

ITEM 6

CONSTRUCTION OF A SOLAR PHOTOVOLTAIC FARM WITH BATTERY STORAGE AND OTHER ASSOCIATED INFRASTRUCTURE, INCLUDING INVERTERS, SECURITY CAMERAS, FENCING, ACCESS TRACKS ANMD LANDSCAPING ON LAND ADJACENT TO INKERSALL ROAD, STAVELEY, CHESTERFIELD FOR INKERSAL SOLAR FARM LTD.

Local Plan: Open Countryside and other open land

Ward: Middlecroft and Poolsbrook

Plot No: 2/3454

Committee Date: 19.04.2021

1.0 **CONSULTATIONS**

Ward Members	Objection from Cllr Bagshaw
Director of Health and Wellbeing	No objection
Environmental Services	No objection
Yorkshire Water Services	Comments received – see report
Environment Agency	No objection
CBC Drainage Engineers	Comments received – see report
Lead Local Flood Authority	Comments received – see report
Highways Authority	Comments received – see report
Coal Authority	No objection
DCC County Archaeologist	Comments received – see report
DCC Planning Policy	Comments received – see report
DCC Landscape Officer	Comments received – see report
North East Derbyshire DC	No comments received
Chesterfield Civic Society	No comments received
CBC Conservation Officer	Comments received – see report
Derbyshire Constabulary	Comments received – see report
Derbyshire Wildlife Trust	Comments received – see report
Chesterfield Cycle Campaign	No comments received
Trans Pennine Trail Partnership	Comments received – see report

Neighbours, Advertisement and Site Notice 1 representations received in support and 40 representations received against – see report

2.0 THE SITE/SITE DESCRIPTION

- 2.1 The site comprises of a total of 65 hectares of agricultural land to the east and west of Inkersall Road and which is centred around the Inkersall Farm to the south of Staveley centre.
- 2.2 The land is of an undulating nature comprised of a total of 13 agricultural fields separated by traditional field hedgerows and which are used for grazing purposes as a part of Inkersall Farm. The land is classed as grade 4.
- 2.3 The Poolsbrook Country Park and the Pools Brook corridor define the northern and eastern boundaries of the site respectively; whilst a smaller unnamed tributary brook with a narrow, wooded corridor runs east to west along the southern edge of the site. The property known as Westcroft House is accessed from Inkersall Road and is positioned between a tributary brook, the wooded corridor and the site. The urban area of Inkersall Green is situated to the west of the site.
- 2.4 Two highways run through the site. Inkersall Green Road, runs east to west and Inkersall Road runs north to south. There are no Public Rights of Way ('PRoW') on the site however a network of PRoWs is present to the west and south of the site including the Trans-Pennine Trail along a portion of the western boundary of the site on a disused railway line.
- 2.5 The site is located within an urban fringe area to the south-west of Staveley and east of Inkersall Green, where the there is a mix of land uses in the wider area however the predominant land use in the vicinity of the application site is open countryside. The local landscape arises from the historic use of the area for coal extraction, including local collieries and open cast mining and this has resulted in

landscape features in the vicinity such as spoil heaps, as well as contributing historic infrastructure, such as the now disused railway which is part of the Trans Pennine Trail.

2.6 Renewable energy generation is already a component use in the area, including a single wind turbine and solar farm to the west of Duckmanton (immediately to the east of the site off Tom Lane – Arkwright Solar Farm), a solar farm to the south of the site between the site and Arkwright Town (accessed off Staveley Road – Cherry Tree Farm) and a solar farm further to the south west of Arkwright Town accessed off Calow Lane.

2.7 Inkersall Farmhouse located adjacent to the site at the junction of Inkersall Road and Inkersall Green Road is a grade II listed building.

3.0 SITE HISTORY

3.1 CHE/20/00171/EIA – Screening request for scheme concluded that an Environmental Impact Assessment was not required – dated 16/03/20.

No other relevant planning history regarding the application site however the following applications are referred to:

3.2 NED/14/00563/FL – 4.9MW solar farm to north east of Arkwright Town was approved subject to conditions 11/09/14 (implemented)

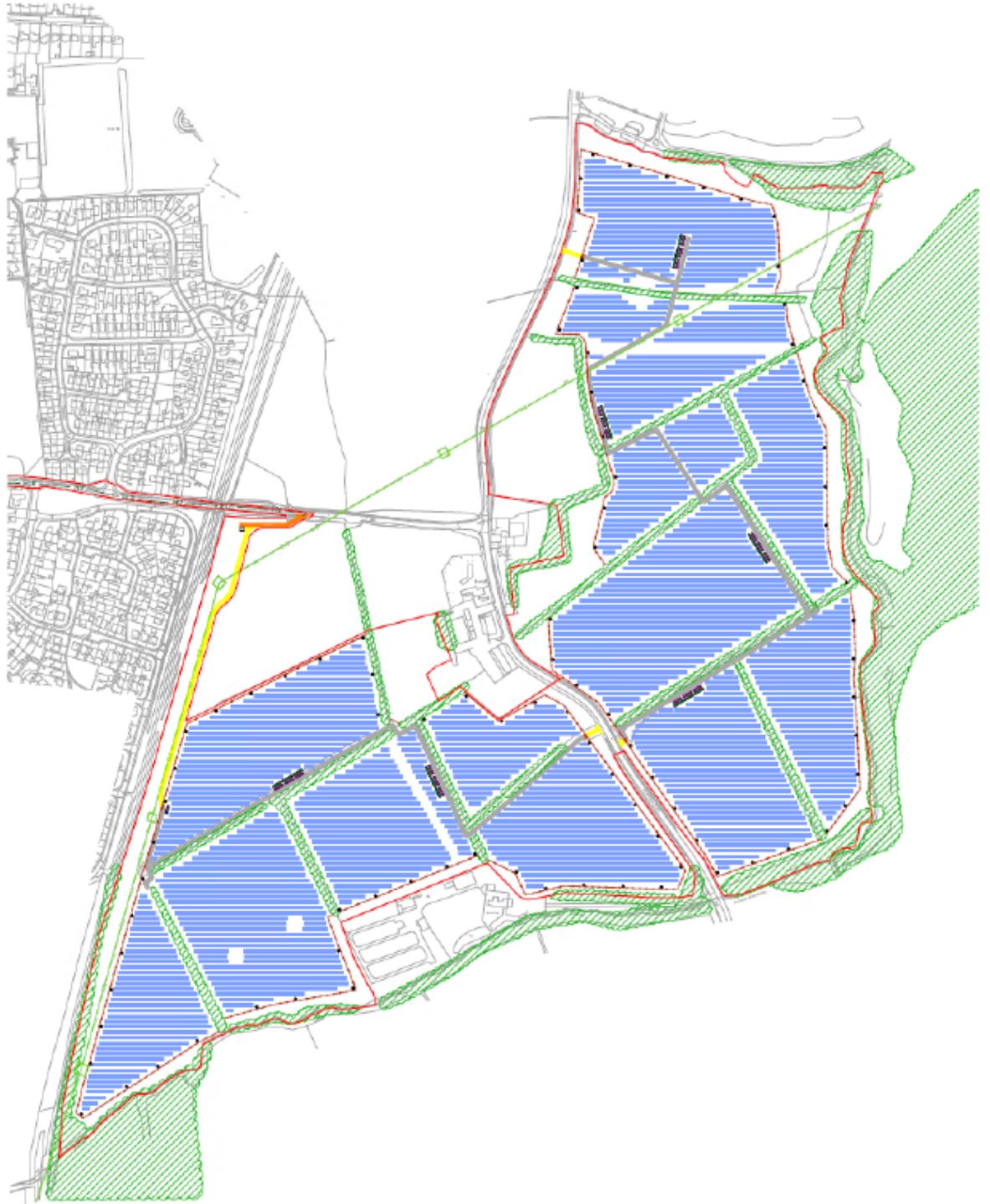
3.3 CHE/14/00644/FUL – 7/8MW solar farm to west of Duckmanton was approved subject to conditions 24/02/15 (27 years) (implemented)

3.4 CHE/15/00542/FUL – 249.7KW solar array on field to west of modern farm buildings at Inkersall Farm was approved subject to conditions on 27/10/15 (not implemented and expired)

3.5 CHE/20/00332/REM1 – Variation of condition on CHE/14/00644/FUL to extend period from 27 years to 40 years was approved on 03/08/20.

4.0 THE PROPOSAL

- 4.1 The application proposes the construction and operation of a solar PV farm, with battery storage and other associated infrastructure. The scheme includes the following main components:
- rows of solar PV panels;
 - approximately 20 batteries within containers (or similar);
 - approximately 20 inverters within containers (or similar);
 - substations;
 - internal access tracks;
 - perimeter fencing; and
 - CCTV cameras.
- 4.2 It was estimated that the solar panels would generate 40MW capacity which is enough electricity to power approximately 13,291 homes and which represents a saving of approximately 9,852 tonnes of Co2 a year. The battery storage system would charge at times of low demand and export power back onto the electricity grid at times of high demand or when solar irradiation is low.
- 4.3 The proposal is to connect to an existing electricity substation located approximately 2.3 km to the north west of the main solar farm site at Victoria Farm in Hollingwood.
- 4.4 Because the development would only proceed after a final investment decision has been made and a contractor appointed the applicant comments that a number of detailed studies would then be undertaken to inform the technology selection for the proposal and to optimise its layout and design before starting work. On this basis the applicant has been unable to fix all of the design details at this stage and has therefore sought to incorporate sufficient design flexibility in the dimensions, layout and height of structures. The approach has therefore been to assess the maximum (and where relevant, minimum) parameters for the elements where flexibility is required. For example, the solar panels have been assessed for the purposes of landscape and the visual impact as being a maximum of 2.7m high, which is the worst-case.



Site layout as initially sought

- 4.5 The solar panels would be laid out in rows running from east to west across the site with a gap of approximately 3-4 m between each row (shown at 3.2 on submitted drawing). The panels would be mounted on a frame, to be installed using spiked foundations of approximately 1 to 2m deep. The panels are typically mounted in four horizontal rows,

with one row fixed directly above the other, and angled at the optimum position for absorbing year-round solar irradiation. The lowest edge of the arrays would be approximately 0.9m from the ground and they would be up to approximately 2.7m at the highest edge. The panels would be a dark blue/black colour designed to maximise sunlight absorption whilst reducing glint and glare.

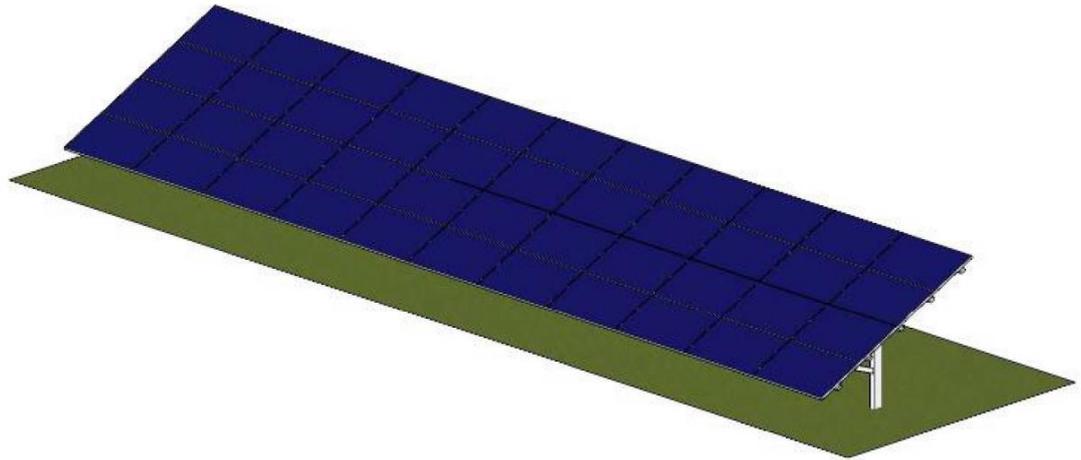


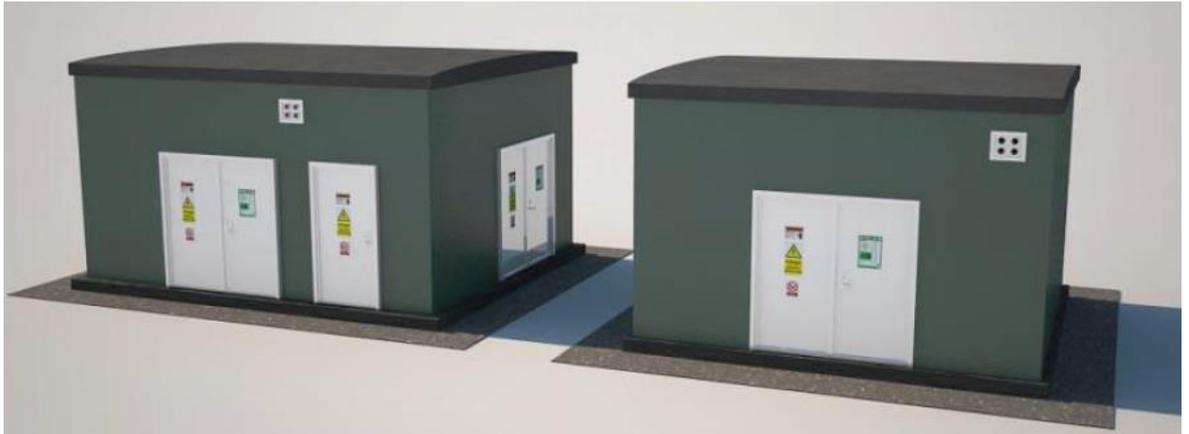
Image of typical solar array.

- 4.6 The batteries would be contained within shipping type containers measuring approximately 13.7m long, 2.5m wide and 3.1m high from ground level. Each of the 20 cabins would be placed on a hardcore base, with a stepped access at one end to the container which would be elevated above ground level by 0.5 metres. Each container would be located adjacent to heating, ventilation and cooling ('HVAC') units and a battery power conversion system, which performs a similar role to the inverters.
- 4.7 The batteries would charge when demand is low and then supply electricity to the local electricity network when the demand requires the electricity. This means that the proposal can supply electricity to the local distribution network at all times of the day.



Typical battery container unit

- 4.8 The inverters would be contained within containers and each would measure approximately 12m long, 2.5m wide and 3m high. Each cabin would be placed on a hardcore base and would be similar in appearance to the battery cabin. The inverters would convert the direct current ('DC') generated by the solar panels into alternating current ('AC'). Transformers, contained within the inverter cabins, convert the low voltage output from the inverters to high voltage suitable for feeding into the local electricity distribution network.
- 4.9 A customer substation would be constructed close to the entrance to the main solar farm site on Inkersall Green Road and which would measure up to approximately 3m high, 12m long and 3m wide. A 'district network operator' ('DNO') substation would be constructed to the north of the main solar farm site, which would measure approximately 12.5m long, 2.5m wide and 4m high. The substations would be placed on a hardcore base. They would receive electricity from the inverters and batteries before transferring it to the local electricity distribution network via a connection to an existing substation in Hollingwood. The substations, batteries, inverters and solar panels would be connected by underground electrical cables.



Typical Inverter cabin

4.10

It is envisaged that deer fencing (mesh with wooden posts or similar) to a height of approximately 2m would be installed along the outer edges of the Site in order to restrict access. This would be sited inside the outermost hedges/trees/vegetation, ensuring that the fence is visually obscured, and access is available for hedge trimming and maintenance. Gates would be installed at the main site access point for maintenance access. These would be the same design, material and colour as the fencing.



Typical Deer fencing

4.11

The perimeter of the site would be protected by a system of CCTV cameras and/or infra-red cameras, which would provide full 24-hour surveillance around the entire perimeter. An intelligent sensor management system would manage the cameras. The cameras would be on poles of up to approximately 4m high, spaced at approximately 50m intervals along the security fence. There would be no lighting within the site at night.

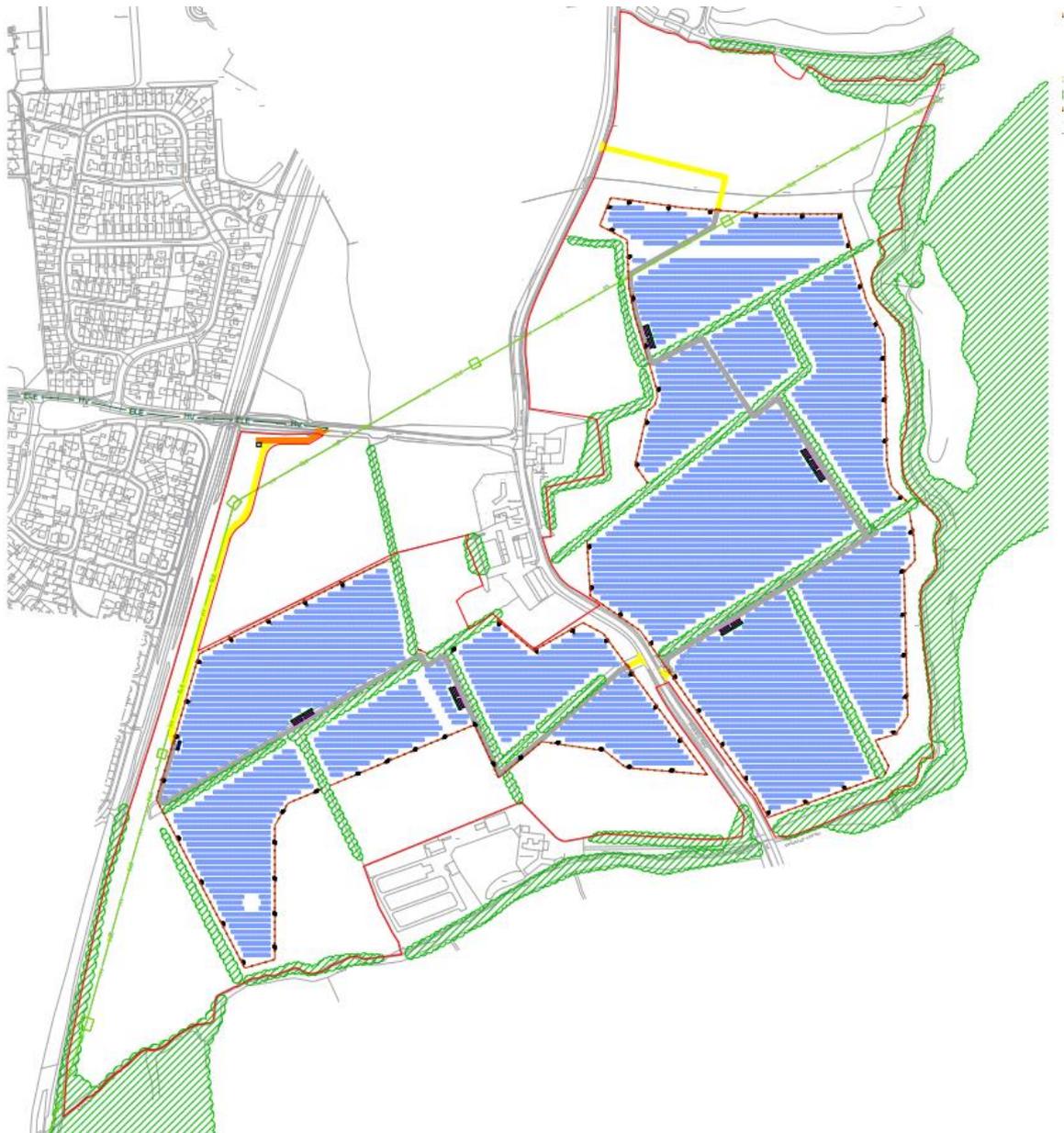


Typical CCTV camera and pole

- 4.12 The construction phase is expected to last for approximately 16 weeks. Facilities would be provided on site for construction workers, including provision of a site office and welfare facilities (including toilets, changing and drying facilities, and a canteen) however this detail including location has not been provided. Fencing would be installed around the perimeter of the site, as discussed, and temporary parking would be provided for the construction workers. It is proposed that construction working hours would be as follows:
- 07:00 – 18:00 Monday to Friday; and
 - 08:00 – 13:00 Saturday.
- 4.13 No lighting is proposed as part of the scheme.
- 4.14 The application proposes the construction of two means of access for construction purposes and subsequent tracks for service requirements. Access to the western block of the site is onto Inkersall Green Road to the east of the Trans Pennine Trail crossing bridge. This access serves the DNO substation and the access tracks around the site and is provided with 2.4 by 215 metre visibility splays to the east and 130 metres to the west. The second means of access is shown onto Inkersall Road to the south of the Poolsbrok Country Park car park at the northern edge of the site. This access serves the eastern block of the site and is to be constructed on an elevated embankment when leaving Inkersall Road. This access is provided with 2.4 by 215 metre visibility splays in both directions.
- 4.15 Once operational, occasional maintenance of the solar panels and other infrastructure would be required. The solar panels would also need to be periodically cleaned, most likely using simply soap and water, to ensure the efficient running of the system. It is expected that under normal circumstances no more than 4 cars/vans would visit the site each week.
- 4.16 The applicant states that the site would be retained in agricultural use for the life of the proposed development. The majority of the site would be planted with a combination of pasture and wildflower meadow, which would enable grazing by sheep. This would include land between and underneath panels.

4.17 At the end of the 40 years period the solar panels and other infrastructure would be removed and the site restored. The proposed restoration process is intended to ensure that the land is restored to the same quality as previously and it is envisaged by the applicant that this would be secured through a suitable condition attached to any planning permission.

4.18 Through the course of processing the application the applicant has provided a number of revisions to the layout plan culminating in the latest submission below.



4.19 The latest revision has removed fields from the north and south west ends of the site and has pulled back panels in the fields around Westcroft House. The latest revision has resulted in a reduction in the capacity of the scheme from 40MW to approximately 30MW.

4.20 The application is accompanied by the following supporting documents:

- Planning, Design and Access Statement by DWD Property & Planning – June 2020;
- Consultation Report by DWD Property & Planning – June 2020;
- Alternative Site Assessment by DWD Property & Planning – June 2020;
- Plans (the full of list of plans is itemised at Appendix A of this report);
- Flood Risk Assessment by Kaya Consulting Ltd – June 2020;
- Historic Environment Desk-Based Assessment by AECOM dated June 2020 and updated September 2020;
- Archaeological Geophysical Survey by AOC Archaeology Group – September 2020;
- Ecological Assessment by Landscape Science Consultancy Ltd – June 2020;
- Badger Survey Report by Landscape Science Consultancy Ltd – confidential – June 2020;
- Landscape and Visual Impact Assessment by Landscape Science Consultancy Ltd – June 2020;
- Transport Report by Mott MacDonald – June 2020;
- Coal Mining Risk and Mitigation Report by AECOM – May 2020.
- Photomontages;

5.0 **CONSIDERATIONS**

5.1 Planning Policy

- 5.1.1 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, ‘applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise’. The relevant Development Plan for the area comprises of the Chesterfield Borough Local Plan 2018 – 2035.

5.2 Chesterfield Borough Local Plan 2018 – 2035

- CLP1 Spatial Strategy (Strategic Policy)
- CLP2 Principles for Location of Development
- CLP12 Renewable Energy
- CLP13 Managing the Water Cycle
- CLP14 A Healthy Environment
- CLP15 Green Infrastructure
- CLP16 Biodiversity, Geodiversity and the Ecological Network
- CLP20 Design
- CLP21 Historic Environment
- CLP22 Influencing the Demand for Travel

5.3 Other Relevant Policy and Documents

- National Planning Policy Framework (NPPF) 2019
 - Chapter 14 – Meeting the Challenge of Climate Change, Flooding and Coastal change
- National Planning Practice Guidance (NPPG)
 - Climate Change 15th March 2019
 - Historic Environment
 - Natural Environment
 - Renewable and Low Carbon Energy

5.4 Key Issues

- Principle of development – National and Local Policy;
- Landscape and Visual Impact;

- Heritage Impact – Archaeology and Setting of Listed Building;
- Impact on neighbouring residential amenity;
- Highways safety Impact;
- Drainage and Flooding Impact;
- Coal Mining and Ground Stability;
- Biodiversity and impact on Ecology;

5.5 Principle of Development

- 5.5.1 The Borough Council declared a climate change emergency in the Borough at its full Council meeting on 17th July 2019.
- 5.5.2 The NPPF sets out the principle of support for renewable energy development in chapter 14. At paragraph 148 it states that “ the planning system should support the transition to a low carbon future. It should help to support renewable and low carbon energy and associated infrastructure”. Paragraph 154 states that “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 recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;
- 5.5.3 The proposal has to be considered in the context of the governments current emissions target setting for the UK which sets a path to net zero by 2050 and that the plan aims for at least 68% reduction in greenhouse gas emissions by the end of the decade compared to 1990 levels.
- 5.5.4 The UK Government has committed to deliver on the Paris Agreement by vigorously achieving its carbon budget and pursuing a target to reduce greenhouse gas emissions to ‘net zero’ by 2050. This was enshrined in law in June 2019 through amendments to the 2050 greenhouse gas emissions reduction target in the Climate Change Act 2008 from at least 80% to at least 100%, otherwise known as ‘net zero’.

- 5.5.5 The UK carbon budget has been further apportioned to local authority areas and County Council areas with the recommended budgets reflecting the actual emissions from industry and commerce, transport and domestic sectors with a suggested periodic reduction. Each local authority area has been allocated a carbon budget reflecting the local area's particular profile and which is consistent with each area's ability to make a fair contribution to the Paris Agreement. The carbon budget for each local authority area is then divided further into carbon budgets for five year periods in-line with the UK carbon budget periods. This allocation produces a carbon emissions pathway or trajectory for each area for the period 2018-2100.
- 5.5.6 The recommended carbon budget for the area of Derbyshire is set out below. Budget periods are aligned with the budget periods in the Climate Change Act and then specific targets are set out for each district and borough council area and aggregated for the County as a whole. Carbon Budgets for Derbyshire County:
2018 to 2022: 27.3 million tonnes CO₂
2023 to 2027: 12.9 million tonnes CO₂
2028 to 2032: 5.9 million tonnes CO₂
2033 to 2037: 2.7 million tonnes CO₂
2038 to 2042: 1.2 million tonnes CO₂
2043 to 2047: 0.6 million tonnes CO₂
2048 to 2100: 0.5 million tonnes CO₂
- 5.5.7 Derbyshire County Council has been working closely with local authority partners (8 district and borough councils) to address the impacts of climate change and to reduce greenhouse gas emissions which are consistent with the allocated carbon budgets for Derbyshire and to reduce carbon emissions to net zero by 2050. To this end the Derbyshire local authorities published the Derbyshire Environment and Climate Change Framework (DECCF) in October 2019, which committed all the local authority partners to seek to achieve these targets.

- 5.5.8 Renewable energy development across the County will play a very important part in enabling local authority partners to meet their climate change commitments and carbon budgets to achieve the overall aim of net-zero emissions by 2050.
- 5.5.9 There is no formal requirement to undertake any sequential assessment of alternative sites. In an appeal at Westerfield Farm, Carterton, Oxfordshire (APPD3125/A/14/2214281) the Inspector observed, at para. 43, that: “It is not local or national policy for a developer to be required to prove that there is no better alternative location for a development before planning permission may be granted.” Notwithstanding this the applicant has undertaken a search for an alternative site within a 3.5 km radius of the connection point to the substation at Hollingwood. The assessment considers previously developed land and lower grade agricultural land. The previously developed land search produced a long list of sites. Small parts of the search area to its north and south are located within North East Derbyshire District Council. However the applicant considered that this area is occupied entirely by agricultural fields and related farm buildings with no significant areas of previously developed land and such sites have not therefore been considered further but any suitable agricultural land is picked up in the lower grade agricultural land search.
- 5.5.10 103 sites were added to the long-list following analysis of previously developed land and 11 sites were added to the long-list following the analysis of lower grade agricultural land. A short list was produced based on size of site and which resulted in the following sites being considered:
- The application site;
 - Land north of Brimington;
 - Tapton Golf Course and surrounding land;
 - Land east of Manor Road;
 - Land south of Inkersall Green; and
 - Staveley and Rother Valley Corridor Area.

5.5.11 The Assessment concluded that the proposed site is available to the applicant for the development and is located in an area where the principle of solar farms is already established. Both the site shape and topography are suitable, and the solar panels and other infrastructure would be located in Flood Zone 1 and the land is entirely Grade 4. The land to the north of Brimington was also considered to be clear, developable and located close to the POC and that it does not suffer from many known environmental constraints, other than a Local Nature Reserve located to its north-west however, the site is allocated in the emerging Local Plan as a Strategic Gap. The Tapton Golf Course site raised concerns over the availability of the site, that it is a part of the Strategic Gap, there are areas of unfavourable topography and it is crossed by a number of public rights of way. The site to the east of Manor Road was considered to be regular in shape, clear and developable, located entirely in Flood Zone 1 and does not suffer from many known environmental or heritage constraints, apart from some Ancient Woodland located adjacent however the site is designated in the emerging Local Plan as a Strategic Gap. The land south of Inkersall Green was also considered to be of regular shape, clear and developable, located entirely in Flood Zone 1 and does not suffer from environmental or heritage constraints however, the site has some unfavourable topography and is crossed by a number of public rights of way. Furthermore, it is not known to the applicant whether the site is available. The applicant considered the Staveley and Rother corridor site benefits from favourable topography and is located close to the grid connection point with a clear route for connection. However, much of the site is located in Flood Zone 2 and 3 and is located in close proximity to two conservation areas and a number of Listed Buildings. Furthermore the applicant understands the site is unavailable due to its future potential to deliver residential and employment development which is included in emerging planning policy and has two outline planning applications currently awaiting determination.

5.5.12 The applicant concluded that, whilst the sites comply with many of the main criteria and are comparable to the proposed application site in many respects, none comprise a more feasible alternative to the proposed site.

- 5.5.13 In so far as Chesterfield Borough is concerned the adopted CBLP 2018 - 35 contains a specific policy for renewable energy development under Policy CLP12: Renewable Energy. The policy states that:
The Council will support proposals for renewable energy generation particularly where they have wider social, economic and environmental benefits, provided that the direct and cumulative adverse impacts of the proposals on the following assets are acceptable, or can be made so:
- a) the historic environment including heritage assets and their setting;*
 - b) natural landscape and townscape character;*
 - c) nature conservation;*
 - d) amenity – in particular through noise, dust, odour, and traffic generation.*
- 5.5.14 The application site is a green field site and shown on the Chesterfield Local Plan 2018-35 as part of an unallocated open countryside area where development proposals are generally restricted. Policy CLP15 (green infrastructure) states that “*Chesterfield borough’s green infrastructure network will be recognised at all levels of the planning and development process with the aim of protecting enhancing, linking and managing the network.*”
- 5.5.15 In a Ministerial Statement on solar energy on 25th March 2015 reference was made to The National Planning Policy Framework which includes strong protections for the natural and historic environment and when considering solar farm development proposals that Councils should take into account the economic and other benefits of the best and most versatile agricultural land. Reference is made in the Statement to the benefits of high quality agricultural land however the Statement makes it clear that meeting energy goals should not be used to justify the wrong development in the wrong location and this includes the unnecessary use of high quality agricultural land. Reference is made to the planning guidance in support of the Framework, (Planning Practice Guidance at para 013 ref ID:5-013-20150327) where particular factors relating to large scale ground mounted solar photovoltaic farms that a local council will need to consider are set out. These include making effective use of previously developed land and, where a proposal involves agricultural

land, being quite clear this is necessary and that poorer quality land is to be used in preference to land of a higher quality. Furthermore consideration should be given to whether proposals allow for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays. The Minister stated that they were encouraged by the impact the new guidance was having but appreciated the continuing concerns, not least those raised in the House, about the unjustified use of high quality agricultural land. In light of those concerns the Minister wanted it to be clear that any proposal for a solar farm involving the best and most versatile agricultural land would need to be justified by the most compelling evidence. Reference was made to planning being a quasi-judicial process, and that every application needs to be considered on its individual merits, with due process, in light of the relevant material considerations.

- 5.5.16 The National Planning Policy Framework paragraph 112 requires the presence of best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) to be taken into account alongside other sustainability considerations. There is no prohibition on developing greenfield land in the government advice however the NPPF expresses a preference for development to be directed to land outside of this classification (on 3b, 4 and 5 land), but paragraph 28 also recognises the need to support diversification of agricultural land that helps to sustain an agricultural enterprise. When considering whether the loss of agricultural land is justified it is also common practice for some form of agricultural use to continue alongside such schemes, usually in the form of sheep grazing. The lifetime of solar PV sites is inherently limited as the arrays deteriorate over time. Removing the land from intensive agricultural use for such a period of time will give the land an opportunity to regenerate and is likely to lead to an improvement in its quality over time, when coupled with suitable conditions to ensure restoration.
- 5.5.17 This government policy position should be taken into account when identifying sites for large scale solar development. In this case the land at the application site is classified as grade 4 and there is therefore no threat to land which is considered to be best and most versatile as agricultural land. Ultimately, the impact on any best and most versatile agricultural land is an important material consideration in the

determination of any planning application for a large-scale solar PV scheme but the government makes it clear that this in itself is not a trump card. Each application must be considered on its merits and, in every case, the contribution towards increasing the supply of renewable energy and meeting national targets must also command significant weight.

5.5.18 It is clear that as part of the tilted balance that one way of reaching the targets referred to would be to use electricity generated from solar farms and that such development is provided with support at a national, county and local level. 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 which will stimulate investment in new jobs and businesses. The NPPG makes it clear that planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable. (Paragraph: 001 Reference ID: 5-001-20140306). In principle therefore such a large scale solar farm generating enough electricity to power approximately 9,750 homes with a direct link to the national grid accords with the broad supportive policy principles set out by government and for which there is clear and undisputed need to help meet carbon reductions up to 2050.

5.5.19 In setting out support for the principle of renewable energy projects, the NPPF also recognises, however, that renewable energy projects may also have a range of local and environmental impacts that may need to be mitigated to make them acceptable. Such matters are dealt with in the sections of the report below.

5.6 Landscape and Visual Impact

5.6.1 As referred to above the application site is part of an unallocated open countryside area where policy CLP15 (green infrastructure) states that *“Chesterfield borough’s green infrastructure network will be recognised at all levels of the planning and development process with the aim of protecting enhancing, linking and managing the network, and creating new green infrastructure where necessary. Development proposals*

should demonstrate that they will not adversely affect, or result in the loss of, green infrastructure, unless suitable mitigation measures or compensatory provision are provided. Development proposals should, where relevant:

f) protect or enhance Landscape Character;

g) increase tree cover in suitable locations in the borough to enhance landscape character, amenity and air quality.

5.6.2 Furthermore policy CLP20 (Design) also states that development will be expected to:

i) preserve or enhance the landscape character and biodiversity assets of the borough;

5.6.3 In such a countryside setting the landscape / visual impact of a solar PV farm is likely to be one of the most significant impacts of such a development. The proposal is supported by a Landscape and Visual Assessment and which concludes that the local landscape has the capacity to incorporate the proposed development without unacceptable impacts. The applicant considers this is based on the notion that the site is located in an urban fringe area with a mix of land uses however mitigation measures are included within the proposal to address the impacts where possible.

5.6.4 The National Planning Policy Framework ('NPPF') sets out the following:

Paragraph 20(d) advises that strategic policies should set out an overall strategy for the pattern, scale and quality of development, and *'make sufficient provision for conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation'*. Paragraph 127(c) advises that planning policies and decisions should ensure that developments *'are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change;*

Paragraph 170 (a) relates to the conservation and enhancement of the natural environment and states that planning policies and decisions should contribute to and enhance the natural and local environment

by: 'protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

- 5.6.5 The local area shows characteristics typical of the regional and local Estates Farmland character area with an undulating landform of low hills and ridges, and shallow valleys reflecting the underlying Coal Measures geology. The area in the vicinity of the site accords with this characteristic and it is appropriate therefore to assess the impacts which will be affected by the existing topography and intervening built form and vegetation. Cumulative impacts are also considered as part of an assessment.
- 5.6.6 It is the case that south facing sloping sites, where solar gain is at its greatest, are an attractive proposition however such sites can be more visible within the wider landscape. Also the infrastructure such as cabins and container type units included in such a scheme can be a very visible feature in the local scene.
- 5.6.7 The application site and the local topography is gently undulating and it is accepted that if the Government's and local authorities ambitious targets relating to climate change as set out above are to be realised and if there is an associated responsibility to deliver solar farms and other renewable energy assets across the UK, then the development of undulating sites will be unavoidable. Indeed, the committee will be familiar with the solar farm and wind turbine development to the east which have already been accepted and which are also on undulating land.
- 5.6.8 The applicants supporting information sets out that well established principles of design have been incorporated into the layout taking constraints into consideration such that the impacts are minimised and additional mitigating planting is introduced where appropriate. The layout proposed involves retention of local landscape features involving the retention of existing hedgerows and tree groups and which are supplemented with additional landscaping measures.
- 5.6.9 The LVIA submission is based on a Zone of Theoretical Vision (ZTV) which indicates the greatest visibility will be from the south and east of

the site and the assessment considers the sensitivity and magnitude of the impacts ranging from low to major. For all receptors the degree of effect depends on landform, built form, vegetation and distance from the proposal. The assessment considers the impacts on the Estate Farmland Landscape Character area would be low to medium sensitivity, of slight magnitude and overall a low degree of effect. The submission considers land use sensitivity to be medium, magnitude to be low and degree of effect to be moderate but for vegetation the sensitivity is considered to be low with low magnitude and slight to negligible degree of effect. For heritage assets such as Inkersall Farm and Bolsover Castle this is referred to as medium to low sensitivity, of low magnitude and a slight degree of effect.

- 5.6.10 The assessment also considers the impacts on residential areas around the site (Inkersall, Inkersall Green, Middlecroft and Staveley, Poolsbrook, Duckmanton, Long Duckmanton, Calow and Arkwright Town) as well as isolated dwellings (Westcroft House and Blue Lodge Farm), the impacts on public Rights of Way such as the Trans Pennine Trail to the west, PRow 1; 12 and 15 within close proximity of the site and PRow 10 and 14 further afield and Poolsbrook Country Park.
- 5.6.11 The Trans Pennine Trail Partnership comments that there is poor reference to the Trans Pennine Trail and its local significance throughout the application and that there will be major visual impact from the TPT from this development. Trail users currently enjoy green views from the Trail looking eastwards which will already be compromised by a housing development and the undulating views from the Trail to the east will be virtually none existent. They comment that the proposals and the mitigating elements to obscure views of the solar farm would significantly reduce the pleasure and desirability by locals to use the Trail for recreational and healthy activity. The TPT is part of Derbyshire's key cycle network and this development will severely impact on the visitor experience of the Trail. The Partnership comment that there is no reference to the protection of Trail users who also cross Inkersall Green Road or the impact during the cable works at the Hollingwood location.

- 5.6.12 The Partnership comment that the close proximity of the TPT provides an excellent opportunity for the developer to show their commitment to the green economy and sustainable travel. They note the applicant refers to the area as not considered to be tranquil or over sensitive to development but this is disputed. The TPT consider the area to be tranquil in the local context and which offers pleasant rural views and which would be changed in so far as the visitor experience. Gapping up hedgerows may obscure some views of the proposal but would withdraw the current enjoyment of the open aspect to the TPT. Users would be confined between a barrier of trees immediately to the east and housing immediately to the west.
- 5.6.13 Whilst the removal of area 5 (south west field) is welcomed by the TPT this does not mitigate strongly enough in terms of the visual impact from the TPT and they question if the developers have considered the removal of the other two fields adjacent to the TPT as opposed to the one at the north? If this is unagreeable they ask that the installations should be moved back some distance, rather than installing directly at the site boundary. The TPT do not consider the reductions suggested as reasonable or necessary to make the proposed development acceptable in planning terms.
- 5.6.14 The applicant has responded commenting that the site and the landscape is neither unique nor protected in status. Reference is made to the fact that the Trans Pennine Trail passes through many suburban and urban edge areas along the route and this section, from the Chesterfield area to Leeds, passes through Sheffield, Wakefield and Barnsley and within that landscape any user of the trail passes close to many developed areas, both residential and industrial. The trail not only opens out areas of countryside but also provides a view of the working landscape, both historical and current, that makes up this central area of Britain.
- 5.6.15 It is the case that there are no panels proposed in the field which slopes up from Inkersall Green Road until beyond the crest so there would be no view of panels at the section of the trail as users cross the bridge over the Inkersall Green Road going south. In the northerly field

adjacent to the TPT the panels would be set below the crest of the hill, on the south facing slope and the backs of the panels would be well screened from the north by the topography and the proposed line of shrub and tree planting on the crest. The panels would not be set alongside the site boundary as the TPT suggest and would be set well away from the corridor because of the exclusion zone required under the overhead power cables. Furthermore the TPT at this point is well screened by thick boundary hedges on its eastern side and the TPT starts to cut into the levels as it moves south from the north west corner of this field thereby assisting further in screening the view for users of the trail.

- 5.6.16 The second field referred to by the TPT Partnership sits with just a point adjacent to the TPT where it leaves the former rail line and heads west along Bamford Road however the former rail line is a part of the key cycle network and is a very popular walking route. In so far as the impact on the TPT the panels are set back from the exclusion zone by the exclusion zone created by the pylons and overhead wires and will be screened from view by both the existing tree and shrub belt alongside the TPT and the existing field hedgerow which long term will be managed at 3m and therefore provide a robust screen. Panels in this second field would not be prominent in the users view.
- 5.6.17 It is considered that for the experience of trail users there will be glimpses of panels which will occur however they will be very limited and would be insufficient in impact terms to amount to a planning concern. There is no evidence or reason to suggest that the development will have an adverse impact on the TPT affecting in any way the enjoyment of users of the trail.
- 5.6.18 In so far as mitigation the scheme includes retention of existing hedgerow patterns with additional new hedge lines where appropriate. Hedges would be managed to an increased height of 3 metres to assist in screening the development and gaps in hedgerows would be infilled.
- 5.6.19 The Assessment also considers the cumulative impacts on both landscape character and on visual receptors of the proposal in

conjunction with other developments associated with it or separate to it. The assessment considers the two solar farms to the west of Duckmanton (Arkwright Solar farm) and to the south of the site between the site and Arkwright Town at Cherry Tree Farm. In so far as impact on landscape character the assessment concludes that an additional solar farm would result in an addition to the landscape which would not necessarily be out of keeping within the receiving landscape as a whole. The scale of impact of an additional solar farm set in the already developed landscape would be of a localised extent and of a reversible nature and would not result in such a significant change to the overall identified landscape character area. The duration of the impact would be 40 years and temporary and the effects would be reversible upon removal of the array at the end of its lifespan. The magnitude of the cumulative change of the proposed development on the Estate Farmlands Character Area on a landscape scale is assessed to be medium to low which would be a discernible but not obvious additional change to the landscape character.

5.6.20 In so far as impact on visual receptors the assessment concludes that the Arkwright Solar Farm and the proposed development would be visible within the landscape when viewed west from Long Duckmanton and Duckmanton; from the east from Inkersall Green towards the Duckmanton ridge; and the individual properties at Inkersall and Blue Lodge Farm and West Croft House. Views of the Cherry Tree Farm Solar Farm and the Proposed Development are referred to as limited, generally due to the screening effect of the landform, built form and vegetation and would only be seen from occasional residential properties on the edge of Long Duckmanton. There would be visibility of parts of all three schemes from long distance views from the edges of Brimington and Calow. Where visible, the Cherry Tree Farm Solar Farm forms a minor element in the view and the combined visual effect, where seen, is referred to as slight.

5.6.21 The assessment also considers the cumulative impacts on transport routes and Public Rights of Way. Sequential views that could include either two of, or all three, solar farms would occur for walkers along six of the footpaths within the ZTV. From the Trans-Pennine Trail, the

Cherry Tree Farm Solar Farm would not be visible and there would be glimpses of the Arkwright Solar Farm to the south east through existing vegetation particularly in winter from the northern ends of the Trans-Pennine Trail but combined views with the current proposal would not occur until viewed from the section where the proposed development is adjacent to the Trail. Views to the east would include the proposed development and the panels of the Arkwright Solar Farm on the ridge by Duckmanton. For the majority of the Trail users they would experience no cumulative effect. Over a short stretch of approximately 250m where cumulative views occur users are referred to as experiencing a high sensitivity and medium magnitude of effect with a moderate overall significance of effect.

5.6.22 From PRoW 1 at its southern end there would be combined views of Arkwright Solar Farm, the proposed development and a corner of the Cherry Tree Farm Solar Farm in the further distance to the south west. At this point the edge of the Arkwright Solar Farm is dominant in the immediate landscape and the addition of the panels of the proposed development would be in the middle-distance set against the urban backcloth of Inkersall Green. Further along the PRoW the views are screened by the landform and vegetation and cumulative views do not occur. Footpath users with a high sensitivity would experience combined views over a short stretch of the path with a medium magnitude of effect with a moderate overall significance of effect. Footpaths to the south and west including PRoW 12, PRoW 10, PRoW 14, PRoW 15 and PRoW 30 would experience occasional views of all three solar farms in the middle distance. Depending on distance and angle of view users with a high to medium sensitivity would experience a medium to low magnitude of effect with a moderate to minor overall significance of effect.

5.6.23 The applicants submissions and context for their response are made on the context of a significantly modified landscape with reference to industrial elements such as disused colliery spoil heaps, major trunk roads, extensive industrial and residential development and existing power infrastructure and that therefore the impact on the landscape character of the Estate Farmlands is considered to be Moderate at the

localised proposed development site. To the wider Estate Farmland Character Area with a combined consideration of the sensitivity of landscape receptors along with magnitude of predicted effect the proposal is considered to result in an overall significance of a slight effect on the landscape character which is not significant in planning terms. With regards to key characteristics within the landscape character area the only significant effect is considered to be in relation to land use where panels are added. The effect on the setting of Inkersall Farm, a Grade II listed property, is considered to not be significant in planning terms and the remaining aspects of the landscape character would receive no direct impact.

In so far as potential visual receptors within and around the site, such as residential properties; roads; Public Rights of Way; and recreational sites such as Pools Brook Country Park the applicant considers that the majority of potential visual receptors would experience negligible or no impacts. The applicant considers that where higher degrees of effect were noted, mitigation measures are proposed in order to address these. The majority of residential properties along urban edges in the surrounding settlements would not experience significant effects. The applicants submissions accept that one property at Westcroft House would experience a significant degree of visual effect at Year 1 however by maintaining and enhancing the existing landscape structure the visual effect particularly from a distance would be softened and by year 15 the effect would be reduced to Moderate. The applicant has however since pulled back the extent of solar panels in the fields surrounding Westcroft House which reduces their visual significance and impact of the proposal on this residential property however this is addressed further in the section below on residential amenity.

The applicants submission accepts that users of three Public Rights of Way: PRoW 1; PROW 12 and PROW 15 with direct views over an open and elevated landscape would experience significant visual effects along short stretches. Being within 500m the receptors would be of high sensitivity and the effects at Year 1 over the short stretches would be of a large to medium magnitude depending on angle of view and vegetation resulting in lengths of the footpaths experiencing an overall major-moderate to moderate significance of effect. With

mitigation planting the applicant considers the significance of effect by Year 15 would be reduced to moderate and minor-moderate respectively.

For visitors in the Country Park the proposed development would be largely screened throughout the Park with glimpses only in discrete locations facing south where landform and vegetation features align. The southern boundary of the park is more open and although the screening effect develops a short way into the Park, reducing the visibility significantly, at the boundary the effect would be significant. The applicant has rated the sensitivity of visitors to the Park as high at this distance and in this localised area the magnitude of change would be large with an overall significance of effect varying from major-moderate. The applicant considered that with mitigation planting the significance of effect by Year 15 would be reduced to minor-moderate. In so far as cumulative effects on landscape character the applicant has concluded that with a combined consideration of the low sensitivity of landscape receptors along with magnitude of predicted effect of medium to low identifies a cumulative impact of minor to slight to the character area. The applicant considers significant cumulative effects for users of Public Rights of Way would occur along short sections that are not screened by the topography or existing vegetation. Depending on distance and angle of view users with a high to medium sensitivity would experience a medium magnitude of effect with a moderate to minor-moderate overall significance of effect. The applicant considers the proposed mitigation would soften the panels arrays for many receptors, but the effect cannot be completely screened on the gently undulating ground. The applicant has since removed the field at the north end of the site which sits alongside the edge of Poolsbrook Country Park from the scheme overcoming the concerns in relation to the proximity to the Park area.

- 5.6.24 The Planning Practice Guidance (Paragraph: 013 Reference ID: 5-013-20150327) addresses the question of what are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic farms. The guidance accepts that large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes however, the visual impact of a well-planned and well-screened solar farm can be properly addressed

within the landscape if planned sensitively. The document sets out particular factors a local planning authority will need to consider include:

- encouraging the effective use of land by focusing large scale solar farms on previously developed and non agricultural land, provided that it is not of high environmental value;
- where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays.
- that solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;
- the proposal's visual impact, the effect on landscape of glint and glare and on neighbouring uses and aircraft safety;
- the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;
- the need for, and impact of, security measures such as lights and fencing;
- great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;
- the potential to mitigate landscape and visual impacts through, for example, screening with native hedges;
- the energy generating potential, which can vary for a number of reasons including, latitude and aspect.

5.6.25

The planning regime includes safeguards aimed to ensure that developments, including solar farms, are properly sited and individuals

and communities are protected against any unacceptable impacts. This means that issues such as visual amenity impacts are an important consideration within the planning process.

- 5.6.26 The comments of the County Planning Officer and the County Landscape Officer are of direct relevance to the consideration of impacts on the landscape and visual amenities of the area. Both contest some of the judgements alluded to in the baseline assessment, particularly the suggestion that the landscape is heavily influenced by the surrounding urban land-uses giving the landscape an urban fringe character. It is considered that the landscape forming the site and its immediate context is not urban fringe in the traditional sense and the way described in that it is not degraded or heavily impacted by human influences and on the contrary forms a green wedge area of agricultural land preventing the coalescence of Inkersall to the west, Staveley to the north and Duckmanton to the east. The land is typical of the character of the wider Estate Farmlands Landscape Character Type having a relatively undulating open topography, fields enclosed by hedgerows and a mixed farming land use. Like much of the landscape of Derbyshire the landscape is not designated but it provides an important local backdrop and resource to people living in the immediate area.
- 5.6.27 With regard to landscape impacts, it is accepted that the proposed development would not directly impact on landscape features such as hedgerows, trees and drainage channels and in some respect these will provide some mitigation to the proposal. However, the assertion that the retention of the grassland below the solar panels would amount to a retention of the existing agricultural land-use is not accepted by the County Planning Officer. There is no doubt that in views of the landscape from a variety of vantage points people will perceive a wholesale change in land-use from an agricultural scene to that of an urbanised and industrial landscape and in this respect it is considered that the overall landscape impacts would be greater than the judgements in the LVIA. The generally open, undulating nature of the Estate Farmlands heightens its overall susceptibility and sensitivity to development of this type and the wholesale change in land-use

heightens the magnitude of the impact. It is not considered that the context of the surrounding area, including residential areas, other solar farms and roads act as mitigating factors and justification in themselves for further urbanising development.

5.6.28 With regard to the assessment of visual impacts, it is considered that the overall effects have been under assessed in the LVIA. From several locations but particularly Viewpoints 1, 5, 6, 7, 8, 11, 15 and 16 the overall significance of effect has been underestimated as either a consequence of under assessing the sensitivity of the receptor (people who would see the development) or the magnitude of the change to that view. For example, Viewpoint 1 would see a significant loss to the middle distant component of this particular view and the coalescence of the foreground solar farm with the settlement edge forming the horizon. This is assessed in the LVIA as an impact of moderate significance however it is considered that this impact should be judged to be an impact of at least major-moderate significance. The undulating landform and the relatively elevated nature of some of the viewpoints mean that the main mitigation proposals would have a very limited effect in reducing the overall visual impacts to the extent suggested in the LVIA throughout the duration of the development. The principal visual mitigation relies on the infill planting of existing hedgerows and allowing them to be managed to an overall height of 3m. The LVIA acknowledges that “*The proposed mitigation would soften the panels arrays for many receptors, but the effect cannot be completely screened on the gently undulating ground*”. It is agreed that the panels would not be capable of being screened in some viewpoints and it is suggested therefore that the long-term impacts as a result would be greater than suggested in the applicants assessment.

5.6.29 The impact of the proposed cabins/container units is also considered to be a component of the scheme which contributes to an urbanising character and which has not been appropriately assessed. The initial scheme proposed 36 cabins arranged in groups of six and each block of 6 will comprise of container type structures extending to an area of at least 50 metres by 6 metres and to a height of over 3 metres. The applicants latest revised plans have reduced the number of proposed cabins to 22 arranged in 5 groups across the site. These elements of

the proposal have the potential to be significant in views (eg from Inkersall Road approaching from the south) and which could contribute to the adverse impacts arising from the scheme however the impacts can be mitigated by ensuring that the cabins are finished in a colour scheme which makes them recessive and that there is landscaping planted to screen the cabins. This can be required by condition.

5.6.30 In so far as cumulative effects it is also considered by the County Planning Officer that these have also been underestimated in the LVIA. The assessment has focused on the combined effects of this proposed development alongside the other solar farms at Cherry Tree Farm and Arkwright Solar Farm and whilst these are important components of the assessment, it tends to under assess the sequential impacts of people passing through the landscape who would consistently see built development of some sort over a very large part of the study area whether that be solar farms, settlement or the wind turbine off Tom Lane. The assessment does not take account of other new development proposed in the local area including for example land allocated for housing at Duckmanton and Inkersall Green and as a result it is considered that cumulatively the development would have a substantial adverse effect on the local landscape over a long period of time (40 years) when considered alongside existing and proposed development.

5.6.31 In response the applicant responded on the impacts on the numerous viewpoints and put forward additional mitigation measures including managing some hedgerows up to 3.5 metres and setting back panels in key areas to achieve additional planting belts. Part of the suggested mitigation extended planting into the neighbouring local authority area and onto third party land and it is suggested that this cannot therefore be relied upon. The applicant accepted this and withdrew this element of suggested mitigation from the scheme. In so far as cumulative impacts the applicant makes reference to the Landscape Institute Guidelines for Landscape Visual impact Assessment 3rd edition (GLVIA3) which states that in most cases the focus of the cumulative assessment will be on the additional effects of the proposal in conjunction with other development of the same type. The guidance refers to the complexity of assessing a combined effect of a range of

different proposals. It is the case however that the applicant is using the notion of an industrial and despoiled landscape to suggest the area is urban fringe and is therefore appropriate for the development, however this is disputed. It is a fact that some land in the local area is allocated in the new local plan for housing development and which is being pursued through planning applications and which will contribute to a cumulative impact with the proposal in the short term however it is also accepted that the appropriate advice on assessing cumulative impacts makes it clear that impacts should only be considered on the basis of the same development types.

- 5.6.32 In ongoing discussions with the applicant regarding the scheme it was considered that the additional mitigation measures did not go far enough and the County Landscape Officer suggested that two fields should be removed from the scheme (field to south of Poolsbrook Country Park to north of site with additional planting and field alongside Trans Pennine Trail to south west of site). The applicant responded positively agreeing to removal of the two fields and to provision of the additional planting but on the proviso that the Council confirms its formal support for the scheme and a planning committee target is agreed. In the circumstances the matter of support for the scheme will be one for planning committee to consider.
- 5.6.33 The applicant has also subsequently removed panels from the fields around Westcroft House which will have the benefit of reducing the scale of the scheme and visual significance of the scheme as perceived in the local area.
- 5.6.34 It is accepted that there will be differences in opinion as to the extent of any visual and landscape impacts and concerns have been expressed on a number of occasions that the scheme is just too large and as a result has an impact on the local area which would be detrimental. The scheme will be clearly visible from key viewpoints and receptors and those in the area are likely to perceive a wholesale change in land use from an agricultural scene to one which would undoubtedly be more urban however the applicant has reduced the extent of the proposal through removing fields at the north and south

west of the site, reducing the extent of panels around Westcroft House and increasing the areas of proposed landscaping and enhancing mitigation measures.

The case is finely balanced in this respect and whilst the mitigation measures would assist in screening the proposal to a degree, such measures cannot screen completely as referenced by the County Council planners and landscape advisor and which is an opinion which has been expressed by numerous local residents as referred to in the representations section of the report. On balance, it is concluded that the benefits of delivering a renewable energy scheme outweigh the harm and it is considered that the proposed development as revised is acceptable in so far as impact in visual and landscape terms are concerned.

5.7 Heritage Impact

- 5.7.1 The National Planning Policy Framework sets out that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting and that the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation (paragraph 189). At paragraph 190 Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise and that they should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal. Paragraph 193 states that when considering the impact

of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation.

- 5.7.2 The Councils adopted Local Plan includes policy CLP21 which states that when assessing the impact of a proposed development on the significance of a designated heritage asset, the council will give great weight to the conservation of designated heritage assets and their setting and seek to enhance them wherever possible.
- 5.7.3 The applicant has provided a Historic Environment Desk-Based Assessment (AECOM, June 2020) and which has been supplemented by an updated version dated September 2020 and a separate Archaeological Geophysical survey.
- 5.7.4 These documents correctly identify below ground archaeology and those built heritage assets that would be impacted on by the proposals. In so far as the grade II listed Inkersall Farmhouse the submission concludes that the proposed development would introduce some change to the setting of Inkersall Farmhouse, however, whereas the context of the setting has changed over time the proposed development could further erode the rural setting of the asset to an extent which could be affected.
- 5.7.5 The applicant has however designed the scheme, including the location of solar panels and proposed landscaping, to minimise the potential impact. This includes an area of separation between the Inkersall Farm and the development, which forms a part of the mitigation strategy. The scheme does not include the use of the fields to the west of the listed farmhouse and which are separated from the fields proposed for solar panels by managed and supplemented hedgerows. The main facades of the listed build are those which face the north, east and west and to the south the group of buildings is largely influenced by the modern agricultural buildings which have developed over time and which support the operation of the agricultural unit. The main setting of the listed building as experienced from the public is the main façade to the street (east) and the one seen

when travelling east on Inkersall Green Road (west). The west façade of the building is also seen from the Trans Pennine Trail to the west. In this context the assessment concludes that the proposed development would constitute 'less than substantial harm' to the significance of the designated asset and the overall impact is considered to be low.



View of farmhouse from Inkersall Green Road

5.7.6 The applicants LVIA also considers the visual impact on Inkersall Farmhouse, and subject to the delivery of the mitigation proposals, concludes that:

- There would be no loss of key views to the farmhouse.
- There would be no loss of view or concealment.
- The building will not be isolated from its surroundings.
- There will be no degradation of the landscape setting as viewed by road users.
- The layout design aims to maintain the cohesion, scale and openness of the immediate surrounding landscape.
- The way the building is experienced would not be changed.

5.7.7 The Councils Conservation Officer considers that the submitted assessments are robust, comprehensive and meet the requirement of Local Plan and NPPF policy and that any harm should be balanced against any public benefits of the wider planning proposals.

- 5.7.8 In terms of archaeology, the site is not within a designated area and analysis of 20th century coal mine abandonment plans have revealed that large areas of the site have previously been subject to opencast extraction during the 1960s and early 1970s. As such, these workings will have destroyed or severely truncated any potential archaeological remains located within their footprint. The assessment concludes that, within the areas not impacted by the 20th century opencast extraction works, there is potential for unknown archaeological assets to be encountered however the applicant considers that the potential within the site is considered to be very low.
- 5.7.9 The County Council archaeologist comments that the undisturbed area should however be subject to geophysical survey, to address the requirements of NPPF para 189 since without this initial level of archaeological evaluation it is not possible to understand significance or to provide advice on appropriate mitigation for archaeological assets (such as areas of 'no dig' construction), and the application does not therefore meet the information bar at NPPF para 189. The applicant therefore undertook further geophysical survey for the north-eastern part of the site not impacted by opencast coal extraction. The results appear to show archaeological potential in the form of a pre-modern field system and other possible features (ring ditches/enclosures) which may be archaeological in origin. The most likely interpretation in this area would be a typical late prehistoric/Romano-British landscape of fields and settlement, though this remains to be tested by field evaluation.
- 5.7.10 The County Council Archaeologist comments that this would be regionally important if confirmed however any archaeological remains are unlikely to constitute an objection to development in terms of rarity, complexity or levels of preservation. Furthermore, the County Archaeologist notes that solar farm development offers considerable potential for archaeological impacts to be avoided where appropriate, for example through no-dig construction. In this respect the archaeological potential of the site is best addressed through a conditioned scheme of archaeological work, in line with NPPF para 199. A series of conditions are recommended to cover a Written

Scheme of Investigation, site investigation and post investigation assessment.

- 5.7.11 It is considered, with regards to above-ground built heritage and archaeology, that there are no unacceptable impacts and any potentially adverse impacts should be weighed against the significant public benefits (relating to climate change) and other benefits (biodiversity gains) associated with the proposed development, as required by planning policy. On balance, it is concluded that the benefits significantly outweigh any harm and it is considered that the proposed development complies with policy and is acceptable in so far as impact on heritage assets is concerned.

5.8 Impact on Neighbouring Residential Amenity

- 5.8.1 Local Plan policy CLP14 states that *The quality of the environment will be recognised at all levels of the planning and development process with the aim of protecting and enhancing environmental quality. All developments will be required to have an acceptable impact on the amenity of users and adjoining occupiers, taking into account noise and disturbance, dust, odour, air quality, traffic, outlook, overlooking, shading (daylight and sunlight and glare and other environmental impacts.*
Furthermore Policy CLP20 refers to criteria which include:
....k) have an acceptable impact on the amenity of users and neighbours;
- 5.8.2 There are a number of residential properties in the vicinity of the application site with the main Inkersall and Middlecroft estates to the west, Duckmanton to the east and a number of individual properties on the immediate boundaries of the site such as Westcroft House on the south boundary and Inkersall Cottages within the centre of the scheme.
- 5.8.3 The residents of the Inkersall, Middlecroft and Duckmanton areas will experience views of the proposal which will be generally from a distance and a number of residents have referred to their concerns

with regard to the impact of the proposal on their appreciation of the open countryside area around where they live. In the main views from the Inkersall and Middlecroft areas are to a degree restricted by the elevated nature of the former railway line now used as the Trans Pennine Trail. The residents closest to the site on Bamford Road for example will not see the proposal however further to the west along Bamford Road as the land gradients rise there will be more distant views. It is accepted that such impacts on residential amenity will not be sufficient to warrant a refusal of planning permission.

- 5.8.4 From Duckmanton there will be long ranging views from the properties which sit along the western edge however it is accepted that such impacts on residential amenity will similarly not be sufficient to warrant a refusal of planning permission.
- 5.8.5 On the other hand the impacts on the amenity of Westcroft House are significant and were considered to be seriously detrimental to the amenity enjoyed by that property. Westcroft House is a detached residential property located to the west of Inkersall Road on the immediate southern boundary of the application site. The property is located at a valley bottom where a Pools Brook tributary runs west to east towards the Pools Brook and which is tree lined creating an enclosing wall of landscaping along the southern edge of the residential plot. As a consequence the residential property is arranged with its main outlook from habitable rooms and its curtilage garden areas to the north, east and west and which are over the rising open agricultural fields which stretch up to Inkersall Farm to the north, Inkersall Road to the east and the Trans Pennine Trail to the west.
- 5.8.6 The application site boundary runs contiguous with the Westcroft House boundary on its north, east and west boundaries. The boundaries around the dwelling are generally open and maintained at a low level to maximise the pleasant open outlook over the existing farmland. Much of the boundary around the dwelling house is low level post and rail fencing with isolated trees.

5.8.7

The initial proposal was to cover every field in the outlook from all three sides of this property with solar panels. The impact would have been exaggerated because of the rising land levels and every field, all the way to the horizon level would have been covered in panels. The panels would also have been facing and angled directly toward the residential property because of the orientation to the south and which raised the realistic prospect of glint and glare issues for the property. The initial proposed scheme showed solar panels running up close to the boundary around all three boundaries of the property with a mitigation proposal of gapping up the existing hedge along the north boundary (part) and allowing the hedge to grow to 3 metres high and to plant new hedge lines along the other boundaries of Westcroft House.



View from house environs looking north east



View from house environs looking north



View from house environs looking north west

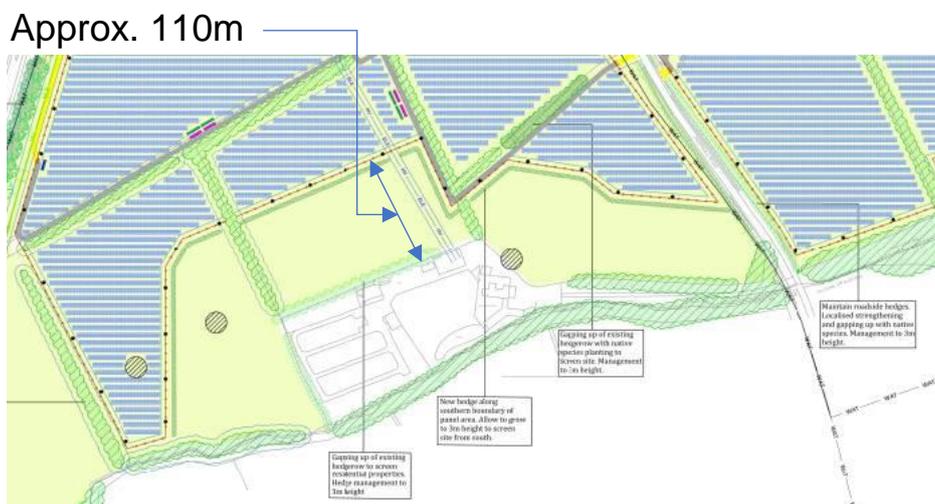


Panorama view of field to west from west boundary of Westcroft House.

- 5.8.8 The applicant had assessed the impacts on the property as high sensitivity with large magnitude effects resulting in an overall major-moderate significance in effect in year 1 but the applicant considered the residual degree of effect following mitigation at year 5 would be moderate.
- 5.8.9 In assessing the impacts on the property it was agreed that Westcroft House would be considered as high sensitivity however the large magnitude was considered to be an under estimation and the magnitude was more likely to be regarded as very large as a consequence of the fact that the proposal would become the dominant feature of the view from the property to which all other elements would

be subordinate. This changed the overall visual effect and significance of the proposal to major rather than the applicants view that it would be a major-moderate level.

- 5.8.10 The applicant accepted the impacts would be harmful and has submitted a revised plan removing panels from the area immediately surrounding Westcroft House. The revised plan retains a belt of approximately 110 metres of unaffected fields around the three sides of Westcroft House together with gapping up existing hedges and a complete new hedge at the boundary where the reduced site area crosses the existing fields. The new boundary line to the north would equate approximately to where the land levels ease.



Extract of latest submitted plan

- 5.8.10 It is clear from policy CLP14 that developments are required to have an acceptable impact on the amenity of adjoining occupiers taking into account issues such as outlook and the environmental impacts. The revised plan removes the complete domination of solar panels within the immediate environs and main outlook from the property and there would remain an agricultural use, albeit reduced on all sides of the property. There would nevertheless still be views of the proposal from the property however the proposal provides for mitigating screen hedges which will in time screen the leading edges of the panelled area of the scheme. Again this is a finely balanced issue however given the wider benefits of the scheme from a climate change perspective it is considered that on balance the local planning authority

would find it difficult to justify a refusal of planning permission under policy CLP14 based on the impacts on residential amenity. Notwithstanding this concerns are made in representations from the property owner and which are detailed below in section 6 of the report.

- 5.8.11 In so far as then group of dwellings at 1 – 3 Inkersall Cottages the proposed scheme includes a set-back of the proposed panels with retention of the existing field to the immediate north. There is also a small copse/wooded area immediately to the east of Inkersall Cottages which is to be retained and which will screen the proposal which falls away down the land levels to the east. The original submitted scheme featured mitigation in the form of a new hedge line to the north of Inkersall Cottages and returned along the Inkersall Road frontage however the residents of 1 Inkersall Farm Cottage requested that the mitigation hedge be removed from the scheme so that they can maintain their view to the north. The applicant has assessed the impacts as minor-moderate which would also be minor-moderate after 5 years following mitigation measures. The impacts on this group of properties are considered to be acceptable.

5.9 Highways Safety

- 5.9.1 Policy CLP20 on Design states that all development will be expected tog) *provide adequate and safe vehicle access and parking*. Policy CLP22 (Influencing the Demand for Travel) focusses on reducing congestion, improving environmental quality and encouraging more active and healthy lifestyles by seeking to maximise walking, cycling and the use of public transport. The policy goes on to state that development proposals will not be permitted where they would have an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.
- 5.9.2 The applicant has provided a Transport Report prepared by Mott Macdonald and which considers the transport arrangements for the Proposed Development during construction and post operation of the scheme. The scheme proposes the construction of two means of access for construction purposes and subsequent tracks for service

requirements. Access to the western part of the site is onto Inkersall Green Road to the east of the Trans Pennine Trail crossing bridge. This access serves the DNO substation and the access tracks around the site and is provided with 2.4 by 215 metre visibility splays to the east and 2.4 by 130 metres to the west. The second means of access is shown onto Inkersall Road to the south of the Poolsbrook Country Park car park at the northern edge of the site. This access serves the eastern part of the site and is to be constructed on an elevated embankment when leaving Inkersall Road. This access is provided with 2.4 by 215 metre visibility splays in both directions. Once operational, occasional maintenance of the solar panels and other infrastructure would be required. The solar panels would also need to be periodically cleaned, to ensure the efficient running of the system. It is expected that under normal circumstances no more than 4 cars/vans would visit the site each week.

- 5.9.3 The scheme also proposes the construction of a connection to the sub station at Victoria Farm at Hollingwood via the route shown on the plan below. The applicant offers the opportunity to agree a Construction Traffic Management Plan as a condition of any planning permission.
- 5.9.4 The Highway Authority has commented that there is to be a construction period of approximately 16 weeks following which vehicle movements to and from the site are expected to be limited. Notwithstanding this the Highway Authority has criticised the fact that photographs are included with submitted information to indicate visibility from the proposed construction accesses. Reference is made to speed readings undertaken in May 2020 and on Inkersall Road 85th percentile speeds were 51.4 mph northbound and 51.8 mph south bound. This equates to visibility requirements of 156 metres and 158 metres respectively. With regard to Inkersall Green Road 85th percentile speeds were 42.2 mph eastbound and 40.7 mph westbound which equates to 113 metres and 106 metres respectively.
- 5.9.5 The Highway Authority requested that a suitable scale drawing should be submitted to demonstrate adequate visibility from all accesses for construction and future maintenance, given the presence of street furniture etc. They also comment that providing adequate visibility

splays may require the removal of fronting hedgerow but visibility splays should be clear of obstructions greater than 1.0m in height (0.6m in the case of vegetation) relative to nearside carriageway channel level. Reference is also made to swept paths which have been submitted for different vehicle types and the Highway Authority comment that some of these appear somewhat tight and in one instance could lead to over-running and damage to the highway.

- 5.9.6 The applicant has responded with further drawings prepared to demonstrate the visibility which can be achieved and which confirms that visibility splays of 2.4 metres by 120 metres in both directions for the access point to Inkersall Green Road and 2.4 metres by 160 metres in both directions for the access point to Inkersall Road can be achieved within highway limits. The splays available are shown in the photographs below.



Inkersall Green Road to west



Inkersall Green Road to east



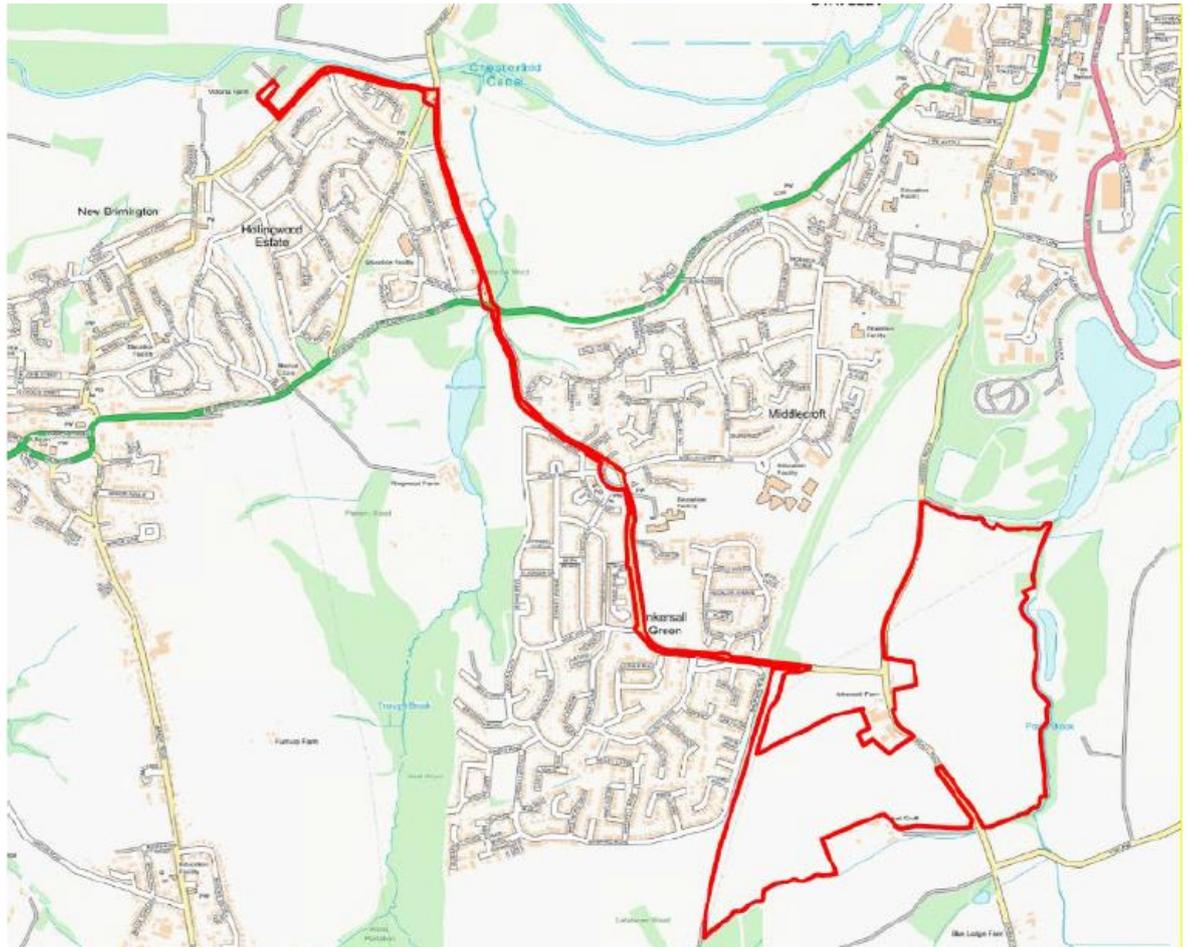
Inkersall Road to north



Inkersall Road to south

5.9.7 It is considered that due to the nature of the proposal, only a limited number of vehicle trips would be generated by the scheme which would have an insignificant impact on highway safety. The number of construction vehicle trips during the construction phase is also expected to be relatively limited, with approximately 6 HGV deliveries expected typically across each working day, over a 16-week period. The access points are located where appropriate visibility splays can be achieved in both directions and which more than adequately addresses the splays required to address the 85th percentile speed of traffic on the respective highways.

5.9.8 It is clear that the traffic impacts of the proposal are limited and can be accommodated within highway limits such that the impacts are not regarded as severe. The proposal therefore accords with policy CLP20 and CLP22 in this respect.



Plan showing external connection route to the grid

5.10 Drainage and Flooding Impact

- 5.10.1 Policy CLP13 (Managing the Water Cycle) of the Local Plan states that *“The council will require flood risk to be managed for all development commensurate with the scale and impact of the proposed development so that developments are made safe for their lifetime without increasing flood risk elsewhere.*
- Development proposals and site allocations will:*
- a) be directed to locations with the lowest probability of flooding as required by the flood risk sequential test;*
 - b) be directed to locations with the lowest impact on water resources;*
 - c) be assessed for their contribution to reducing overall flood risk, taking into account climate change.*

- 5.10.2 A Flood Risk Assessment prepared by Kaya Consulting Ltd forms parts of the submission on the basis that the site is larger than 1 hectare however no development is located within Flood Zone 2 and 3 with all solar panels and associated infrastructure located within Flood Zone 1. The FRA concludes that the site is generally considered to be at low risk from surface water flooding as there is a limited catchment outside of the site boundaries that could generate surface water that could enter the site and that areas shown to be at risk from surface water flooding are localised and close to existing drainage channels. The submission comments that runoff rates for surface water are unlikely to increase as a result of the proposed development and that an increased impact on the surrounding area is not expected. The drainage strategy in the FRA recommends that swales/filter drains should be located around the proposed buildings (where a hard surface is proposed), such as the inverters, batteries and substations and that runoff would be directed into the swales from the hardstanding areas into existing drains. The submission argues that retention of grass between and underneath the solar panels should maintain the original greenfield runoff rates within the site.
- 5.10.3 Yorkshire Water Services has commented that the line of a public sewers crossing the site should be maintained clear to allow for future maintenance and repair access. The Environment Agency has confirmed it raises no objection to the proposal from a flooding risk perspective.
- 5.10.4 In response to questions from the Lead Local Flood Authority about the lack of infiltration testing and the applicants assumption that the soil will allow water to infiltrate the applicant submitted a Technical Memo via Kaya Consulting Ltd. The submission made the following comments:
- surface water runoff from each individual hardstanding structure is to be stored adjacent to the structure including modelling of the ground to divert existing surface water runoff around the area. The storage areas will be sized to store the 100-year plus climate change uplift runoff volume.

- enhanced infiltration measures are included within the storage areas in the form of an infiltration trench which will be filled with stone/aggregate within the bed of the area. This additional measure will not only enhance the limited infiltration potential but also provide additional storage within the dedicated area.
- additional mitigation is also proposed to further attenuate surface water runoff from the site. Filter trenches are proposed in a number of locations downslope of the storage areas so in the event of multiple storms, surface water runoff from the impermeable structures will discharge into the storage area swales before overspilling in a controlled manner over the site, mimicking existing overland flow pathways to a downslope filter trench. These trenches provide additional storage and runoff attenuation. The filter drains act to capture surface water runoff until capacity is reached before discharging into adjacent watercourses via natural designed overflows utilising channel protection measures. The filter trenches would not be required to extend throughout the entire downslope boundary of the site, just in sections within the downslope watershed of the impermeable structures to provide that additional mitigation.
- recent studies (Wallingford Hydrosolutions, 2017 and Sharp et al., 2017) suggest that solar farms have insignificant impact on surface water runoff rates and volumes (compared to the greenfield runoff rate) permitting that surface water flow pathways and site vegetation coverage remain largely similar to pre-development conditions. As storage and attenuation structures within the site are designed in way that maintains surface water flow pathways to pre-development conditions and significant changes to vegetation cover are not expected, it is highly likely that the solar panels will have negligible impact on surface water runoff rates and volumes.
- if a minor increase to runoff generation does occur as a result of the development, additional drainage measures have been incorporated to mitigate potential increases to surface water runoff leaving the site, as the downslope filter trenches would act as additional storage in the case of multiple storm events.

- an area of approximately 26.3 ha would directly benefit from additional surface water attenuation and storage due to the trenches and although the trenches are situated primarily downslope of the impermeable structures, an area of approximately 9.8 ha with the impermeable structures would also benefit from attenuation and storage by extending the trench on the southern boundary of the site in an effort to provide betterment to the residential property adjacent to the site.

- 5.10.5 As a result of concerns expressed that any additional runoff rate generated from the solar panels would contribute to the storage swales prematurely reaching capacity and exacerbating flooding issues downstream of the site the applicant comments that even if solar panels were to increase surface water runoff at the site, this would not effect the capacity of the swales draining the impermeable areas due to the raising of ground levels around the upslope boundary of the storage structures. These diversion bunds will divert surface water runoff around the storage areas, separating runoff generated from the hardstanding structure from the rest of the site. The swales therefore would only fill from runoff generated by the hardstanding structures and any impact from increased runoff generation would not therefore be applicable.
- 5.10.6 The applicant has submitted a drainage layout plan which indicates the general location of bunds, swales and filter trenches and the outfalls to watercourses however it indicates that the sizing and capacity of both swales and filter trenches is yet to be designed.
- 5.10.7 Notwithstanding the applicants comments it is most likely that the provision of solar panels across the site will serve to accelerate the run off of surface water during rainfall. It is accepted that there will continue to be percolation below the panels and across the site as existing however the considerable number of hard sloping surfaces will enable rainfall to be concentrated quicker along the lower edge of the panels resulting in surface water arriving more quickly towards the lower parts of the site. The Lead Local Flood Authority accept that this

situation is a realistic proposition however the applicant is to incorporate drainage solutions which can manage any such increases there may be in surface water run off. As referred to above, whilst the swales and drainage trenches have yet to be designed and sized, it is considered that such information can be agreed through a pre commencement condition in the event that planning permission was being recommended for approval. There is a requirement of all development to consider the impacts of surface water run off and the effects of climate change over time and to build systems which ensure that, post development, the surface water run off rate is not just no worse but which is improved by up to 40% compared to the pre development greenfield run off rate. The opportunity therefore arises to build such improvements into the scheme to ensure the existing situation regarding surface water run off in the area is improved and which is provided with appropriate on site storage and outfalls.

5.10.8 On this basis the proposal is considered to satisfy policy CLP13 of the local plan.

5.11 Coal mining and land stability

5.11.1 Policy CLP14 of the Local plan refers to Unstable and Contaminated Land and states *Proposals for development on land that is, or is suspected of being, contaminated or unstable will only be permitted if mitigation and/or remediation are feasible to make the land fit for the proposed use and shall include:*

- a) a phase I land contamination report, including where necessary a land stability risk assessment with the planning application; and*
- b) a phase II land contamination report where the phase I report (a) indicates it is necessary, and*
- c) a strategy for any necessary mitigation and/or remediation and final validation.*

A programme of mitigation, remediation and validation must be agreed before the implementation of any planning permission on contaminated and/or unstable land. The requirement to undertake this programme will be secured using planning conditions.

- 5.11.2 The planning application includes a Coal Mining Risk and Mitigation Report prepared by Aecom. The report reveals that some parts of the site have previously been subject to opencast coal extraction during the 1960s and early 1970s, and further areas may include abandoned mine entries. The majority of the site, however, other than the south western corner, is classed as low risk.
- 5.11.3 The applicant proposes gaps in the solar panels where there are two former mine entries within the site however having regard to the nature of the proposed development, which should not have a significant bearing load upon the ground, means that the risks arising are limited. Furthermore the area of the site which is shown to be at highest risk is the field to the south west corner of the site which has now been removed from the scheme by the applicant.
- 5.11.4 The Coal Authority comment that solar arrays are included on their Exemptions List on the basis that the various elements of such schemes generally do not require significant groundworks and as such, they would not expect the submission of a Coal Mining Risk Assessment or an equivalent report in support of a planning application. Nevertheless, they note that in this instance the planning application is accompanied by a Coal Mining – Risk and Mitigation Report which is based on a review of appropriate sources of coal mining and geological information and which acknowledges the extensive coal and ironstone mining activity which has taken place at the site. It categorises the site into Low, Medium and High Risk Areas based upon the specific risks identified within that particular part of the site. The Coal Authority comment that section 5 of the report outlines a range of possible options to mitigate the risk posed by the various aspects of mining legacy and that the specific option to be adopted by the applicant will be dependent upon the results of intrusive investigations to further quantify and assess each specific risk. On this basis the Coal Authority has confirmed no objection to the proposals.
- 5.11.5 It is considered that the issues in relation to ground conditions has been appropriately considered and which satisfies the requirements of policy CLP14.

5.12 Biodiversity and Impact on Protected Species

- 5.12.1 Local Plan policy CLP16 Biodiversity, Geodiversity and Ecological Network states;
'The council will expect development proposals to:
- *protect, enhance and contribute to the management of the borough's ecological network of habitats, protected and priority species and sites of international, national and local importance (statutory and non-statutory), including sites that meet the criteria for selection as a local wildlife site or priority habitat; and*
 - *avoid or minimise adverse impacts on biodiversity and geodiversity; and*
 - *provide a net measurable gain in biodiversity'*
- 5.12.2 The application is accompanied by an Ecological Assessment and a confidential Badger Survey Report both produced by Landscape Science Consultancy Ltd. The Ecological Assessment is based on an Extended Phase 1 Habitat Survey which concludes that the site is improved grassland and arable fields and therefore has a relatively low species diversity and the site is considered to be of low ecological value. Reference is made however to the suitable habitat and potential for ground nesting birds and brown hare on the site, bats in boundary trees, Great Crested Newt in a lake at Ireland LWS and reptiles in boundary habitats particularly along the Pools Brook boundary .
- 5.12.3 Mitigation measures are included as part of the proposal as follows:
- Retention of all trees and hedgerows which are to be gapped up with native species where appropriate;
 - New native hedgelines and trees to be planted;
 - Sowing species rich wildflower meadows below and adjacent to the solar panels and which will connect all margins of the solar arrays;
 - Provision of 10 metre buffer zones along sensitive boundary habitats with Ireland LWS and Pools Brook to the east and Bower LWS to the south and 5 metre buffer zones along all other boundary habitats such as hedgerows and woodlands.

- Provision of 50 metre buffers between site infrastructure and the offsite lake where Great Crested Newts have been confirmed to be present within Ireland Wildlife Area LWS (Pools Brook), eastern survey site boundary;
- Incorporating mammal gates into security fencing;
- 30 metre off setting from all identified badger setts on and adjacent to the site.

5.12.4 The applicant recommends a Biodiversity Management Plan and a Construction Ecological Management Plan should be secured through a planning condition to ensure the successful establishment and long term management of mitigation measures to be introduced as well as the measures for avoiding impacts during the undertaking of the construction works.

5.12.5 The report concludes that the solar arrays and associated infrastructure would largely affect existing improved grassland and arable fields with minimal impacts to boundary habitats and that the mitigation incorporated into the scheme will enhance and strengthen features and would provide a net gain in biodiversity post-development.

5.12.6 Derbyshire Wildlife Trust has confirmed that sufficient ecological survey work has been undertaken to a good standard and ecological considerations factored into the scheme design. They comment that the following quantifiable habitat creation measures are listed in the DAS:

- creation of approximately 15 ha of species rich wildflower grassland;
- creation/maintenance of approximately 1.2 km of new native hedgerow planting;
- provision of approximately 47 new trees; and
- retention of approximately 50 ha of grazing pasture.

The Wildlife Trust welcome the measures proposed in the Ecological Assessment along with the recommendations for best practice measures during the construction phase. They comment that for the 15ha of wildflower grassland to be realised, the target habitat must be

suitable for the land type and an appropriate management regime must be in place. Typically wildflower grassland is difficult to establish on agricultural land due to the high nutrient content. In addition, over-seeding on well-established improved grassland is unlikely to prove successful due to the lack of bare ground. The Wildlife Trust suggest that rough, tussocky grassland around site margins and hedgerows, along with areas of living bird tables and pollinator strips may be more achievable. Where the ground has been disturbed during installation of the solar arrays, this may be more suitable for sowing of a suitable general purpose wildflower mix.

5.12.7 The Wildlife Trust comment that the Ecological Assessment acknowledges the suitability of the site for ground-nesting birds, however no breeding bird survey has been undertaken. Whilst they agree that the new habitat creation measures will benefit birds, they consider that the installation of solar arrays over such a large area will result in a loss of available nesting habitat for ground-nesting birds and therefore they encourage the incorporation of 4x4m skylark plots on site to maintain some breeding habitat for this species and others such as meadow pipit. Furthermore a number of bat and owl boxes should be installed on onsite trees to further contribute to a net gain for biodiversity.

The Wildlife Trust recommend the inclusion of conditions requiring a Construction Environmental Management Plan (CEMP: Biodiversity) and a Landscape and Ecological Management Plan (LEMP).

5.12.8 The conclusion reached is that there would not be significant impacts on ecology and biodiversity gains are achievable and that there would be a number of benefits as a result of the new habitat that is proposed and overall therefore it is considered that the proposed development would comply with relevant planning policy CLP16.

5.13 Community Gain/Benefits

5.13.1 The opportunity for community benefits is often raised in response to projects of this nature and such opportunities include establishment of a local Environmental Trust or Community Benefits Trust for example,

with funds being contributed annually by the developer and used for appropriate energy conservation measures. Other community benefits can involve local share issue, community ownership of panels and investment in Green Infrastructure provision and management.

- 5.13.2 In this case the applicant has not indicated any such community benefits however whilst the guidance to local planning authorities is to encourage community benefits, the guidance makes it clear that any offer is not relevant to the consideration of any planning application. Neither the principle or detail of any undertaking to offer or not offer community benefits can be taken into account as a material planning issue. As such, the requirement for community benefit is not considered to be compliant with the Regulations and cannot be required under planning law and no weight therefore can be given to the inclusion or not of a community benefit scheme when considering a planning application.

6.0 REPRESENTATIONS

- 6.1 The application has been publicised by advert in the Derbyshire Times on 23rd July 2020, by site notices x 5 on 29th July 2020 and by neighbour notification letters. In response a total of 1 representation in support and 40 representations against have been received from local residents. Furthermore, comments have been received from ward Councillor Bagshaw, Staveley Town Council and the Hollingwood Residents Association. The following points have been raised:

6.2 Staveley Town Council

- 6.2.1 The Town Council had expressed concerns regarding the size of the proposal and confirmed that they recognise that the removal of the two fields goes some way towards mitigating concerns about the size of the farm. They comment that their concerns were originally recognised by ward Councillors but acknowledged by STC as a potential issue however they didn't express an initial written response as they hadn't had a Planning meeting due to Covid.

6.3 Councillor Bagshaw

- 6.3.1 The proposed application for the gigantic Solar Farm is more like a village. According to the image from the consultants report suggests that it is larger than the combination of Inkersall and Middlecroft Housing Estates. All the site is on Greenfield land. This goes against the Chesterfield Borough Councils Local Plan which includes a statement on “Protecting our Greenfields”. The application has a huge visual impact on the area as it borders with the Trans Pennine Trail and peaceful surroundings of Poolsbrook Country Park. As well as the visual appearance of the solar panels that stand as high as 2.7m the site will be surrounded by 2m high posts, and several fixed CCTV cameras on 2.5 metre high poles in addition to several containers believed to be as large as 10ft High x 40ft long.
- 6.3.2 The report written by Kaya Consultants Ltd states that it should be noted that risk of flooding can be reduced but not totally eliminated. This backs our concerns of flooding being worsened in places such as Tom Lane, Troughbrook and Staveley Road junction at Arkwright Hill. The report further predicts surface water flooding at Inkersall Green Rd of up to 300mm and a risk of Fluvial flooding deeper than 300mm on Inkersall Road. This may not be an issue with most traffic but deep concerns for the superstores who deliver food in refrigerated vans as the excess water could cause the equipment to stop running and would be costly to repair as well as disrupting food delivery. It is anticipated that the area would be disrupted with weeks or even months of roadworks as a trench has to be dug from the site straight through Inkersall and Hollingwood villages to connect to the Hollingwood substation.
- 6.3.3 At a meeting I had with Low Carbon representatives it was confirmed by them that there will be no benefit to the local community and they confirmed that the Council/Area will not receive the sum of £120,000 per year as what was posted on Social Media in relation to the application.
- Comments – The size of the site is acknowledged as being large scale – see section on principle of development in relation to development of such proposals on agricultural land. It is accepted that flooding may currently occur during periods of***

heavy rainfall and as evidenced in photographs which have been submitted by objectors however whilst it is considered that the proposal may contribute to an increase speed in which surface water may run off, the increase is likely to be limited and the applicant is proposing to build filter trenches/ditches to cater for any increased run off with the aim of improving the situation compared with the existing. – See section 5.10.

See section 5.9 regarding the connection to the National Grid and section 5.13 concerning the opportunity for community gains and benefits.

6.4 Hollingwood Residents Association

6.4.1 Strongly object. No benefit to the local community, will cause severe disruption, and be a permanent eyesore. The existing solar farm around Duckmanton appears to have affected the water table and flooding around Tom Lane has caused this road to be shut an increasing amount since this facilities construction. How can we be assured that this similar site will not also cause problems? Furthermore, the planned laying of a cable from the site all the way through Inkersall and into Hollingwood along Troughbrook Road and Station Road will also cause significant disruption to the village, increased pollution and damage to the road surface.

6.4.2 The size of this new solar farm is equivalent to the same footprint as the village of Inkersall and there are already four other such sites in close proximity. At a time when we should be maximising farm land it seems a waste of green field sites, building yet another solar farm.

Comments – see comments above.

6.5 Supporting Residents

6.5.1 One letter of support has been received from a resident of Duckmanton on the basis that clean, green renewable energy is the future. Reference is made to the former industry where residents lived alongside such sites as Coalite and Staveley Chemicals. Compare that to living alongside a solar farm with no smell, fumes or noise – a

good neighbour to have. There would be benefit for the community with power for appliances. In the future when we are all driving electric cars and still building hundreds of houses we will still need the power from solar farms. The solar farm will be of benefit and will be working towards cutting emissions and improving the environment.

6.6 Objecting Residents

- 6.6.1 A total of 40 representations have been received against the proposal from local residents. The following is a list of points raised:
- Eyesore and clearly visible from Trans Pennine Trail;
 - Visual impact will be extreme – very severe – awful sea of grey glass ruining the greenery and countryside – cumulative impacts – impact of containers and tall posts – impact on the quality of life for residents – an eyesore thousands of local residents would have to put up with every day – blot on landscape – ugly to countryside – will be like Silicon Valley – loss of tranquil area which is valued locally – please resist and leave the green and pleasant land for future generations to enjoy – will soon have no beauty left on the area;
 - Photograph of Arkwright fishing pond surrounded by panels – no wonder no one is seen fishing there – it could be a nice peaceful place to enjoy a days fishing but now it is surrounded by panels the green landscape creating a calm and natural setting is lost;
 - No benefit to Council or Inkersall Community. No financial reason why council should approve the application;
 - No jobs created;
 - Land should be used for agriculture – needed to help the country reduce its dependence on imports;
 - Development is too large and too close to housing – colossal – gigantic – huge – monstrously inappropriate size – completely out of proportion to the surrounding area – comparable size to entire Inkersall housing estate – There would be a solid block of solar panels between Inkersall and Duckmanton – half the proposed area would be acceptable – some solar farms in an area is acceptable however this proposal is too large and too close to housing and public amenity areas especially when taken

in context of other existing solar farms – over development of area – in favour of green energy but not at the expense of green land;

- Do not object to the principle but Inkersall has done more than its fair share;
- Property devaluation;
- Contrary to policy – the new local plan proposed protection of green fields;
- No account taken of cumulative impact with existing solar farms and housing schemes;
- The past blight of deep and surface mining has gradually been removed by careful restoration –eg Ireland Colliery has become a Country Park with a caravan site and which attracts visitors to the area. Much has been done to restore the visual aspects of the area – tips have gone and the natural beauty of fields and open spaces have been restored at considerable costs – proposal equally as bad as former coal mines;
- Views from the County Park will be adversely affected;
- Issues with glint and glare – photograph provided of issue with Tom Lane site
- Land is classed as poor farmland yet it has supported dairy farming and agriculture for generations;
- Green Belt land;
- Alternative options of St Gobain and Staveley Works which is available should be a priority on the basis of their previously developed non agricultural existing use;
- Impact on Strategic Gap;
- Impact on wildlife, ecology and biodiversity. There are deer in the area and deer fencing is proposed to keep them out thereby blocking their natural movement through the area. The area is also used for hunting by kestrels and buzzards;
- Continued agricultural use is unlikely as sheep are never seen grazing on solar farm sites;
- Massive environmental impacts;
- Increased risk of flooding as run off will increase – solar panels will have water cascading from them – existing flooding issues a regular occurrence with photographs provided of flood at Tom

Lane with car stranded and water cascading down Tom Lane – the proposal will be like thousands of houses with no gutters and downpipes connected to drainage – impact on insurance premiums;

- Traffic and highway safety issues – disruption from roadworks and trench to Hollingwood;
- Impact on privacy with all CCTV cameras;
- Impact on tourism;
- Noise issues;

Comments – see consideration of issues relating to the principle, landscape and visual impact, drainage, highways, residential amenity, the ground condition and biodiversity/ecology in main section of report.

6.6.2

Westcroft House – The following representation is specifically drawn to the committees attention because of the proximity of the property to the proposed development and the references made in the report at 5.8 to impact on the amenity of the property.

- High quality agricultural farm land and should stay that way especially when other brownfield sites are available in CBC area to meet government requirements;
- Large number of reflective panels look towards the house would be detrimental;
- No amount of screening on the boundary would prevent reflection as the topography is unfavourable;
- The topography of the land slopes towards Westcroft House with no provision for drainage – one solar panel may have insignificant impact but no provision is made for fields full of solar panels – like creating houses with no gutters and would compound a dangerous flood risk on Westcroft House which needs to be addressed – The Inkersall estate in its infancy sent surface water towards Staveley however during mining subsidence its direction was reversed and a large culvert was put adjacent to the former railway line in Mr Crooks fields;
- When Staveley Road was straightened to cope with traffic increase a second culvert was omitted and only one put back for

water to flow under the road. This leaves a 4 inch farm drain under the Westcroft House driveway and into the brook which is now a problem and needs addressing;

- When RJB Mining opencasted next to Westcroft House there was a joint venture and the brook was cleared from the culvert exit to the road at the same time as a balance pond was provided at Westcroft House and the bank was raised for the length of Westcroft House;
- The owner of Westcroft House has done everything they can to negate the problem. What was once a brook is now at the point of overload and needs addressing; Mr Crooks as land owner would be liable for surface water run off and it is his responsibility to divert it from Westcroft House (not the limited company proposing to lease the land) – As solar power is not agricultural farming his insurance may not cover any damages to Westcroft House;
- Increase in traffic for such a large installation and maintenance required on already dangerous road;
- Permission was refused for Mr Crook to build an additional house unless in farmyard area;
- CBC required a wall by wall restoration at increase cost due to green belt area;
- Solar power is not designated agriculture;

In response to the latest revised plan referred to at para 5.8.10 the owner of Westcroft House comments that the revised plans seem to be a token gesture and nothing has really changed. The view from the property will be nothing but solar panels and a planning committee site visit should be carried. The water run off is now a serious problem and will need to be addressed. The cameras overlooking the property would be an invasion of privacy and would be detrimental to privacy. The owner of Westcroft House finds it strange that a farmer who is in his 90s would take a lease surrounding Westcroft House with solar panels and yet leave his view clear! It is suggested that all panels on the fields to the west of Inkersall Road should be removed and be replaced on the fields to the north on Inkersall Green Road and to reinstate the field to the north of the site adjacent to Poolsbrook

Country Park. This would put the water flow in the other direction and negates the impact of flooding and reduces the visual impact on Westcroft house. The last option is that CBC or the solar company buy Westcroft House as the owner would never have built there.

Comments – see section 5.5 regarding the principle of solar farm schemes and their location on greenfield sites. The land is agricultural land but is classed as grade 4 and not best and most versatile agricultural land.

Reference is made to the restrictive policies which were in place at the time when Westcroft House was being developed and which required the wall by wall restoration in the countryside area however the government has a different approach to solar farm schemes in such open countryside areas.

It is accepted that surface water run off is a concern during periods of heavy rainfall and it is considered that the proposal may contribute to an increase speed in which surface water may run off, however the increase is likely to be relatively limited and the applicant is proposing to build filter trenches/ditches to cater for any increased run off with the aim of improving the situation compared with the existing. There is a requirement to build in capacity to deal with climate change in the future. This may well involve the necessity for the land owner to consider the adequacy of the land drain which passes beneath the Westcroft House driveway to reach the watercourse and any improvements necessary and which can be dealt with by a pre-commencement condition requiring full details before any works on site – See section 5.10.

The revised plan before the committee has pulled panels significantly away from the boundary with Westcroft House and which is considered in section 5.8 of the report. It is accepted that the outlook from upper floor windows will still provide views of the development site.

7.0 HUMAN RIGHTS ACT 1998

7.1 Under the Human Rights Act 1998, which came into force on 2nd October 2000, an authority must be in a position to show:

- Its action is in accordance with clearly established law
- The objective is sufficiently important to justify the action taken
- The decisions taken are objective and not irrational or arbitrary
- The methods used are no more than are necessary to accomplish the legitimate objective
- The interference impairs as little as possible the right or freedom

7.2 It is considered that the recommendation is objective and in accordance with clearly established law.

7.3 The recommended conditions are considered to be no more than necessary to control details of the development in the interests of amenity and public safety and which interfere as little as possible with the rights of the applicant.

8.0 STATEMENT OF POSITIVE AND PROACTIVE WORKING WITH APPLICANT

8.1 The following is a statement on how the Local Planning Authority (LPA) has adhered to the requirements of the Town and Country Planning (Development Management Procedure) (England) (Amendment No. 2) Order 2012 in respect of decision making in line with paragraph 38 of 2019 National Planning Policy Framework (NPPF).

8.2 The LPA has used conditions to deal with outstanding issues with the development and has been sufficiently proactive and positive in proportion to the nature and scale of the development applied for.

8.3 The applicant /agent and any objectors/supporter will be notified of this report informing them of the application considerations and recommendation /conclusion and which will also be available on the website.

9.0 CONCLUSION

9.1 On the basis of the assessment above, it is clear that national and local planning policies in the NPPF and Chesterfield Local Plan

provide support for the development of renewable energy projects of the nature proposed. The Government has set out carbon budgets at the national level to meet its commitment for net-zero emissions by 2050 that have been further apportioned to county level and then district and borough level. There is an undisputed need for such renewable energy projects as a way of tackling the climate emergency to which we face and there is no doubt that the application proposals would help meet the carbon reduction budgets at the County and local level.

- 9.2 However, in setting out support for renewable energy developments, national and local planning policies in the NPPF and the Chesterfield Local Plan seek to ensure that proposed new renewable energy projects do not have a harmful impact on the environment and the area around them and that where harm is likely the impacts of that harm should be appropriately mitigated. In this context the assessment above has highlighted that where there have been concerns, the applicant has amended the scheme and reduced the scale of the proposal and added further mitigation measures. It is accepted that the proposal is a large scale scheme and there will be visual implications for those in the area and those passing through, and that such impacts cannot be completely screened. The report argues that such impacts can be considered to be finely balanced however given the climate emergency and government policy the tilted balance in the context of section 38(6) of the Planning and Compulsory Purchase Act 2004 it is suggested is weighted in favour of an approval. There would be a need to deal with the technical detailing to ensure that the benefits to the environment such as biodiversity and drainage for example can be appropriately secured.

10.0 RECOMMENDATION

- 10.1 It is therefore recommended that the application be approved subject to the following conditions:
1. The planning permission is granted for a period of 40 years from the commencement of the solar farm development. Not less than 12

months from the expiry of the 40 years or on cessation of electricity generation on site (whichever is sooner) details of the removal of the array and associated equipment; the restoration of the land to agricultural use; and the phasing of works shall be submitted to the Local Planning Authority for consideration / approval. Not less than 6 months from the expiry of the 40 years or on cessation of electricity on site (whichever is sooner) all development hereby permitted shall be removed and the land restored to agricultural land in accordance with the approved scheme.

Reason - In the interests of visual amenity for those in the area and to ensure the land returns to an agricultural use.

2. Prior to the commencement of the development hereby approved, full details of the final locations, design and materials to be used for the site infrastructure, such as; the panel arrays, battery cabins, inverters, control room, substations, power conversion system, HVAC unit, cabins, containers, CCTV cameras and fencing shall be submitted to and approved in writing by the local planning authority. Subsequently the development shall be carried out in accordance with the approved details and be retained as such for the life of the development.

Reason - To ensure the development is carried out in a manner which minimises the visual impact on the character of the area.

3. No development shall take place on site (including site preparation works) until a Construction Environmental Management Plan (CEMP: Biodiversity) has been submitted to and approved in writing by the local planning authority. The CEMP (Biodiversity) shall include the following.
 - a) Risk assessment of potentially damaging construction activities.
 - b) Identification of "biodiversity protection zones.
 - c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).
 - d) The location and timing of sensitive works to avoid harm to biodiversity features.

- e) The times during construction when specialist ecologists need to be present on site to oversee works.
 - f) Responsible persons and lines of communication.
 - g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.
 - h) Use of protective fences, exclusion barriers and warning signs.
- The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority.

Reason - In the interests of safeguarding any ecological interests which may exist on the site in accordance with policy CLP16 of the Chesterfield Local Plan 2018-35 and the wider requirements of the NPPF.

- 4 A Landscape and Ecological Management Plan (LEMP) shall be submitted to and be approved in writing by the Local Planning Authority prior to the commencement of the development. The LEMP should combine both the ecology and landscape disciplines and include the following:
- a) Description and evaluation of features to be managed, including full details of habitats to be restored and created upon completion of works.
 - b) Ecological trends and constraints on site that might influence management.
 - c) Aims and objectives of management.
 - d) Appropriate management options for achieving aims and objectives.
 - e) Prescriptions for management actions.
 - f) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).
 - g) Details of the body or organization responsible for implementation of the plan.
 - h) Ongoing monitoring visits, targets and remedial measures when conservation aims and objectives of the LEMP are not being met.
 - i) Locations of roosting features, nesting features and habitat piles (include specifications/installation guidance/numbers)
- The LEMP shall also include details of the legal and funding mechanism(s) by which the long-term implementation of the plan will

be secured by the developer with the management body(ies) responsible for its delivery. The approved plan shall be implemented in accordance with the approved details.

Reason - In the interests of safeguarding any ecological interests which may exist on the site in accordance with policy CLP16 of the Chesterfield Local Plan 2018-35 and the wider requirements of the NPPF.

- 5 Within 3 months of commencement of the development, full details of a soft landscaping scheme for the site shall be submitted to the Local Planning Authority for consideration. The required soft landscape scheme shall include planting plans; written specifications (including cultivation and other operations associated with plant and grass establishment); schedules of plants, noting species, plant sizes and proposed numbers; densities where appropriate, an implementation programme and a schedule of landscape maintenance for a minimum period of five years. Those details, or any approved amendments to those details, which are agreed in writing by the local planning authority shall be carried out in accordance with the implementation programme.

Reason - The condition is imposed in order to enhance the appearance of the development in the interests of the area as a whole in accordance with policy CLP15 of the Chesterfield Local Plan 2018-35.

6. If, within a period of five years from the date of the planting of any tree or plant, that tree or plant, or any tree or plant planted as a replacement for it, is removed, uprooted or destroyed or dies, or becomes, in the opinion of the Local Planning Authority, seriously damaged or defective, another tree or plant of the same species and size as that originally planted shall be planted at the same place, unless the Local Planning Authority gives its written consent to any variation.

Reason - The condition is imposed in order to enhance the appearance of the development in the interests of the area as a whole in accordance with policy CLP15 of the Chesterfield Local Plan 2018-35.

- 7 The development shall be carried out in accordance with the submitted Flood Risk Assessment and Drainage Strategy v2.1 and the Technical Memo dated 10/2/21 by Kata Consulting Ltd and the mitigation measures they detail.

Reason – In order to prevent increased risk of flooding in accordance with CLP13 of the Chesterfield Local Plan 2018-35.

- 8 No development shall take place (including site preparation works) until full details, cross sections and calculations of the filter trenches and ditches and their outfalls to local watercourses have been submitted to and approved in writing by the local planning authority. The approved details shall be implemented in full in accordance with the approved details and shall be maintained as such for the life of the development.

Reason – In order to prevent increased risk of flooding in accordance with CLP13 of the Chesterfield Local Plan 2018-35.

9. A verification report carried out by a qualified drainage engineer shall be submitted to and approved by the Local Planning Authority prior to the site being brought into use. This shall demonstrate that the drainage system has been constructed as per the agreed scheme (or detail any minor variations), provide the details of any management arrangements for surface water attenuation devices/areas, flow restriction devices and outfalls.

Reason: To ensure that the drainage system is constructed to the appropriate technical standards for sustainable drainage.

10. Development shall not take place on the eastern parcel of the site until a Written Scheme of Investigation for archaeological work has been

submitted to and approved by the local planning authority in writing.
The scheme shall include:

1. The programme and methodology of site investigation and recording;
2. The programme for post investigation assessment;
3. Provision to be made for analysis of the site investigation and recording;
4. Provision to be made for publication and dissemination of the analysis and records of the site investigation;
5. Provision to be made for archive deposition of the analysis and records of the site investigation;
6. Nomination of a competent person or persons/organization to undertake the works set out within the Written Scheme of Investigation.

No development shall take place other than in accordance with the agreed archaeological Written Scheme of Investigation.

Reason - To ensure that any archaeological interest is appropriately assessed and documented prior to any other works commencing which may affect the interest in accordance with policy CLP21 of the Chesterfield Local Plan 2018-35 and the wider NPPF.

11. No development shall take place until a Construction Method Plan has been submitted to, and approved in writing by, the Local Planning Authority. The approved Statement shall be adhered to throughout the construction period. The Statement shall provide for:
 - a. the parking of vehicles of site operatives and visitors;
 - b. transportation of materials to the site;
 - c. loading and unloading of plant and materials;
 - c. storage of plant and materials used in constructing the development;
 - d. the erection and maintenance of security fencing including and decorative displays and facilities for public viewing, where appropriate;
 - e. any wheel washing facilities required;
 - f. measures to control the emission of dust and dirt during construction and

g. a scheme for recycling/disposing of any waste resulting from demolition and construction works.

Reason – In the interest of a health environment and highway safety in accord with policy CLP14 of the Chesterfield Local plan 2018-35.

- 12 The development shall be carried out in accordance with the plan(s) accompanying the application as modified by the revised plans deposited by e mail on 24th March 2021 (LCS007-PLE-01 Rev 08 Indicative Site Layout Plan External; LCS007-DZ-01 Rev 04 Development Zoning Plan and D34.19-06-Rev I Landscape and Biodiversity Scheme).

Reason - In order to clarify the extent of the planning permission in the light of guidance set out in "Greater Flexibility for planning permissions" by CLG November 2009.

Informative Notes

1. If work is carried out other than in complete accordance with the approved plans, the whole development may be rendered unauthorised, as it will not have the benefit of the original planning permission. Any proposed amendments to that which is approved will require the submission of a further application.
2. This approval contains condition/s which make requirements prior to development commencing. Failure to comply with such conditions will render the development unauthorised in its entirety, liable to enforcement action and will require the submission of a further application for planning permission in full.