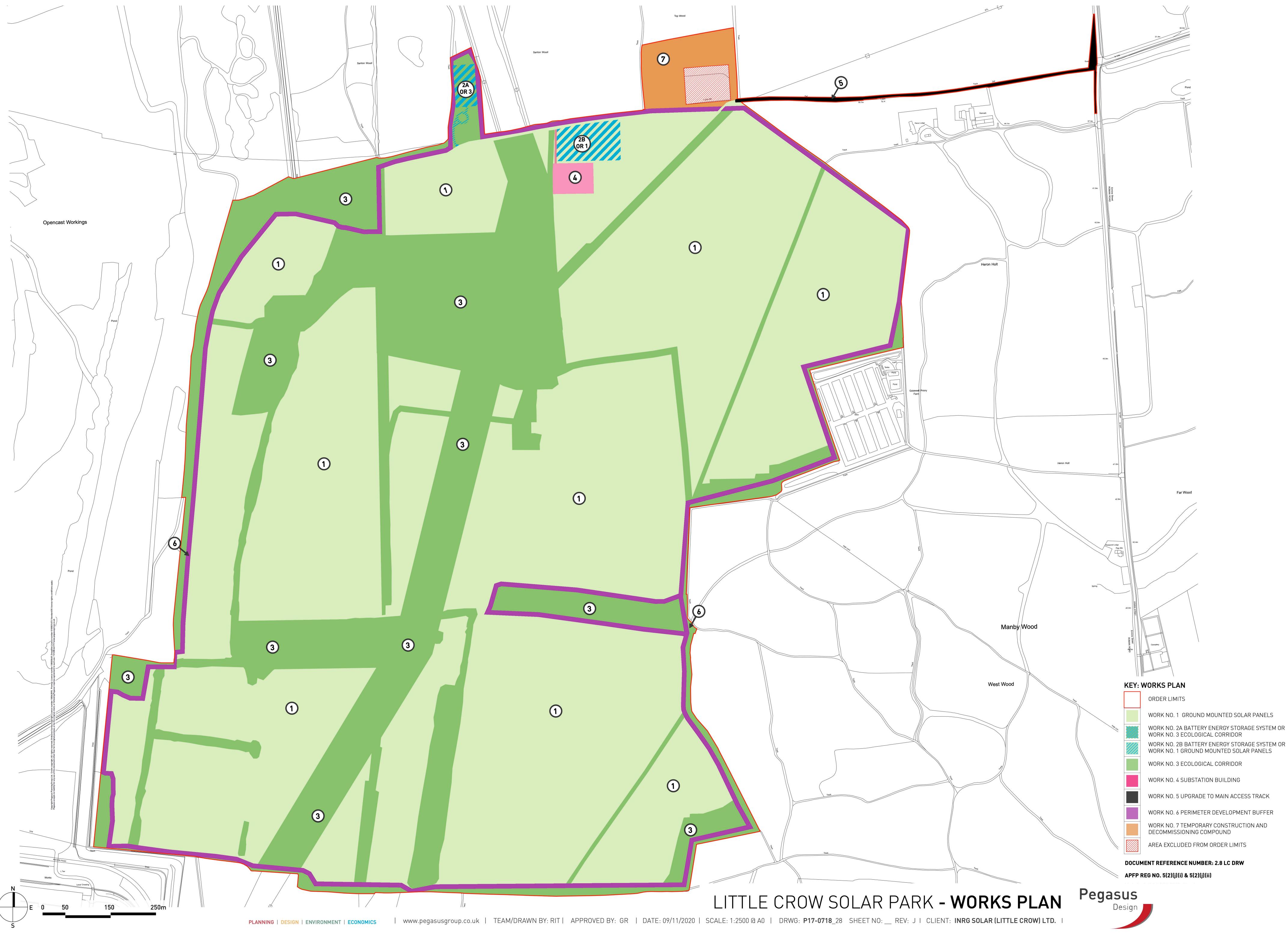
Conclusion

9.8 Overall, the development is considered to provide significant positive effects.



APPENDIX 1

WORKS PLAN



WORK NO. 2B BATTERY ENERGY STORAGE SYSTEM OR WORK NO. 1 GROUND MOUNTED SOLAR PANELS WORK NO. 3 ECOLOGICAL CORRIDOR WORK NO. 4 SUBSTATION BUILDING WORK NO. 5 UPGRADE TO MAIN ACCESS TRACK WORK NO. 6 PERIMETER DEVELOPMENT BUFFER WORK NO. 7 TEMPORARY CONSTRUCTION AND DECOMMISSIONING COMPOUND

AREA EXCLUDED FROM ORDER LIMITS

DOCUMENT REFERENCE NUMBER: 2.8 LC DRW APFP REG NO. 5(2)(j)(i) & 5(2)(j)(ii)

