

# Proposed Solar Power Station on Land West of Boxted, Suffolk

## **Planning Statement**

Prepared by Dr Chris Ford MRTPI  
for Save Glem Valley  
February 2024



SOLAR FARM SITE

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TOWN & COUNTRY PLANNING ACT 1990, as amended.

**OBJECTION** on behalf of **Save Glem Valley**, a Third-Party Objector Group, in relation to an application for planning permission for the proposed construction and operation of a solar farm with associated works, equipment and infrastructure at Boxted, Suffolk, Babergh District Council reference DC/23/05127.

## **0 Preamble**

- 0.1 This submission, on Planning and related matters, forms part of an overall objection on behalf of Save Glem Valley (**SGV**) in relation to the application for planning permission for the proposed '*Construction and operation of a solar farm with associated works, equipment and infrastructure*' at Boxted, Suffolk. The planning authority deciding the application is Babergh District Council, with application reference DC/23/05127 (**the Proposal**). SGV is a third-party objector group formed by residents who live in the vicinity of the proposed development and who are likely to be significantly affected by the development if it is permitted and built.
- 0.2 The Proposal is located on approximately 44 hectares of agricultural land, lying between 100m and 1,400m, west of the village of Boxted in Suffolk, at OS Grid Reference 581867 250939. The irregular shaped site spreads some 1,350m east-west and some 650m north-south. The site slopes downward to the north-east, with a fall of some 48m across the site resulting in a gradient of 8%.
- 0.3 This submission has been prepared by Dr Chris Ford (BA, MBA, MSc, PhD, MRTPI). Dr Ford is an experienced Chartered Town Planner. He has specialised in energy developments for over a decade. His academic research focuses on the 'Spatial aspects of energy systems engineering and energy policy'. He has specialised expertise in the UK power network, energy market regulation, energy policy and renewables engineering. This experience takes account of the requirements to minimise local environmental effects (of both generation and power networks) and the cost to consumers in delivering a net zero energy system. He is therefore well placed to apply the planning maxim: "*The right development in the right place*" to the need to locate renewable energy generation and supporting infrastructure in the most suitable locations across the country.
- 0.4 This report and assessment has been undertaken in association with other specialist professional advisors engaged by SGV. These are a Landscape Architect; a Heritage Consultant and Senior Counsel experienced in Planning

and Environmental Law. The professional expertise of these consultants ranks with those engaged by the Applicant's advisors. Consequently, as well as Planning Authority and consultee professionals, there are two sets of specialists interpreting and considering the circumstances of the Application against policy and guidance and the whole circumstances of the Proposal. This report highlights the areas of alignment and any differences in these specialists' views.

- 0.5 This objection covers assessment of the proposal under Planning policy at the national and against local development plan, and other material considerations (Section 1). It sets out the energy context in which the Application is being considered and considers the energy benefits of the Proposal (Section 2). It then reviews the Applicant's rationale and case for the Proposal (Section 3). Next it scrutinises the effects arising from the Proposal, including weighing the specialists' assessments and the overall acceptability (section 4). It then weighs the planning merits or balance of the proposal (Section 5) and concludes by offering a recommendation to the local planning authority (Section 6).

## **1 Planning and Energy Policy**

- 1.1 Planning and energy policy relevant to consideration of this Proposal includes national energy policy, national planning policy and local development plan policies. Where relevant to the Proposal these are covered here. First national energy policy is considered, then national planning policy, and the section closes with local planning policy.

### NATIONAL ENERGY POLICY

- 1.2 The UK Government has set out a target to reach net zero by 2050, backed by the 2006 legislative basis of the Climate Change Act. Under the UN Framework Convention on Climate Change the UK has committed to a Nationally Determined Contribution of reducing nationwide greenhouse gas (GHG) emission by at least 68% of 1990 levels, by 2030. In February 2024 the Government noted that the UK is the first major economy to halve its climate emission against 1990 levels and that 'more than 40% of the country's electricity is now produced from renewables <sup>1</sup>. The remaining energy transition will require the removal of GHG emissions from the heating, transport and

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<sup>1</sup> 2024, DESNZ press release. UK first major economy to halve emissions.  
<https://www.gov.uk/government/news/uk-first-major-economy-to-halve-emissions>

other sectors as well the energy system itself. Demand for electricity is therefore expected to grow from an average 33GW today, to around 76GW by 2050<sup>2</sup>. The Government has a target, subject to security of supply, of fully decarbonising the energy sector by 2035. The Government wishes to achieve this within the energy trilemma of energy security, least harmful environmental effects and affordability for consumers.

1.3 The Energy Security Plan sets out the steps the Government is taking for greater energy independence and resilience. NPS-EN-3 sets out national policy for renewable energy for nationally significant infrastructure. **For solar energy** the Government has a target of 70GW deployment by 2035. This includes both ground and roof-top mounted panels. *“Deploying rooftop solar remains a key priority for the Government”*<sup>3</sup>. This can be on homes, commercial and industrial premises. For ground-mounted solar the Government is *“looking for development mainly on brownfield, industrial and low and medium agricultural land”*<sup>4</sup>. EN-3 states the *“government is supportive of solar that is ‘co-located’ with other functions (for example, agriculture, onshore wind generation, or storage) to maximise the efficiency of land use”*<sup>5</sup>. Whilst the Proposal is not of a scale to be classed as national infrastructure, NPS EN-1 says the government’s EN-3 policy *“may be a material consideration in decision making on applications”* for planning permission<sup>6</sup>.

1.4 In terms of progress towards the government’s 70GW target the UK had 15.7GW of solar capacity in December 2023. Of this 7.7GW (49%) is ground mounted solar farms (similar to the Proposal), 3.4GW (22%) is small and roof mounted schemes, with the remainder of 4.6GW (29%) being domestic. The mix between commercial ground mounted and other solar is 49%/51%. This split is expected to remain. The ground mounted split of the 70GW target is therefore 34GW (70\*0.49). The latest REPD shows that commercial solar has grown to 9.1GW, with 1.8GW under construction and 14.2GW consented and awaiting construction. The current operating and approved pipeline for ground mounted solar energy is therefore 25GW<sup>7</sup>. This demonstrates that ground mounted solar is already well ahead of track to delivering its share of the target (i.e. 34GW). Given that commercial operational and approvals is nearly three quarters of its share of the target (25/34=73.5%), and with the rate of build

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<sup>2</sup> National Grid Electricity System Operator. FES in Five - July 2023.

<sup>3</sup> DESNZ. Powering up Britain – Energy Security Plan, p37 & p38.

<sup>4</sup> Ibid.

<sup>5</sup> DESNZ. National Policy Statement for Renewable Energy Infrastructure (EN-3), section 2.10.10. 2023.

<sup>6</sup> DESNZ. Overarching National Policy Statement for Energy (EN-1), section 1.2.1, Mar 2023.

<sup>7</sup> Source data: DESNZ, Renewable Energy Planning Database, Jan 2024.

- accelerating, the informed judgement is therefore that the UK will comfortably reach the government's 70GW target for solar energy by 2035. The challenge for delivery is the build rate rather than permitting installations.
- 1.5 In 2023 the Government significantly expanded permitted development rights for solar energy for both domestic and non-domestic uses<sup>8</sup>. This included solar canopies for car parks. This is a new format for developing solar energy and is thought to have considerable potential. It includes developing solar energy on extensive supermarkets' and other off-street parking areas. It has the added benefit of being mostly located in urban areas, close to electricity consumption.
- 1.6 Not widely understood, but over recent years there has been considerable expansion of new renewable generating capacity. The acceleration of renewables has been remarkable. The UK now has 112GW of renewable generation already installed and operating. Respected industry bodies state that for net zero the UK needs an additional 270GW. That sounds a big increase. It is. But what is more surprising is that there is already 550GW of new renewable generation with contracts to connect to the power networks. Many other projects are still being conceived and will add to this. For example, there is considerable scope for hundreds of gigawatts of offshore wind, the Government's preferred choice for renewable energy. As a matter of fact, there is far more energy available and potentially than the UK will ever need.
- 1.7 The maths are simple; only half of the existing renewable projects, already in the pipeline, are needed for the UK to achieve net zero. The other half are not required and can be dropped. Even if they all gained planning permission/Electricity Act consent, the market will kill them off as being economically unviable. There is an abundance of available schemes to choose from to meet net zero.
- 1.8 The somewhat surprising conclusion (to many) is that the UK can now see itself reaching net zero within a reasonable timeframe. There is little doubt that the target of decarbonising the energy system by 2035 will be met. The priority for planning authorities now is to pick and permit renewable energy projects which avoid adverse local environmental effects. The wider challenge for the planning system is minimising the overall aggregate local environmental effects of the many new renewable energy schemes coming forward. Planning authorities can now be extremely selective about selecting which schemes to support and then consenting them. Projects with even minimal local effects can

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<sup>8</sup> Town and Country Planning (General Permitted Development etc. (England) (Amendment)(no 2) Order 2023.

be avoided. Planning authorities can now employ discerning decision making and support only the very best renewable schemes, which avoid adverse local environmental effects on people and places.

- 1.9 An important aspect, and the greatest challenge in delivering net zero, is the role of the power transmission and distribution network. Low carbon energy not only needs to be generated, but it has to be delivered to consumers. The existing power network was engineered to carry fossil fuel powered electricity from a handful of power stations to homes and businesses. Renewable energy generation is dispersed into thousands of sites, across land and sea. Given the present plentiful supply of generation resources the capability of the power network is now well understood to be critically important to delivering net zero. There are parts of the power network which do not have sufficient spare capacity to provide for renewable energy. These locations are best avoided. It is better to locate renewable energy where there is spare existing capacity on the power transmission and distribution network.

#### NATIONAL PLANNING POLICY

- 1.10 The UK Government has set out national planning policy in the National Planning Policy Framework (NPPF) (last updated in September and again in December 2023) and Planning Practice Guidance (PPG). Section 14 of the NPPF addresses ‘meeting the challenge of climate change’. The NPPF states: *“plans should take a proactive approach to mitigating and adapting to climate change, taking into account ... biodiversity and landscapes and the risk of overheating from rising temperature”* (para 158<sup>9</sup>); *“to help increase the use and supply of renewable and low carbon energy and heat, plans should (a) provide a positive strategy for energy from these sources that maximises the potential for suitable development ... while ensuring that adverse impacts are addressed appropriately (including cumulative landscape and visual impacts), b) consider identifying suitable areas for renewable and low carbon energy sources”* (para 160).
- 1.11 In relation to determining planning applications for ‘renewable and low carbon development’ (at para 163) NPPF advises *“planning authorities should:*
- a) not require applicants to demonstrate the overall need for renewable and low carbon energy and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;*

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<sup>9</sup> NPPF paragraph numbering refers to the December 2023 version.

- b) *approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas ... .*
- 1.12 Accordingly, SGV takes from this that: (1) A generic need for solar farms has been established; (2) That, whilst a ‘small-scale project’ is not defined, small scale projects have an accumulated value which, when aggregated, compare with equivalent large projects; (3) That, whilst the planning authority here has not identified areas suitable for renewable and low carbon energy, any proposal would need to meet the criteria used for identifying suitable areas.
- 1.13 SGV notes that the key policy criterion set out in NPPF for applications for renewable and low carbon development, such as this Proposal, is that the planning authority **should approve the application if its impacts are acceptable**<sup>10</sup>. The question, which is not resolved or clarified by NPPF, is what an ‘acceptable impact’ is. This is therefore a matter for judgement by the planning decision maker for each case.
- 1.14 As well as policy directly relevant to climate change and renewable energy developments, NPPF also provides various general policies relating to ‘conserving and enhancing the natural environment’ and the ‘historic environment’, ‘promoting healthy and safe communities’, ‘achieving well-designed and beautiful places’, ‘achieving sustainable development’, ‘supporting a prosperous rural economy’ and ‘determining applications’. Aspect of these policies have a bearing upon the decision making in regard to the Proposal.
- 1.15 Not least amongst these other NPPF policies is the need to:
- “(a) protect and enhance 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);*
- (b) recognising the intrinsic character and beauty of the countryside, and wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and trees and woodland; ...*

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<sup>10</sup> NPPF sets out specific terms for acceptability for onshore wind turbines (at Footnote 58, p47) but not for solar energy.



*(d) minimising impact on providing net gains to biodiversity including by establishing coherent ecological networks that are more resilient to current and future pressures;*

*(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions ... .*  
(NPPF-para 180).

- 1.16 When determining planning applications NPPF requires that “*...if significant harm to biodiversity resulting from a development cannot be avoided ... then planning permission should be refused*” NPPF-186 a).
- 1.17 NPPF sets out extensive terms for protecting and conserving heritage assets. This includes where “*any harm to, or loss of, significance of designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification*” (NPPF – 206). Furthermore, “*where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage assets, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss*” (NPPF-207). In relation to non-designated heritage assets “*a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset*” (NPPF-209).
- 1.18 SGV notes that: (i) the Site is located in an area of ‘valued landscape’; (ii) much of the Site is taken up by best and most versatile agricultural land; (iii) the Site is significantly covered by non-designated heritage assets; (iv) the Site is within the setting of designated heritage assets as well as other assets in the general vicinity.
- 1.19 NPPF recognises that Planning Practice Guidance (PPG) is provided on specific topics. The PPG for renewable and low carbon energy (last updated August 2023) confirms that “*planning has an important role in the delivery of new renewable and low carbon energy infrastructure **where environmental impact is acceptable***”. The main emphasis of the PPG is the role that identifying areas suitable for renewable and low carbon energy can play. For ‘large scale ground-mounted solar photovoltaic farms’, such as this Proposal, the PPG notes that these “*can have a negative impact on the rural environment, particularly*

*undulating landscapes*". This implies criteria for unacceptability. SGV note that the proposed site is situated in an 'undulating landscape'.

1.20 The PPG states that the factors influencing decisions on solar farms include:

- Focusing solar farm developments on previously developed and non-agricultural land of low environmental value. Where greenfield land proposals affect agricultural land, preference is given to poorer quality land. Proposals allow continued agricultural use and/ or facilitate biodiversity.
- That solar farms are temporary, and conditions should be used to ensure full removal and site restoration. However, NPPF now recognises that where renewables sites exist significant weight should be given to utilising an established site (NPPF 163c). This means, in reality, that a consented solar farm site should be treated as permanent.
- Great care is given to consideration of conserving heritage assets, *"including the impact of proposals on views important to their settings"* <sup>11</sup>.
- Assessment of cumulative landscape and visual impacts.
- The need for security measures such as lights and fencing.
- The visual and landscape impact of glint and glare on neighbouring uses.
- The need to conserve and enhance the natural environment.
- The energy generating potential of the proposal.

1.21 The PPG points to other supplementary guidance for solar farms. The 2015 Written Ministerial statement made clear, that *"proposals for a solar farm involving the best and most versatile agricultural land would need to be justified by the most compelling evidence"* <sup>12</sup>. The context for this is the Minister's view that solar developments can be undertaken *"but not in any place and not if it rides roughshod over the views of local communities"* <sup>13</sup>. The Minister also pointed out that the model for solar farms is *"disused airfields, degraded soil and former industrial sites"*.

1.22 The 'best and most versatile' agricultural land (BMV) is defined by Natural England as Agricultural Land Classification grades 1 to 3a <sup>14</sup>. Grade 1 is graded as excellent, 2 as very good, 3a as good, 3b as moderate, 4 as poor, with 5 as very poor. The PPG direction, that preference for greenfield site development

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<sup>11</sup> 2023 PPG Renewable and low carbon energy, Paragraph: 007 Reference ID: 5-007-20140306, Bullet 4.

<sup>12</sup> Written Ministerial Statement HCWS488, 35 March 2015.

<sup>13</sup> Ministers Statement to the Large-Scale Solar Conference, April 2013.

<sup>14</sup> Natural England, Guide to assessing development proposal on agricultural land, February 2021.

of solar farms on 'poorer quality agricultural land', implies that use of grades 4 and 5 land is endorsed.

LOCAL PLANNING POLICY

- 1.23 Having reviewed the national energy and planning policy for solar farms this submission now turns to local planning policies. Local Planning Policy has been set out by the District Council (the local planning authority) in its Development Plan. The Babergh and Mid Suffolk Joint Local Plan - Part 1 2018-2037' (**Joint Local Plan or JLP**) was adopted on 23 November 2023. Prior to this the 2014 Core Strategy and Policies were in force. The Application was made on 1 November 2023 and therefore strictly pre-dates the JLP. However, given the timing, the Applicant would be aware of and should take account of the Policies set out in the JLP. Given the imminent adoption of the Joint Local Plan at the time when the Application was lodged, it is the prime Development Plan document which needs to be taken into account when deciding the Application. The JLP part 1 covers policies only. Part 2 of the JLP, which covers area designations, will be produced later. There is therefore some legacy from the former Core Strategy on area designations.
- 1.24 The key policy pertinent to the Proposal in the JLP is Policy 25 – 'Energy Sources, Storage and Distribution' (LP25). LP25 states:

*"1). Renewable and low carbon ... generating proposals will be supported subject to :*

*(a) the impact on (but not limited to) landscape, highways safety, ecology, heritage, residential amenity, drainage, airfield safeguarding and the local community having been fully taken into consideration and where appropriate , effectively mitigated;*

*(b) where renewable or low carbon energy designs are to be incorporated with a development, an integrated approach being taken, using technology that is suitable for the location and designed to maximise operational efficiency without compromising amenity;*

*(c) The impact of on and off-site power generating infrastructure being acceptable, having regard to other policies in this Plan;*

*(d) The provision of mitigation, enhancement and compensation measures when necessary; and*

*(e) Approval of connection rights, and capacity in the UK power network, to be demonstrated as part of the planning application (where necessary).*

*2). The relevant LPA will normally use conditions attached to planning consents for energy development schemes to ensure the site is restored when energy generation ceases or become non-functioning for a period of six months.*

*3) Where proposals for renewable and low carbon energy impact on nature conservation, the Area of Outstanding Natural Beauty, or the setting of heritage assets (including conservation areas), the applicant must be able to convincingly demonstrate that potential harm resultant from the development can effectively be mitigated and that there are no alternative sites available in the District or for community initiative within the area which it is intended to serve. This includes providing underground power lines and cabling.*

- 1.25 LP25 clarifies that power ‘generating infrastructure’ includes “*over-head cables, cable runs, invertors, control building, security fencing and highways access points*” (JLP footnote 36). LP25 also clarifies that “*nature conservation sites’ includes SSSI, SAC, SPA, NNR, Ramsar Sites and local Nature reserves*” (JLP footnote 37).
- 1.26 SGV notes that: JLP LP25 Policy 1a will be **key to the assessment of the Proposal**; that Policy 1b requires consideration on the ‘suitability of the location’ and ‘maximising operational efficiency’ of the solar technology; that Policy 1c consider the impact of the power infrastructure; that Policy 1e requires the Applicant to demonstrate that they have an approved connection and that there is capacity in the power network for the Proposal; and that Policy 1d says there is mitigation enhancement and compensating measure.
- 1.27 SGV also notes that since the Proposal affects the setting of heritage assets that LP25 Policy 3 is engaged. Therefore, the Applicant requires to ‘convincingly demonstrate that the resultant harm can be mitigated and that there are no alternative sites within the District’.
- 1.28 Other policies (than LP25) in the JLP also come into consideration in assessing the Proposal. The Policies relevant to the Proposal are: SP03 – Sustainable location of new development, SP09 – Enhancement and management of the environment, SP10 – Climate change, LP15 – Environmental protection and Conservation, LP16 – Biodiversity and geodiversity, LP17 – Landscape, LP19- Historic environment, LP24 Design and residential amenity, LP27 – Flood risk and vulnerability and LP29 – Safe sustainable and active transport. The specific terms of these Policies are set out within the Joint Local Plan. Other pertinent local planning documents, relevant to the Application, are the Joint Council’s

Landscape Guidance 2015 and the Suffolk Landscape Character Assessment. These are referred to for their terms and not restated here.

## 2 Weighing the Benefits of the Proposal

- 2.1 The Applicant states that the key and overriding benefit of the Proposal is to produce “renewable energy, which is driven by numerous government legislation”<sup>15</sup>, with a view to reducing greenhouse gas. They see this as reason to set aside or discount adverse environmental effects arising from the Proposal. The Applicant’s Proposal of a solar farm is intended to produce renewable electricity. This aligns with NPPF and the PPG (see above at para 1.10 ff) which requires the energy generating value to be taken into account.
- 2.2 In considering any renewable and low carbon energy it is useful to understand the context in which a decision is being made. This section sets out an overview of the energy system, what is needed to get to net zero, and what contribution any proposal might make. Section 1 (above) has already discussed and how far we are along the road to completing the energy transition.

### THE ENERGY POTENTIAL OF SOLAR FARMS

- 2.3 First, it useful to understand the potential energy value of a solar farm. Solar farm produces energy by converting sunlight into electricity using photovoltaic cells. These only produce electricity during daylight. The amount of electricity produced depends on the intensity of the sunlight and the orientation of the cells toward the sunlight. For example, if cells are facing southward, they will produce relatively little energy at dawn when sunlight mostly comes from the east. The energy produced over a year is dependent upon: the number of hours of daylight, the cells orientation relative to the sunlight and the available light intensity. Clearly the daylight hours are greatest in summertime and least in winter. Due to the varying azimuth (or angle) of the sun the light intensity is also greater in summer than winter. Unfortunately, the daily yield of energy per month from a solar panel (taking account of the daylight hours and sunlight intensity) contradict the seasonal pattern of demand for electricity, which increases in winter.
- 2.4 Given the known output of solar panels, it useful to compare this to the pattern of demand for electricity in the UK. The daily pattern of demand for electricity

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<sup>15</sup> Planning Statement 6.2.

rises until around 8.00am, is then relatively flat during the working day and rises to a peak in the early evening before falling steadily through the evening to its lowest level during normal hours of sleep. Whilst this fits the production of electricity from solar farms in mid-summer, during the spring and autumn parts of the demand pattern are missed. In winter solar energy provides no energy at the daily peak and, due to low sun intensity, has little energy to offer during the working day.

- 2.5 In conclusion therefore, the output from a solar farm does not align well with the pattern of electricity consumption. Over a year a solar farm produces electricity for the equivalent of 11% of a year, or 963 hours per year, or an average of 2.64 hours per day.
- 2.6 It is for these reasons that solar energy is not expected to be the primary source of renewable energy in the UK. In the future, wind energy, particularly offshore wind energy will become the prime source of electricity generation in the UK. Solar energy load factor (of 11%) compares unfavourably to the load factor for offshore wind energy at 60% (or 219 days at 24 hours a day). Furthermore, whereas solar energy will be available only in daylight hours, mostly in summer, offshore wind energy is likely to be available when the demand for electricity is greatest, that is during the dark evenings in winter. So not only does offshore wind produce much more energy, but it also produces it when energy demand is greatest.

#### ENERGY POTENTIAL OF THE PROPOSAL.

- 2.7 The following section looks in detail at the energy value of the Proposal. Before looking at this it is useful to briefly consider the Site against other solar farms in the vicinity, from a technical perspective. It is notable that all other solar farms (operating or proposed) in the area are all situated on flat or gently south facing sites. Stradishall is a good example. However, the Proposal Site is sloping north-eastwards. This slope, of some 48m over 590m, creates two technical problems. Firstly, as would be expected, the Applicant shows the panels in rows running across the site east-west with neighbouring panels along each row adjoining (EIAR-Fig 04 & 05). However, due to the Site slope the panels need to be stepped down across the slope of the site. This will result in a difference in height above ground level between the east and west end of each panel group<sup>16</sup>. As a consequence, the panels either will result in adjoining panels incurring shadowing or needing to be separated to avoid shadowing. The

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<sup>16</sup> The panels rows across the site cannot be level, otherwise the panels at the eastern end of the row would need to be 48m above ground.

- topography of the site also means that the separation of rows of panels needs to be greater than on a flat site. Otherwise, each row would cause a shadow on the next row to the north. Avoiding shadowing is a crucial positioning requirement for solar energy collectors. Overall, it is estimated the solar output from this site would be between 10% and 40% lower than on a flat site of equal area<sup>17</sup>. From an engineering perspective this is a poor site for a solar farm. It will result in a lower energy output per hectare than on a flat site.
- 2.8 The Applicant states that the Proposal is for a 'solar farm' with a capacity of "20MW"<sup>18</sup>. The Proposal site is given as 43.7hectares. This equates to 0.45MW per hectare (20/43.7). In their January 2023 newsletter to local communities the Applicant stated that "*it is anticipated that the solar farm would be capable of generating up to 20MW of clean, low-cost renewable electricity, enough to power approximately 8,000 homes*"<sup>19</sup>. In their Statement of Community Involvement, the Applicant says (in response to comments received) that the "*proposed development would be capable of producing clean green electricity for approximately 8,900 homes every year*"<sup>20</sup>.
- 2.9 Before examining this in detail is useful to compare the Applicant's energy value claims for this Proposal with other recent proposals for solar farms in Babergh and Mid Suffolk (B&MSDC) Districts. B&MSDC recently considered a proposed for a 49.9MW solar farm at Bradley, Suffolk (B&MSDC DC/22/01530). For that proposal the applicant indicated that 14,000 homes would be served. That equates to **280** homes per MW of solar farm capacity (14000/49.9)<sup>21</sup>.
- 2.10 The Council also recently considered a solar farm proposal between Somerton and Burstall, Suffolk. In that case the applicant initially proposed a 49.9MW capacity that would serve 13,000 homes. That equates to **260** homes per MW capacity (13000/49.9)<sup>22</sup>. The Applicant for the current Proposal indicates that 8,900 homes would be served by the 20MW capacity. That equates to **445**

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<sup>17</sup> The north-east facing sloping on the Site means that energy produced per hectare would be less than on a flat site, due to: a) parts being below the horizon; b) either greater distance between rows of panels being required (and thus fewer panels per hectare across the site) or panels being angled lower than the optimum angle for the sun light intensity ; c) some separation of blocks of panels along rows, to avoid higher panels shadowing neighbouring lower panels. It should also be noted that the information from the Applicant is inconsistent: Figure 08 states that the maximum structure length for panels is 19m whereas Figure 4 (Infrastructure Layout) shows all blocks with a length of 15m.

<sup>18</sup> Planning Statement 3.1.

<sup>19</sup> SCI\_APPENDIX\_B\_PUBLIC\_EXHIBITION\_NEWS\_LETTER-8411521, using a Dec 2022 figure for household consumption of 3,509 kWh per home.

<sup>20</sup> Applicant: Statement of Community Involvement, 6.1. using a Dec 2022 figure for household consumption of 3,748 kWh per home.

<sup>21</sup> DC/22/01530 figures taken from the Officer's Report to the MSDC planning committee of 6/12/23.

<sup>22</sup> DC\_23\_02118-PLANNING\_STATEMENT-8271504.pdf, section 1.

homes per MW plated capacity (8900/20)(or **400** homes/MW for 8000). The number of homes claimed served for this Proposal is clearly substantially out of alignment with the other recent cases, by a difference of approximately 65% increase.

- 2.11 SGV respectfully suggest that the Applicant's number of homes claimed to be served by the Proposal is in error. It is substantially overstated. The calculation of homes served is a commonly understood formula. It is calculated as the stated plated capacity of the solar farm (20MW or 20,000 kW), multiplied by times the hours in each year (24\*365=8,760), multiplied by the 'load factor' for the number of hours of electricity generation annually (11%<sup>23</sup> or 963 hours output annually), then divided by the average electricity consumption of homes (circa 3500 kWh pa<sup>24</sup>). This gives a potential 'homes served' by the Proposal of 5,506. ( $\{20000*365*24*0.11 = 19,272,000\} / 3,500 = 5,506$  homes). It is notable that the Bradley and Burstall developers' figures align with this formula ( $\{49900 * 8760 * 0.11\} / 3500 = 13,738$ ). Clearly, the Boxted Applicant's claim for homes served is vastly overstated. With due respect to them, the Applicant's information appears unreliable.
- 2.12 However, it is notable that whilst the Applicant referred to the number of 'homes served' in their community consultations, this information is not provided within the Application documentation. It might seem that this absence is a simple omission or casual oversight. However, SGV believes it is not. SGV believes the omission of the number of homes served by the Proposal is a deliberate intentional omission. SGV notes the carefully considered wording used by the Applicant in the application documentation. In its submission the Applicant gives a "capacity of **up to** 20MW"<sup>25</sup>. 'Up to' means anything between zero to 20MW, with 20MW as the maximum limit.
- 2.13 The question then arises "Why would the Applicant not state the number of homes served by their Proposal in the Application?" As shown in other recent cases in the Districts, it is normal for applicants to state the number of homes served by a solar farm. It is part of their routine justification for their proposal and crucial to the rationale for tolerating adverse local environmental effects. Based on industry information, SGV understands that the **Applicant does not,**

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<sup>23</sup> BEIS/DESNZ DUKES Table 6.3.xlsx (Load factor for renewable electricity generation), shows the Load Factor for solar photovoltaics schemes operating on an unchanged configuration (i.e. operating as in the previous year), for the year 2022 (the latest available date), as 11.4%.

<sup>24</sup> BEIS/DESNZ Subnational Electricity and Gas Consumption Statistics , January 2024. P11. Latest figure given as 3,239kWh pa.

<sup>25</sup> Planning Statement 3.1.



- and cannot know the number of homes served by the Proposal.** The obvious question is why?
- 2.14 Before explaining, it useful to recall the relevant policy context. The Babergh and Mid Suffolk Joint Local Development Plan – Part 1 (JLP) Policy LP25 states that *“renewable and low carbon, decentralised and community energy generating proposals will be supported subject to ... (e) approval of connections rights, and capacity in the UK power network, to be demonstrated as part of the planning application”*. This is saying that consideration of an electricity generation proposal, such as this Proposal, is *subject to* an approved connection and sufficient capacity on the power network criteria. Whilst the previous Local Development Plan policy did not include terms (in policies such as CS13) related to ‘connection approval’ and ‘capacity of the power network’ these issues are ‘material considerations’ for this Application.
- 2.15 In Policy terms, the onus is on the developer to show that their proposal will achieve the benefits they claim. Whilst the Applicant states *“electricity will be exported to the existing overhead line to the distribution network via a Point of Connection mast”*<sup>26</sup> they do not set out the terms of the connection.
- 2.16 Industry information shows that whilst the Applicant has an ‘approved connection’ their connection is subject to limitations due to the local power network. The Applicant’s connection contract is designated as ‘ANM’. ANM means that it is subject to ‘Active Network Management’. ANM is used in electricity distribution networks where the electricity generation capacity connected exceeds the capacity of the power network, where the network is ‘constrained’.
- 2.17 In these circumstances a generator is offered only a ‘non-firm’ contract. In such situations, the generator limited to only producing and exporting energy as and when the power network has sufficient capacity to carry their energy. In constrained parts of the network the network operator will turn off, or ‘curtail’, generators when the local generation exceeds the capacity of the network. These ‘constraints’ limit the ability of the Proposal to produce electricity for use by consumers. Consequently, the electrical output from the Proposal will be limited, or ‘constrained’. The Proposal will therefore only achieve its claimed electrical output (claimed as 20MW) when there is spare capacity on the local network, such as when other generators in the local area are not producing energy (for whatever reason). These circumstances can only change if the capacity of the local network is increased by building new network

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<sup>26</sup> Planning Statement 2.2.

- infrastructure. SGV also note that the Applicant's offered connection date is 2028. At that point they will have a 'non-firm' right to generate electricity.
- 2.18 It is for this reason that the Applicant omits to include the number of homes served by their Proposal. It is why the Applicant is very careful to use the phrase 'capacity **up to** 20MW'. The Applicant does not state the homes served by the Proposal in the application documentation because they do not know how many homes will be served. The Proposal is located in an area where the power network' is constrained. Very simply, because of the limitations of 'capacity in the UK power network' locally the Applicant cannot know how much energy can be produced and exported by the Proposal.
- 2.19 Overall, the energy generating value of the Proposal is therefore unclear and unsubstantiated. We know that the maximum potential is 20MW which the Applicant has incorrectly claimed would serve 8,900 homes. Realistically this should be no more than 5,500 homes, at best. However, because of the constraints on the capacity of the local power network the number of homes it is likely to be substantially below this. But the key point is that it is uncertain and unknown.
- 2.20 Consequently, the energy value of the Proposal, claimed as the primary benefit by the Applicant, has not been 'demonstrated' (as JLP LP25 requires). That value is in grave doubt and has not been substantiated. At best, the energy value benefit of the proposal, claimed by the Applicant, is uncertain and unclear.
- 2.21 When judging the potential adverse effects that might arise from the Proposal, it is necessary to bear in mind that the claimed positive benefits of the Proposal (i.e. usable renewable energy) are unreliable and, at best, unknown.

### **3 The Applicant's Rationale for the Proposal**

- 3.1 The Applicant has set out, in their Planning Statement, a rationale as why they are proposing a 20MW solar farm at this Site. However, examination of this shows that their rationale has significant flaws and shortcomings. This section exams the Applicant's reasoning for selecting and proposing this Site for a solar farm.
- 3.2 The Applicant sets out their site selection criteria in Section 5 of their Planning Statement (PS). This consists of the 'fundamental requirements' of access to

- the power network, planning designations, requirements to accommodate 20MW capacity, impact on agricultural land, landscape, access and a 'willing landowner'.
- 3.3 The Applicant states that the key criteria, for selecting this Site is a fundamental requirement to access to the power network. However, contrary to the Applicant's statement, this is not a legitimate planning consideration. Proximity to the power network is not a matter the planning authority needs to or should take into account. In the planning appeals in Cambridgeshire (APP/W0530/W/15/3012014 and 30113863) the Inspector found that "*no weight should be attached ... to the availability of a grid connection*". These decisions were recovered for determination by the Secretary of State. In confirming the decision, the Secretary of State agreed with the Inspector "*that no weight attaches to the assertion that a grid connection to the national grid is an essential site requirement (IR76)*" (para 19). Accordingly, the Applicant's site selection process is flawed from the very outset and cannot therefore be relied on for a balanced planning judgement.
- 3.4 The Applicant sets a size requirement of a 20MW solar farm due to 'viability'. They say, "*the Applicant requires sufficient land ... to accommodate a solar PV development with a capacity of 20MW*" (PS 5.12). However, there is no reason to accept that 20MW is a required to comply with some notional set scale for a solar energy generation project. Government data shows there are over a thousand solar energy sites operating already, and a further 1,600 sites are under or awaiting construction. These vary in size between under 1MW to over 100MW. Contrary to the Applicant's claim, there is no pre-ordained specification of solar energy sites' capacity. Even if the Applicant requires a specific size for their own viability, clearly other developers can achieve viability at lower scale. Accordingly, a set scale (20MW or otherwise) is not a pertinent planning consideration. The evidence shows that solar energy can be delivered at capacities other the 20MW. Again, there is no need for the planning authority to be limited to the Applicant's viability criteria.
- 3.5 The Applicant rules out rooftop solar as it is "*not considered feasible at the proposed scale*" (5.13). The Applicant rejects roof mounted again due to their preferred scale (of 20MW). However, as the NPPF recognises "*even small-scale projects have a valuable contribution to significant cutting greenhouse gas emissions*" (163a). Government data shows that rooftop solar projects vary in scale between 6MW and 0.2MW. As the Government indicates, several of these projects could be aggregated to provide 20MW. Contrary to the Applicant's assertion, there is no sound basis for rejecting roof mounted solar

- as means of providing renewable energy to address climate change. A further advantage of both domestic and industrial rooftop solar, is that it invariably avoids the need for transmission of electricity and bypasses any need for new power network infrastructure.
- 3.6 The Applicant says that access to the power network is a ‘fundamental requirement’. Rather contradicting themselves, they state “sites must be within 1km of a grid connection” (5.27) but also state they restricted the search area “to land with power line running through it” (5.8). The Applicant goes on to compare power network access to the available lower grade agricultural land. They state that Babergh has “only 1.83%” of Class 4 and 5 agricultural land, whilst ignoring non-agricultural land. They are, however, somewhat obscure about the position in relation to Class 3 land. Effectively they argue, contrary to policy, that Class 3 land qualifies for their search. They then reach the unsupported conclusion that there are no alternative sites available in Babergh. However, independent re-assessment shows that 42% of the land area within Babergh complies with the Applicant’s own criteria of access to power networks and agricultural land. More land fitting the criteria is available in wider Suffolk and neighbouring Council areas. The Applicant’s claim, that “*there are no alternative sites*” (PS 5.26) (even for their spurious 20MW capacity sites) is not supported by the evidence and is not credible.
- 3.7 A key feature of the Applicant’s site selection criteria is their need for a “willing landowner” (5.12). It is not surprising that developers seek a willing landowner. However, property values and the commercial interest of land ownership are not appropriate matters for planning considerations. Such matters are not ‘material planning considerations’. Accordingly, the planning authority should set aside the Applicant’s site selection criteria based on ‘willing landownership’. Only appropriate planning considerations should be considered.
- 3.8 The Applicant refers to the brownfield land register for Babergh and Mid Suffolk Councils (5.15), and says there are no ‘previously developed sites available’ (5.13) and claim there is ‘very limited poor agricultural land’ within Babergh Council area (5.18). The Applicant moves on to say that “*where no non-agricultural land or previously developed land is identified in the site search area ... use of agricultural land is therefore necessary*” (5.16). All of this is focused on the District of Babergh.
- 3.9 The Applicant is tacitly making the unsupported judgement that solar energy site has to be provided within Babergh. However, planning criteria are not bound by such restrictions. Curiously, there is no explanation from the

Applicant as to why their search area only considered within the Babergh District. The Applicant is not transparent on what 'the search area' is. Nor do they explain why other Districts are excluded or not considered. Independent locational analysis shows that there are ample areas of non-agricultural and poor quality agricultural (class 4 & 5) land is available. In any event, the applicant's claim that the "*use of agricultural land is therefore necessary*" (5.16) is false and is not supported by the facts nor by policy.

- 3.10 The Applicant's treatment of planning designations, landscape and access within their site selection assessment is cursory and not part of their fundamental criteria. It is apparent that these planning issues were not taken into account in any meaningful way in the Applicant's site selection process. It is evident that the Applicant found the Site, using only their 'fundamental criteria' (of grid access and a willing landowner), and presumed that landscape, access and other legitimate planning considerations would be acceptable. This is poor planning indeed. While the Applicant's real site selection is driven exclusively by power lines access, commercial viability and a 'willing landowner', these are not planning criteria.
- 3.11 Overall, the Applicant's site selection process has little if anything to commend it. Most of it is based on non-planning criteria. Where it does incorporate criteria relevant to planning judgement these are clearly subsidiary to non-planning criteria. Furthermore, even these are not considered in a meaningful way. The Applicant's conclusion that the application site is "*the best and most viable site within the search area*" is gravely ill founded. Accordingly, it is submitted that the Applicant's site selection process should be set aside and entirely discounted from the planning authority's consideration.

#### **4 Impacts Arising from the Proposal and Acceptability**

- 4.1 Judgement determining any planning application should be based on weighing the planning balance of the merits and the adverse effects arising from a proposal. It is therefore necessary to assess what the potential benefits and adverse impacts of this Proposal are. Earlier, the potential energy value of the Proposal has been set out (see Section 2 above). The policy guidance on how proposals, such as this solar farm, should be judged have been set out above in Section 1 (Planning and Energy Policy). As noted in section 1.11(b) and 1.13 (above), for National Policy, NPPF states applications for renewable projects should be approved if 'its impacts are acceptable'. Local Development Plan policies say renewable energy proposal will be supported, subject to assessing

various impacts (see 1.24 above). This section now turns to consider the environmental impacts which would arise from the Proposal and considers whether these are 'acceptable'.

#### AGRICULTURAL LAND

- 4.2 The Applicant accepts that the Site is currently used as agricultural land. It is reasonably productive arable land typical of the County and East Anglia. The Applicant also accepts that parts of the Site ranks as Class 2 or 3a agricultural land, with the remainder as Class 3b. The split is 8 ha (17.8%) of Class 2, 13 ha (28.9%) of Class 3a, with the remaining 24ha (53.3%) as Class 3b. About half of the Site is therefore 'best and most versatile' agricultural land (BMV) with the remainder being moderate quality agricultural land. Since the Site 'involves' BMV land, Policies in relation to 'best and most valuable' (BMV) agricultural land are therefore engaged.
- 4.3 Policy guidance for solar farms "*involving*" BMV agricultural land is that acceptability would "*need to be justified by the most compelling evidence*" (see 1.21 above). With due respect to the Applicant, SGV concludes that the Applicant has not shown 'compelling evidence' to justify the use of any BMV land in these circumstances. As set out above (section 3), the Applicant's site selection process was gravely flawed. Whilst the Applicant concluded that there was no alternative to their proposal at this location, an independent re-assessment shows that there are ample opportunities for the development of solar energy in the District and surrounding areas. Consequently, the applicant has not shown 'compelling evidence' for the need for a solar farm on this Site.

#### LANDSCAPE AND VISUAL IMPACT

- 4.4 Arguably one of the most important effects of any solar farm situated across 44 hectares of agricultural land is the unavoidable industrialisation of the countryside. The landscape and visual impact assessment is therefore an important consideration in adjudicating the Proposal. To assist this, the Applicant has prepared a Landscape and Visual Appraisal (**LVA**). Given the importance of these issues, SGV has also engaged a Landscape Architect to carry out a review of the Applicant's LVA and undertake a parallel analysis of the potential landscape and visual effects (**SGV-LR**). Those two reports are referred to for detailed analysis of the landscape and visual effects of the Proposal. Here we consider the landscape and visual amenity effects by reviewing the general conclusions of the two LVIA reports, and highlight the differences.

- 4.5 Before going into detail on differences it is useful to highlight the common ground in the findings of the two assessments. First and most importantly is agreement by both professionals that the Site is located within a ‘**valued landscape**’. NPPF paragraph 180(a) is therefore engaged. NPPF requires that, in terms of ‘conserving and enhancing the natural environment’ any ‘valued landscape’ should be ‘protected and enhanced’ by development.
- 4.6 The two professional landscape assessments also agree that the Proposal would result in **major adverse or negative** landscape effects on the landscape character of the Site and its surrounding area (LVA 6.35 & 6.41). They agree the proposal would have **major adverse or negative** effects on valued views. They also agree that the Site falls in a ‘Special Landscape Area’ in the former Local Development Plan (LVA 6.35)<sup>27</sup>.
- 4.7 Where the two professional assessments differ is in their interpretation of the consequence of the identified landscape and visual effects. Having identified major negative effects the LVA arrives at the conclusion that *“the development can be accommodated without undue harm to landscape and visual amenity”* (LVA 8.14). The SGV-LR points out that this statement does not align with the actual LVA findings (SGV-LR 12.5). SGV concludes that the industrial nature and scale of the Proposal *“would be entirely inappropriate within, and in conflict with, the prevailing character of these landscapes, which are ancient, deeply rural, highly tranquil and very beautiful”* (SGV-LR 12.7).
- 4.8 These differing assessments need to be understood. The best place to start is the highest policy requirement - NPPF. Whilst oblique, the LVA conclusions seem to refer to NPPF para 180a when suggesting that the Proposal will ‘protect and enhance important landscape features’ (LVA- 8.12). The fact that this is oblique rather than a direct reference is, in itself, indicative that the author is not confident of compliance with policy. Even as an oblique reference, however, this is a somewhat surprising conclusion for a landscape architect to come to. It is difficult to conceive of how a solar farm in any way ‘protects and enhances’ the landscape. With respect to the author, it seems likely that the public would not agree. To be fair to the LVA it is only suggesting that the Proposal is *“seeking to maintain local character, retain, protect and enhance important landscape features”* (LVA- 8.12). Perhaps this is driven out of a desire to present the Proposal as complying with policy (NPPF 180a- valued

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<sup>27</sup> The new JLP is a part 1, covering policies only, and does not therefore cover area designations. The identification of the ‘Special Landscape Area’, covering the Site, therefore carries forward from the former Local Development Plan. Whilst it is not certain, it seems likely that the Part 2 of the JLP will sustain the Special Landscape Area status covering the Site and wider the Glem valley.

landscape) and a wish to find a silver lining in an otherwise dark cloud. The question to be assessed, however, is not whether the Applicant is 'seeking' to enhance the landscape, but whether or not the Proposal complies with NPPF policy (180a) by 'protecting and enhancing the valued landscape'. The suggestion that the Proposal (a 44-hectare solar farm) in an undulating 'special landscape area', which is clearly accepted as a 'valued landscape', might overall 'protect and enhance' the landscape is not in any way credible. The Proposal plainly does **not** 'protect and enhance the valued landscape'. Accordingly, it follows that the Proposal fails to meet a key NPPF policy (180a) requirement in respect to landscape.

- 4.9 The planning judgement here indicates that the Applicant's landscape assessment is not sustained. The evidence shows that it is the professional judgement of the SGV landscape architect which is sound, rather than the Applicant's LVA. On other matters too, it is apparent that that the Applicant's LVA identifies adverse landscape and visual effects but then goes on to bend the consequences of that finding to suggest that the proposal can be 'accommodated without undue harm' (LVA 8.14). Tacitly the LVA wording accepts that there is 'harm to the landscape and visual amenity' (from the Proposal). But apparently this harm is not undue. Claiming that it is 'not undue' or not disproportionate or excessive or unwarranted implies some external justification or criteria for discounting the harm. However, the LVA offers no such justification or reason for discounting the harm. Consequently, the Applicant's LVA is strongly susceptible to valid criticism and flawed by the absence of credibility.
- 4.10 The SGV-LR also points out that while the LVA used published guidance, it did not always interpret this correctly, and contains errors, omissions, contradictions, and flawed assumptions. Also, the LVA did not consider the cause and nature of several of the effects likely to occur.
- 4.11 Since it is known through local knowledge, it is not surprising that the Applicant's LVA did not identify any cultural value of the landscape at the Site. As the SGV landscape review points out (SGV-LR 7.1.28), the Site has noteworthy significant cultural associations. The Site has been painted several times by a renowned Suffolk artist. With his work on display in the Tate gallery, this gives the artist's work national standing. This is a unique attribute of the Site, which would be damaged by the Proposal. The public would be unable to consider the artist's interpretation of the real-life scene. More importantly, the artist would be unable to continue the record of his evolving interpretation of this landscape.



4.12 Overall, on landscape and visual amenity, the apparent and unavoidable conclusion is that, contrary to the LVA conclusions, there are clearly major negative effects arising from the Proposal. There are no ways to mitigate these effects. Given that it is agreed that the Site is situated in 'valued landscape' and within a Special Landscape Area the Proposal falls short on compliance with JLP policy LP17 and NPPF. The Proposal will not protect and enhance the valued landscape (NPPF 180a). It does not recognise the intrinsic character and beauty of the countryside (NPPF 180b).

HERITAGE IMPACTS.

4.13 The Applicant has prepared a Heritage Assessment of the Proposal (SVG-HA). SGV have also engaged their own expert on heritage. The Applicant's and SGV's heritage assessments are referred for its detailed analysis and is not restated. Here we consider the general conclusion of SGV's analysis and compare this to the Applicant's heritage assessment.

4.14 In respect to designated heritage assets, it is useful to compare the Applicant's heritage assessment with the SVG assessment. The first observation is that the identification of heritage assets is consistent. Both studies identify the listed buildings in the vicinity of the Proposal and within the Hartest Conservation Area. Where the assessments differ is in the judgement of the potential impacts. The Applicant consistently understates the level of harm arising from the Proposal.

4.15 To the casual observer, the Site may appear as just agricultural land, typical of rest of the District and wider County. However, the analysis by both the Applicant and SGV shows that the Site has considerable heritage value, which needs careful consideration. In respect to designated heritage assets, this arises due to the relationship between the Site and those Heritage assets.

4.16 It is noteworthy that the Applicant assesses the setting of heritage assets in order of proximity to the Site. They then tend to discount any impact due to natural screening by hedgerows and trees. However, that does not amount to an assessment of the historic value and the underlying setting of heritage assets. It is as though the Applicant has treated the Site, like a casual observer, as agricultural land typical of the area, within which various heritage assets happen to exist in the general vicinity. The Applicant treats the heritage assets as distinct and unrelated to the setting in which they exist.

4.17 The analysis by SGV, however, recognises that the Site is a key component of the local heritage assets. That is not due merely to proximity. It arises because

the heritage assets exist as part of the local area and setting. *“The Site is part of a larger medieval and post-medieval manorial complex centred on Bosted Hall”* (SGV-4.3.2.1). In other words, the identified heritage assets do not exist in isolation, as may be deduced from the Applicant’s analysis. The heritage assets exist due to and as part of the wider area (including the Site). The Applicant seems to apply modern functionalist thinking. However, the historic relationship between the heritage assets and the Site is really based on historic feudal farming over the local area, a deer park, ancient woodland and ancillary activity. These all form parts of the ‘manorial complex’.

- 4.18 Rather than limiting the ‘setting’ to current visibility, used by the Applicant, the historic setting of heritage assets extends into and beyond the Site. Rather than being isolated listed buildings (as suggested by the Applicant), it seems likely that the Heritage Assets exist in this location *because of* the land around them. The historic buildings, remaining today, are closely reliant upon the surrounding land, including the Site. Consequently, the Site is part of the setting of the heritage assets. The Proposal therefore has adverse impacts on ‘views important to the settings’ of heritage assets (see 1.20 above).
- 4.19 There is also a significant difference in approach between the Applicant and SGV in respect to *non-designated* heritage assets. The applicant has carried out a geophysical survey. This has identified the presence of extensive archaeological features, likely to date from ‘the later prehistoric period’ (sic). While acknowledging their existence, the Applicant suggests that essentially these historic assets can be discounted. The solution they offer, to avoid all disturbance to them, is that the Applicant *“will use above ground foundations and cabling”* (HS-7.8). However, this rather bland assertion ignores important issues. Ground foundations do not avoid all damage to soils and the ground. As recognised above (0.2, 2.7, above), the Site has a considerable slope, of approximately 8%. Ground mounted blocks of panels require to be placed on level ground. To use ground foundation panels the Applicant will need to prepare the ground by levelling sections, in a series of steps, across the site. Otherwise, the panels will not be level. Given the gradient across the Site such works will likely interfere with and damage the archaeological features on the Site. The applicant’s suggestion therefore does not provide a solution to protect the non-designated heritage assets. As SGV-HA points out, the *“construction of the solar farm will have a direct and irreversible impact upon the archaeological deposits with the Site”* (SGV-HA 5.12). A programme of archaeological trial trenching is required before the Applicant can be determined.

4.20 Overall, on heritage matters the Proposal does not show compliance with JLP Policy LP18. The Proposal does not take account of *“the desirability of sustaining and enhancing the significant heritage assets”* (NPPF 203a). While the proposal does not directly impact designated heritage assets, it will have a considerable adverse impact on the settings of designated assets. In respect to non-designated heritage assets the Site has extensive archaeological remains. NPPF therefore requires a ‘balanced judgement having regard to the scale of any harm of loss and the significance of the assets’ to be made (NPPF-209). At the present such a judgment it not possible until the Site has been surveyed by trial trenching.

ECOLOGY.

4.21 For ecology and biodiversity net gain the Applicant has prepared a statement (BNGS) and an ecology assessment (EA). Whilst not engaging an ecologist SVG has prepared a report on ecology (SGV-ER). This report has been prepared by a biology graduate under the supervision of an appropriately qualified ecology expert (PhD Ecology). Whilst the expert wishes to remain anonymous the SGV report has been reviewed by him and found to be ‘excellent and comprehensive without need of alteration’. Bearing this mind, here we assess the differing perspectives of the two ecology and biodiversity reports.

4.22 The Applicant’s ecologists concludes that the Proposal will implement additional biodiversity measures which will achieve net gain score of 99% for habitat and 48% for hedgerows, which *“will satisfy the emerging mandatory national requirement”* and the JLP’s need for 10% biodiversity net gain (BNG) (BNGS- 4.1 & 4.2). The BNGS acknowledges that it is *“based on habitat only and does take account of any required species actions, such as those for legally protected species”* (BNGS-2.24). The EA covers species and concludes that *“designed-in avoidance, mitigation and enhancement measure and the additional measures targeted at protected species ... all ecological impacts from the Proposed Development can be adequately avoided, mitigated or compensated for”* (EA 8,1).

4.23 SVG accepts that the Proposal incorporates some useful BNG which will provide additional habitats. Some of this is outside the boundary of the Proposal and will require to be secured as dependent upon the consent in some way. Inevitably the BNG measures will take some years to establish and provide a positive benefit for habitats and species. SGV also notes that the EA is based on the current Proposal which uses deer fencing with mammal gates and

- infrared lighting. Given the security issues raised by the Police<sup>28</sup> SGV is not convinced that this type of fencing is appropriate. In the event that a full security fencing is required a full re-evaluation of the ecology impact would be required. This should not only take account of hard physical barriers preventing species movement across the Site, but also the potential for extensive white lighting around the perimeter and at key on-site installations.
- 4.24 Where SGV submits that the Proposal falls short is in relation to the protection of species including protected species. The EA accepts that the Proposal will result in reduced habitat for species (e.g. Skylarks, EA 7.22) and makes only generic assurances that species will be largely unhindered. However, solar farms are relatively new features, and the academic research on their impact on species is quite limited. There is significant doubt over these findings.
- 4.25 Overall, SGV remains concerned that the Proposal will create harm to skylarks, bats, badgers and other protected species. It is unlikely this loss can be adequately mitigated. Whilst there is potential for BNG for habitat this does not take into account potential losses to species. On balance then it is quite possible the Proposal has an aggregate negative impact on ecology.

#### CONSTRUCTION AND OPERATING NOISE.

- 4.26 For Noise the Applicant has undertaken an acoustic impact assessment (**AIA**). It concludes that for daytime for all properties the predicted noise level is 'low or minor'. For night-time the AIA accepts that 'rating noise would be close to the threshold when adverse impacts start to occur' (AIA 6). The AIA then suggests that this can be discounted because, they claim, the standard assessment methodology is 'overly conservative'. This is based on the very low background noise at the Site. The Applicant suggests this can be set aside and absolute limits applied. However, this is in effect a denial that the background noise at the Site is extremely low. In terms of noise nuisance, it is submitted by potential receptors that the Proposal should be assessed against the actual background noise, not based on some theoretical level.
- 4.27 It is notable that the AIA only considers noise from "*operational impacts*" (AIA - 1, p4). The Applicant has provided no assessment or consideration of noise arising from the construction or restoration periods. These will be extensive. This is a significant omission in the Applicant's supporting information. Boxted residents have experienced noise from a solar farm's construction. Several have visited the nearby Pentlow Hill solar farm (in Braintree District, Essex), which is

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<sup>28</sup> Suffolk Constabulary, DC/23/05127 Consultation response, 16/1/24

currently undergoing construction. That is using a similar panel mounting system to this Proposal. To insert these the steel or aluminium supports into the ground a pile driver is needed to drive these in, up to 2.4m depth. This creates considerable metallic hammering noise which creates a nuisance well beyond the site boundary. Other construction machinery noise will also arise. Given the number of mounts to be piled into the ground and the extended period of construction this is likely to form an unacceptable level of noise, and amount to a Nuisance, which would therefore adversely affect local amenity. Construction and Site restoration noise requires to be assessed.

#### TRAFFIC

- 4.28 In respect to traffic and highways the Applicant has submitted a Construction Traffic Management Plan (**CTMP**). This gives the Applicant's estimate of the level of traffic which would be generated by the Proposal and their assessment of the adequacy of the roads in the area to carry this additional volume of traffic. They indicate construction traffic would come from the A134, via the A1093, the B1066 and Braggons Hill to the Site. They conclude that "*there are no valid highways or transportation reasons which would prevent the proposed development*" (CTMP 6.8).
- 4.29 However, there are a number of shortcomings to the Applicant's CTMP. The Applicant gives no quantification of the traffic requirement for traffic arising from earthworks. Given the Site is not flat, these works, probably to provide level steps across the site and access tracks, will be extensive. Aggregate and other building material will need to be brought in for internal access tracks, cable ducts and foundations. Experience shows that for energy development of this nature earthworks are usually the largest single component of traffic generation and concomitant traffic noise.
- 4.30 The Applicant also provides no information for the traffic arising from removal of the solar farm at the end of life. Whilst a long way off, traffic will obviously be generated by the removal of all equipment and the restatement of the land to agricultural use.
- 4.31 Whilst the CTMP provides estimates of traffic generation they provide no supporting data on the quantity of materials to be used and the vehicle loading capacities. It is therefore not possible to verify the Applicant's estimates of traffic generation. Given that the Applicant must have this data <sup>29</sup>, it is unclear why the Applicant has not provided this information.

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<sup>29</sup> Otherwise, they would not be able to calculate the traffic generation themselves.

- 4.32 The proposed use of Braggons Hill is also potentially problematic. At the bottom of Braggons Hill is a bridge over the River Glem. The substantial increase in traffic, particularly HGVs, will be well beyond the bridge's usual load. It is also noted that sections of the B1066 are quite narrow for extended sections and may restrict the ability of HGVs to pass each other.
- 4.33 Overall, on traffic and highways, the Applicant's assertion, that there are no valid traffic and highways reason to prevent development, is premature. Further information is needed from the Applicant and the Roads Authority.

#### SECURITY AND FENCING

- 4.34 The Applicant states that the Site boundary only needs to be safeguarded by a deer fence with occasional cameras and only infrared lighting. The visual impact of this would be quite moderate. Whilst not in accordance with field boundaries in the area, which are hedgerows, it would have a limited visual effect. However, consultation with the Police and experience at other solar farm development in the area show that a higher level of security is required. As illustrated in the SGV-LR (section 11) this would require fully secured boundary fencing supported by cameras with, most likely, permanent boundary flood lighting. The visual impact of this would be alien in this country location. The night-time effects of extensive security lighting all around the boundaries would be in stark contrast to the present dark skies environment of the local countryside. White or flood lighting in any form is likely to significantly affect amenity and is also likely to affect ecology and habitats. Any change to this, even for temporary short periods, would represent a significant change to the character of the area and adversely affect residents' amenity. The fixed fencing would also change the daytime character of the area.

#### AMENITY

- 4.35 As stated in the 2015 WMS solar energy developments can be supported "*but not in any place and not if it rides roughshod over the views of local communities*" (1.21). Amenity is a relevant planning consideration for the Proposal. As has been observed, the Site is situated in an undulating landscape. Consequently, there will be extensive visibility of it both within the valley in which it is proposed and, due to fact that the Site rises to the surrounding plateau, across the wider area. The Proposal represents a significant change to the area by industrialising, with extensive manmade structures, an area which is currently agricultural countryside. For those that are likely to see it, residents in and visitors to the area, this change will have a significant impact on amenity. For some dwellings, particularly Moorhouse Farm and Miller's Cottage, but also

others with outlooks towards the Site, the impact on amenity is likely to be very significant and, in some cases, overbearing.

- 4.36 The applicant argues that the Proposal “*can be accommodated without undue impact on ... visual amenity*” (PS 6.39). Tacitly here the Applicant is accepting that there will be some impact on visual amenity. Their claim is that it is ‘undue’. Residential amenity is dealt with in JLP Policy LP24. This requires ‘all new developments’ to make a ‘positive contribution ... to its context’. Recognising scale and the nature of the development proposals, it must ‘safeguard the existing character/ context’; and be ‘designed for ... amenity’. It is difficult to accept that the Proposal meets these JLP requirements. It could perhaps be argued that it is the nature of solar farms that they are visually intrusive and therefore must affect the amenity of those who live in or visit the vicinity. However, there are examples of solar farms in the area where the local amenity is not affected, Stradishall being a good example. Due the enclosed site there and the surrounding topography the solar farm is only seen by anyone choosing to walk through it. With respect to the Applicant their claim that the Proposal can be accommodated without ‘undue’ impacts on amenity is ill-founded. The amenity impacts at Moorhouse Farm will be overbearing. Other residential property will be significantly impacted and visitors and walkers to the area (using Braggons Hill, Somerton Road and many other points in the area) will be adversely affected.
- 4.37 Furthermore, policy on solar farms requires the decisionmaker to have due regard for the views of the local community. Given the strength and number of objections recorded against the Application it is clear that the local community does not support the Proposal. Were the Application to be granted planning permission it would be reasonable to conclude that consent would ‘ride roughshod over the views of the local community’.

#### OTHER ISSUES

- 4.38 There are also some other issues where there is currently doubt or uncertainty. The consultation by the Fire Service requires a second emergency access to the Site. Since this is not dealt with in the Application documentation it is unclear where this will be and what effects would arise.

#### CONCLUSION

- 4.39 Overall SGV finds that the Proposal would give rise several adverse impacts. These include use of BMV agricultural land, landscape and visual amenity, heritage environment, residential amenity and community views. Some topics,

such as traffic, security, noise, heritage, on-site ground works, emergency services access, end of life restoration, all require further information from the Applicant and cannot at this time be assessed, far less resolved satisfactorily. These impacts need to be weighed against the positive benefits of the Proposal.

## **5 The Planning Balance**

- 5.1 In determining any application for planning permission, a judgement has to be made on the planning balance or merits of the Proposal, considering the potential benefits against any likely adverse impacts. This Section considers the planning balance of the Proposed solar farm at this Site. Since the planning system is 'plan-led' this judgement has to be made in the light of relevant planning policies. For a solar farm these policies are set out above, in Section 1.
- 5.2 The potential adverse impacts of the Proposal have been discussed in Section 4 (above). This shows that there are adverse impacts on the use of the Site for a solar farm, for example, by locating the Proposal on BMV agricultural land. Since the Site 'involves' 'best and most versatile' agricultural land the Applicant is required to show that there is no reasonable alternative to the use of BMV land at this Site. Whilst the Applicant makes the claim that there are no alternatives, the evidence does not support that assertion.
- 5.3 In respect of landscape and visual amenity the Applicant acknowledges that there would be major negative effects of the Proposal. They suggest that these are not undue. However, they have not provided an adequate explanation of the agreed fact that the Site is located in a 'valued landscape'. Such landscapes need to be 'protected and enhanced'. It is difficult to see how the proposal meets this need. SGV's view is that the Applicant has underestimated the landscape and visual amenity consequences of the Proposal and takes no account of the cultural landscape value. Significant adverse landscape and visual amenity impact would arise if the Proposal was consented and built.
- 5.4 SGV also finds that the Applicant's assessment of heritage impact underestimates the likely consequences of the Proposal. It is evident the Proposal would adversely impact the settings of the interlinked heritage assets and would adversely affect the manorial complex which covers the Site. Before determining the Proposal, a full assessment is required of the archaeological remains across the Site.



- 5.5 Whilst the Proposal offers positive biodiversity net gains for habitat the potential impact on species is less clear. In part this is because the standard of boundary fencing is uncertain. Whilst the Applicant proposes deer fencing it looks that in practice high security fencing and flood lighting will be needed around the whole boundary. Such boundary fencing is likely to have and adverse impact on species, included protected species.
- 5.6 While the impact of noise might be acceptable during operation the Applicant has not provided any information on noise arising from construction. Further information is needed on this before any judgement can be made on noise impact. Further information is also required in regard to traffic before a judgement can be made on that. Further information is also required on a second emergency access.
- 5.7 In respect of amenity and the impacts on the local community it is evident that there will considerable adverse impacts, including overbearing impacts on Moorhouse Farm and significant impacts at other residential properties and local viewpoints such as at Miller's Cottage.
- 5.8 Weighing against these adverse environmental effects are the potential benefits of the Proposal. There is one benefit of the Proposal, namely a solar farm which should provide low or zero carbon energy. Given the climate change crisis there is a self-evident need for renewable energy. That the proposal could produce some renewable energy is not in question. This is a very important consideration when weighing the planning balance for this Proposal.
- 5.9 However, there is considerable doubt on the quantum of renewable energy that the Proposal might produce. The Applicant claims the Proposal would have a capacity of 20MW. Usually, a 20MW solar farm could be expected to provide around 19,300MWh of electricity each year and serve some 5,500 homes with renewable electricity. However, it is noted that the Applicant has not made any claim in regard to how much electricity the Proposal would produce each year. This is an important omission which creates doubt over the potential single benefit of the Proposal. Unfortunately, other evidence throws considerable doubt over the potential energy benefit of the Proposal. That is because the local power network is highly constrained and does not have sufficient capacity for the electricity that might be produced to be exported from the Site. Caution therefore needs to be applied to the potential energy benefit arising from the Proposal. This uncertainty needs to be taken into account. There is little point in judging that various adverse environmental effects should be tolerated,

- because of the renewable energy value of the Proposal, when that energy benefit does not materialise.
- 5.10 In summary, on environmental effects there will clearly be some adverse impacts arising from the Proposal. These impacts fall into three categories. Firstly, there are areas where the information from the Applicant is not sufficient. Subject to the additional information, to be provided by the Applicant being sufficient, it is possible that the uncertainty over the impact can be resolved. This affects traffic, security and fencing, noise and emergency access.
- 5.11 Secondly, some of the effects arising from the Proposal fall into the area where they may be considered as potentially acceptable and matters to be judged in the general planning balance. It may be that some effects might be viewed as tolerable when weighed against the potential benefits of the Proposal.
- 5.12 The third category is where national or local policy sets a threshold which needs to be attained no matter what the potential benefits of the Proposal. Any proposal needs to achieve a set level of biodiversity net gain, any harm to heritage assets requires 'convincing justification'; solar farm sites involving BMV agricultural land require 'most compelling evidence'; and sites within valued landscapes need to 'protect and enhance' that landscape.
- 5.13 For the Proposal the planning balance shows that there are several of the third category thresholds which have not been met. Therefore, these criteria mean that the balance is against the Proposal. SGV accepts the Proposal could meet the required threshold on biodiversity net gain. However, the thresholds for harm to heritage assets, best and most versatile agricultural land and the protection of valued landscapes have not been achieved. The shortfall on heritage assets arises because the Applicant has not appropriately considered the setting of manorial complex of the assets and not demonstrated that the extensive archaeological remains could be adequately protected. To demonstrate that it is necessary to use BMV agricultural land for a solar farm, the Applicant needed to provide 'compelling evidence' that BMV is needed. Since there are plenty of alternative sites for renewable energy elsewhere, the evidence does not show that BMV land needs to be used. The Applicant's claims on BMV land are far from compelling. If anything, their evidence on BMV land is poor and unconvincing. In respect to valued landscape, the Applicant's LVA is at best tentative, whilst their Planning Statement is cursory in respect to the considering the importance of the valued landscape. That is not sufficient. Given the evidence, perhaps it is not surprising that the Applicant's

statements are not persuasive. It is self-evident that the Proposal does not, as is required, protect and enhance the landscape here.

- 5.14 SGV's professional assessment is that there are also other adverse impacts arising from the Proposal. There would be other adverse impacts in respect to landscape and visual amenity, such as major negative effects on valued landscapes and views. Depending upon the finalised security and fencing arrangements there could be adverse ecological impacts upon various species, including protected species. It is clear there are significant impacts arising which affect the amenity of the local community. It is possible that some of these impacts could be tolerated if there were substantial benefits from the Proposal.
- 5.15 However, the primary benefit of the Proposal, the production of renewable energy, is in considerable doubt. The Applicant has not demonstrated what the energy value of the Proposal would be. Accordingly, when weighing the adverse impacts of the Proposal against the potential benefits, the scales can only show a balance in one direction. Without substantiation of the energy value benefit, the balance of the planning judgement must mean that the adverse environmental impacts of the Proposal outweigh the claimed benefit. The balance of the planning merits of the Proposal are therefore that the environmental impacts should be avoided.

## **6 Conclusions and Recommendation**

- 6.1 The conclusion that follows this weighing of the planning balance for this case is therefore straightforward. On the planning balance of the issues, the Proposal should not be granted planning permission. The policy criteria for valued landscape, BVM agricultural land and protection of heritage assets have not been met. When weighing other adverse effects, such as ecology, other landscape and visual amenity issues, residents' and community amenity, the uncertainty over the energy value of the Proposal weigh against awarding consent. Other issues require further information and may in time prove to unresolved.
- 6.2 Accordingly, SGV recommend that the application for Planning Permission should be **refused**.
- 6.3 The refusal should be based on:

## OBJECTION BY SAVE GLEM VALLEY

Babergh District Council Ref: DC/23/05127

- In respect to the PPG on renewables and low carbon generation and JLP Policy LP15 states that renewable energy developments should avoid best and most versatile agricultural land, the Applicant has not shown a convincing case to justify use of BMV land at this Site.
- In respect of landscape and visual amenity the Proposal is located on 'valued landscape' (NPPF-180a) and does not 'protect and enhance' that landscape. The Proposal would be alien to the 'intrinsic character and beauty of the countryside' (NPPF-180b) in this location and would have a negative impact on the 'rural environment' in this undulating landscape. The Proposal would create other major negative landscape and visual amenity impacts. The Proposal does not comply with JLP Policy LP17 in that it does not 'integrate with the existing landscape character and reinforce local distinctiveness', and is not 'sensitive to the landscape and visual amenity impacts'.
- In respect to the heritage environment the proposal does not pay sufficient regard to the 'setting of heritage assets' in the vicinity, and (using current information) does not protect archaeological remains on the Site.
- In relation to PPG on renewable energy the potential benefits of the Proposal in contributing to addressing climate change are uncertain and unreliable. The Proposal does not meet the criteria set out in JLP Policy L25 in regard to landscape, heritage, residential amenity and local community. The Applicant has not demonstrated approved connection rights and the effect on the proposal of the capacity in the UK power network. In regard to 'nature conservation' and the 'setting of heritage assets' (LP25-3) the case has not been made that 'the potential harm resultant from the development can be effectively mitigated and that there are no alternative sites available'.
- The proposal is contrary to JLP Policy LP24 in that it is not 'compatible / harmonious with its location and appropriate in terms of scale, mass form siting design in relation to its surrounding' (LP24-b) and therefore will adversely impact on residential amenity.
- In respect to NPPF paragraph 163(b) the overall impacts of the Proposal are found not to be acceptable.

- 6.4 SGV also notes that other issues require further information from the Applicant. Dependent upon that that information these issue may or may not add further reasons for refusal of the Application.

CDF  
29 February 2024.