Proposed Solar Development at
Birchall Green Farm, Sinton Green

Planning Application Ref: 21/01846/FUL

Landscape & Visual Review

prepared by

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for

Grimley Solar Farm Action Group

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1. Introduction & Relevant Experience

1.1 Introduction

1.1.1 In October 2021, I was commissioned by a group of local residents (Grimley Solar Farm Action Group (GSFAG)) to carry out a review of landscape and visual matters in relation to a planning application (ref 21/01846/FUL) submitted to Malvern Hills District Council (MHDC) for the '*Development of a solar farm with ancillary infrastructure, security fence, access, landscaping and continued agriculture, to generate power to feed into the local distribution network*'. The findings were to be written up in a report and submitted to MHDC as part of the community's consultation response.

1.1.2 The first stage of the process involved gaining an understanding of the background to and nature of the proposals, and carrying out a preliminary review of the applicant's submission, in particular the Landscape and Visual Impact Assessment (LVIA). This was followed by a desktop appraisal of the existing landscape and visual baseline situation and visits to the site and surrounding areas in order to verify and augment the desktop studies. I also spoke to people from the community (including several who are professional experts in their fields), and contacted various bodies / organisations for clarification of certain matters.

1.1.3 From this, I gained a good understanding of the relevant issues, especially the landscape and visual receptors most likely to be affected by the proposals, and the nature and scale of the effects likely to arise. I then carried out a more in-depth analysis of the applicant's information, and finally, compared the results of my own assessment with those of the applicant's LVIA.

1.1.4 This report sets out the findings. In summary, I concluded that the LVIA has not been carried out in accordance with published guidance or best practice, and contains numerous flaws, omissions and contradictions; there are similar problems with some of the applicant's other environmental studies. **Matters which require clarification / response / action from MHDC / the applicant are highlighted in emboldened text**. Depending on the nature of the responses, another review may need to be carried out and / or additional comments submitted.

1.2 Relevant experience

1.2.1 I am a chartered member of the Landscape Institute (CMLI), a Fellow of the Royal Society of Arts (FRSA), and a Member of the International Association for Landscape Ecology (MIALE). I specialise in landscape, environmental and colour assessment / planning, masterplanning and design in the UK and overseas, and have done so for over 35 years. I have experience in dealing with developments of the type proposed here, and am familiar with the area's landscapes, having lived and worked in and around the Malvern Hills for much of my life.

1.2.2 I have been instrumental in the promotion of the landscape-led and iterative approach to development, which has been adopted by local planning authorities and others. I was a contributor to the Landscape Institute (LI)'s *Guidance for Landscape and Visual Impact Assessment* 1st edition, and a reviewer of the current 3rd edition. I am a member of LI and Natural England working groups tasked with updating current guidance, and providing consultation responses such as to the revised National Planning Policy Framework (NPPF), the Government's *25 Year Environment Plan*, and the Agriculture Bill.

1.2.3 I advise bodies responsible for National Parks and AONBs, and local planning authorities, producing guidance documents, carrying out character, sensitivity, capacity and effects assessments and reviewing planning applications for large-scale proposals including residential, industrial and environmental schemes. I am regularly called as an expert witness for planning inquiries, giving evidence on behalf of appellants, defendants and Rule 6 Parties. Today, much of my work is in neighbourhood planning, helping rural communities to develop a more in-depth and informed understanding of landscape and its value. In 2020 I was invited to speak about 'valued landscapes' at the Planning Inspectorate's Annual Training Event. I am a Design Council Expert, and an author.

2. Proposed Development

2.1 Background to the scheme

2.1.1 In 2020, the applicant was proposing to apply for permission to construct a solar farm which was approximately twice the size of the one for which permission is currently being sought.

2.1.2 The original scheme was categorised as Schedule 2 development under the Town and Country Planning (Environmental Impact Assessment (EIA)) Regulations 2017, meaning that it could potentially give rise to a level of environmental effects which is categorised as 'significant' within the context of the Regulations, and an EIA may have to be carried out.

2.1.3 MHDC screened the proposals and their opinion was that '*the proposed solar development would not have an individual or cumulative environmental impact* [sic] *as there are no other consented solar farms within local area of Sinton Green and it would not be of a size, design or nature that necessitates environmental assessment for the purposes of the Regulations*' (see letter dated 22nd December 2020 which can be found in PDAS *Appendix 1 – EIA Screening opinion 1*).

2.1.4 I assume that the omission of the word 'significant' before the word 'impact' in the above excerpt was an error, since evidently, the proposed development would have some form of impact. The issue of 'significance' is discussed in Section 3 below.

2.1.5 Regarding MHDC's screening opinion, I am concerned about the stated justification for not requiring a cumulative effects assessment, for the following reasons:

i) Only ***consented*** *solar farms within local area of Sinton Green* were considered. However, it is necessary for cumulative effects assessments to consider other schemes, *especially those still in the consenting system*, i.e. permission is being sought but has not yet been granted (see for example *Guidelines for Landscape and Visual Impact Assessment* para. 7.3).

ii) Only *consented* ***solar farms*** *within local area of Sinton Green* were considered. Solar farms are industrial in nature and scale and can therefore industrialise rural landscapes when no other solar farms are present. However, other forms of development such as wind turbines and intensive poultry / livestock-rearing units are also industrial in nature and scale, and should therefore be factored in to cumulative effects assessments.

iii) Only *consented solar farms* ***within*** [the] ***local area of Sinton Green*** were considered. The extent of 'local area' is not defined. In fact, there is the potential for the proposed development to give rise to significant adverse effects which would be experienced many miles from the site, including the increase in large vehicles using roads which mainly comprise narrow lanes (see effects section below). In combination with similar proposals, levels of effects on the local road network could therefore be very high, and of long duration.

iv) I am aware of a number of existing and proposed solar farms within a few miles of the site, for example Allsetts Farm, Broadwas (15/00386/FUL) and land at Doverdale (21/01363/FUL) (both approved but not built); also existing / proposed farms at Stockton-on-Teme and Bransford.

- **MHDC should ask the applicant to carry out and submit an assessment of the cumulative environmental effects that would arise from the proposed development in combination with other developments which are similarly industrial in nature and scale, during construction, operation and decommissioning. The extent of the study area should be determined by the likely extent of any inter-project cumulative effects including during construction / decommissioning.**

2.1.6 I also note that MHDC's 21st June 2021 screening opinion states that '*The proposed solar farm would* ***take land out of intensive agriculture for the duration of the project which… could bring significant benefits to flora and fauna, as well as to the soil and surrounding habitats***'. In fact

none of the land is in intensive agriculture - it is, and was, pasture. The applicant's Preliminary Ecological Appraisal (PEA) (Rev 4, 21st June 2021) made a mistake when it said that Area 5 was arable (see Section 2.3 below). Notwithstanding this, it seems unlikely that even if Area 5 had been arable and was returned to pasture, that the benefits to flora and fauna would be significant, especially as the area would be covered by solar panels, which compromise biodiversity.

2.1.7 For some reason, after receiving the screening opinion, the applicant decided to reduce the size of the solar farm from a 52ha site with 41MW output to a 36ha site with either 25 or 21MW output (see below). This proposal was also screened by MHDC, who again concluded that EIA was not required.

2.1.8 Notwithstanding this, Section 3 of the applicant's September 2021 Planning, Design and Access Statement (PDAS) states that '*the key environmental themes have been addressed in the survey referred to in the previous section*' (i.e. in the various studies and assessments submitted to MHDC by the applicant).

2.1.9 In early summer 2021, the applicant carried out consultation with stakeholders and the local community. The communities' concerns and the applicant's responses are set out in the applicant's June 2021 Statement of Community Involvement (SCI). The concerns included:

- Impact on biodiversity and the environment
- No justification of the need for solar panels at this location
- Level of construction traffic
- Landscape / visual impact.

2.1.10 In Section 1, the PDAS states that '*Many of the community's concerns and suggestions have been taken on board by the applicant and where possible, appropriate amendments have been made to the proposals. These are described in Section 6.0 of this statement*'.

2.1.11 I note that Section 6 of the PDAS does not explain how the community's concerns and suggestions have been taken on board by the applicant, instead it refers the reader to Section 5 of the SCI, which only identifies two items (reducing the height of the proposed security fences from 3m to 2m, and installing badger gates in the fence). The SCI refers the reader back to the PDAS for scheme changes following stakeholder consultation (including pre-application advice from MHDC / others in July 2020).

2.2 Project location

2.2.1 The proposed development site ('the site') lies in open countryside some 7.5km north west of Worcester city centre and c. 3.2km west of the River Severn near Grimley. It is encircled by a number of small, scattered settlements and villages lying between c. 1 and 2.5km from its boundaries, including - from the north in a clockwise direction - Holt Heath, Holt, Oakall Green, Sinton Green, Moseley, Monkwood Green, Wichenford, Ockeridge and Little Witley.

2.2.2 The site lies wholly within Grimley parish, although effects arising from the proposed development could potentially extend to / affect receptors within neighbouring / nearby parishes, including Holt to the north, Wichenford to the west, and Hallow to the south.

2.2.3 Holt Heath is at the junction of the two main roads which run through the study area (the A443 and A4133 which run north - south and east - west respectively). South and west of these roads, a network of minor lanes connects the settlements. The B4204 Worcester - Martley road lies c. 3km to the south west.

2.3 Site description

2.3.1 The character of the site and surrounding areas are described in more detail in the following sections. There are several maps and plans in the applicant's reports including the LVIA, but for ease of reference see the 1:25,000 scale OS map extract in Appendix CT-A, which shows the site boundary and the location of the solar array areas as well as the viewpoint locations.

2.3.2 In summary, the site comprises 36ha of farmland, associated with Birchall Green Farm.

2.3.3 The site's topography is greatly influenced by Grimley Brook, which forms the westernmost edge of the site, and small tributaries which rise south of the site and flow northwards through it within a shallow valley, discharging into the brook some 750m to the north.

2.3.4 The site is gently undulating. Ground levels fall from c. 54.5m above Ordnance Datum (AOD) at the eastern site boundary down to the valley which runs through the approximate centre of the site, from c. 47m AOD at the southern site boundary to c. 40m AOD on the northern site boundary. Ground levels then rise from the valley westwards to a high point of c. 51.5m AOD before falling to c. 46.5m AOD on the western site boundary. A separate shallow valley falls westwards from the eastern site boundary towards the centre of the site.

2.3.5 The Birchall Green Farm complex lies just beyond the site's eastern boundary, which zig-zags north - south between the two lanes which lead north west and south west from Sinton Green. For the most part it follows existing field / woodland edge boundaries.

2.3.6 The southern section of the eastern boundary follows the line of the small watercourse and Grimley Brook tributary which appears to rise on the eastern edge of Monk Wood (or Monkwood, as it is more commonly known; I have used Monk Wood here as it is what Natural England call it in the woodland's Site of Special Scientific Interest (SSSI) citation - see below). The watercourse is well-wooded for most of its length.

2.3.7 The site's southern boundary is along what appears to be an arbitrary line running north west - south east through a field south of the Sinton Green - Monkwood Green lane, on the east side of Monk Wood (the area is required to accommodate the proposed southern site access point - see project description in following section). From this point, the lane runs on through the centre of Monk Wood and crosses Monkwood Green to join the Moseley - Wichenford lane.

2.3.8 The site's western (south west-facing) boundary runs along the eastern edge of Monk Wood, from the Oakall Green - Monkwood Green lane (south) to Grimley Brook (north), and along a stretch of the brook. The site's northern boundary runs eastwards from the brook, cutting across open fields along another arbitrary line, returning north-eastwards to the Oakall Green - Ockeridge lane and following it south-eastwards back to the Birchall Green Farm complex.

2.3.9 There are several fields within the site boundary, all semi-improved pasture apparently used for grazing by sheep and /or horses.

2.3.10 I note that the PEA records Area 5 (Area G3 on Figure 1: Birchall Green Baseline Habitat Map) as an arable field, but it is pasture. This is a surprising error, since during a walk-over survey this would surely have been evident; it is possible that the assessor looked at Google Earth instead - the version I use shows hay-making being carried out in June 2018, which may have been mistaken for arable cultivation.

2.3.11 Incidentally, according to the applicant's *Agricultural Land Use* report dated 10th March 2021, '*The proposed site is currently partially in agricultural use, however, the landowner has advised that significant parts of the site are currently used for shooting by a local syndicate. Therefore, it is only partially in agricultural use*'. All the locals I spoke to said that as far as they were aware, the site had not been used for shooting in recent memory.

2.3.12 The fields within the site display a variety of boundary treatments depending on their location, mainly hedges (or fences where hedges have been removed / lost) and woodland edges. The historic map regression that was carried out for the purposes of this review identified which of the pre-20th century field boundaries are missing, and which boundaries are of more recent origin.

2.3.13 A block of woodland lying between array Areas 1 and 4, and a smaller block between Areas 2 and 3, are excluded from the application. The larger block is ancient-semi-natural woodland (ASNW); the smaller block is not designated as ASNW but could potentially be, as it is shown as mature on late 19th century maps.

2.3.14 Including the part of the site required to construct the southern access point, which extends south-eastwards along the Sinton Green - Monkwood Green lane as far as the Oakall Green lane junction (see below), the length of the site from its north-westernmost to south-easternmost point is c. 1.3km. At its widest point (between Monk Wood and the Sinton Green - Ockeridge lane), the site measures c. 700m.

2.4 Project description

2.4.1 The development which is currently proposed comprises a *solar farm with ancillary infrastructure, security fencing, landscaping, and access*.

2.4.2 Most of the scheme elements are described in the applicant's documents. Those which could potentially affect landscape character and visual / social amenity are summarised below:

OPERATIONAL REQUIREMENTS

i) According to the applicant's PDAS, '*The proposed development is for the installation and operation of a ground-mounted solar farm of around 25MW that will generate and deliver electrical power directly to the local distribution network*'.

- I note that other documents, including MHDC's screening opinion dated 21st June 2021 (see below), state that the scheme would generate 21MW.

ii) The solar farm would be operational for 40 years.

iii) The application site area is c. 36ha. Of this, c. 21ha would be covered by arrays of solar panels.

- MHDC's June 2021 screening opinion says 31ha would be covered by arrays but I think that is an error.

iv) The applicant's documents state that the panels would be situated in four separate areas within the application site boundary.

- In fact, there are five areas. *PDAS Figure 2 - Layout plan* shows that Area 1 comprises two fields separated by a fence (the boundary hedge was removed many years ago). There would be arrays in both fields, the panels being separated by a c. 30 - 40m wide corridor running along the hedgeline. In this review I have called the westernmost field array 'Area 5'.

v) A total of 46,170 no. solar panels would be installed.

vi) The panels, which comprise a series of photovoltaic cells, are flat, with a glass-like surface. They would be mounted onto supporting galvanised metal frames angled at between 15 and 20 degrees from the horizontal.

vii) The structures would be 2.8m high (from ground level to the top of the back of the panel frame). There would be a c. 1m gap between the ground and the bottom of the panels '*to allow grazing of sheep around the frames and to alleviate any risk to sensitive electrical equipment*' (PDAS para. 5.3.1).

viii) The panels would be laid out in rows c. 3.7m apart. The rows would be aligned east - west, with the panels facing south.

ix) The feet of the panel frames would be driven into the ground by mechanical (either direct or screw) piling.

x) Although difficult to ascertain from the information submitted, it appears that within the array areas (which would be fenced-off - see below), the intention is to retain the existing semi-improved grassland and erect the structures within it (and presumably, to restore it in areas disturbed / damaged during construction). During operation, it is stated that the sward would be managed by sheep-grazing and / or mowing.

xi) The applicant's *Mitigation and Enhancement Plan* (MEP) (drawing no. P001.302.06 Rev. 06) shows that the remaining parts of the fields between the site boundaries and the fenced-off array areas would be 'managed for biodiversity'.

xii) In para. 6.10, the applicant's June 2021 *Ecological Enhancement, Mitigation and Management Plan* (EEMMP) report states that either the existing sward would be removed and the land cultivated prior to sowing with a wildflower meadow seed mixture, or ('*Where site assessment reveals that the existing vegetation is worth preserving*'), seed would be sown into gaps in the existing sward.

xiii) According to the PDAS and other documents, 2m high post-and-wire deer-proof security fencing would be erected around the perimeters of the five array areas.

xiv) However, I note that in para. 5.4.3 1st bullet point, the applicant's June 2021 Transport and Access Statement (TAS) states that '*It is estimated that the security fencing would require approximately 15 HGV deliveries (30 two-way movements) for the 4.3km length of* ***fencing panels***'. This suggests to me that the proposed security fencing could actually be of the galvanised metal weldmesh type as opposed to post-and-wire, since weldmesh and similar fences are supplied in panels, whereas wire is supplied in rolls.

xv) Indeed, due to increasing levels of theft / vandalism affecting solar and other forms of intensive development in rural areas[1], it is now more common for weldmesh or other form of high-security fencing to be specified for solar farm schemes, and sometimes, when damaged / lost deer-proof post-and-wire fencing is replaced, weldmesh is used instead.

xvi) It is important to know which type is being proposed, since the landscape / visual effects arising from each one are different, as shown in the images overleaf.

[1] https://www.nfumutual.co.uk/globalassets/farming/rural-crime/2021/rural-crime-report-2021.pdf

Example of deer-proof post-and-wire fencing at solar farm

Example of weldmesh security fencing at solar farm

- **MHDC to ask the applicant to clarify which type of fencing would be specified, and what colour, and provide photographic examples of the fencing *in situ***

xvii) 4m wide x c. 2m high green metal security gates would be situated within the fenceline at the access points. Safety signage would be displayed on the fencing and gates.

Example of green metal security gates with signage at solar farm

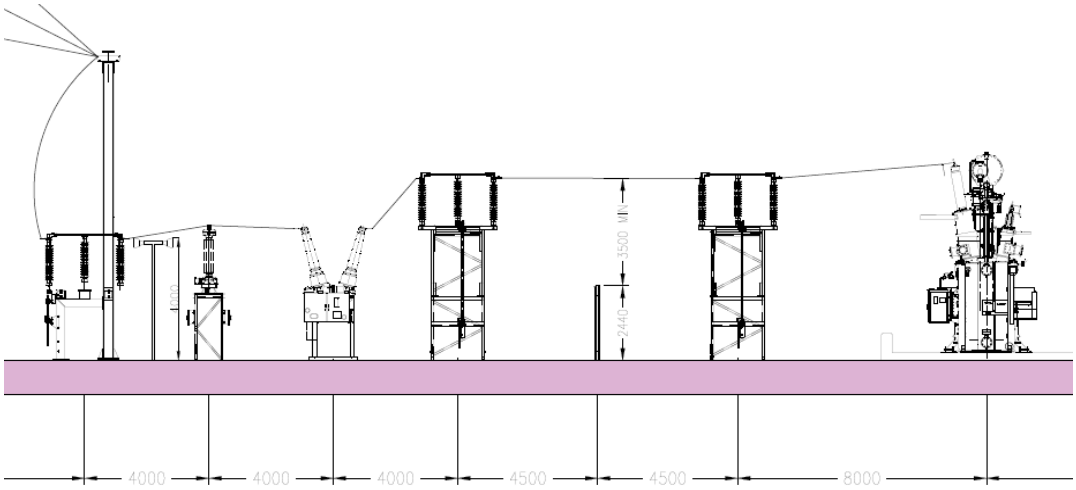
xviii) *Infra-red and/ or thermal imaging CCTV cameras will be installed to the fence* [on 2.5m high posts] *to provide security coverage of the site. These will only monitor the development areas and will not capture images of the public rights of way or surrounding land* (PDAS para. 5.35).

xix) The proposal requires the construction of substations. These would be located at the southern end of the site, at the south-eastern tip of array Area 4.

xx) The main substation area is not on Birchall Green Farm's landholding, it is within an adjacent field, next to a pylon which carries the existing overhead 132kV power network. It comprises two compounds (one WPD's, one 'the customer's') which contain the transformer and other equipment, mainly operated by the distribution network operator (DNO). The DNO substation would connect to the existing network via a new overhead cable.

xxi) The transformer and other visible equipment are shown on the applicant's drawing no. P001.304.03 Rev. 03, an extract from which is provided in the image overleaf.

DNO substation equipment - elevation



xxii) The area would be c. 48m long and c. 25m wide, enclosed by a 2.4m high galvanised security palisade fence (example in image below).

Example of palisade fence around substation

xxiii) As well as the above equipment, outside and adjacent to the fenced-off area there would be a WDP relay / control room and a metering room. I could not find any details of the sizes / heights of, or materials proposed for, these structures.

xxiv) A second smaller 'private' substation would be constructed west of the DNO substation, providing the connection from the solar farm to the latter. It would be encased in a 'holly green'-coloured glass-reinforced plastic (GRP) container measuring c. 7.7m x 5m x 3.5m high.

xxv) In the same area as the private substation there would also be a holly green GRP-clad communications cabinet (2.4m x 2.7m x c. 2.6m high), a white GRP-clad pad mount

transformer (c. 1m x 1m x 1m high), and two holly green metal storage containers (c. 6m x c. 2.5m x 2.6m high).

xxvi) According to the applicant's June 2021 Arboricultural Impact Assessment (AIA), construction of the substations would entail removal of part of Group (G) 57, which comprises a mixture of hawthorn, blackthorn and hazel. The PDAS explains that '*The applicant has proposed to screen this substation with new hedge and tree planting*'.

xxvii) Invertors and transformers are required at various points throughout the site; they would be contained within 'signal white' metal 'smart transformer cabins' which appear to be of varying shapes c. 2.6m high in an area measuring c. 6m x 5.5m. A total of six cabins are shown on the applicant's *Proposed Site Layout Plan* (drawing no. P001.301.14 Rev. 14).

xxviii) It is not clear whether the substation and transformer areas would be surrounded by hardstanding or grass or both.

xxix) I could not find any details of this either, but it appears that trenches for electric cables would need be dug throughout the site: '*On-site cabling will be ducted underground at a typical depth of around 1 metre*' (PDAS para. 5.3.6).

- **MHDC should ask the applicant to provide details of the proposed cabling / trenching, especially the routes, and explain how disturbed ground would be reinstated. In particular, because the site is drained by old clay land drains, how any such drains encountered during the works would be reinstated if damaged by trenching (and / or by piling / heavy vehicles / other)**

xxx) According to the PDAS (last bullet point on page 7 - paragraph / bullet numbering would have been helpful), '*No artificial lighting will be used, and should it be required for emergency maintenance then it will be temporary*'. However, I note that i) a floodlighting column is proposed in the DNO substation area, and ii) the TAS states that '*Temporary lighting of the access could be considered as a possible mitigation measure, if required*', and, '*so that drivers and pedestrians on shared routes can see each other easily*', '*Lighting may be needed after sunset or in bad weather*'.

xxxi) Also, Worcestershire County Council (WCC)'s Transport Planning and Development Management Team's response to the application dated 16th November 2021 states that '*The site is situated in an unlit area and no consideration has been given to the need to temporary lighting. The applicant should carry out risk assessments of the proposed accesses to identify risks which could be mitigated by the provision of lighting.* ***The*** [sic] ***should engage a lighting consultant to assess the requirements in line with the WCC Street Lighting Design Guide. This should be provided sympathetically to the surrounding environment and include consultation with both the Parish Council and WCC ecology***' (author's emphasis).

- **MHDC should also ask the applicant to assess the effects of lighting on landscape character, visual amenity and biodiversity (especially bats)**

xxxii) The proposed means of disposal for surface water run-off from the site is via existing watercourses. In its consultation response (to the current application), the South Worcestershire Land Drainage Partnership said that '*Silt traps and bunds should be provided along the bottom of slopes to watercourses to protect them from silt and debris during the construction phase*'.

xxxiii) I also note that WCC's Transport Planning and Development Management Team's 16th November response states that '***The Highway Authority is concerned that the proposal could potentially increase stormwater discharge from the site. As such, the Developer will be required to ensure that sufficient drainage is installed to prevent surface water flowing onto the highway***' (author's emphasis).

- **MHDC should ask the applicant to:**

  a) confirm whether silt traps and bunds would be constructed along the bottom of slopes to watercourses, and if so, provide details

  b) provide details of how the spread and dispersal of water run-off at the ground surface would be dealt with

  c) provide details of how stormwater discharge would be dealt with

  d) provide details of how soil compaction would be dealt with during the construction phase

  e) provide a soil management plan

  f) assess environmental effects arising from the above, especially on existing trees and hedges / their root protection areas (RPAs), verges and ditches (especially those which require culverting)

xxxiv) Three new and / or upgraded access points to the site are proposed. The same points would be used for construction, operation and decommissioning; they are described in the construction requirements section below.

xxxv) According to para. 6.1.1 of the applicant's TAS, during the operational phase of the development (which would last 40 years), '*The traffic generated by the solar farm during its operation would be negligible, as there would be no staff based at the site and movements would be limited to periodic routine maintenance activities, such as to undertake maintenance of vegetation, washing of the panels and routine maintenance checks. The visits would typically be made by Light Goods Vehicles (LGVs) and it is expected that approximately 12 trips per year would be required*'. However, there may be a requirement for more frequent interim visits, for example to replace damaged / defunct panels - see below and Section 4.5.

CONSTRUCTION REQUIREMENTS

xxxvi) Para. 5.3.8 of the PDAS states that '*The total construction period will be approximately 20 – 24 weeks including any pre-preparation of the site, fencing, assembly and erection of the photovoltaic arrays, installation of the inverters/transformers and grid connection*'. According to para. 5.2.1 of the TAS, '*The construction phase of the development is programmed to take 6 months (26 weeks)*'.

xxxvii) However, Section 5.2 of the PDAS says that '*The scheme will be operational for 40 years and so the application is for 40 years plus* ***up to 1 additional year each for construction and decommissioning****, totalling 42 years*' (my emphasis).

xxxviii) I note that the current industry standard for a solar panel's productive lifetime is 25 - 30 years, so they may need to be replaced during the operational phase. This could potentially require interim decommissioning and construction phases.

xxxix) Three points of ingress to / egress from the site are proposed: one is at an existing field access, the others are new. Presumably all three would be created at the start of the construction period. All would be used during construction, operation, and decommissioning.

xl) Two of the access points would be off the Sinton Green - Ockeridge lane, a section of which forms the site's northern boundary. The third would be off the Sinton Green - Monkwood Green lane, at the site's southernmost end.

xli) The western northern site access is egress only. It appears to be at the same point as an existing field access (installed within the last few years, albeit apparently without planning permission), which is only a few metres west of another access to the same field and which appears to no longer be in use.

xlii) The first existing access is through a field gate at which the gap in the hedge is currently c. 12m wide. From the applicant's plans and documents it is not clear exactly how much more of the hedge (H2 in the AIA) would need to be removed, but according to the plans in the TAS, a c. 40m-long apron of some form of hardstanding (possibly tarmac) between the internal access track and the road would need to be accommodated. Sections of existing grassed verges would also have to be removed.

xliii) The eastern northern site access is ingress only. Its construction would entail the removal of more of H2, although again, the extent is not clear: the arrangement appears to be the same as for the western access point, so potentially, up to 40 linear metres of hedgerow and similar lengths of grassed verge would have to be removed.

xliv) The southern access is for both ingress and egress. It appears that one oak (Tree (T) 83 in the AIA) would be removed, and probably a c. 15m length of roadside hedge (H86) would have to go, along with the associated grassed verges. At the access point there would be a c. 20 - 25m wide hardstanding apron leading to a 6.74m wide access track.

xlv) Although I could not find reference to this in any of the applicant's documents (the matter is discussed further in the effects sections below), drawing nos. C20063-ATP-DR-TP-0013 Rev. PO2 and C20063-ATP-DR-TP-0005 Rev. PO1 respectively in Appendices B and C of the TAS suggest that a c. 160m-long section of the Sinton Green - Monkwood Green lane would need to be widened in order to accommodate 10m-long vehicles entering and existing the site.

xlvi) If one measures the width of the lane on the proposed access drawings, it is shown as being c. 6.5m wide. In reality, it is c. 4.2m wide, with a c. 3m-wide grassed verge along the southern side of the lane and a ditch running below the hedgerow. If the lane did have to be widened to c. 6.5m then presumably sections of verge, ditch and hedge would have to be removed.

xlvii) In fact, it seems as though this would be the most likely scenario, and would explain why the application site boundary includes the area south of the lane, including the roadside hedge and the eastern part of a field, as shown (superimposed) on the Google Earth extract overleaf.

Application site boundary at proposed southern access to site east (image © Google)

xlviii) I estimate that a c. 160m-long section of the roadside hedge on the southern side of the lane would have to be removed, along with at least two mature oak and possibly other escaped hedgerow trees including a veteran ash, and an associated c. 160m-long section of grassed verge. If that was the case, presumably the ditch could be diverted, and a new hedge and verge created / trees planted, but as far as I could ascertain, this has not been proposed.

- **MHDC should ask the applicant to confirm whether the lane would be widened and if so, to provide details of the proposals and a full assessment of associated environmental effects**

xlix) Another point of concern is that the northern and southern accesses have been designed with 2m x 43m visibility splays based on 30mph speeds; however, along the lanes to / from the access points, the speed limit is unrestricted (60mph) - see WCC's Transport Planning and Development Management Team's 16th November 2021 response and the effects sections below.

- **Should it be concluded that the visibility splays must be increased to allow for faster traffic, there would certainly be additional loss of features within the sightlines such as hedges, trees, verges and ditches, with associated adverse effects on character, visual amenity, heritage and biodiversity. This would require assessment.**

l) Within the site, several access tracks would be laid. They would be c. 6m wide and surfaced with stone / hardcore. The surfacing would remain *in situ* during the operational period and be removed at decommissioning, with the land being restored to pasture.

li) The combined total length of the internal tracks is c. 1.4km.

lii) According to the TAS, the track routes would need to be excavated (up to 0.5m deep) and backfilled with imported material.

liii) According to the applicant, none of the tracks would cross the public footpath which runs north east - south west across the site (FPs 524(C) and 526(C)), and according to Section 4.1 of the PDAS, the footpath would remain open throughout the construction and operational phases (and presumably, during decommissioning). However, see landscape effects section below.

liv) At certain points where internal access tracks cross field boundaries, a number of mature trees and sections of hedgerow would have to be removed (for example G32, G71 and G57 - see AIA and effects sections below).

lv) Unless one already exists, it appears that a new crossing over the watercourse which runs between Areas 2 and 3 would have to be constructed in order to access Area 2 (if one already exists, it may need to be reconstructed / reinforced in order to accommodate HGVs). Also, it is not clear how the watercourse which flows through the middle of the proposed substation area would be crossed - see Section 4.4. below. I could not find any reference to these matters in the applicant's documents.

lvi) Some of the mature trees alongside the internal access tracks require lift-pruning to 3m above ground level in order to accommodate vehicles using the tracks. One of the trees is described in the AIA as a Grade A mature field boundary oak.

lvii) As some of the proposed tracks would be within trees' RPAs, no-dig construction methods are recommended in the AIA (also, a section of the security fence north of Area 4 is within the RPA of a Grade A2 veteran oak).

lviii) The AIA found that not all of the trees on the site had been plotted on the applicant's topographical survey, so the arboriculturalist put those which had the potential to be affected by the scheme onto their own drawings, albeit with the caveat that '*their positions are not accurate and cannot be guaranteed. The layout has taken account of these trees but their locations and RPA extents should be confirmed on site prior to commencement of works*'.

lix) PDAS para. 5.3.7 states that '*Temporary construction compounds will be created during the construction period to accommodate portacabin-type buildings in addition to providing an area for material storage and construction vehicles to turn around. Portacabins are required for offices, toilets, canteen and storage and will contain temporary parking spaces for staff. The compounds are expected to be within the site itself, with the facility constructed in phases*'.

lx) However, at paras. 4.2.6 and 4.2.7, the TAS refers to a single compound.

lxi) It is not possible to understand the nature and extent of effects arising from one or more construction compounds without knowing its / their location and extent.

- **MHDC should ask the applicant to provide plans showing the locations of and areas covered by the construction compound/s**

lxii) PDAS para. 5.3.7 also states that '***Some space outside the compound area may also be required****, but as a temporary feature,* ***this does not form part of this application****. There will be no need to remove trees or vegetation to achieve this*' (my emphases).

lxiii) As far as I am aware, i) any and all land that is or may be required to accommodate construction activities must be part of the planning application, and ii) an assessment of the environmental effects that could potentially arise from the use of the area should be carried out. There are, however, certain exceptions to this, for example if the change of use is for a short duration.

- **MHDC should ask the applicant to clarify where the off-site area is, what it would be used for, and for how long, and then decide whether effects assessments are necessary**

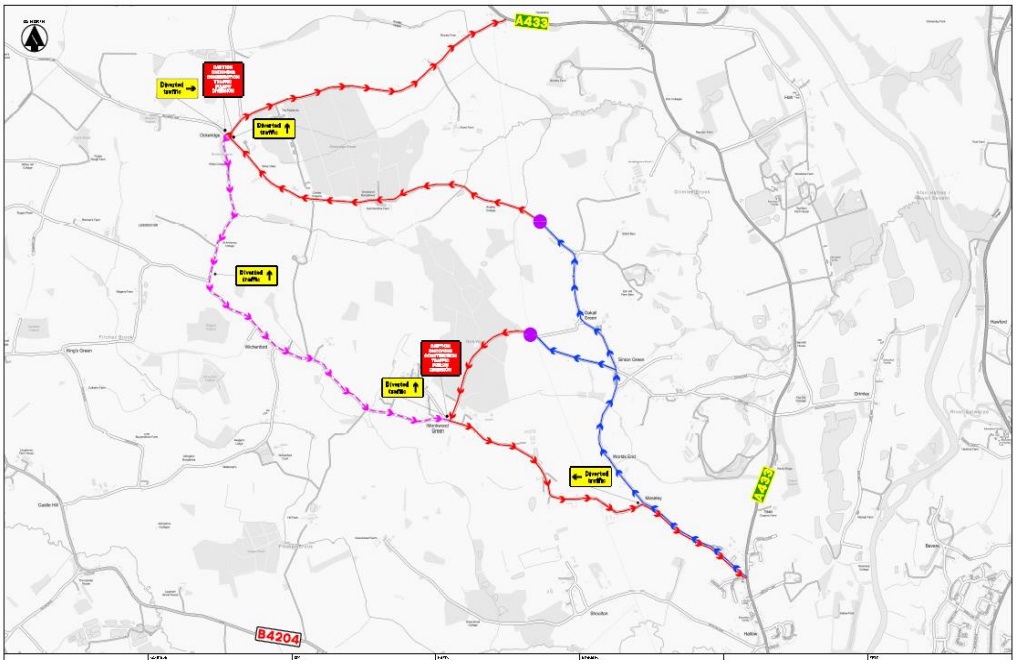
lxiv) According to TAS para. 5.2.2, '*During the construction phase there would be vehicular movements to the site, associated with the delivery of construction components and materials, together with the arrival and departure of construction staff. The delivery of construction components and materials would be mainly by HGVs, with staff trips mainly by cars or vans. Abnormal Indivisible Loads (AIL) would not be required to transport materials to and from the proposed development site and no AIL's would be generated by the Development*'.

lxv) According to the PDAS para. 1.3 (last bullet on page 8): '*To minimise disruption on local roads during construction, a one-way system has been incorporated and background traffic given the option of avoiding the construction route (all routes will still be available for local access)*'.

lxvi) I assume that the proposed one-way system would apply to all road-users traveling to / from / through the area apart from pedestrians - i.e. it would include motorists, cyclists, equestrians and others who are obliged to comply with the Highway Code.

lxvii) The route is shown on drawing no. C20063-ATP-DR-TP-0112 Rev. PO1 (contained in TAS *Appendix D Traffic Management and Vehicle Routes*), with an extract provided below (the site boundary is not shown on the plan, but the proposed northern and southern access points are marked with purple dots).

Proposed construction routes to / from site



lxviii) The predicted numbers and timings of vehicle movements are set out in the TAS, although with caveats. In summary, '*the construction phase of the proposed solar farm would result in approximately 334 HGV deliveries (668 two-way movements) over a 16 week period. That equates to an average of 4 HGV deliveries per day across a 16 week period (around one HGV delivery every other hour, on average). During the peak weeks, which would occur broadly from weeks 3-7, when the stone for access tracks and solar panels / inverters are being delivered, it is estimated there would be 7 HGV deliveries per day, on average*'.

lxix) *3 - 4 vehicle cranes would be delivered to site to position the substation, inverters and transformers* (TAS para. 5.4.3).

DECOMMISSIONING REQUIREMENTS

lxx) According to the PDAS Section 5.2, *Once decommissioned, the development will be completely removed and returned to its current use*.

lxxi) It is not clear to me clear to me whether or not the substation would be removed at the end of the operation.

- **MHDC to confirm whether the substation would be removed at the end of the operation.**

lxxii) Although the length of time estimated for decommissioning does not appear to have been stated by the applicant, according to paras. 6.2.1 and 6.2.2 of the TAS, '*The number of HGVs required for decommissioning would be at similar levels as the construction phase and such the impacts would remain as set out for construction. Vehicles would use the same routes as for the Construction although this would be discussed and agreed with WCC prior to Decommissioning*'.

lxxiii) It therefore appears likely that the decommissioning phase would last as long as the construction phase, i.e. somewhere between 20 and 52 weeks, *dependent upon a range of factors, such as the shipping of materials and the weather* (TAS para. 5.2.3).

MITIGATION, ENHANCEMENT & COMPENSATION

lxxiv) The mitigation and / or enhancement measures proposed in the LVIA and elsewhere have been factored in to the review process and the reporting of overall levels of effects.

lxxv) The mitigation measures are set out in LVIA Section 6, and are said to comprise:

- *Setting back of panels from property and field boundaries.*
- *Management of roadside hedges to increase height.*
- *Inclusion of meadow grasses surrounding the panels and the opportunity for sheep grazing within the development fields.*
- *Addition of new fast growing willow trees in the wet area in field adjacent to NW edge of area 2*.

lxxvi) Unfortunately, the LVIA assessor has misunderstood the difference between mitigation, compensation and enhancement.

lxxvii) This is explained further in Section 4.5, but in summary, mitigation measures are those which are specifically required to avoid / reduce levels of effects. They cannot be double-counted as benefits / enhancements / compensation.

lxxviii) For example, LVIA para. 5.4 says that '*The* ***mitigation measures*** **[include]** ***enhancing existing hedgerows*** *as well as planting new hedges and trees to assist in the screening of the development*' (in elaboration of this point, para. 3.21 simply says that '*New hedges will be planted to the northern boundary of parcel 4*', and para. 5.30 mentions trees near the substation. One has to turn to EEMMP para. 6.14 for clarification that '*New [native] trees will be planted to the west of Field B8 and around the substation which is located in Field B2*').

lxxix) For some reason - presumably due to the lack of cross-referencing between the topic authors - other landscape mitigation measures are proposed which are noted in other reports but not mentioned in the LVIA, which is not helpful:

a) Page 9 of the PDAS says that '*The proposed development has taken the opportunity to reinstate an historic hedgerow along the northern boundary of Area 1*'.

b) EEMMP para. 6.12 says that '*Native hedge rows will be planted along the northern and southern boundary of Field 3* [possibly an error, should be G3, which is applicant's Area 1 / my Area 5] *and G2* [Area 1]*, along the eastern boundary of Field B8, B7 and B5* [Area 2]*, sections of the southern boundary of Field B9* [Area 3]*, the northern section of Field B1* [Area 4] *and around the east, south and western boundary of the substation which is located in Field B2* [Area 4]' (it would have been helpful if the PEA and EEMMP had noted which habitats were in which array areas).

lxxx) An '*Information board* [is] *to be added to explain developments and biodiversity improvements*'.

lxxxi) These matters are discussed further in the effects sections, along with consideration of the likely appropriateness / efficacy of the proposed measures.

3. LVIA, EIA and Significance

3.1 Para. 1.4 of the applicant's LVIA states that the assessment process was based on published guidance (*Guidelines for Landscape and Visual Impact Assessment Edition 3*, or '*GLVIA3*').

3.2 *GLVIA3* explains that there are differences in approach between projects which are the subject of EIA, and those which are not. One of the main differences relates to 'significance', which is explained below; another is that if a project is subject to EIA, an LVIA should be carried out, and if not, the appropriate form of assessment is a landscape and visual appraisal (LVA) (to which most of the guidance applies as well).

3.3 In this case, MHDC concluded that the proposed development would not give rise to significant individual or cumulative effects and therefore an EIA was not necessary. However, the LVIA assessor appears to be under the misapprehension that the proposed scheme is EIA development. This is an important point which is of relevance to this application.

3.4 The purpose of EIA is to determine whether a proposed development is likely to give rise to what the EIA Regulations call 'significant' effects.

3.5 If significant adverse environmental effects are predicted, decision-makers may conclude that the resultant harm would outweigh any scheme benefits so would not grant planning permission (unless the benefits were also significant, in which case the nature and amount of harm / benefit would need to be considered).

3.6 I note that the LVIA assessor has misunderstood / misinterpreted the LVIA process: para. 4.15 incorrectly states that in LVIA levels of '*sensitivity to change and magnitude of impact… are aggregated… to determine the significance of the impact experienced by each receptor*'.

3.7 The Landscape Institute's publication *GLVIA3 Statement of Clarification 1/13 10-06-13* is helpful in this matter; under the heading 3. Significance it says:

'*Members may find the following helpful: In simple terms, assume an environment (A). Then assume a proposed development (B). B is placed into A and, as a result, gives rise to impacts which permit the identification of effects of various sorts. The level of, or degree of, effect may then be judged. This may be achieved, for example, by determining magnitude and registering it against sensitivity, each as defined in GLVIA3 in Paras 3.23 to 3.30. Depending on the means of judgement and terminology (which should be explicitly set out), effects of varying degrees of change (or levels of change), may be derived. The assessor should then establish (and it is for the assessor to decide and explain) the degree or level of change that is considered to be significant*'.

3.8 Those responsible for carrying out the EIA will set out in the Environmental Statement (ES) what significance threshold has been applied in the assessments (it may vary from topic to topic). Usually, levels of effects are recorded on a scale ranging from 'substantial' to 'negligible' (or 'neutral'), with 'moderate' in the middle.

3.9 The assessor may decide that 'significant' effects are those which are judged to be 'moderate and higher'. Indeed, that is the significance threshold which has been adopted in the applicant's LVIA: para. 4.17 states that '*A significant effect is considered to be a very severe, severe, substantial, major or moderate effect*'.

3.10 Crucially, the *GLVIA3 Statement of Clarification 1/13 10-06-13* goes on to explain why understanding 'significance' is so important:

4 For Non-EIA Landscape and Visual Impact Appraisal

In carrying out appraisals, the same principles and process as LVIA may be applied but, in so doing, it is not required to establish whether the effects arising are or are not significant given that the exercise is not being undertaken for EIA purposes. ***The reason is that should a landscape professional***

apply LVIA principles and processes in carrying out an appraisal and then go on to determine that certain effects would be likely be significant, given the term 'significant' is enshrined in EIA Regulations, such a judgement could trigger the requirement for a formal EIA (my emphasis).

3.11 In fact, the LVIA concluded that certain effects (on views only) *would* be significant adverse: para. 6.1 states that '*The permanent proposals have given rise to some adverse and significant visual effects at the Post Construction stage*'.

3.12 My own review also concluded that the proposed development would give rise to levels of visual effects that would have been categorised as significant had the scheme been the subject of EIA; however, it also concluded that the high levels of adverse effects on landscape character would have been categorised as significant as well.

3.13 The LVIA states that in most cases, levels of visual effects '*can be reduced and offset with appropriate mitigation measures*' (para. 6.1), and that '*The majority of views will not experience any significant effects*'. I do not agree that levels of visual effects could be reduced adequately by mitigation.

3.14 These matters are explained further in the following sections.

4. Landscape Character Effects

4.1 Landscape sensitivity

4.1.1 In LVIA / LVA, levels of landscape sensitivity are arrived at by combining levels of landscape value with levels of susceptibility to change (both are based on the findings of the baseline landscape character assessment, which is carried out first to establish 'what is there' - see below).

4.1.2 The LVIA does not set out what the site and surrounding area's levels of landscape value and susceptibility to change were judged to be, but it concludes that the overall sensitivity of the site, its setting, and the wider landscapes, are between medium and high. I disagree with this conclusion, for the reasons set out below.

4.1.3 Criteria for levels of value and susceptibility to change can be found on page 10 of the LVIA. In my opinion, the value criteria are acceptable, but the susceptibility criteria are not.

SUSCEPTIBILITY TO CHANGE

4.1.4 *GLVIA3* (para. 5.40) defines susceptibility to change as:

'*The ability of the landscape receptor (whether it be the overall character or quality / condition of a particular landscape type or area, or an individual element and / or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning polices and strategies*'.

4.1.5 Susceptibility criteria need to be established *specifically for the type of development which is being considered* (unlike those for landscape value, which exists independently of any development proposal), and should reflect *specific aspects of the receiving landscape's character likely to be affected by that type of development*.

4.1.6 A good example of susceptibility criteria which can be used for field-scale solar photovoltaic energy projects is on pages 30 and 31 of Natural England's *An approach to landscape sensitivity assessment – to inform spatial planning and land management* (June 2019).

4.1.7 Based on these and my own criteria, I concluded that the site and surrounding area's level of susceptibility to change in the form of solar development is between high and very high. This is especially due to the following landscape features / factors which were identified during my baseline studies (described in more detail in the following sections):

- Intimate landscapes
- Ancient field patterns
- Open pastures / pastoral fields
- Large areas of semi-natural woodland
- Dispersed settlement / sparsely settled / un-populated areas
- Strong sense of place
- Physically or perceptually remote, peaceful or tranquil
- Heritage designations / assets
- Biodiversity designations / assets
- Recreational assets
- Green Infrastructure (GI) assets and functions
- Landscape functions
- Local community values

- No existing reference or context within landscape to type of change proposed
- Few detracting features in the area
- Majority of existing high value landscape features / qualities could not be replaced
- Very limited or no opportunities for mitigation.

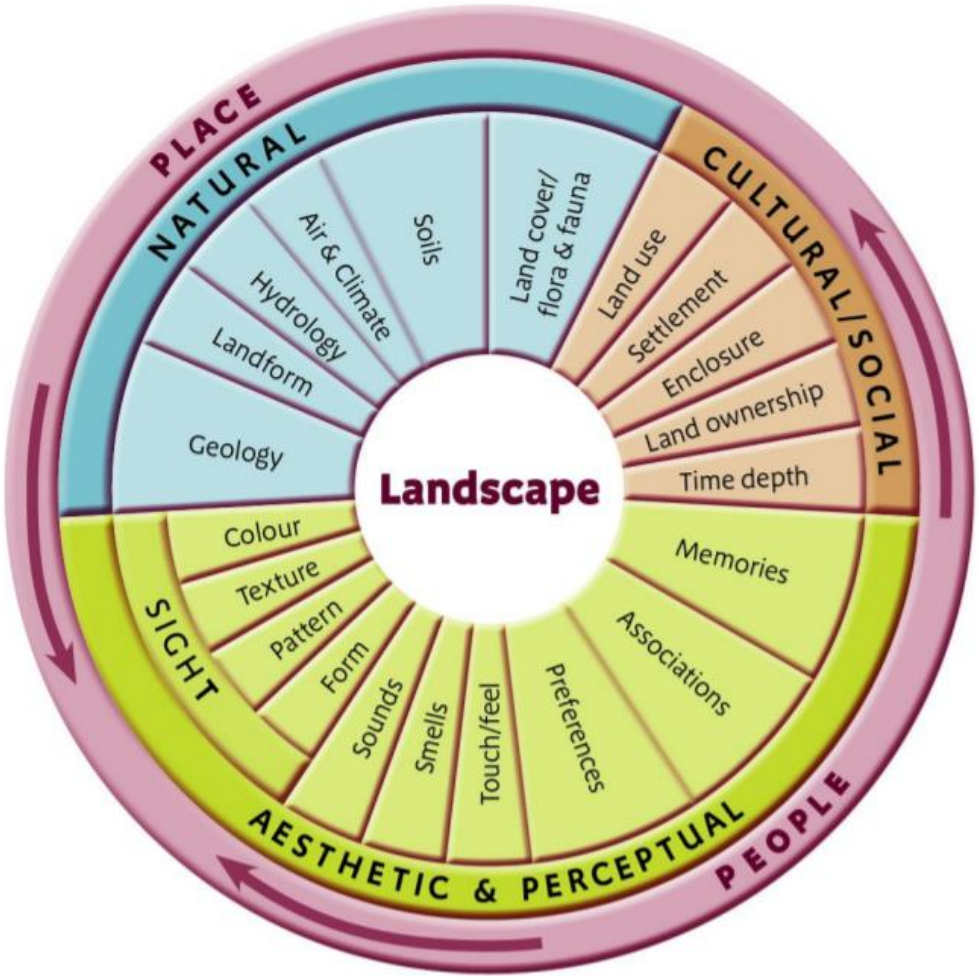
LANDSCAPE VALUE

4.1.8 Landscape value is defined in *GLVIA3* (para. 5.19) as '*The relative value that is attached to different landscapes **by society**, bearing in mind that a landscape may be valued by different stakeholders for a whole variety of reasons*' (my emphasis). The guidance explains how levels of landscape value are established through the assessment process.

4.1.9 A summary of key value factors is set out in *GLVIA3* Box 5.1, although this is not exhaustive, and does not include 'function' which is now agreed to be a highly important factor (see Section 2.4 of the Landscape Institute's *Technical Guidance Note 02/21 Assessing landscape value outside national designations*).

4.1.10 Both biodiversity and heritage are integral to landscape character, along with many other factors which have not been considered in the LVIA's assessment of effects. Those which should be included in LVIA are shown on *Figure 4. What is landscape?* on page 17 of Natural England's *An approach to landscape sensitivity assessment – to inform spatial planning and land management*, reproduced below for ease of reference.

Figure 4. What is landscape?



4.1.11 Unfortunately, features and factors of high local and neighbourhood value may not be designated and can be difficult (and time-consuming) to quantify, so are often overlooked. The onus of establishing features and factors of high value often falls on the local community, as it is rarely volunteered by the developer, and the community studies often identify previously unknown or undesignated assets which are later recognised as being of national significance.

4.1.12 Community involvement and public consultation are the best ways of objectively establishing what is important to local people and why, and can result in judgements - especially those about what is valuable enough to be protected - ratified by 'common consensus' as far as possible.

4.1.13 In the LVIA, there is no identification or analysis of the factors which contributed to the assessor's judgements about levels of landscape value.

4.1.14 In fact, the LVIA deals with landscape value in a single, very short paragraph (para. 2.22), which says, '*The site doesn't lie within or adjacent to any other environmental or heritage designations. The fabric of landscape within the site represents a relatively intact agricultural landscape*'.

4.1.15 That statement is not only unhelpful, it is also factually incorrect (although para. 2.5 does note that the site is adjacent to Monk Wood SSSI).

4.1.16 Nor does the above statement explain what is there, how valuable it is, and to whom and why: establishing these is a fundamental and critical part of the LVIA process. Clearly, as value features and factors were not identified in the applicant's LVIA, effects upon them were not assessed.

4.1.17 *GLVIA3* Box 5.1 includes landscape condition and quality as value factors, but under the heading Landscape Condition, the LVIA simply states that '*The majority of land cover is pastoral farmland. The fields are bound by dense hedges and mature individual trees and belts of woodland*' (para. 2.21). More comprehensive information about the landscape's features, condition and quality can be found in the applicant's AIA and PEA, and in the effects sections below where relevant.

4.1.18 My assessment concluded that the site and surrounding area's level of value is at least 'moderate to high', due to the presence of the features / factors / qualities listed above (as susceptible to change), and below:

- Areas with components combined in an aesthetically pleasing composition, in good condition and health
- Very good representation of the landscape area / type
- Very good scenic integrity
- HER / other historic features of high landscape importance / interest.

<u>OVERALL SENSITIVITY</u>

4.1.19 The LVIA concluded that the overall sensitivity of the site, its setting, and the wider landscapes, are between medium and high. However, no information was provided about the sensitivity of the individual landscape features and factors.

4.1.20 My assessment concluded that the landscapes of the site and areas likely to be most affected by proposed development are of 'high' sensitivity (a combination of moderate to high value and high to very high susceptibility to change of the type proposed).

4.1.21 I note that WCC's *Landscape Character Assessment Supplementary Guidance Technical Handbook* (August 2013) also categorises these landscapes as being of high sensitivity, albeit the form of change was residential development, not industrial as is the case here.

4.2 Nature and magnitude of effects

4.2.1 Once the sensitivity of the receptor has been determined, the next step in the LVIA / LVA process is to assess the nature and magnitude of the various effects to which the proposed development is likely to give rise. The final stage involves making judgements about the overall levels of effects on all the receptors identified (individually and combined), which are based on a combination of levels of receptor sensitivity and magnitudes of effect.

4.2.2 Before determining magnitudes of effect, it is necessary to identify the nature or type of effects which are likely to arise from what is being proposed. Effects may be negative, positive, direct, indirect, temporary, permanent, and / or cumulative.

NATURE OF EFFECTS

4.2.3 For more detailed information about each of the factors / features that would give rise to the different types of effects, see list in Section 2.4 above. In summary, likely effects include:

i. Permanent features (i.e. for the duration of the project which is c. 40 years - permanent in the context of many people's lives) include solar arrays, security fencing, CCTV and lighting columns, signage, substations, invertors, transformers, cabins, cabinets, relay / control / metering rooms, storage units (various sizes, materials and colours), earthworks / berms, new / widened access points, access tracks, and hardstanding.

ii. Temporary features during construction / decommissioning phases (up to one year allowed for each) include compound/s, lighting, and the one-way construction route.

iii. It is likely that some of the direct effects arising from construction and other traffic using the proposed one-way routes (for example loss of / damage to verges, hedges and trees) would be permanent (i.e. for the 40-year duration of the project, and potentially, beyond).

iv. It is also likely that during decommissioning and / or interim maintenance / panel replacement works), if / where vegetation along the construction route had recovered, similar damage / loss would occur again.

v. Industrialising features and activities inserted into rural landscape displaying considerable natural beauty, tranquillity and time depth, with no existing reference to the type of development proposed.

vi. Loss of / damage to existing landscape elements, features and landcover: many found on and around the site are rare / unique, and are very good representations of both the national and local landscapes' key characteristics.

vii. Change in landscape / historic landscape character from traditional rural / agricultural to intensive industrial.

viii. Changes to / loss of landscape function and contribution to landscape character - area within which site lies plays important roles in both.

ix. Changes in aesthetic / perceptual qualities of the landscape: disturbance / activity / movement / noise (vehicular, mechanical and human), clutter and paraphernalia associated with activities on site, lighting, bright colours, and glint / glare from reflective surfaces (the glint / glare phenomenon is explained in visual effects Section 5).

x. Pollution of soil, air and / or water - residues and emissions, odour and dust (also nuisances).

xi. Effects of noise, light, pollution, traffic etc. on people's mental / physical health and well-being, and quality of life.

xii. New tree, hedgerow and other planting / landscaping: it is important to ensure that proposed mitigation / enhancement / compensation measures such as landscaping are both effective and appropriate in terms of landscape character and visual amenity - otherwise, these and

other measures may in themselves give rise to adverse effects (as is the case here). They may also be in conflict with measures proposed in other topics (also the case here).

xiii. Changes to / loss of views / amenity resulting from the above.

MAGNITUDES OF EFFECT

4.2.4 Judgements about the magnitudes of effect to which the various aspects of a proposed development is likely to give rise take into account matters such as its size and scale, the geographical extent of the area influenced by any loss / change (which is considered at different scales, from national to site-level); the duration of the effects (taking into account seasonal changes as well as the 'lifetime' of the development); and their reversibility.

4.2.5 Whilst many of these matters are likely to affect landscape and visual receptors to the same degree (especially size, scale, duration and reversibility), others will affect different receptors in different ways; for example, in landscape character terms, the geographical extent of what is proposed is usually clearly defined due to physical / cultural factors, whereas in visual terms, the extent of what is seen depends on factors such as the angle and elevation of the view, screening elements, mitigating measures and so on.

4.3 Landscape baseline

4.3.1 As mentioned above, all effects assessments begin with a landscape character assessment (LCA), to establish what is there (the baseline situation). The current guidance for this is Natural England's *An Approach to Landscape Character Assessment* (October 2014), although the 2002 version is still relevant.

4.3.2 The LVIA / LVA should describe all the receptors, features, factors and qualities identified during the LCA process. It should then go on to explain the process of analysis and set out the justification for conclusions drawn about each receptor's level of value and susceptibility to change of the type proposed. It should then explain how each receptor would be affected, and to what degree.

4.3.3 The LVIA carried out for this application reports the findings of the LCA which was undertaken but unfortunately, the study was carried out at a very high level, with very little granular exploration of the landscapes likely to be affected by the proposed development.

4.3.4 The study area boundary should be set at an early stage in the process, based on a number of factors. Of course at the LCA stage one does not predict whether, how or to what degree features within the study area would be affected by the proposals, but they should still be identified as potential receptors and included in the effects assessment. Even if effects are predicted to be neutral, it is important to know that (and also to understand how the conclusion was arrived at).

4.3.5 LVIA para. 1.16 states that the extent of the study area was '*an area extending up to approximately 3km to 5km from the centre of the site*' because '*This is considered to be the maximum extent within which **significant** landscape and visual effects could occur for the type of development proposed*' (my emphasis - note use of word 'significant' here).

4.3.6 The problem with the study area boundary being measured from the centre of the site is that the site is c. 1.3km long from north west to south east and almost 700m long from north to south, so in places the maximum extent of the study area is far less than 5km. Also, my own assessment concluded that effects could potentially extend much further than this.

4.3.7 As an indication of the scale and extent of the development and by way of comparison, the site is c. 1.3km long from end to end, and the site area is 36ha; **the settlement / built-up area at nearby Hallow is c. 1.3km long, and covers c. 32ha**.

4.3.8 Parts of the site are intervisible with the northern end of the Malvern Hills c. 14km to the south west (designated as an Area of Outstanding Natural Beauty (AONB)), and although not noted in the LVIA, with Abberley Ridge and the iconic Grade II* listed Abberley Clock Tower, lying respectively c. 6km and c. 7.5km to the north west (it is important to note that there may be interinfluence between places / features regardless of whether or not they are intervisible).

4.3.9 The LVIA failed to identify many other key landscape features which could potentially be affected - see below.

4.3.10 In fact, the LVIA's character baseline section is very short; the majority of the text is generic, cut and pasted from published landscape character information, and much of that is not relevant to the site and its contextual landscapes.

NATIONAL, REGIONAL AND LOCAL LANDSCAPE CHARACTER

4.3.11 The first part of the LVIA's baseline section deals with national landscape character. The site is correctly identified as lying within National Character Area (NCA) NCA106 Severn and Avon Vales, which covers an extensive area from Bristol to Bromsgrove. However, although not noted in the LVIA, the western boundary of the NCA is only c. 4.5km west of the site, and there is interinfluence (and intervisibility) between this and other NCAs to the west and south west (NCAs 101, 102 and 103).

4.3.12 The LVIA then sets out the key characteristics of NCA106. However, despite saying they are '*pertinent to the site context*', many are not relevant, as they are many miles from the study area (for example, *Prominent oolitic limestone outliers of the Cotswold Hills*; *the Warwickshire River Avon meanders over a wide flood plain between Stratford, Evesham and Tewkesbury; Roman influences centred at Gloucester*; *strong Shakespearian heritage at Stratford-upon-Avon*).

4.3.13 The LVIA does not explain which of the key characteristics are actually present on the site / in the surrounding area. It is important to know this, so that judgements can be made about a) whether or not the site is a good representation of the NCA's landscapes, and b) whether the proposed development could affect features which are of interest / importance at the national landscape level (as is the case here).

4.3.14 Helpfully, LVIA para. 2.8 does note that in the NCA106 profile document, '*There are general references to renewable energy throughout the NCA document but these are limited to wind, tidal and biomass initiatives*'. As mentioned above, this is of relevance to judgements about levels of the site's susceptibility to change: **within NCA106, solar arrays are not characteristic**.

4.3.15 The LVIA does not note that the site lies within the Mid-Worcestershire Forest regional character area, although this of relevance to the character of the site and surrounding areas.

4.3.16 According to WCC's *Landscape Character Assessment Supplementary Guidance Technical Handbook*, '*The Mid-Worcestershire Forest region forms part of a great swath of Royal forests that once extended across the central part of the West Midlands… Such a large and distinctive assemblage of Royal Forests was quite unique in the country and a very relevant element of the cultural heritage and landscape of Worcestershire… Although the forest origins provide a strong unity to this huge area, each particular forest has its own cultural history which is relevant to the overall landscape evolution of the area*' (paras. 3.1.6.5 - 8).

4.3.17 The site lies within, and is a very good representation of, the *West Worcestershire Woods* part of the Mid-Worcestershire Forest.

4.3.18 Following the Norman conquest of England in 1066, King William established royal forests[2], along with forest law. In the mid-13th century, hunting rights in the royal forests on both sides of the Malvern Hills were transferred from the monarch to the bishops of Hereford and Worcester, a section of the boundary running along the Malvern Hills ridgeline / the Shire Ditch. The Worcestershire forest became Malvern Chase, whilst the Herefordshire forest became known as the Bishop's Chase. Malvern Chase is described as being 'densely wooded' and containing wolves and wild boar. The chases remained in use for at least 400 years, until disafforestation and enclosure began in the 17th century.

4.3.19 Now, West Worcestershire Woods '*is a heavily wooded area where the Landscape Types are largely derived from woodland assarting and enclosure of waste… The area was known as Weogorena leah in the early Anglo-Saxon times, "the wood pasture" of the Weogorna (the men of Worcester region), and provided seasonal pasture in open woodland… The area is fairly well wooded with important ancient semi-natural woodlands at Monkwood, Ockeridge and Shrawley, together with many smaller woods… The ancient character of the woods is revealed by the ancient ditch and bank boundaries which contain old trees, especially small-leaved lime and wild service. These woods have a rich woodland flora and Monkwood is notable for butterflies, including the uncommon wood white. These and other woods in the area hold a nationally important dormouse population… The land use history (assarts formed in wildwood) is reflected in the hedgerows which contain a wide range of woody species including small-leaved lime, large-leaved lime (a nationally scarce tree) and wild service. Away from intensively farmed areas there is similarly a rich flora*' (paras. 3.1.6.37 - 42).

Typical West Worcestershire Woods landscapes (application site)

[2] Today in the UK, the term forest is often assumed to be a large expanse of dense woodland, but this was not its original meaning: a forest was an area of land designated for hunting, under the ownership of the king and with its own laws. It comprised a mosaic of different habitats, including woodland, wetland / waterbodies, grassland, commons, enclosed fields and scattered settlements.

4.3.20 The LVIA does correctly identify the local (i.e. countywide) landscape character types (LCTs) within the study area, again repeating published information, and again it does not state which of the key characteristics are present on the site / in the surrounding area (see below), does not note whether or not the site is a good representation of the host LCTs (it is), does not factor in interinfluence / intervisibility with neighbouring LCTs (there is), and does not consider whether the proposed development could affect features which are of interest / importance at the local landscape level (it could).

SITE AND CONTEXTUAL LANDSCAPE CHARACTER

4.3.21 The next part of the LCA / LVIA process normally involves describing in detail the character of the site and its contextual landscapes, considering each of the factors shown in *Figure 4 What is Landscape?* above in turn. *GLVIA3* is very clear that LCA / LVIA should identify, describe, evaluate, and assess effects upon, individual landscape elements and features as well as broad landscape areas and types.

4.3.22 In the applicant's LVIA, the site's baseline landscape character is not described at all; it simply says (para. 2.18) that '*The landscape character of the site's location generally accords with the descriptions within the national and local landscape character assessments and as summarised above*'.

4.3.23 The statement is not only unhelpful, meaningless and inadequate for a project of this nature and scale, it is also factually incorrect - see NCA comments above, for example.

4.3.24 My own assessment identified numerous elements and features on the site and within the surrounding areas which make highly important contributions to both the character and the level of value of the landscapes which form the site *and* the proposed development's context and setting, and with which there is interinfluence (and in many cases, intervisibility - see visual effects in Section 5). Some of the features are rare / unique.

4.3.25 *GLVIA3* also emphasises that the landscape's specific aesthetic and perceptual aspects should be identified as part of the LCA, and effects upon them assessed, but this was not included in the applicant's LVIA.

4.3.26 Some of the most characteristic and valuable landscape elements, features, aspects and qualities which could potentially be affected, directly and / or indirectly, are listed and illustrated below, with more detailed descriptions provided in the effects sections where relevant. Many of these features are also key characteristic of the site's LCTs:

i. Trees, especially in woodlands, along watercourses, in hedgerows (field boundaries / roadside), isolated groups, and individual specimens. Some of the woodlands are ASNWs, and several veteran trees were identified. The specimen in the photo below is on the site, and probably started growing in the 1600s.

The two oak trees in the photo overleaf are field boundary remnants, having escaped from a hedge between proposed array Areas 1 and 5. The majority of the hedgerow is defunct and has been replaced with fencing; however, **the hedgeline itself was established in the 12th century** (perhaps earlier), and forms part of the highly distinctive and possibly unique arrangement of pentagonally-shaped assarted fields which characterise the site and surrounding area. No restoration of this hedge has been proposed by the applicant, but it should certainly be considered (regardless of whether or not the scheme is approved).

ii. Open pastoral fields of grazed, semi-improved grassland, many bound by species-rich hedgerows.

View from public footpath east of site looking south west towards Malvern Hills

iii. Small, well-wooded watercourses / occasional waterbodies.

Pond between array Areas 1 and 3

iv. High levels of tranquillity.

View from public footpath crossing site

v. Significant time-depth, much of it visible.

Lovely Cottage along lane north of site

vi. Ancient field patterns and footpaths / trackways.

Track along eastern edge of Monk Wood, adjacent site

vii. Significant biodiversity.

Monkwood SSSI / Nature Reserve

viii. Narrow, winding lanes, some with grassed verges (wide and flat, or narrow and steep, often botanically-rich), bound by tall, species-rich hedges and overhung by roadside trees.

View along lane at proposed southern access point

Lane along construction route

Lane at south-eastern entrance to Sinton Green along construction route

Lane along construction route

Lane along construction route

Lane along construction route

ix. Lanes very lightly-trafficked, used by local people for walking (including children going to / from school), running, cycling, horse-riding.

Lane through Monk Wood

x. Well-used and popular public footpaths and publicly-accessible trackways through open fields (including site) and woodlands.

Path through Monk Wood, adjacent site's western boundary

GREEN INFRASTRUCTURE

4.3.27 The above and other features that could be adversely affected by the proposals are highly valuable GI assets, which perform numerous important GI functions at a landscape scale (they also make notable contributions to the area's natural capital and ecosystem services).

4.3.28 GI is not mentioned in the LVIA, although para. 2.10 of *GLVIA3* explains that GI '*is not separate from the landscape but is part of it*', and that effects on GI may need to be addressed in LVIA / LVA.

4.3.29 The site lies within South Worcestershire Green Infrastructure Environmental Character Area (ECA) 1: Teme Valley and Wyre Forest.

4.3.30 All ECAs have been placed into one of three categories based on their overall score for GI. These are: 1. Protect and enhance 2. Protect and restore 3. Restore and create.

4.3.31 The category is based an assessment of the ECA's landscape character, biodiversity and the historic environment characteristics. These characteristics were each attributed a score, with biodiversity being given a greater weighting than landscape and the historic environment, each of which were given equal but lower weightings.

4.3.32 The strategic GI approach for the Teme Valley and Wyre Forest ECA is to protect and enhance. The overarching principles identified by the GI partnership include the need to a) enhance stream and river corridors, and b) protect ancient countryside character.

4.3.33 For further information about the area's GI see Worcestershire Green Infrastructure Strategy (2013) and the Worcestershire Green Infrastructure Framework (2012) (also the 2012 Worcestershire Landscape Character Assessment Supplementary Guidance documents).

4.4 Landscape effects during construction / decommissioning

4.4.1 The LVIA did not consider or assess the effects likely to arise during construction and decommissioning, therefore no mitigating measures were proposed to reduce such effects (albeit in some cases, reduction may not be possible).

4.4.2 **This is a serious omission which needs to be rectified.** My own assessment concluded that significant adverse effects would arise during the construction and decommissioning phases, some of which are likely to be permanent (i.e. lasting for, or beyond, the lifetime of the scheme i.e. 40 years).

4.4.3 The aspects of the construction and decommissioning process that could give rise to adverse landscape effects are described in the list in para. 2.4.2 above, and the nature of the effects likely to arise are listed in para. 3.3.4 above. Below, both are explained further where relevant.

4.4.4 The duration of the construction and decommission phases cannot be stated with certainty at this stage, being subject to a number of factors: the applicant states that a period of up to one year would be allowed for both.

ON-SITE CONSTRUCTION WORKS

4.4.5 When construction commenced, the existing (western) northern access point into the site would be widened, and the two new ones - north (eastern) and south - would be created. Vegetation would be cleared. The internal access tracks would be formed, and one or more compounds would be set up within the site (also, note comment about the possible requirement for off-site compounds in the para. 2.4.2 list above).

4.4.6 Preliminary security fencing, CCTV and lighting columns would be erected. Materials and vehicles such as cranes would be brought to the site. Over a period of time, the panels, substations, invertors, transformers, cabins, cabinets, relay / control / metering rooms and storage units would be placed in their final locations, with hardstanding and fencing / other security features erected. Cabling trenches would be dug and if required, earthworks / berms would be constructed along the sides of the watercourses.

4.4.7 Extraordinarily, the LVIA assessor's judgements and conclusions about effects are based on the incorrect assumption that **no landscape features would have to be removed** to facilitate construction or operation.

4.4.8 LVIA para. 1.21 states that '*No landscape features including the hedges that divides the fields will be removed as part of the installation and the existing boundary hedges will be retained and in-filled where necessary*'; para. 5.5 confirms that '*There are no landscape features to be removed as part of the development*'.

4.4.9 Para. 1.20 states that '*Access to the facility is to be taken from two un-named lanes to the north and south of the development at **existing** field gates and access points*' (my emphasis). This is very concerning, and brings into question the robustness and validity of the survey process: had the assessor actually visited the proposed access points (or even looked on Streetview), they would surely have realised that only one access point is existing (in fact, it is relatively recent). The other two would have to be created, and this would involve the removal of significant amounts of hedgerows and trees.

4.4.10 According to my calculations (see Section 2), **up to 250 linear metres of roadside hedgerow would have to be removed to facilitate access into the site**, along with associated trees, grassed verges and ditches. These appear to be historic hedge-ditch-lynchet systems.

4.4.11 As mentioned in Section 2, construction of the southern access appears to entail widening of the lane and the removal of mature trees (oak and ash, almost certainly veteran), verges, ditch and

hedge on the south side of the lane, but this appears not to have been considered in the LVIA, PEA or AIA. In fact, I am not convinced that the AIA assessor was aware of the full extent of hedgerow and tree removal required at any of the access points.

4.4.12 These concerns are echoed in WCC's Transport Planning and Development Management Team's 16th November 2021 response to the application, which says that '*vehicles visiting the site during the construction phase are likely to damage the grass verges and roadside ditches*'.

4.4.13 Within the site, up to **100 linear metres of hedgerow with mature escaped trees, and mature trees along the watercourse would also have to be removed** in order to accommodate the access tracks.

4.4.14 In addition, according to AIA para. 5.4, '*B grade tree group G19 and A grade tree T24 will require pruning to provide 3m clearance above the proposed access track*'. T24 is a large mature field boundary oak.

4.4.15 Furthermore, the security fence proposed along the northern boundary of array Area 4 would be constructed within the RPA of T54, which is a Grade A2 mature English oak.

4.4.16 I note that the 4th bullet point on page 7 of the PDAS says, '*The Tree Survey and Arboricultural Impact Assessment (June 2021) concluded that the proposed development will not harm any veteran or grade A trees*'), which contradicts the AIA.

4.4.17 Also, the AIA found that not all of the trees on the site had been plotted on the applicant's topographical survey, so the arboriculturalist put those which had the potential to be affected by the scheme onto their own drawings, albeit with the caveat that '*their positions are not accurate and cannot be guaranteed. The layout has taken account of these trees but their locations and RPA extents should be confirmed on site prior to commencement of works*'. Thus, potentially, other trees could be affected.

4.4.18 It does not appear that the AIA factored in loss of / damage to trees / hedges arising from the digging of cable trenches and any embankments / bunds required, which, if such loss / damage occurred, would inevitably increase levels of adverse effects.

4.4.19 Indeed, the high value of the trees on the site are recognised in the AIA, which provides more comprehensive baseline information than the LVIA (there appears to have been very little if any cross-referencing between the various environmental topics, despite the fact that most - especially landscape, heritage, ecology and arboriculture - are very closely interrelated).

4.4.20 AIA Section 4 explains that '*The site contains a large number of mature English oak trees, two of which are considered to have Veteran status due to their large size and unique features. The quantity of mature oaks has resulted in a much higher percentage of A category trees on site than would normally be expected. Boatley wood, classified as ancient woodland, is situated towards the centre of the site and recorded in this tree survey as W26. One of the veteran trees recorded (T27) is within this woodland*'. Para. 5.1 says that '*Eighteen individual trees, three groups of trees (G30, G40, G70), and three woodlands (W26, W45, W69) were recorded as high A category. Their retention should be considered imperative to the design of the development. Two of these are Veteran trees (T27, T68). Veteran trees are highly important arboricultural features of special significance that must be retained and protected accordingly'*.

4.4.21 The above features (*Notable pattern of hedgerow trees, predominantly oak. Hedgerow boundaries to fields*) are **primary key landscape characteristics** of the host Principal Timbered Farmlands LCT.

4.4.22 They also make **highly important contributions** to the area's heritage, historic landscape character (HLC), visual / social amenity, and biodiversity.

4.4.23 HLC was not considered in the LVIA, and there appears to have been no attempt to identify or factor in features of historic importance when making judgements about landscape (and visual) character,

value, susceptibility to change or effects. Given the significant time-depth both visible and buried on the site and within the study area, and which makes such an important contribution to the character of the site and surrounding landscapes, **this is another important omission that again brings into question the veracity of the assessments' findings**.

4.4.24 Heritage, landscape / cultural history and historic landscape character in particular are integral elements of LCA. Landscape assessment guidance is clear about the matter, setting out the range of historic and socio-cultural baseline information which needs to be gathered, analysed and factored in to the findings. It states, '*The history of the landscape, its historic character, the interaction between people and places through time, and the surviving features and their settings may be relevant to the LVIA baseline studies, as well as the cultural heritage topic*'.

4.4.25 According to *Topic Paper 5 Understanding Historic Landscape Character*[3], '*HLC/HLA is most of all concerned to trace the imprint of the past on landscape. Known as 'time-depth' (see Box 1),* ***this is one of the landscape's most important characteristics****. It can be defined as "the long-term interaction between human activity and natural processes" [5]. It recognises that the long sequence of events and actions that have produced the present environment, and which is visible within the landscape, is the result of human activity as well as natural processes*' (my emphasis).

4.4.26 Understanding historic landscape character is important because otherwise, the value of certain features may be missed, and not factored into judgements about sensitivity / capacity / potential effects. This may lead to the levels of capacity and / or effects being reported as lower than they should be, as is the case here.

4.4.27 Also, although detailed assessments of heritage assets, their significance and potential effects on them / their settings are beyond the scope of LVIA, it is important to analyse the archaeological / other data and use the information to build up an understanding of how the area's landscapes and settlements evolved over time, and establish factors such as intended / current interinfluence and intervisibility. Also, the heritage topic should be cross-referenced with the landscape and visual topic as the latter will (should) inform judgements made about heritage matters such as interinfluence / intervisibility / setting / association and so on

4.4.28 Heritage assets are considered in the applicant's June 2021 Cultural Heritage Baseline and Impact Assessment (CHBIA); however, it appears that the CHBIA has not considered the presence of heritage assets / features and effects upon them on certain parts of the site that would be developed. For example, for some reason, the westernmost part of array Area 1 (my Area 5) is not included, nor is the land required for the substations and the construction of the southern access which is likely to entail the removal of historic features. The north-western access point and land required to construct the access track leading to Area 1 are also excluded.

4.4.29 Heritage and HLC are considered in greater detail in submissions being made to MHDC by GSFAG, which should be referred to for more information on the subject.

4.4.30 The only heritage assets identified in the LVIA were '*a number of Grade 2 Listed Buildings within the vicinity of the two sites*'. My own assessment identified numerous historic features on the site and within the study area which make highly important contributions to the present-day character of the site and its contextual landscapes, and with which the site has varying degrees of association, interinfluence and intervisibility; some could potentially be indirectly affected by the proposed development during construction and operation. They include:

i. Possible Bronze Age feature on site (WSM04537).

ii. Woodbury Hill Camp Iron Age hillfort scheduled monument (c. 6km north west of site).

[3] *Landscape Character Assessment Guidance for England and Scotland - Topic Paper 5: Understanding Historic Landscape Character* The Countryside Agency and Scottish Natural Heritage (2002)

iii. Possible Roman activity on site including routeway (no wider analysis carried out to determine veracity of this).

iv. Anglo-Saxon features including various types of boundaries, alder carr, hedge-ditch-lynchet systems.

v. Early Medieval ridge-and-furrow[4] field systems in array Areas 1, 2 and 3.

vi. Assarts - some recorded by 1186AD.

vii. Possible Medieval chase / Norman royal forest remnants (Monk Wood is mentioned in the Domesday Book).

viii. Three Grade II* and three Grade II listed buildings at / in the vicinity of Wichenford Court (of 15th century origin) lying c. 2km to the south west.

ix. Grade II* listed Old Hill farmhouse (late 1500s) c. 570m north east of site on elevated ground.

x. Several veteran oak, some dating from 1600s.

xi. Witley Court: country house dating from c. 1610. Main complex lies c. 4.3km north west of site. Scheduled monument, three Grade I, two Grade II* and several Grade II listed buildings / structures within / associated. Grounds are designated Registered Park and Garden (RPG); **boundary of RPG is c. 2.7km from site**. (There is another RPG lying c. 3km north east of the site at Ombersley Court, but there is little or no association or interinfluence between this RPG and the site.)

xii. Abberley Clock Tower: iconic late-19th century Grade II* listed structure on Abberley Ridge. Associated with Grade II* Abberley Hall (c. 7km north west of site, intervisibility in places).

4.4.31 The evidence certainly indicates that some of the field boundaries and extant hedgerows are ancient, probably between 900 and 1000 years old, possibly even older[5]. Although it was not possible to survey all of the hedges from publicly-accessible places, the majority appeared to be species-rich and in good condition, and **likely to be categorised as 'Important' under The Hedgerows Regulations 1997**.

4.4.32 Indeed, paras. 6.8.3 and 4 of the CHBIA state: '*1840 is pre the Inclosure Act and, therefore, boundaries recorded on it which are now hedgerows may fall within the Hedgerow Regulations (Appendix 5). These state: 5. The hedgerow - is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts.* ***This is of archaeological interest as such field systems may date to the Postmedieval or earlier***' (my emphasis).

4.4.33 From its girth, I estimated that one of the veteran oaks on the site (to be retained) would probably have started growing in the 1670s; other oaks in the vicinity of the site appear to be of a similar age. It is quite possible that these oak trees were once growing in the royal forest of Malvern Chase, or perhaps planted to delineate 'King's Third' land.

[4] Ridge-and-furrow is a relic of an obsolete type of agriculture. The pattern of ridges and furrows is often all that remains of the narrow strips (called 'selions') used in the open field system of agriculture – a communal method of strip farming in large village fields which has its origins in the Early Medieval period (c. CE 800 - 1200) and which continued in some areas into the early 19th century. Although ridge-and-furrow is not protected *per se*, its national importance is recognised by bodies such as Historic England https://www.english-heritage.org.uk/publications/turning-the-plough-loss-of-a-landscape-legacy/turningplough.pdf.

[5] The country's oldest hedgerows are pre-Bronze Age, created when early farmers cleared woodland to settle, grow crops and keep animals. Often, strips of woodland were left - trees cut down to a manageable height - to mark boundaries, and for protection. Today, some of these strips are thriving hedgerows, often delineating hundred, county, parish and other boundaries. The Romans began the practice of planting new hedges to impose 'order' on the land and its uses, and this was embraced and continued by the Saxons - many hedges in the wider landscapes are of medieval origin. 18th / 19th century enclosure resulted in the removal of old, often organically-shaped hedgelines (although hedges alongside straight trackways were usually retained if the trackway was kept) and new hedge-planting, usually using a single species (hawthorn is typical).

4.4.34 Unfortunately, the PEA makes the same erroneous assumption as the LVIA and CHBIA about there being no loss of features / vegetation / landcover, apart from the existing grassland on the site.

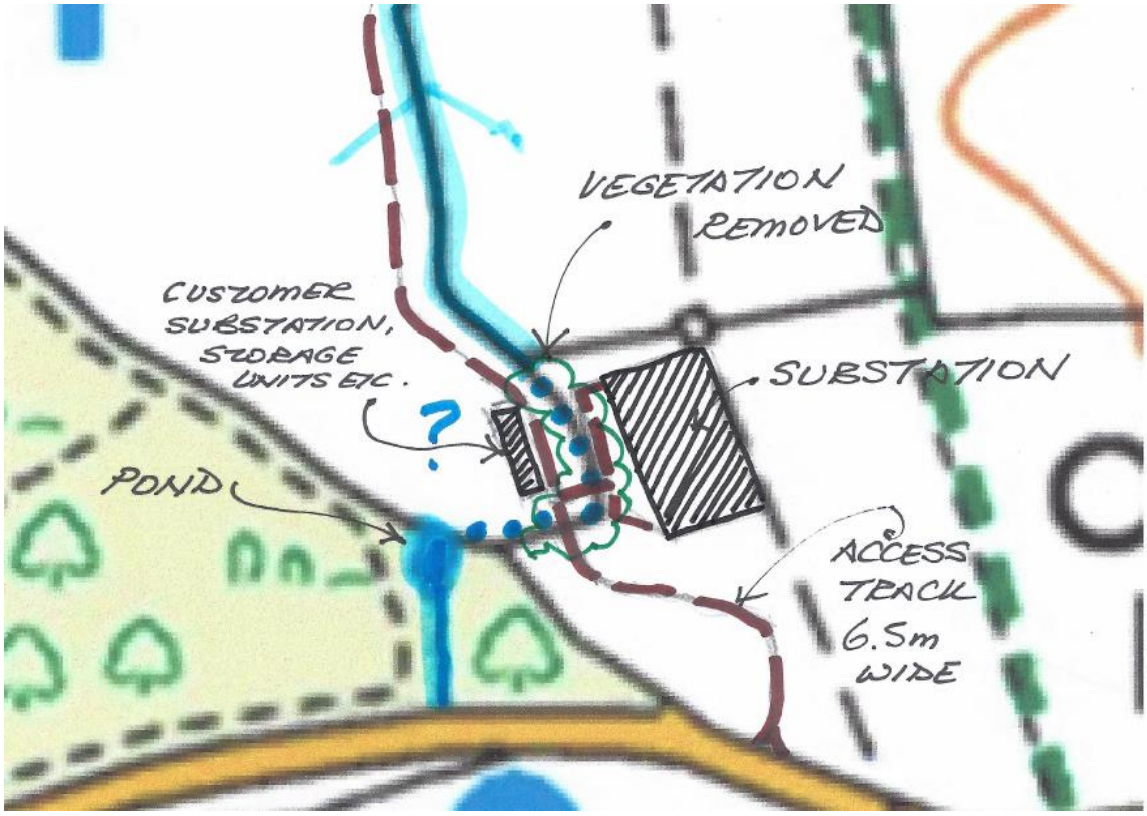
4.4.35 PEA para. 5.4 says: '*Other habitats such as woodland, trees, deadwood and ponds are* ***not impacted by the development proposals during the construction or operational phases***'. PEA para. 3.22: '*Fields were generally separated and enclosed by sections of hedgerow and in some cases woodland. These hedgerows often contained trees of significant age.* ***It is understood that the proposed development will not require the removal of these areas of hedgerow***'. PEA para. 4.12: '*However, some of the habitats on the proposed site, including the hedgerow could provide suitable foraging areas for some species such as birds or bats nesting or roosting in the SSSIs.* ***However, the proposed development will not result in the removal of the hedgerows.*** *As a result, the potential impact of the solar farm on the adjacent SSSIs is likely to be not significant*'.

4.4.36 Furthermore, I note that **the PEA survey has not covered the whole of the application site area**. It appears to exclude the southern boundary hedge and verge where the southern access point would be created, and it certainly excludes the land south of that which is required to construct the southern access and accommodate turning HGVs, where it seems likely there would have to be removal of verge, ditch, hedge and trees. It also excludes land to the north: the western edge of area B8 shown on Figure 1: Birchall Green Baseline Habitat Map is drawn along the east side of a watercourse. In fact, the watercourse is within the site, along with the eastern side of the adjacent field. The westernmost of the two northern accesses goes through that land, and the existing gateway would need to be widened with associated loss of / damage to hedgerows and trees.

4.4.37 As ecological effects on these areas / features have not been assessed, no mitigation measures have been proposed (although enhancement is proposed there - grassland, trees and a pond - see landscape mitigation measures below).

4.4.38 In addition, none of the applicant's assessments explain what would happen to the southern end of the small watercourse (tributary of Grimley Brook) which runs through the site. It enters the site via the small pond at the eastern edge of Monk Wood / the SSSI, then zig-zags along an old field boundary before heading north. The proposal is to remove the existing field boundary vegetation in order to construct the access track, substations, storage units and other scheme elements, but as shown on the marked-up map overleaf, the watercourse flows through the middle of this area so may have to be culverted.

Proposed works adjacent southern end of watercourse flowing through site



- **MHDC to ask the applicant to a) provide details of how the watercourse would be accommodated / treated during construction and operation, b) if culverted, whether it would be opened up again during decommissioning, and c) carry out an assessment of the environmental effects likely to arise from the proposals.**

4.4.39 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision-making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by government in its 25 Year Environment Plan[6].

4.4.40 Biodiversity is an important factor in landscape and visual assessments, especially as different habitats have different characteristics and features which contribute to a landscape's character. Loss or erosion of habitats can therefore lead to adverse effects on landscape character and visual amenity (see for example *GLVIA3* para. 3.22). Changes to landscape features, elements and landcover can also result in changes to the habitats, and the species of flora and fauna they support.

4.4.41 *GLVIA3* notes that '*... the presence of features of wildlife... can add to the value of the landscape as well as having value in their own right*.'

4.4.42 In its guidance document *A Handbook on Environmental Impact Assessment* (4th edition 2013), Scottish Natural Heritage (SNH) explains that '*...all landscapes, everywhere, are important as* [inter alia] *...an environment for plants and animals, the condition of which directly affects biodiversity conservation*.'

[6] Natural Environment PPG para. 009

4.4.43 The baseline information which needs to be gathered and considered in landscape assessments is set out in LCA guidance; the list includes 'literature on wildlife' such as relevant NCA profiles, Biodiversity Action Plans, management plans, and habitat and other surveys.

4.4.44 Ecology / biodiversity is also dealt with in great detail in other submissions being made to MHDC by GSFAG, which should be referred to for more information on the subject; however, in my opinion, the loss of (and inevitable damage to) the hedgerows, trees and other features on the site / on its boundaries could potentially give rise to adverse effects on biodiversity.

4.4.45 It would certainly give rise to **high levels of adverse effects on the character of the site and its contextual landscapes**.

4.4.46 The change in the site's character from rural / tranquil to industrial / busy would be noticeable and / or experienced from the start: the site is up to c. 1.3km long and c. 700km wide., and the area is 36ha (the extent of the settlement / built-up area at Hallow is c. 1.3km long and it covers c. 32ha).

4.4.47 The number, location and extent of the of construction compounds is not stated as far as I can ascertain, thus it is not possible to assess specific effects arising; however, both within and outside the compound/s, throughout the construction phase there would be disturbance, activity, movement and noise (vehicular, mechanical and human), clutter and paraphernalia associated with the activities, lighting, bright colours, and glint / glare from reflective surfaces (the latter are explained in visual effects Section 5).

4.4.48 Over time, the permanent features would be installed: access tracks, hardstanding, security fencing, signage, CCTV and lighting, solar panels, substations, invertors, transformers, cabins, cabinets, relay / control / metering rooms, storage units, earthworks and berms.

4.4.49 Clearly the above would give rise to high levels of effects on views and visual amenity; however, construction noise could give also rise to significant adverse effects on what are currently surprisingly high levels of tranquillity experienced on the site and within many of the surrounding areas.

4.4.50 The activity likely to generate the most noise is the piling required to insert the legs of the solar panel frames into the ground. I have heard the noise: it is extremely loud and very jarring. Due to the combination of low ambient noise levels and the nature of the topography, sounds can travel for relatively long distances across these landscapes. The LVIA does not consider this or other similar construction effects, and nor does the PEA.

4.4.51 For example, both assume that there would be no lighting, so effects on character, visual amenity and biodiversity arising from this were not assessed either, despite the other studies identifying some forms of lighting as a requirement.

4.4.52 During construction, there would be high levels of adverse effects on people using public rights of way (PRsoW) and publicly-accessible paths on / along the boundaries of the site. Effects on views are considered in Section 5; however, in LCA, it is necessary to consider effects on how landscape is experienced, which involves other senses.

4.4.53 As noted above, during construction, the proposed development would generate noise, odour and dust, and cause changes in ground conditions amongst other things. The experience of walking along the footpath crossing the site in particular would be completely altered during construction, although given the large scale of the project, the extent of the site area and the low ambient noise levels that currently exist, the change would also be experienced by people using off-site PRsoW / other routes, especially the public footpath which runs east of the proposed substation, the tracks and public footpaths / bridleways through Monk Wood, and the network of quiet lanes surrounding the site (see also effects arising from the proposed construction route below).

4.4.54 Walking along the footpath which crosses the site is a good opportunity to appreciate the host landscape's special qualities. It is very beautiful at all times of year, displaying great biodiversity and for the most part, appearing to be in very good health. It is also surprisingly peaceful - birdsong and other natural sounds can be heard clearly, enhancing the experience and lifting the spirit.

4.4.55 Ancient character is evident, unchanged for several hundred years - the footpath which crosses the site is part of the network of old trackways which criss-cross throughout the study area, some probably thousands of years old (the CHBIA notes the potential for Bronze Age and Roman activity). Gently-undulating topography, woodland and riparian trees give rise to organic, flowing forms which contrast with the distinctive assarted areas which are not only highly characteristic but likely to be rare and possibly unique.

4.4.56 The local PRoW network evidently makes a highly important contribution to people's mental and physical health and well-being, and to their quality of life, which the construction activities are likely to adversely affect to varying degrees.

4.4.57 Section 4.1 of the PDAS states that the public footpath which crosses the site would remain open throughout the construction phase; however, I note WCC's Public Rights of Way team's consultation response dated 15th October 2021 which says that '*there is a danger that public access may be hindered during the construction phase. This includes the establishment of new hedgerow immediately adjacent to GM-524*'.

4.4.58 Of course, if only one construction compound is proposed, internal construction traffic would have to cross the footpath in order to access all the array areas, in which case the applicant would have to apply for a temporary closure.

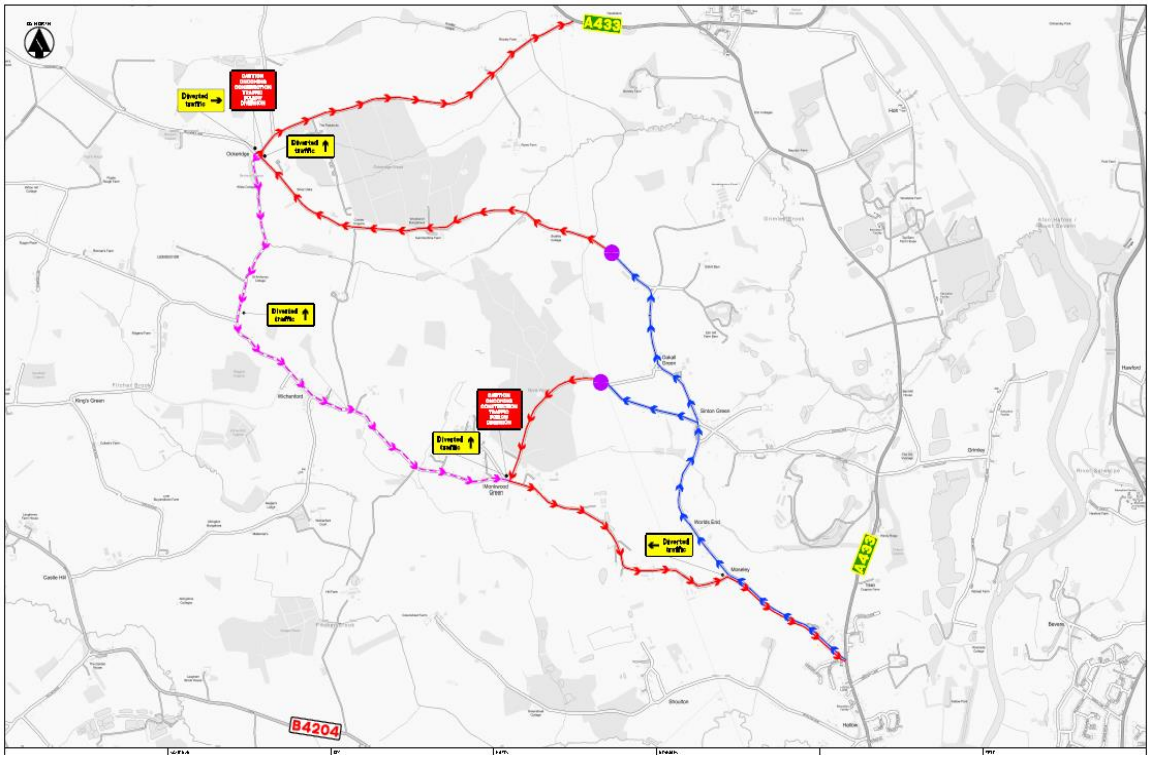
4.4.59 In fact, I am advised that during a recent consultation event organised by the applicant (November 2021), the applicant's representative said that the footpath would have to be crossed, and therefore temporarily closed. The loss of the resource would inevitably adversely affect those who use the footpath, regularly or otherwise.

4.4.60 As the construction works progressed, the site's positive aesthetic and perceptual qualities would change significantly. What is currently a rural, ancient, gentle and very lovely landscape would become industrialised, alien and ugly.

CONSTRUCTION ROUTE

4.4.61 Regarding the proposed construction route, for the duration of the works, both construction and local traffic would be subject to a one-way system - see TAS plan overleaf.

Proposed construction routes to / from site



4.4.62 In my opinion, the proposed one-way system for not only construction but all local traffic - including cyclists and equestrians - is highly unsustainable, and has not been properly thought-through.

4.4.63 Whilst carrying out visits to the site and surrounding area (and the homes of local residents to assess visual / other effects), I attempted to follow the one-way system, until I realised how many extra miles of driving this would entail. For example, I needed to drive along Moseley Road from The Fox Inn on the east side of Monkwood Green to houses on the west side - a relatively short distance of some 300m. **With the one-way system in place, the journey would be 10.3km**.

4.4.64 I also concluded that when arriving at the site from the south via its northern access point and intending to return from whence they came, construction vehicle drivers would either get lost (as I did on several occasions - there are a few dead-ends), or, instead of going north to travel south, which seems counterintuitive, they would take the shorter 'background traffic-only' route which heads south, turning left at Ockeridge instead of right, passing through Wichenford and Monkwood Green, and on to Moseley. The latter is just as unsuitable as the others for heavy vehicles / traffic.

4.4.65 As far as I could ascertain, effects on landscape character and other receptors arising from the increase in volume of traffic and large vehicles using the proposed construction route were not assessed in the LVIA, the PEA or the AIA.

4.4.66 The various factors, features and likely effects identified in my own assessment are as follows:

i) It is inevitable that the increase in traffic along the lanes, much of which would comprise HGVs (and vehicle cranes), would result in damage to and / or loss of landscape elements and features, erosion / loss of the area's special qualities, and erosion / loss of a highly valuable natural / recreational / historic resource. Along the route there would be traffic noise, movement and lights, disturbance, mud / dust and various forms of pollution, all of which have the potential to adversely affect environmental and human health.

ii) In fact, there is already evidence of damage to ancient landscape features along certain lanes, some of which appears to be relatively recent. This could be due in part to the increase in

'white van' home deliveries, which began at the start of the Covid-19 pandemic and appears not to have abated since (I carried out a study of these matters for the Malvern Hills AONB Unit early last year, and we are continuing to monitor the situation).

iii) The lanes are very lightly-trafficked (probably because they are difficult to negotiate at the best of times, let along during bad weather). In fact, the high levels of tranquillity that can be experienced within these rural landscapes is one of the area's most special and valuable aesthetic qualities; yet, it was not considered in the LVIA.

iv) Here it is important to note that tranquillity is often assumed to be synonymous with lack of sound; however, in LCA / LVIA, that is not the case. 'Tranquil areas' should not be confused with 'quiet areas', which are defined by the European Environmental Noise Directive (END; 2002/49/EC) as '*areas… that are undisturbed by noise from traffic, industry or recreational activities*'.

v) In landscape assessments, the definition of tranquillity is usually as per *GLVIA3*'s glossary i.e. '*a state of calm and quietude associated with peace,* ***considered to be a significant asset of landscape***' (my emphasis).

vi) In Wales, the definition of tranquillity that has been adopted by both Welsh Government (Welsh Government 2012) and Natural Resources Wales (NRW 2016a) is '*An untroubled state, which is peaceful, calm and free from unwanted disturbances. This can refer to a state of mind or a particular environment. Tranquillity can be measured in terms of the absence of unwanted intrusions, or by a balancing of positive and negative factors. These include the presence of nature,* ***feeling safe****, visually pleasing surroundings and a relaxing atmosphere*'.

vii) I emphasise 'feeling safe' because in my opinion, the proposals for the construction route and one-way system are potentially dangerous.

viii) The applicant's assessments assume that at their narrowest, the lanes are c. 3m wide - narrow enough to require the implementation of a one-way system - most lorries are c. 2.5m wide excluding wing-mirrors, 3m wide with wing-mirrors. In fact, the majority of the lanes are less than 3m - I measured c. 2.5 - 2.7m widths in several places along the proposed route (see photos in Section 4.3).

ix) The lanes are well-used by walkers, cyclists and equestrians (for recreational purposes, and for travelling to and from school, places of work and worship, commercial outlets, hostelries and other key destinations) - probably due to the lack of traffic. Many are also winding. Even cyclists tend to travel slowly along the lanes, perhaps lingering to enjoy the variety of views and experiences along the way. However, it is unlikely that construction vehicle drivers would be treating the journey as a recreational experience, being more likely to want to get from A to B as quickly as possible.

x) Along many of the lanes, the speed limit is unrestricted (60mph): to me, it appeared likely that such speeds could be achieved at certain points, albeit for those unfamiliar with the route there are sudden blind bends and summits. Sunlight in the eyes / strobe effects of sun through trees / sun glinting off solar panels can also disorientate a driver. Thus, there must be a high degree of probability that at many places along the route, construction traffic could encounter stationary / slow-moving cars, pedestrians, equestrians and cyclists, and potentially, run into them.

xi) Also, I was advised that during recent works, some people flouted highways restrictions that had been put in place. And, as mentioned above, it is easy to lose one's sense of direction. Thus, it is not out of the question that construction vehicles could also collide with vehicles travelling in the 'wrong' direction.

xii) In either event, there are few refuges or passing places (these would be required - see below): at some blind bends they have been carved out of the hedgebank. Sections of grass verges have been damaged by vehicles using them to pass (or park up), hedges and trees have been damaged, and the road surfaces have deteriorated (physically and visually).

Vehicular damage to verges and hedgebanks along local lane

xiii) Many of the lanes are bound by hedgerows and / or trees (including woodland). Often, they are overhung by low branches - many are holloways, evidence of centuries - if not millennia - of use. During the site visits I noticed evidence of recent damage to overhanging branches, presumably caused by large vehicles.

xiv) Some lanes have relatively wide grassed verges and a ditch running along the hedgeline (probably historic hedge-ditch-lynchet systems), others are bound by near-vertical grassed banks.

xv) These are highly characteristic, high-value features which are highly susceptible to change - some are ancient, rare, and irreplaceable. All make important contributions to the area's character, special qualities and sense of place, and people's health and well-being and quality of life.

xvi) Many are designated and / or protected by planning policy / regulation, especially for their biodiversity value / nature conservation interest. Those which could be directly or indirectly adversely affected during construction, especially along the proposed route, include:

- SSSIs (Monk Wood and Monkwood Green, woodland and grassland respectively).
- Monkwood Green is Registered Common Land and Open Access Land (CRoW Act).
- Local Wildlife Sites (LWSs) (Monk Wood Complex, Monkwood Green, Grimley Brook, Ockeridge Wood).
- ASNWs (Monk Wood, Ockeridge Wood).
- Priority Habitat Inventory (PHI) sites (Deciduous Woodland, Lowland Meadows).

- Worcestershire Biodiversity Action Plan (BAP) habitats and species including hedgerows, woodlands, scrub, ancient / veteran trees, ponds, lakes, rivers, streams, grassland and road verges (verges near the proposed southern access and along both sides of the lane through Monk Wood are designated Roadside Verge Nature Reserves (RVNRs); it is possible that these habitats extend further east into the application site. Ideally, surveys should be carried out and effects assessed).

RVNR sign on verge adjacent site's proposed southern access point

4.4.67 WCC's Transport Planning and Development Management Team's 16th November 2021 response not only echoes the above, it raises additional concerns. For example, '*The Highway Authority also notes the open drainage ditches on the C2069 and U64005.* ***The applicant must demonstrate that these can and will be culverted at the site accesses and wherever passing bays are installed***' (author's emphasis)**.** The effects arising from this must be assessed as it could adversely affect water quality and biodiversity.

4.4.68 Also, the response explains that the visibility splays at the access points were established on the basis of a 30mph speed limit; however, the limit along the lanes is unrestricted, so it is likely that the splays would have to be wider. This would almost certainly require more hedge, verge and tree removal.

4.4.69 Furthermore, according to the response, the passing bays that would have to be created at certain points along the lanes would have to have sufficient forward visibility, which could also entail removal of vegetation.

4.4.70 Other issues relating to the proposed construction route the implications of which will require consideration include:

i) Economic effects: the extra miles that people would have to drive / cycle / ride could potentially adversely affect local businesses and trades. For example, people visiting the popular Pampered Ponies establishment from the south e.g. Sinton Green would face a round trip of 10km as opposed to the usual 5km, and along the way would experience the effects arising from construction / other traffic.

ii) Flooding, which occurs along the Sinton Green - Monkwood Green lane at / in the vicinity of the proposed southern access.

iii) Any weight limit restrictions on the bridges which occur along the route.

4.4.71 As the above features and factors were not considered in the applicant's assessments, no mitigation measures to avoid / remedy / reduce adverse effects - **some of which are potentially significant** - have been proposed. Notwithstanding this, in my opinion, many could not be mitigated, nor could they adequately be compensated for, given the rarity / antiquity of some of the features.

4.4.72 Some on- and off-site construction effects are likely to be permanent, lasting well beyond the scheme's planned 40-year lifetime - see also decommissioning below.

4.4.73 Certain types of vegetation along the construction route could potentially recover / grow back over time / be replaced; however, another concern is that the solar panels may be stolen / vandalised / damaged / reach the end of the industry's stated 25-year lifespan, and thus have to be replaced, entailing further construction activities and re-damaging slowly-recovering features.

4.4.74 When construction is complete, the site would become operational. Effects arising during this period are set out in Section 4.5.

DECOMMISSIONING

4.4.75 At the end of 40 years of operation, it is proposed that the site would be decommissioned. It is likely that during decommissioning, similar effects to those which arose during construction would occur.

4.4.76 Although the stated intention is to restore the land to its former use, it seems unlikely that the landowner / farmer would want to remove / restore the access points, for example, so they could remain an urbanising and detracting feature in the landscape (potentially, this could be dealt with by way of a suitably-worded planning condition should the scheme be approved).

4.4.77 Nor is it clear to me whether or not the substation would be removed.

4.4.78 Also, a decision would have to be made about whether or not new and uncharacteristic hedge and tree planting would also be removed and the historic field pattern restored: these matters are explained in the next section, but again it seems unlikely that the landowner / farmer would want to remove them. Furthermore, their removal could potentially give rise to adverse effects on flora and fauna.

4.5 Landscape effects during operation

4.5.1 Unless there is a requirement for interim construction activities / works (which there could well be - see above and below), it seems likely that once the scheme is operational, the amount of noise / disturbance / activity on and off the site would be relatively low, and sporadic. However, mechanical noise would emanate from the substations / invertor units / coolers / other equipment. Due to the low ambient noise levels and nature of the local topography, this is likely to be audible at certain locations, potentially adversely affecting receptors in residential properties and using nearby PRsoW - one public footpath is only c. 60m east of the main substation.

4.5.2 The majority of the effects arising from the operational development would be the result of the introduction of the various scheme elements and requirements described in the previous sections i.e. solar arrays (five separate areas with a combined total area of 21ha), security fencing, CCTV and lighting columns, signage, substations, invertors, transformers, cabins, cabinets, relay / control / metering rooms, storage units (various sizes, materials and colours), earthworks / berms, new / widened access points, access tracks, and hardstanding.

4.5.3 The operational effects would last for at least 40 years (unless an application was made to extend the scheme's lifetime). As mentioned above, although technically temporary, this is a very long time period, and for some, the effects are likely to be permanent.

MITIGATION, COMPENSATION & ENHANCEMENT

4.5.4 The mitigation and enhancement measures proposed by the applicant have been factored in to both the LVIA and my review.

4.5.5 It is important to ensure that the measures are both effective and appropriate in terms of landscape character and visual amenity, otherwise, the measures may in themselves give rise to adverse effects. They may also be in conflict with measures proposed in other topics: there are examples of where this has occurred in the applicant's submission - see visual effects in Section 5 below.

4.5.6 Unfortunately, the LVIA assessor has misunderstood the difference between mitigation, compensation and enhancement.

4.5.7 The difference between them is explained in *GLVIA3* paras. 4.21 - 4.23: in summary, mitigation measures are those which are specifically required to avoid / reduce levels of effects. They cannot be double-counted as benefits / enhancements / compensation. If mitigation is not feasible / appropriate, then compensation may be required. Enhancements are proposals that are not required to mitigate adverse effects, so they can be counted as a scheme benefit.

4.5.8 The confusion is clear in LVIA para. 5.4, which states, '*The **mitigation measures such as enhancing existing hedgerows** as well as planting new hedges and trees to assist in the screening of the development will reduce the magnitude of change…*', and in para. 5.24, '*The developer has provided an opportunity to introduce **mitigation measures such as increased planting and hedgerows to enhance and increase local biodiversity***' (my emphases).

4.5.9 Thus, **new hedgerows and trees have been proposed to mitigate adverse effects on views, but have been double-counted as scheme enhancements / benefits / gains in the landscape, heritage and biodiversity topics**.

4.5.10 Also, the *meadow grasses surrounding the panels* are in fact proposed ecological enhancements. LVIA para. 1.22 says that '*The **fields will be planted as lowland meadows to enhance its*** [sic] ***biodiversity** and the areas are between 10m wide at is narrowest and circa 50m wide in areas where this can be achieved. This is indicated on the Landscape Mitigation Plan which demonstrates the full extent of wildlife planting around the perimeter of the boundaries*'. However, the LVIA also includes the new meadows as mitigation measures (see for example LVIA para. 6.2 and LVIA Table 9).

4.5.11 *GLVIA3* para. 3.39 explains that '*Enhancement… is often referred to **incorrectly** as an outcome of the proposed mitigation measures - for example where planting is proposed to mitigate landscape and / or visual effects but will also achieve an enhancement of the baseline condition of the landscape*' (my emphasis), which is exactly what the LVIA has done.

4.5.12 As far as I could ascertain, all the mitigation measures in the LVIA are proposed to reduce effects on views and visual amenity; these are dealt with in Section 5. Evidently, since it was concluded - erroneously - that there would be no loss of or damage to landscape elements, features or qualities, no mitigation or compensation for that was considered necessary (given the rarity and antiquity of many of the features that would be lost, like-for-like compensation would not be possible).

4.5.13 No mitigation was proposed to reduce levels of adverse effects on landscape character, although in my opinion, it would not be possible to avoid, remedy or reduce the levels of the majority of the adverse effects on character which are likely to arise.

4.5.14 An example of the proposed mitigation / enhancement measures giving rise to adverse effects in themselves is demonstrated by the disruption to the ancient field patterns that would be caused by the applicant's proposal to create new field boundaries in certain places:

i) From Grimley Brook, the site's northern boundary would run eastwards, marked by a new hedge. On page 9, the PDAS says that '*The proposed development has taken the opportunity to reinstate an historic hedgerow along the northern boundary of Area 1*' (my Area 5). However, late-19th / mid-20th century maps, and a 1945 photograph contained in the CHBIA (Plate 8 - from Google Earth), show that the western section of the northern boundary was on a different alignment from that which is currently proposed. In fact, the lost boundary was created in the 12th century / earlier, when the fields were assarted, being part of the unusual pentagonal field pattern visible elsewhere on the site / in the vicinity. Given the boundary's historic significance, if a new hedge is to be planted, it should be on the original line.

ii) From the north-eastern corner of my Area 5, the northern boundary appears to follow existing field boundaries. It is not clear what form of boundary treatment is proposed along the eastern section which returns to the lane at the westernmost northern access point: no new hedge is shown on the MEP, but elsewhere, security fencing is shown. Whichever it is, the existing larger field would be subdivided.

iii) New hedgerows are proposed along the southern sides of Areas 5, 1 and 3. The Area 5 boundary would subdivide what is currently a single field. In fact, the field was historically subdivided on a different line, the southern section being orchard until the late 1800s. The Area 1 and 3 boundaries appear to be along the line of old field boundaries.

iv) A new field boundary with hedge is proposed along the northern edge of Area 4. Late 18th century maps show a complex arrangement of field shapes there, some likely to be remnant medieval strips. Although some of the old hedges no longer exist, others do, and are in relatively good condition. The new boundary would cut straight across the old arrangement, creating new subdivisions. As noted in Section 4.4, the security fence would be constructed within the RPA of T54, which is a Grade A2 mature English oak, with potential adverse effects.

v) Old hedgerows with escaped trees would have to be removed to accommodate the new access track, substations and other equipment / features. The proposed hedges around the substation would create a new field within the larger existing one.

4.5.15 Further disruption to landscape pattern would be caused at the proposed access points, with gaps of up to 40m in the roadside hedges to the north, and potentially, the 'rearrangement' of the line of a 160m-long section of ancient roadside hedge to the south.

4.5.16 New tree planting is proposed in two places: a) both sides of the new access track which starts at the north (western) access point and runs through the field west of Area 2, and b) around the main substation. In both places, the introduction of randomly-scattered trees into open pasture is highly uncharacteristic in this landscape (and its LCT) and would in itself give rise to adverse effects (here, free-standing trees are almost always either ornamental, or old field / trackway boundary remnants).

4.5.17 I note that the trees proposed to screen the substation are planted very close to the line of the existing overhead cables, so in future they may need to be pollarded.

4.5.18 It is not clear to me what landscape and / or visual effects would be mitigated by *sheep grazing within the development fields*.

4.5.19 Nor can mowing and / or grazing always reach under the lower parts of the panels, as shown in the photo overleaf.

Grassland management at solar farm

Weeds, left unmanaged, could become a problem for the panels

4.5.20 An '*Information board* [is] *to be added to explain developments and biodiversity improvements*'. The location is shown on the MEP as being at the western edge of array Area 4. I assume this is indicative, since there is no public access to that point. There is a publicly-accessible trail following the inner eastern side of Monk Wood from which that part of the site would be visible, but additional planting is proposed along the woodland edge to help screen views, and even if it was visible, it seems highly unlikely that the information on the board would be legible from the woodland path.

OPERATIONAL EFFECTS

4.5.21 The LVIA process involves assessing effects on individual elements and features, as well as the landscape resource as a whole.

4.5.22 The applicant's LVIA did not identify the majority of features / qualities that would be affected. It was also based on the assumption that there would not be any damage to / loss of the features that it did identify. Nor did it consider the majority of the operational scheme elements listed in Section 2, nor the nature and scale of the effects to which they would give rise.

4.5.23 LVIA para. 5.3 says that '*The magnitude of change to the landscape character types and areas will be* ***small*** *due to the relatively small portion of the character areas being effected* [sic]. ***The overall key characteristics will remain intact'***. Evidently, magnitudes of effect would be higher, since key characteristics would in fact be lost.

4.5.24 Para. 5.5 states: *The landscape features within the site will undergo a* ***medium*** *amount of change through the introduction of photovoltaic units over the fields.* ***There are no landscape features to be removed as part of the development'***.

4.5.25 As a result, unsurprisingly, the LVIA concluded (para. 7.4) that '*The assessment has determined that the likely significance of effects on the landscape will not exceed minor moderate* [i.e. **between minor and moderate adverse**] *in terms of the site, its setting and the broad landscape character and therefore the effects are not considered to be significant*' (see notes about significance above).

4.5.26 Incidentally, I note that nowhere does the LVIA state whether effects are positive / beneficial or negative / adverse; this is another flaw and is dealt with in Section 5.1; however, given the stated magnitudes of impact **it is evident that all effects would be adverse**.

4.5.27 As explained in Section 4.2 above, judgements about levels of effects on landscape character are arrived at by combining levels of receptor sensitivity with levels of predicted magnitudes of change. The LVIA concluded that the level of sensitivity of the receiving landscape is **between medium and high**, and that during the period prior to the proposed mitigation measures becoming effective (c. 10 years - see below), the magnitude of effect of the scheme would be '**medium**'. Para. 5.9 says that '*Therefore, the significance of effects will be* ***moderate*** *at the operational stage*'.

4.5.28 Paras. 5.10 - 11 go on to explain that '*the landscape treatments introduced to the boundaries will mature enough after 10 years to provide effective mitigation. The magnitude of change will be* [i.e. would reduce to] *small and therefore* ***the residual effects will be minor moderate***'.

4.5.29 There are several problems with the above premise.

4.5.30 Firstly and most importantly, it demonstrates that as well as having confused mitigation and enhancement, the LVIA assessor has not understood the difference between landscape and visual effects, and as a result, they have been conflated. LVIA para. 5.4 says that '*The mitigation measures such as enhancing existing hedgerows as well as* ***planting new hedges and trees to assist in the screening of the development*** *will reduce the magnitude of change to very small leading to minor* [adverse] *residual effects*'.

4.5.31 Effectively, it has been assumed that measures proposed to reduce levels of effects on views would also reduce effects on landscape character, which they would not. This is a fundamental error. As *GLVIA3* makes perfectly clear throughout, landscape and visual effects must be assessed separately. **Effects on landscape character can arise from change / new development regardless of whether or not there anyone can see it**. ("*Just because you can't see something doesn't mean it's not there*.")

4.5.32 Thus, the screen planting would not '*reduce the magnitude of change to very small leading to minor* [adverse] *residual effects*': during operation, effects on character would remain at the same level from start to finish.

4.5.33 Incidentally, I note that LVIA para. 3.10 states that '*the proposed development will not be visible to the majority of the cultural receptors*' so they would not be affected by the proposals, but as with landscape character, effects on a heritage asset's setting / associations may occur regardless of whether or not there is intervisibility between the asset and a proposed development.

4.5.34 Secondly, for the reasons stated previously, in my opinion, the site's level of sensitivity is 'high', not medium to high.

4.5.35 Thirdly, LVIA Table 3 sets out the criteria for levels of magnitude of effect. Those for 'medium' are '*Partial removal of, or moderate changes to the characteristics of the landscape element in question. Also applies to complete removal that can be suitably mitigated against*'. However, given the extent of the removal that would occur, and the fact that in the majority of cases mitigation is either not feasible or would not be effective, the criteria for a large magnitude of change would be more appropriate, i.e. '*Permanent removal of, or a significant change to, the characteristics of the landscape element in question. Limited scope for replacement, reinstatement or other mitigation*'.

4.5.36 Fourthly, the combination of a medium to high sensitivity receptor and a medium magnitude of effect should theoretically result in a level of effect that is higher than moderate.

4.5.37 Finally, on the basis of a high sensitivity receptor and a large magnitude of change, **the level of effect on landscape character as a whole would be 'substantial' adverse** (see LVIA Table 4).

4.5.38 According to LVIA para. 4.10, '***A significant effect is a Very Severe, Severe, Substantial, Major or Moderate effect***'.

4.5.39 My own assessment concluded that the operational effects on landscape character would indeed be **substantial adverse**. In summary, they comprise:

i) Replacement of pasture within rural landscape displaying considerable natural beauty, tranquillity and time depth, with industrialising / urbanising, alien features over a very large area, uncharacteristic here - no existing reference to the type of development proposed within the contextual landscapes.

ii) Extent of loss of / damage to high-value landscape elements, features and landcover fully experienced. Many ancient, some rare / possibly unique. Those found on and around the site are very good representations of the host NCA's and LCTs' key characteristics.

iii) Disruption of ancient field / landscape patterns.

iv) Erosion / loss of area's special, aesthetic and perceptual qualities. Change in character from rural, ancient, gentle and very lovely landscape to one which is industrialised, engineered, alien and ugly.

v) Loss of / reduction in function of individual features affecting landscape / ecosystem as a whole.

vi) Disruption to wildlife including protected species.

vii) Loss / erosion of biodiversity and natural capital.

viii) Deterioration of soil quality / permanent loss of soil (ALC 3a and 3b) - see below.

ix) Bright colours and glint / glare from reflective surfaces (see visual effects in Section 5).

x) Erosion of people's mental / physical health and well-being, and quality of life.

4.5.40 Regarding effects on soil, there is evidence that UK solar farms do considerable damage to the soil through compaction and turbation during construction and increased runoff during construction and operation. As noted previously, these are valuable historic landscapes: they, and their soils, have undergone surprisingly little change in the last few hundred years.

4.5.41 Another matter that must be considered is the requirement for maintenance and management during the operational period. The applicant's TAS states that '*there would be no staff based at the site and movements would be limited to periodic routine maintenance activities, such as to undertake maintenance of vegetation, washing of the panels and routine maintenance checks. The visits would typically be made by Light Goods Vehicles (LGVs) and it is expected that approximately 12 trips per year would be required*'.

4.5.42 However, I am reliably advised that some solar farms require maintenance visits as often as once every two weeks. This is due to problems such as a) birds dropping stones on panels entailing regular replacement; and b) both birds' guano and lichen building up on the panels' surfaces and reducing efficiency, requiring regular washing. Also, solar panels have a limited lifespan so presumably, after 20 - 30 years, they would all need to be replaced.

4.5.43 This means that some of the effects that would arise on- and off-site during construction and decommissioning (movement, noise, activity, disturbance, light, damage to vegetation and so on)

would also be experienced to varying degrees at regular intervals during the 40-year operational period.

4.6 Landscape character effects summary

4.6.1 The LVIA contains numerous errors, flaws and omissions. For example:

i) The applicant's LVIA (and other environmental studies) did not identify the majority of features / elements / factors / qualities that would be directly and / or indirectly affected by the proposed development, some of which are of very high value.

ii) The studies were also based on the erroneous assumption that there would not be any damage to / loss of the features that it did identify. Nor did it consider the majority of the operational scheme elements, nor the nature and scale of the effects to which they would give rise.

iii) Effects arising during construction, especially along the construction route, were not assessed.

iv) As high-value features were not identified and effects on them were not assessed, no mitigating measures were proposed.

v) The difference between mitigation and enhancement was not understood, meaning that the new hedgerows and trees proposed to mitigate adverse effects on views were double-counted as scheme enhancements / benefits / gains in the landscape, heritage and biodiversity topics (I do agree with the LVIA's conclusion that there would not be any beneficial landscape effects).

vi) Certain proposed mitigating measures are uncharacteristic and inappropriate in the landscape.

vii) Landscape and visual effects were conflated, resulting in the false assumption that screen planting can reduce levels of adverse effects on character, which it cannot.

4.6.2 As a result of the above, predictions of levels of effects were underestimated, and would certainly be higher than reported.

4.6.3 My own assessment concluded that during both construction and operation, **the proposed development would give rise to very high ('significant') levels of adverse effects on the character of the site and its contextual landscapes**, the majority of which could not be mitigated.

5. Effects on Views and Visual Amenity

5.1 Introduction

5.1.1 As explained in the previous section, it is very important to understand the difference between landscape and visual effects. Although closely interrelated, they must be assessed separately: a landscape's character can be adversely affected by change / development regardless of whether anyone can see it or not. Unfortunately, the two are often conflated, as was the case in the applicant's LVIA.

5.1.2 The process for assessing levels of effects on views / visual amenity is the same as for character, i.e. levels of visual receptor sensitivity are combined with the predicted visual magnitudes of effect likely to arise as a result of a proposed development being built and operated.

5.1.3 Visual assessments always rely heavily on the findings of the baseline LCA, which describes and analyses the various elements, features, factors and qualities present within the study area which are visible and / or which can be experienced and / or perceived in some way. It is important to note that often, the meaning / value of what one is looking at is not obvious on the ground - for example designated wildlife sites, scheduled monuments, or views painted by well-known artists.

5.1.4 The various features and qualities identified in the LCA inform the nature and quality of the view, and are factored in to judgements about visual value and susceptibility to change. The nature of a view is also influenced by matters such as how well-cared for and / or well-used the landscape is, and what its character tells us about the area's sense of place / local distinctiveness.

5.1.5 The visual assessment takes into account the various landscape functions noted during the LCA, and identifies visual functions as well[7].

5.1.6 The numbers of people experiencing a certain view is a factor, as is their reason for / purpose of being there (for example, some visual receptors may live in residential properties; some may use various PRsoW as a recreational resource, or for commuting; some may be visiting the area specifically to enjoy its special landscape qualities). The level of the individual's visual receptor sensitivity is established by combining their susceptibility to change with the value of the view.

5.1.7 I note that the LVIA scoped out certain VPs frequented by high sensitivity receptors on the basis of there currently being existing intervening screening vegetation. Para. 3.4 says that '***There are a number of other long range promoted routes within the study areas*** *as illustrated on Figure 1. However, the field survey demonstrated that there were* ***little or no views of the site from these routes due to existing vegetation*** *and landform or the distance was too great to distinguish the site. These potential receptors are therefore scoped out of the assessment'* (my emphases).

5.1.8 However, increasingly, visual effects assessments are carried out on the basis of a 'vegetation-free' scenario (see next section). These days, as a matter of course I do not recommend relying on either existing or proposed vegetation to screen views for a number of reasons, including:

i) Many LVIAs including the applicant's base and report judgements about levels of effects on summer views when vegetation is in full leaf, simply noting that 'effects are likely to be higher in winter'. For example, at para. 1.8, the applicant's LVIA says, '*The screening effect of the deciduous trees, hedgerows and under-storey shrubs will decrease during the winter. However the density of the extensive surrounding vegetation will mostly retain the screening effects during the winter months*'; para. 5.29 states that at one viewpoint (VP) there are '*intervening hedges and*

[7] Interestingly, nowadays, the concept of 'beauty' is inextricably linked to 'good health' and resultant 'happiness', and it is widely recognised that if a landscape (or ecosystem, or an individual feature) is healthy and performing important functions, then it is intrinsically 'beautiful'. See for example the Building Better, Building Beautiful Commission (BBBBC)'s January 2020 *Living With Beauty* report, which was probably partly responsible for derailing the government's previously-proposed (and rather unpopular) planning reforms.

mature trees… therefore there will be little to no visibility of the development especially in summer months. There may be occasional glimpsed views during winter months when the deciduous vegetation has dropped it leaves'. In fact, some of the hedges / tree belts in the area including on the site are overgrown and thin, with relatively clear views through in winter.

ii) Here in the English Midlands, deciduous vegetation is often leaf-free between late October and late April, i.e. **half the year**. **The LVIA should have reported levels of effects during winter, not summer - or both**.

iii) The uncertainty of existing and proposed vegetation's long-term survival:

- Old age, deliberate (authorised / unauthorised) removal, pests, diseases, pollution and accidents can result in decline and loss - native trees and hedges in particular are highly vulnerable to change. In the 1970s, Dutch elm disease eradicated more than 25 million elms in the UK (and 97% of elms in France), which irrevocably changed the landscape and had adverse implications for biodiversity. Today, there is clear evidence of the devastating effects of acute oak decline, oak processionary moth, ash dieback, horse chestnut canker, the Asian longhorn beetle and *Phytophthora*, amongst others.
- In some cases, the nature of the existing screening vegetation may result in the conclusion that it is likely to remain in place for several years, if not the lifetime of the proposed development (which in this case would be 40 years). For example, it may comprise dense, mature regenerating woodland so should have a degree of longevity / permanence (for example, Monk Wood). In other cases it may be a thin, overgrown hedge which will need lowering / laying in future (for example on the site and along the lanes on the site's periphery).
- Regarding proposed screening vegetation, the species selected should be resilient to pests, climate change and so on. Good management is crucial, especially during the early years when plants are most likely to struggle to establish.

5.1.9 The applicant's recommendations for / assumptions about the management of existing and proposed hedges within and on the perimeter of the site are a good example of conflict arising between mitigating measures proposed in different topics, noted in Section 2.4 above.

5.1.10 At certain VPs, in order to fully or partially screen views of the panels, the LVIA states (para. 6.2) that the proposed hedges would be allowed to grow to, and would be managed at, a **height of 3m**, which would be achieved around ten years from planting. Also, if lower than 3m, existing hedges would be allowed to grow to that height where necessary for screening purposes.

5.1.11 However, EEMMP para. 6.13 states that the aim for existing and proposed native species hedges is that they '***will be maintained at 150cm high***'.

5.1.12 In fact, allowing hedges to grow taller than 1.5 - 1.8m means they become leggy and gappy at the bottom, resulting in adverse effects on character, views, and biodiversity.

5.1.13 Clearly, at some point, a decision will have to be made about which should take priority - biodiversity or visual amenity: either ecological benefits will be smaller than envisaged, or levels of adverse visual effects will be higher (also bear in mind that the hedges would give rise to adverse effects on landscape character due to disruption of the historic field patterns - see previous section).

5.1.14 As mentioned above, the LVIA does not state whether landscape and visual effects are positive / beneficial or negative / adverse (although given the stated magnitudes of impact, it is evident that **all effects would be adverse**).

5.1.15 This is yet another flaw. *GLVIA3* is clear about the matter. Para 3.22 explains that '*in LVIA, thought must be given to whether the likely… effects… are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity*'; para. 3.45 (bullet on

page 46) says that '*All types of effect should be identified, and* ***for each effect a judgement should be made about whether it is positive / beneficial or negative / adverse***'; para. 5.37 says, '*One of the more challenging issues is deciding whether the landscape effects should be categorised as positive or negative… **An informed professional judgement should be made about this and the criteria used in reaching the judgement should be clearly stated.** They might include, but should not be restricted to: i) the degree to which the proposal fits with existing character; ii) the contribution to the landscape that the development may make in its own right, usually by virtue of good design…*'; para. 6.29 says that '*As with landscape effects, **an informed professional judgement should be made as to whether the visual effects can be described as positive or negative** (or in some cases, neutral) in their consequences for views and visual* amenity' (my emphases).

5.1.16 Finally, whilst LVIA / LVA is an objective, evidence-based technical process, it is often necessary to consider subjectivity, particularly in relation to alternative energy projects, which can be controversial. Clearly, some people perceive solar panels and wind turbines as being beneficial and sustainable features, so their presence in the landscape is welcomed, whereas others find them highly industrialising, disturbing, intrusive and alien. Of course, a great deal also depends on context and the character of the receiving landscape.

5.1.17 The LVIA mentions subjectivity in para. 4.16. It states that '*Visual impacts may also either be adverse (negative), beneficial (positive), or neutral (of no material effect). This is a **subjective judgment based on the individual perceptions of the assessor** and is not directly related to significance of effect*' (my emphasis).

5.1.18 Notwithstanding the LVIA's error about 'significance', this statement is simply **not correct**. An LVIA assessor should **never** make subjective judgements that reflect their own personal opinions / tastes / beliefs. The assessor **must** adopt an objective approach, by a) assuming the worst-case scenario i.e. the receptor finds all or part of a scheme objectionable, so levels of effects are assessed accordingly, and b) assessing effects arising from each of the scheme element/s in a technical and objective way - for example, 'a wind turbine is a tall man-made structure with moving parts', which may or may not be characteristic in the receiving landscape, and may or may not be able to be accommodated without giving rise to unacceptable levels of landscape / visual / sensory effects.

5.1.19 The above matters are explained further below where relevant.

5.2 Visual receptor sensitivity

5.2.1 LVIA Table 5 sets out the levels of visual receptor sensitivity which have been used as the basis for judgements about levels of visual effects.

5.2.2 Unfortunately, it does not provide the levels of visual value and receptor susceptibility to change which would have been combined in order to arrive at this conclusion (indeed, there is no analysis of either in the LVIA). Thus, it is not possible to know whether a 'medium' sensitivity receptor is the result of the combination of 'high' visual value and 'low' susceptibility to change, or if both are 'moderate' - the difference is material.

5.2.3 The LVIA considers the level of sensitivity of 'recreational receptors' (i.e. people walking along public footpaths) to be '**between medium and high**' (on a 5-point scale from 'very low' to 'very high'). However, I would categorise such receptors as being of '**high**' sensitivity, given the importance of the recreational resource to the local community and visitors - this would accord with the LVIA's criteria for 'high' which include '*Public viewpoint in a recreational context with the expectation of a rural outlook. A valued community view…*'.

5.2.4 The sensitivity of 'transport' receptors i.e. people travelling along rural lanes is categorised in the LVIA as 'low', presumably because it assumes they would be in motorised vehicles and the purpose of the journey would not be for recreational purposes but for commuting, getting to school and so

on (which reflects my own criteria for receptors with 'low' susceptibility to the type of change proposed i.e. *People using main roads, rail corridors, infrequently used / inaccessible public rights of way and likely to be travelling for a purpose other than to enjoy the view*).

5.2.5 In fact, because there is so little traffic and they are so quiet and pleasant, the lanes on the periphery of and in the vicinity of the site are regularly used for walking, cycling and horse-riding. Also, it cannot be assumed that everyone who is driving a car is not travelling for recreational purposes / to enjoy the scenery and other sensory experiences available along the way. In fact, for various reasons, they may not be able to walk well, or at all.

5.2.6 Thus, the level of sensitivity of receptors travelling along the lanes for recreational purposes is the same as those using public footpaths ('medium to high' according to the LVIA, and 'high' according to my criteria).

5.2.7 LVIA Table 5 categorises residential receptors as 'medium' sensitivity receptors. Again, the problem is that the route to this judgement is not explained (neither levels of visual value and susceptibility to change nor the justification for those conclusions are provided).

5.2.8 My own criteria categorise residential receptors' level of susceptibility to change of the type proposed as 'high' (on a 5-point scale). In this case, I consider the level of visual value of many of the views from residential properties to be at least 'moderate to high', therefore in my opinion - and having applied professional judgement - the sensitivity level should be 'high'. Indeed, *GLVIA3* para. 6.33 states that '*the visual receptors most susceptible to change are generally likely to include… residents at home*'.

5.2.9 Also, the LVIA states that the 'medium' level of residential receptor visual sensitivity only applies to people with '*private views from principal living spaces*'. It is not clear what is meant by a 'principal living space', which could be upstairs, downstairs or a garden annexe. When carrying out LVIAs / LVAs, I include people in all parts of their homes and gardens as residential visual (and sensory) receptors; I then assess whether or not their views would be affected, and if so, how.

5.3 Visual effects overview

5.3.1 The character of the site and its contextual landscapes are described in detail in Section 4.3. The list of scheme elements is set out at para. 2.4.2, including proposed mitigation / enhancement. The nature of effects is set out in Section 4.2, landscape effects during construction / decommissioning in Section 4.4, and landscape effects during operation in Section 4.5. The information is summarised below for clarity where relevant.

5.3.2 The developed site's Zone of Theoretical Visibility (ZTV) is shown on LVIA Figure 7. The title of the drawing is *3km Study Area with Visual Barriers*, which is indicative of the associated problems.

i) Regarding the study area, as mentioned in Section 4.3 above, the extent of the LVIA study area boundary was set at far less than it should have been given the likely extent of visual effects (**3km from the centre of a site which is up to c. 1.3km long**). Even small-scale changes in the landscape can give rise to high levels of adverse visual effects: those arising from movement, contrasting colours and glint / glare can be experienced from many miles away.

ii) An example of the high degree of visibility of a small amount of movement within an otherwise still landscape is the single white wind turbine lying c. 15km east of the Malvern Hills. It is not only visible with the naked eye, its moving parts draw the eye as well.

iii) Glint and glare are phenomena which can give rise to significant adverse visual effects and negatively affect people's quality of life and well-being. They are also known to distract motorists and pilots. Glint is a momentary flash caused when sunlight hits a smooth, glassy surface such as a solar panel. Glare is diffused light caused by the reflection of the sky on

smooth, glassy surfaces; it is less intense than glint, but the effect may be experienced for long periods throughout the day.

iv) The image below is an example of the effects of glint / glare. It shows two modestly-sized houses (constructed in c. 2018) which lie c. 3km from an elevated viewpoint on the Malvern Hills within the AONB, within its setting. Instead of using matte roof tiles as recommended, the developer used composite instead of natural tiles (the effect can also be seen on Google Earth).

Effect of light on reflective surfaces (roof tiles)

v) This was a catalyst for the AONB Partnership's 2019 publication *Guidance on how Development can Respect Landscape in Views* (to which I contributed). The guidance also highlights the visual effects of light on standing water (image overleaf).

Effect of light on reflective surfaces (still water)

Figure 13 Surface of water body 'broken up' by mature vegetation

vi) Although I have experienced the phenomena, which are unpleasant at a distance and highly disturbing / disorientating at close quarters, I do not carry out technical glint / glare effects assessments.

- **MHDC should ask the applicant to produce an assessment of the effects of glint and glare on highway safety and residential / recreational amenity. The assessment should be carried out by a suitably-qualified expert in the subject in accordance with guidance / best-practice.**

vii) In addition, the AONB guidance illustrates a) the high degree of visual permeability of certain forms of intended screen planting even in the summer months and b) the adverse visual (and landscape) effects to which uncharacteristic forms of vegetation can give rise (see image overleaf).

Mature screen planting (Lombardy poplar) at polytunnel development

Figure 20 Single line of trees of one species helps to screen polytunnels but is uncharacteristic in the local landscape

viii) Regarding the ZTV plan title's 'visual barriers', as well as topography and built form (which is reasonable, although some buildings may not be permanent), the visual barriers include existing belts and blocks of woodland (assumed to be 15m high, although they could potentially be higher).

ix) The locations of the woodlands were taken from the OS OpenMap LocalTM dataset; however, some of the woodlands are plantations, so may either have been removed since the data was gathered, or may be removed within the development's lifespan.

x) Also, for the reasons set out above, a) it is not safe to rely on vegetation to screen, and b) in many cases, the screening effects are only experienced for six months of the year.

- **MHDC should ask the applicant to submit a new ZTV plan that a) covers at least a 5km study area, and b) does not include vegetation**

5.3.3 In fact, the application site does enjoy a certain degree of visual containment by topography (by built form to a much lesser degree since in many places settlement is very scattered). For example, a series of ridgelines between the site and the Grimley Brook / A443 corridor to the east screen all but near-distance (up to c. 500m) views of the site, and it is highly unlikely that the developed site (i.e. with c. 3m high solar panels, substations etc. in place) would be visible from east of the ridges.

5.3.4 The site also currently enjoys a relatively high degree of visual containment by dense, mature vegetation, predominantly in the form of Monk and Ockeridge Woods to the west and north west, although Woodbury Hill Camp Iron Age hillfort (scheduled monument) c. 6km to the north west is intervisible with the site in places.

5.3.5 The two small woodland blocks between Monk Wood and Birchall Green Farm also currently provide localised containment, screening certain parts of the site from certain views.

5.3.6 The contribution made to containment / screening by existing hedges varies considerably, depending on their height. Height is determined by a) the purpose of the hedge and b) its level of management.

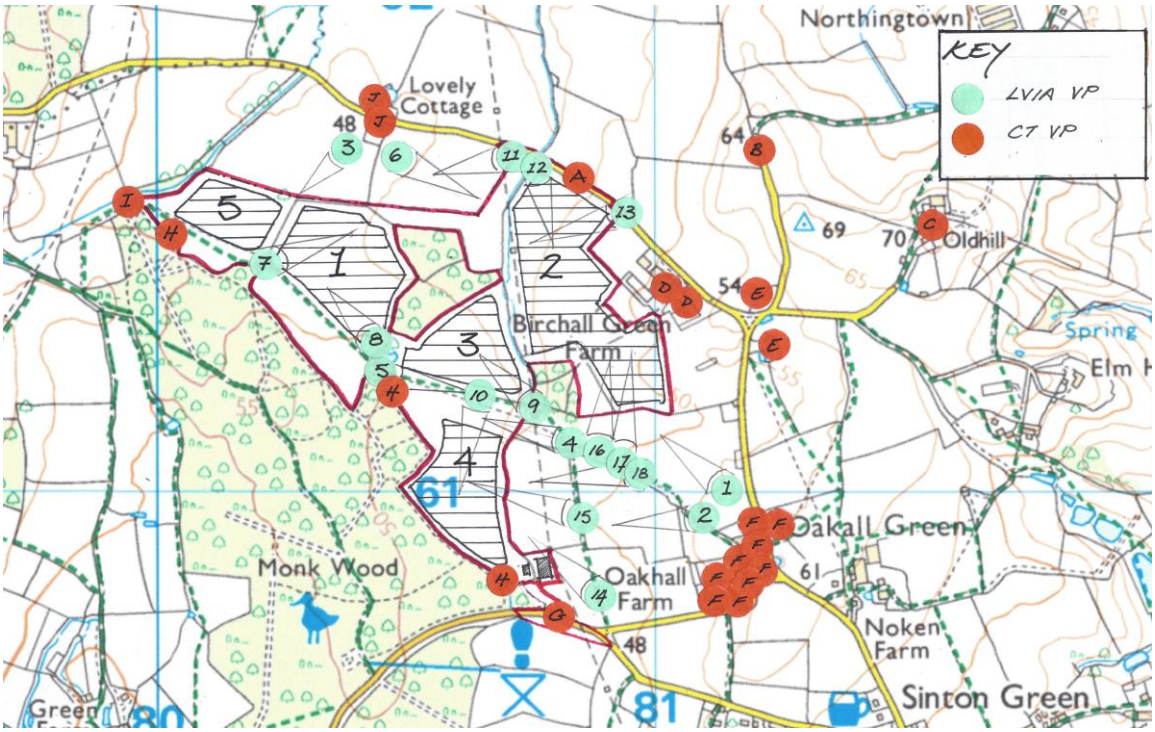
5.3.7 On / in the vicinity of the site, some hedges appear not to have been regularly managed for many years, being tall, thin and leggy / gappy as a result; others show signs of fairly regular management, having been allowed to grow on for one or two seasons or more, sometimes up to 2 or 3m in height, before being trimmed back down to the most commonly-adopted boundary hedge height of c. 1.5m.

5.3.8 Although parts of the site could not be visited as they are not publicly-accessible, the walk-over and visits to the surrounding areas confirmed that as it is relatively low-lying (c. 50m AOD), the developed site would almost certainly be intervisible with higher ground, for example the Malvern Hills to the south west (only glint / glare is likely to be an issue at this distance), Woodbury Hill Camp (scheduled monument) to the north west, and Abberley Ridge to the north west. There is also the potential for intervisibility with high-value landscape features on / below Abberley Ridge, including the Clock Tower and Witley Court / Gardens, and thus for adverse visual effects on receptors at those locations.

5.3.9 The LVIA identified 18 near-distance VPs from which the proposed development would be visible, and assessed effects on visual receptors at each of them. My own assessment identified others - see Section 5.5.

5.3.10 For ease of reference, on an OS map extract I have marked both the LVIA's VPs and the additional near-distance VPs which I found (below, with larger version in Appendix CT-A: Near-distance viewpoint location plan).

Near-distance viewpoint location plan



5.3.11 All of the LVIA's VPs are either within the site or on its boundaries. As mentioned above, the LVIA assessor decided that middle- and long-distance visual receptors could be 'scoped out' of the study on the basis of i) distance from the site - despite the fact that the application site is larger than the nearby settlement of Hallow, and the effects of glint / glare can be experienced many miles away from the source; and ii) intervening screening vegetation - see previous note about not placing reliance on vegetation to screen views.

5.3.12 Unfortunately, the way the LVIA has been structured makes it very difficult to establish precisely what levels of effects at each of the VPs are predicted to be.

5.3.13 For example, LVIA Table 9 summarises the conclusions drawn about levels of visual effects, but only as experienced by the different types of receptors (recreational, residential etc.) at several VPs, not as experienced at each numbered VP individually.

5.3.14 Also, the detailed / technical effects assessment information is scattered throughout the LVIA text - for some reason, visual effects arising at most of the 18 VPs are firstly described in the visual baseline section, with reference to the accompanying computer-generated images (CGIs) / photomontages (LVIA Appendix B) which show what the development would look like during operation. Visual effects at some of the VPs, but not all, are also described in LVIA Section 5. This is confusing (although I did eventually manage to extract the information relevant to effects at each of the LVIA's VPs - see below).

5.3.15 Furthermore, the written explanations in the LVIA text are extremely brief, and the CGIs / photomontages in LVIA Appendix B do not include any explanatory text about levels of receptor sensitivity or magnitudes of effect, as one would normally expect in an LVIA / LVA.

5.3.16 The combination of the above means that it is difficult if not impossible to understand the reasoned justification for the judgements, and how the conclusions were drawn.

5.3.17 Finally, for some reason, CGIs were only produced for five of the LVIA's 18 VPs (1, 2, 4, 5 and 6). It would have been much more helpful to have had CGIs for all the VPs, especially as a) the five which have been selected do not necessarily represent the worst-case scenario, and b) they simply do not allow a complete understanding of the scale of development and the full extent of visual effects.

5.3.18 The main problem is that several VPs - including those without CGIs - are in the same / adjacent locations, but the views from them are aligned in different directions. In my opinion, this is highly misleading: even though the CGIs are panoramic views, the views shown / described are only part of what would in fact be far wider views of the development.

5.3.19 For example, LVIA VP2 is near the eastern end of the public footpath which crosses the site. The view is looking west / north west along the footpath. From the CGI and text in LVIA para. 3.13 (visual baseline section but describing effects), one might assume that only arrays in Areas 3 and 4 would be visible from VP2; however later, in para. 5.26, one learns that at least part of Area 1 is likely to be visible. And then, one realises that at VP2, one is as likely to be looking north west as south west - towards array Area 2, which is closer to VP2 than Area 4.

5.3.20 The LVIA concluded that levels of residual visual effects at VPs 1 and 2 would be 'moderate' (adverse). Clearly, had judgements about effects likely to arise at VPs 1 and 2 been based on the change to the view as it would be experienced in reality and not just part of it, levels of effects at both VPs would be much higher (notwithstanding this, I note that the LVIA's threshold for a 'significant' effect is 'moderate').

5.3.21 This is discussed further in Section 5 below; however, to me this is a clear illustration of the true size of what is proposed - the extent of the visual envelope is so large that it is difficult to present as a single image.

5.4 Visual effects: construction route

5.4.1 The main off-site effects of construction / decommissioning would arise from use of the local road network by construction and other (local / passing) traffic (as mentioned previously, in my opinion, the proposed one-way system is highly unsustainable, and potentially dangerous).

5.4.2 The route and predicted numbers of vehicles are set out in the list at para. 2.4.2. Effects on the various landscape elements, features, factors and qualities present along the route are described in Section 4.4, all of which have the potential to adversely affect environmental and human health as well as views and visual / social amenity. The issues of relevance to the latter include:

i) traffic noise, movement, lights, smells;

ii) reduction in existing high levels of tranquillity including sense of safety;

iii) damage to and / or loss of highly valuable landscape elements and features such as roadside grass verges / hedges / trees;

iv) erosion / loss of area's special qualities

v) erosion / loss of highly valuable natural / recreational resources.

5.4.3 In my opinion, given their nature and scale, it is unlikely that levels of the majority of the adverse effects arising could be avoided or reduced by mitigation.

5.4.4 As noted above, people who drive, walk, cycle and / or ride horses along the lanes for recreational purposes are categorised as 'high' sensitivity receptors.

5.4.5 Magnitudes of effect would vary along the route depending on the individual environmental and human receptors and the types of effects arising. Overall, given the nature, scale and extent of the likely effects, according to the criteria for magnitudes of visual effect in LVIA Table 6, the magnitude of effect would be 'large' (i.e. '*Partial loss or alteration to one or more key elements, features or characteristics of the view. The introduction of prominent elements of a scale, form and colour distinct from the surrounding landscape*').

5.4.6 According to the Visual Effect Significance Assessment Matrix in LVIA Table 7, the combination of a 'high' sensitivity receptor and a 'large' magnitude of effect theoretically results in a **'substantial [adverse]'** (see above note about the LVIA not having stated whether effects are positive or negative) **residual level of visual effect**.

5.4.7 Although (in MHDC's opinion) the proposed development did not require EIA, the LVIA appears to have assumed that it did - see Section 3. LVIA para. 4.17 advises that '*A significant effect is considered to be a very severe, severe, substantial, major or moderate effect*'. Thus, had the scheme been the subject of EIA, **the visual effects arising from use of the proposed construction route would have been categorised as 'significant (adverse)'**.

5.4.8 Also, it is likely that a) some of the effects would extend beyond the 40-year lifetime of the proposed development; b) similar effects would occur again during decommissioning; and c) similar effects would occur should panels need replacing / other works have to be carried out during the operational phase.

5.5 Visual effects: on-site construction / decommissioning and operation

5.5.1 The LVIA did not consider any of the visual (or other sensory / experiential) effects likely to arise on site during construction / decommissioning. A period of up to one year has been allowed for each, although this partly depends on factors beyond the applicant's control (such as supply of materials and the weather), and the duration could be less, perhaps up to six months.

5.5.2 The on-site construction activities / features described in Section 2 would be visible from the same viewpoints and view routes as those from which receptors would experience visual effects during operation, so they are included in this section for ease of reference.

5.5.3 As far as I could ascertain, the LVIA only assessed visual effects during operation arising from i) the solar arrays, ii) the main substation, iii) the proposed screen planting (hedges and trees), and iv) the proposed biodiversity enhancement measures (meadows).

5.5.4 There is certainly no mention of, or assessment of the visual effects arising from, the other scheme elements, which include CCTV and lighting columns, signage, customer substation, invertors,

transformers, cabins, cabinets, storage units, earthworks / berms, new / widened access points, access tracks, and hardstanding.

5.5.5 Where relevant, these are noted in the review of visual effects below.

5.5.6 Cumulative visual effects were not considered either, which they should have been (see Section 2.1).

5.5.7 In the following section, the visual effects likely to arise during construction and operation at each of the LVIA's 18 VPs are considered in turn, along with an assessment of the visual effects likely to arise at certain VPs not included in the LVIA.

LVIA VP1

5.5.8 LVIA VP1 is on private land (presumably the applicant's), in a field north west of the cluster of eight or so residential properties at Oakall Green, at the eastern end and just north of the public footpath which crosses the site. A CGI has been produced for this VP.

5.5.9 The LVIA states that it is representative of the views likely to be experienced by a) recreational receptors walking along that section of the footpath, and b) residential receptors in the adjacent houses (although it is at a lower elevation - see below). Given its location, it could also potentially be representative of views of the developed site from the lane to the east, which could well be available should the hedge be lowered in future.

VP1 recreational receptors

5.5.10 Recreational receptors at / in the vicinity of VP1 would experience the full range of effects likely to arise during construction and decommissioning (and possibly in between), which would cover the whole site, not just the array areas, and which could last for up to twelve months. As mentioned above, as well as adverse visual effects, receptors would also experience loud noise (especially from piling), odours, dust, light and so on.

5.5.11 The operational view illustrated and assessed in the LVIA is looking in a west / north-westerly direction, and according to LVIA para. 3.12 (and the CGI), '*The solar panels of parcel 2 will be visible to the right of the view*'.

5.5.12 The LVIA concluded (para. 5.27) that at the start of the operational phase and for the next ten years or so, '*the magnitude of change will be **medium*** **[adverse]** *leading to a **major*** **[adverse]** (i.e. 'significant') *significance of effects*'. Para. 5.28 explains that '*the proposed mitigation will be effective after ten years reducing the magnitude of change to **small*** **[adverse]** *and the residual effects will be **moderate*** **[adverse]**' (i.e. still 'significant') (mitigation is discussed below).

5.5.13 However, if a viewer turned slightly to the south west, they would also see Area 4, and possibly Areas 1 and 3 as well. The VP nearest to VP1 that looks in a south-westerly direction towards the other arrays is VP18 (also on the footpath), from which the LVIA also predicts (see LVIA Table 9) that levels of visual effects would be '**major adverse**', reducing to a residual '**moderate adverse**' after 10 years or so.

5.5.14 As noted in Section 5.3 above, the LVIA should have judged the effects likely to arise at this and other VPs based on the change to the view as it would be experienced in reality, and not just on part of it. Clearly, when aggregated, the magnitudes and overall levels of effects at VP1 would be higher than stated.

5.5.15 The panels would industrialise what is currently a very fine view towards Woodbury Hill Camp lying c. 6km north west of the site, and Abberley Ridge and the Clock Tower, with Witley Court below behind trees.

5.5.16 Incidentally, in the LVIA photos, the wooded hill visible on the skyline in VP1 and other photos is labelled as Titterstone Clee Hill, which is incorrect - the hill in the photos is Woodbury Hill Camp.

Titterstone Clee Hill lies c. 27km to the north west and is not intervisible with the site (although it can be seen on the skyline from more elevated locations, for example CT VP-B).

5.5.17 In addition, the wood in the LVIA VP1 photo is incorrectly labelled as Monk Wood, and erroneously referred to as such in the LVIA - para. 3.12 says '*Monk Wood nature reserve clearly visible to the centre left*'. In fact, it is the smaller block of woodland lying mid-way between Monk Wood and Birchall Green Farm, known locally as Three Acre Wood. It is quite possible that the assessor simply did not understand the scale of the proposed development and assumed that the small wood was the significantly larger and more distant Monk Wood.

5.5.18 Of great concern at this VP (and others lying in an arc from south west to south east) are the effects of glint / glare on the receptors. As noted in Section 5.1, the phenomena are unpleasant at a distance and disturbing / disorientating at close quarters. The distance between VP1 (on the footpath) and Area 2, from which the glint / glare would emanate, is just c. 250m.

5.5.19 Regarding the proposed mitigation measures which are shown on the VP1 CGI, even if it is assumed that existing / proposed vegetation can be relied on to screen / filter views in future which I doubt for the reasons stated previously (pests, diseases, climate change etc.), I completely disagree with the assertion that the proposed hedges would reduce levels of visual effects in the longer term. In my opinion, if anything, they draw the eye by emphasising the unnatural shapes and forms of the array areas, which disrupt the historic field patterns. See also note above regarding contradictory assumptions about / recommendations for height at which hedges would be maintained.

5.5.20 Furthermore the LVIA categorises recreational receptors as being of '**medium to high**' sensitivity, whereas, for the reasons set out above, they should be categorised as '**high**', thus further increasing levels of effects, residually probably up to '**between substantial and severe adverse**', both during construction and operation.

<u>VP1 residential receptors</u>

5.5.21 LVIA VP1 is said to be representative of residential as well as recreational receptors (i.e. people living at Oakall Green - see photo below).

Properties south east of site at Oakall Green

5.5.22 According to local residents, the assessor did not visit and ask whether private views could be considered, although those I spoke to said they had hoped this would happen.

5.5.23 In Table 9, the LVIA categorises these receptors as being of '**high**' sensitivity. I agree with that, but I do not agree with the judgements about levels of effects, which appear to contradict what is said about effects on recreational receptors at VP1.

5.5.24 LVIA para. 5.36 says that when the scheme is operational, '*dwellings in the vicinity of Oakhall* [sic] *Green that back onto the fields overlooking Birchall Green Farm will have some visibility of the panels within parcel 2, albeit from a* ***medium to long distance*** (my emphasis)*. The panels sit as a different layer of colour within an already layered landscape. This is demonstrated in the CGI Photomontages VP01 and VP02*'. On that basis, para 5.37 sets out the conclusion that: '*The magnitude of change will be* ***small*** **[adverse]** *leading to* ***moderate*** **[adverse]** *significance of effects at the operational stage and this will be reduced to* ***minor moderate*** **[adverse]** *residual effects when the screening potential of the mitigation fully mature*'.

5.5.25 As with the recreational receptors above, if residential receptors looked west / south west, as well as the panels in Area 2, they would also see panels in Area 3; panels and the substations, units and other structures in Area 4; and, possibly panels in Areas 1 and 5.

5.5.26 Furthermore, due to their close proximity, a high degree of glint / glare emanating from Area 2 would be experienced by residential receptors at VP2, which lies c. 270m to the south east of Area 2.

5.5.27 Thus, the magnitude and level of effects would of course be far higher than stated.

5.5.28 Regarding the proposal to reduce levels of visual effects by planting hedges and trees, as noted in Section 5.1, there is a conflict between the recommendation in the LVIA to allow hedges to grow up to 3m tall in order to screen / filter views at least for part of the year, and the recommendation in the EEMMP to maintain hedges at 1.5m to maximise biodiversity. The small scatter of trees which would be planted around the substation would do little to reduce visual effects of this scale and extent.

5.5.29 Furthermore, the location of the trees around the substation is contrived, and highly uncharacteristic in this landscape. I also note that the trees are planted very close to the line of the existing overhead cables, so they are likely to require pollarding in future.

5.5.30 In fact, the Oakall Green houses are situated at c. 60m AOD, well above Area 2, which lies at between c. 50m and c. 42m AOD; thus, in order to fully screen views from houses at Oakall Green all year-round, trees would have to grow to c. 30m in height, and they would have to be evergreen. Clearly that is neither realistic nor appropriate.

5.5.31 What I do not understand is why the LVIA considers that the operational magnitude of change experienced by the *residential* receptors at VP1 ('small adverse') would be *lower* than that experienced by the *recreational* receptors on the footpath at VP2 ('medium adverse').

5.5.32 Firstly, although it is stated that the residential receptors are at a *medium to long distance* from Area 2, which is presumably why it reports a lower magnitude of change, the footpath VP is only c. 18m west of the nearest residential VP. The footpath VP is c. 315m from Area 2 and c. 380m from the main substation (Area 4); the nearest houses / VPs in the Oakall Green cluster are c. 275m from Area 2 and c. 315m from the main substation. **These are near-distance receptors**.

5.5.33 Secondly, as the footpath (VP2) is at a lower elevation than the houses (VP1), more of the site would be visible to the residential receptors, and the proposed screen planting would be less effective.

Views from house in Oakall Green (VP1) looking west / north west

5.5.34 In the first of the above photos, the line of the eastern end of the public footpath is marked by the oak trees on the left hand side of the photo. The smaller of the two woodlands is visible in the mid-ground, with Three Acre Wood and Monk Wood beyond. The hill on the left is Woodbury Hill Camp,

and the hill on the right is Abberley Ridge. Birchall Green Farm complex can be seen on the far right hand side.

5.5.35 Finally, and most importantly, and what the LVIA assessor appears to have failed to understand / factor in to their judgements, is that whilst footpath walkers would only be affected from time to time and for the duration of the walk through the site, **effects on residential receptors would be experienced whenever they looked out of the window / went into their gardens**.

5.5.36 Thus, these 'high' sensitivity residential receptors at VP1 would experience at least a 'large' magnitude of change, resulting in '**between substantial and severe adverse**' effects, both during construction and when operational.

LVIA VP2

5.5.37 LVIA VP2 is also on the public footpath west of the houses at Oakall Green, at its eastern end. Receptors are recreational only.

5.5.38 The full range of effects likely to arise during construction and decommissioning would be experienced by these receptors. It must also be borne in mind that if on the footpath and walking west they would experience sequential effects along the length of the view route (and on the return journey as well, if coming back) - explained further below.

5.5.39 A CGI has been produced for this VP. The LVIA states that during operation, looking south west from the VP, arrays in Areas 3 and 4 and part of Area 1 would / are likely to be visible; however, as noted above, looking north west, the full width of Area 2 - **which is around twice the size of the other arrays** - would also be visible.

5.5.40 Furthermore, VP2 is closer to Area 2 than it is to Area 4. Area 2's southern boundary is just c. 250m north west of VP2. The substation area is c. 340m to the south west, and at its closest point, the boundary of the Area 4 arrays is c. 440m to the west.

5.5.41 The LVIA concluded (para. 3.13) that '*some of the panels in parcels 4 and 3 will be partially visible beyond the field boundary vegetation and these become virtually imperceptible once the full effects of the mitigation are mature*'.

5.5.42 I note that the planting which is proposed to mitigate the visual effects of the substation area from this VP (and others), which is shown on the MEP, consists of a new hedge around the main substation and three free-standing trees. On the CGI produced for VP2, these trees are shown as very mature (highly unlikely they would grow to this size in ten years), and positioned so that they filter views of the substation and panels in Area 4. However, if one travelled a little further north west along the footpath the angle of view would have changed, so the trees would no longer have the same screening effect.

5.5.43 In any case, previous comments about the conflicting recommendations, likely inefficacy and inappropriateness of the proposed screen planting apply here.

5.5.44 Effectively, the situation at VP2 is almost exactly the same as at VP1, and the LVIA has underestimated levels of effects for the same reasons i.e. the proposals would industrialise a fine view over an ancient, high quality landscape.

5.5.45 In my opinion, effects on receptors at VP2 would be '**between substantial and severe adverse**' both during construction and when operational.

LVIA VPs 3 & 6, and CT VPs D & J

5.5.46 No CGI was produced for VP3, which the LVIA states is representative of the view from Grade II listed Boatley Cottage looking south west towards Area 1 (i.e. Areas 1 and 5). The VP is within the application site, adjacent to the cottage garden boundary.

5.5.47 According to the LVIA, during operation, Areas 1 (and 5) would be visible from VP3. LVIA para. 3.14 says that '*The proposed panels will initially be visible in the field beyond the fence but will not be high enough to block views of the upper portion of the mature woodland. After 10 years the proposed hedge installed as part of the mitigation treatment will virtually screen the panels from this view*'.

5.5.48 I find it extraordinary that the LVIA assessor is concerned about the solar arrays screening the wood yet doesn't actually describe / address the effects arising from the panels, access tracks and equipment such as the 'signal white' metal 'smart transformer cabins' (c. 2.6m high in an area measuring c. 6m x 5.5m), one of which is located on the northern side of Area 5 in full view of the cottage. I do not agree that the proposed mitigating measures would help to reduce levels of effects.

5.5.49 LVIA para. 5.37 concludes that '*The magnitude of change will be **small** **[adverse]** leading to **moderate*** (i.e. 'significant') **[adverse]** *significance of effects at the operational stage and this will be reduced to **minor moderate** residual effects when the screening potential of the mitigation fully mature*'.

5.5.50 Evidently, for the reasons set out above (and discussed further below), I do not agree with this judgement: in my opinion, levels of operational effects at this VP would be far higher, and construction effects would be equally harmful albeit for different reasons and durations.

5.5.51 However, to exacerbate matters, this is another VP which has been treated as two separate VPs, at the same location but with views in different directions, whereas in reality, the extent of what would be visible is far greater.

5.5.52 In order to understand this, one must look at **LVIA VP6**, which is adjacent to VP3 (also on the application site, just beyond the garden boundary) but representative of the view looking south east from Boatley Cottage instead of south west. Looking south east, Area 2 would be visible on rising ground, as shown in the photograph below.

View from Boatley Cottage near VP6, looking south east towards Area 2 / Birchall Green Farm

5.5.53 Conclusions about operational visual effects at VP6 are set out in LVIA para. 5.37. They are exactly the same as conclusions drawn about effects on views from VP3 set out above (LVIA para. 3.14), i.e. there would be a '**small [adverse]**' magnitude of change and a '**moderate** (i.e. 'significant') **[adverse]**' significance of effects reducing to a residual '**minor moderate [adverse]**' after screen planting becomes effective 10 years or so after planting.

5.5.54 However, receptors at Boatley Cottage would be able to see Areas 1 and 5 and Area 2 at the same time, so of course, levels of effects would be higher.

5.5.55 The justification for the conclusion that the magnitude of change would be 'small' at VP3 is set out in LVIA para. 5.35, which states: '*There are no immediate dwellings in the vicinity of the proposed development in the north. Birchall Green Farm, Lovely Cottage and Boatley Cottage are likely to experience* ***medium distance*** *visibility of the proposed development but this will be* ***visually separated by a number of fields***' (my emphases).

5.5.56 That statement is wrong. In fact, **Boatley Cottage garden boundary is only c. 80m north of the northern boundary of Area 1**, so effects on the view would undoubtedly be substantial / severe adverse in that regard only, let alone with Area 2 being visible at the same time.

5.5.57 Furthermore, the full c. 580m width of the Area 1 and 5 parts of the site (which stretch from Grimley Brook to Three Acre Wood) is likely to be visible from the property.

5.5.58 Also, VP6 is said to be representative of views from Grade II listed Lovely Cottage (opposite Boatley) (CT VP-J). The LVIA assumes that only views to the south east, over Area 2 (c. 290m to the south east), would be affected, but there may be views of the site from Lovely Cottage / its garden over Areas 1 and 5 to the south west as well (i.e. the view from VP3). **Lovely Cottage's garden boundary is less than 200m north of Areas 1 and 5**.

5.5.59 I note that the photo of the view from VP6 incorrectly labels Three Acre Wood as Monk Wood.

5.5.60 During construction, receptors at both Boatley and Lovely Cottages would experience visual / other sensory effects (especially noise) at close quarters. There would also be clear views over the new northern access points and tracks / security fencing to the south east.

5.5.61 The LVIA does not include a photo or CGI of the two residential properties / their gardens at Birchall Green Farm, and there is no numbered VP (I have called it VP CT-D); however, it does include people there as receptors, and assesses changes in their views (which would be over Area 2, and possibly Areas 3 and 4 as well). They are exactly the same as conclusions drawn about effects on views from Boatley and Lovely Cottages (LVIA para. 5.37), i.e. during operation there would be a '**small [adverse]**' magnitude of change and a '**moderate** (i.e. 'significant') **[adverse]**' level of effects reducing to a residual '**minor moderate [adverse]**' after screen planting becomes effective 10 years or so after planting.

5.5.62 However, **Birchall farmhouse's garden boundary is only c. 30m north east of the application site boundary**, so the levels of effects experienced during construction / decommissioning and operation would be very high.

5.5.63 I note that currently, one of the properties at the farm is a holiday let, described as *an idyllic countryside retreat with stunning views* offering the opportunity for *a quiet stroll around the country lanes*.

5.5.64 Incidentally, the LVIA says that receptors at VP6 are both residential and recreational, so the VP could potentially have been intended to be representative of views from the lane west of the proposed northern access points that would be available if / when the hedge was lower.

5.5.65 It is a small point in the whole scheme of things, but when the scheme was operational, in the foreground of views from Boatley Cottage / other receptors in the vicinity towards Area 2 the security fence would be visible (no hedge is proposed), along with another proposed

uncharacteristic scatter of isolated trees in what is currently open pasture. On the CGI for VP6 the proposed trees are shown as far larger than they would actually be after 10 years' growth - in fact, they look fully-mature. Also, Area 2 is on rising ground, so it seems unlikely that within 40 years, trees would grow tall enough to fully screen the whole of Area 2 from view (fast-growing species such as Leylandii / Lombardy poplar are not an appropriate option - they are highly uncharacteristic in this landscape, and would increase levels of adverse effects on both character and views).

5.5.66 Although the effects experienced by receptors at Boatley Cottage, Lovely Cottage and Birchall Green Farm would vary depending on location, angle of view, extent of visibility and so on, in my opinion, due to their close / very close proximity to the site, receptors at are likely to experience **severe adverse visual (and other sensory) effects** during construction / decommissioning (noise, light, dust etc.), and **severe adverse visual effects** during operation.

LVIA VPs along footpaths G/524(C) & G/526(C) (VPs 4, 5, 7, 8, 9, 10, 16, 17 & 18), & CT VP-I

5.5.67 Including VPs 1 and 2 (see above), eleven of the LVIA's eighteen VPs are along the public footpath which crosses the site from south east (Oakall Green) to north west (Grimley Brook). The other footpath VPs are 4, 5, 7, 8, 9, 10, 16, 17 and 18. The footpath's western section is G/524(C), which runs to the junction with north-south footpath G/525(C); the eastern section is G/526(C). It is about 1.5km long from end to end.

5.5.68 Apart from the CGI for VP2, which shows the view from the eastern end of G/526(C), CGIs of the changes to views along the footpath were only produced for VPs 4 (central section of path / site looking west) and 5 (central section of path / site looking east). Since these VPs are in closer proximity to the mature existing woodlands than other VPs along the path, they give the false impression that the site / its boundaries are more well-wooded than they are, with a higher degree of screening than is actually the case.

5.5.69 Also, as with other VPs, views from individual VPs are at the same location as an adjacent / nearby VP, but looking in a different direction. VPs 5 and 8 are at the same place but looking north west (towards Areas 1 and 5) and east (towards Areas 3 and 4) respectively. VPs 9 and 10 are in the same place but looking north east (over Area 3) and south (towards Area 4) respectively. VPs 4, 16, 17 and 18 are in the same place but looking west (towards Areas 3 and 4), north east (towards Area 2) and south west (towards Area 4 and the substations) respectively.

5.5.70 This means that effects at each of these VP are reported as being lower than they would be in reality, since much more of the site would be visible than one might assume.

5.5.71 In addition, the LVIA did not include an important VP at the western end of the footpath, where it emerges from the northern tip of Monk Wood SSSI adjacent to Grimley Brook. I call this VP CT-I. My assessment concluded that this section is likely to be where receptors would experience the very highest levels of adverse effects.

5.5.72 Travelling east from that point, and also west from the pond south of Three Acre Wood - a distance of over half a kilometre - one of the loveliest sections of the walk can be experienced, with a variety of fine and interesting views in all directions (sometimes defined by free-standing oak or ancient woodland edges - see photos overleaf), and very few detractors (apart from erosion / loss of hedges and other elements / features on the site - usually a sign of poor management).

View from western end of public footpath crossing site looking north east over Areas 1 and 5

View from western end of public footpath crossing site looking south east over Areas 1 and 5

5.5.73 VP7 is located on the footpath some 300m east of CT VP-I; the view shown in the LVIA photo and which was assessed is looking north east over Area 1, the boundary of which would be adjacent at this point. The photo gives an indication of the landscape's character in this area - one has to imagine how it might change as there is no CGI, but even if a hedge was planted and allowed to

grow up to 3m, and if it did eventually screen views of the panels (which may not be possible since the panels are c. 3m high and would be on rising ground, potentially breaching the natural skyline), for many years prior to this the security fencing, signage, CCTV, access tracks, transformer cabins, berms and other scheme elements would be visible.

5.5.74 In fact, the photo only shows, and the LVIA only assessed, the existing view looking north east over the northern part of Area 1 (once again, Three Acre Wood is incorrectly labelled as Monk Wood). In reality, the whole of Area 1 would be visible from this point, along with Area 5 when looking west. Receptors would therefore experience very high levels of adverse effects at this point as well.

5.5.75 The CGI for VP5 shows the view at a point on the footpath between Three Acre Wood and Monk Wood looking east towards Areas 3 and 4 (Monk Wood is correctly labelled in this one).

5.5.76 Not all of the areas that would be visible are included in the photo, presumably because the entire view is too wide to include on one sheet, so it is important to understand that if one walked a few metres further east, the whole of Areas 3 (north of the path) and 4 (south of the path) would be visible (the photo for VP 10 shows the view over Area 4 looking south; the VP9 photo shows the view looking over Area 3 from the east, looking north west).

5.5.77 VP8 is adjacent to VP5 but looking in the opposite direction - north west over Area 1 (with Area 5 beyond), so the comments about effects being greater as more of the site is visible from the VP than is apparent in the LVIA apply in this case as well.

5.5.78 Unfortunately, it is up to the reader to combine all this information in order to properly understand the full extent of the visual effects.

5.5.79 Also as mentioned above, the woodland in the vicinity of VPs 4 and 5 is mature and dense so currently effectively screens certain views from certain locations; however, one only has to travel a short distance west or east to see the landscapes opening up again, with some fine middle- and long-distance views including towards the Malvern Hills, Woodbury Hill Camp and Abberley Ridge.

5.5.80 The LVIA does not consider the overall experience of walkers along the full length of the route (and possibly, back again). The footpath crossing the site is c. 1.5km long from end to end, and at a strolling pace takes a good half-an-hour or so to walk.

5.5.81 Both during construction and operation, the full range of effects arising from the proposed development described above would be evident at various points along the route, and the receptors would be in very close proximity to the works for the duration of the walk.

5.5.82 The area's high levels of tranquillity would be severely disrupted during construction and decommissioning for periods of up to one year allowed for each (and there could be further requirements for works e.g. panel replacement in the hiatus), and it is very likely that the equipment would generate audible noise during operation as well. The effects of glint / glare in particular could be highly disturbing.

5.5.83 The whole experience would be extremely unpleasant, in my opinion (unless one was not concerned about the effects and was interested in the process, of course, but the worst-case scenario must be considered in LVIA).

5.5.84 Regarding mitigation to avoid / reduce levels of visual effects at the VPs along the footpaths, the LVIA consistently states either that '*hedges installed as mitigation measures will effectively screen the development after 10 years or so*', or that effects '*will be softened by the hedge introduced as part of the mitigation measures*'. It is not clear to me exactly what 'softened' means in this context, and it is not quantitative.

5.5.85 My opinions about the appropriateness / effectiveness of the proposed screen planting are set out above, but the CGIs produced for VPs 4 and 5 in particular are good illustrations of the problems.

5.5.86 They show the proposed screen planting (mainly hedges with a few scattered trees) in place, but at c. 3m tall after 10 years' growth, whereas the PEA recommends that existing / proposed hedges are managed at c. 1.5m. Previous comments about not placing reliance of vegetation to screen are relevant here, but the other important point is that the change in character resulting not only from the panels, fencing and other paraphernalia, but also from the disruption to the historic field patterns, would be fully visible at these points regardless of the heights of the hedges.

5.5.87 The magnitude of effect that would arise at most if not all of the VPs along the footpath crossing the site has been underestimated in the LVIA for the various reasons set out above. My own assessment concluded that it would without doubt be '**very large**' (the highest on the LVIA's scale). According to the LVIA's criteria (LVIA Table 6), this would be where the proposed development would result in '***A total loss or major alteration to the existing visual elements, features or characteristics of the view. The introduction of prominent elements of a scale, form and colour uncharacteristic of the surrounding landscape'***.

5.5.88 NB the LVIA considers footpath receptors' level of sensitivity to be 'medium - high', not 'high', so levels of effects would be higher even if the LVIA's magnitude of change stayed the same.

5.5.89 In summary, the LVIA concluded that receptors at **VPs 4, 5, 7, 8, 9 & 10** (along footpath G/524(C)) would experience '**substantial adverse**' visual effects, reducing to 'moderate adverse' after 10 years (still 'significant'). My own assessment concluded that the level of residual adverse visual effects would be higher ('**severe adverse**').

5.5.90 The LVIA concluded that receptors at **VPs 16, 17 and 18** (along footpath G/526(C)) would experience '**major adverse**' effects, reducing to 'moderate adverse' (still 'significant') after 10 years. My own assessment concluded that the level of residual adverse effects would be higher ('**between substantial and severe adverse**').

LVIA VPs 11, 12 & 13, and CT VP-A

5.5.91 LVIA VP11 is at the site's existing northern access point (i.e. the western northern access), the view is looking south west towards Areas 1 and 5.

5.5.92 LVIA VP12 is at an existing gated access a few metres east of VP11, the view is looking south / south east into Area 2.

5.5.93 The LVIA photo wrongly labels the watercourse running through the site as Grimley Brook (it is a tributary).

5.5.94 This is another example of one VP having been treated as two, since from VP11, Area 2 would be visible as well as Areas 1 and 5 - see photos overleaf.

Existing access point along lane north of site looking east

Existing access point along lane north of site looking south west

5.5.95 LVIA VP13 is further east along the lane, looking west / south west into Area 2. Areas 3 and 4 could potentially be visible from this point.

5.5.96 The LVIA did not assess effects on views arising at the site's proposed eastern northern access point, so I have called that VP CT VP-A. The view is looking south west towards Areas 1 and 5, and south over Areas 2, 3 and 4.

Proposed northern access point (eastern)

5.5.97 LVIA para. 3.22 explains that VPs 11, 12 and 13 '*are located on the lane to the north of the development and represent the views that motorist* [sic] *experience in the locality. The hedgerows are maintained to a height whereby views across the fields towards the development are limited to locations where there are gaps for field gates. At these locations some of the panels within parcel 2 will be visible but most are screened by the existing field boundary vegetation*'.

5.5.98 Firstly, as noted previously, it cannot be assumed that all receptors would be 'low' sensitivity motorists: many would be 'high' sensitivity recreational receptors.

5.5.99 Secondly, as noted previously, it is likely that the roadside hedges will be trimmed back in future regardless of whether or not the scheme is approved, if only as good management practice and to maintain / enhance biodiversity.

5.5.100 Thirdly, not only Area 2, but also Areas 1, 3, 4 and 5 could potentially be visible from these VPs.

5.5.101 LVIA para. 5.38 concludes that '*The main road network in the north of the development may experience the occasional glimpsed view into the development such as demonstrated in viewpoints 11-13*'.

5.5.102 However, the LVIA assessor appears not to have realised a) the extent of the works required to widen the existing access point and achieve the sightlines, which are likely to result in at least c. 40 lin. m of hedge being lost along with significant urbanisation of this narrow rural lane (hardstanding apron, 6.75m wide surfaced access tracks, security gates and fencing, lighting, signage and so on), and b) that a completely new access would have to be created to the east (CT VP-A), which would have similar adverse effects (probably higher due to the amount of hedge removal required), and would allow open views into / across the site - the security fencing and panels would be in very close proximity to the viewer especially at VPs 13 and CT VP-A.

5.5.103 Note that the visibility splays at the access points were established on the basis of a 30mph speed limit; however, the limit is unrestricted, so it is likely that the splays would have to be wider (see WCC's Transport Planning and Development Management Team's 16th November response). This would almost certainly require more hedge, verge and tree removal.

5.5.104 Furthermore, the LVIA assumes that a) all receptors are motorists of 'low' sensitivity, and b) because of the existing tall roadside hedges and the assumption that '*No landscape features including the hedges that divides the fields will be removed as part of the installation and the existing boundary hedges will be retained and in-filled where necessary*' (LVIA para. 1.21), the magnitude of effect would be 'very small'. On that basis, it concludes that levels of effects on these receptors would be '**minor**' (levels of residual effects were predicted to be the same, as no mitigation was considered necessary).

5.5.105 My assessment concluded that a) many receptors are of 'high' sensitivity; b) the industrialising nature and extent of the proposed access points, tracks, panels and other paraphernalia would result in at least a 'large' magnitude of change; c) the overall level of effect that would be experienced by receptors at VPs 11, 12, 13 (if hedges were lower) and CT-A would therefore be '**substantial adverse**', both during construction / decommissioning and operation.

LVIA VPs 14 & 15 along footpath G/525(C)

5.5.106 LVIA VPs 14 and 15 are along public footpath G/525(C), which runs between the Sinton Green - Monkwood Green lane (south) and the junction between footpaths G/524(C) and G/526(C) (north). The views are stated to be looking west towards Area 4, although the LVIA photos are oriented to the north west.

5.5.107 It is also possible that Areas 2 and 3 could be visible from these VPs.

5.5.108 At VP14 travelling north, the substation areas would be visible. VP15 is further north, beyond the substation, so when looking north west it would not be visible; the LVIA doesn't note that it would be visible from VP15 when travelling south.

5.5.109 Incidentally, the LVIA photo for VP14 is a very good illustration of the very large scale of the site / proposed development. Monk Wood (correctly labelled) is visible on a quite distant skyline: the section of the Wood which features in the photo is in fact around half a kilometre from the VP.

5.5.110 The LVIA's conclusions about effects rely heavily on the presence of existing vegetation and the planting of new hedges and trees to filter / screen views, which I do not consider to be safe. Furthermore, as mentioned previously, the proposed trees are not only uncharacteristic, they would also not be effective screens.

5.5.111 Also, the photos from VPs 14 and 15 were taken in summer. LVIA para. 3.23 says that '*the solar panels in parcel 4 are mostly screened by the existing field boundary hedge, especially in summer months*'. In reality, deciduous trees are bare for half the year, so levels of effects would be higher during that period.

5.5.112 LVIA paras. 5.31 and 5.32 say that '*The magnitude of change is **small** **[adverse]** leading to **moderate** **[adverse]*** ('significant'] *likely significance of effects. The mitigation treatments will result in **minor moderate** **[adverse]** residual effects*'. This judgement assumes 'medium - high' sensitivity receptors, whereas they are 'high'.

5.5.113 My own assessment concluded that the level of residual adverse effects at VPs 14 and 15 would be '**substantial adverse**', both during construction / decommissioning and operation.

CT VPs A - J

5.5.114 CT VPs A - J are at locations from which the harmful effects on landscape character would be visible and / or could be experienced, but which were not identified in the LVIA so effects were not assessed.

5.5.115 All are near-distance views, as I did not have time to identify or assess effects on middle- and long-distance receptors.

CT VP-A

5.5.116 At proposed northern access point (east) looking in arc from west to south east. See effects on LVIA VPs 11, 12 and 13 above ('**substantial adverse**').

CT VP-B

5.5.117 Along lane leading north from Oakall Green and towards Northingtown (becomes public footpath when turning east). Elevated location on ridgeline **c. 300m east / north east of site** (my criteria categorise this as a near-distance view, i.e. up to c. 500m from target). Fine panoramic view looking in arc from west to south, with site (and Birchall Green Farm) clearly visible in mid-ground.

View from CT VP-B looking west / south west (image © Google)

5.5.118 Angle of view means that **full extent of site from north west to south east (Areas 1 - 5) likely to be visible**.

5.5.119 'High' sensitivity recreational receptors. Magnitude of effect 'between medium and large'. Overall effect (construction and operation) '**between major and substantial adverse'**.

CT VP-C

5.5.120 At / in the vicinity of Oldhill, a Grade II* listed building (late 16th century timber-framed farmhouse) in elevated position on ridgeline **c. 500m east / north east of site** (near-distance view). Accessed via lane leading north from Oakall Green which becomes public footpath south of Oldhill, leading to Northingtown.

5.5.121 Currently, mature vegetation including tall roadside hedges and ornamental evergreen trees (some Leylandii) screens most views at ground-level, although there are gaps through which fine panoramic views open up, to west / south west with site clearly visible in mid-ground. Views available from Oldhill over / through vegetation. Vegetation has low degree of permanence.

5.5.122 Angle of view means that **full extent of site from north west to south east (Areas 1 - 5) likely to be visible**.

5.5.123 'High' sensitivity residential and recreational receptors (also very high value heritage asset). Magnitude of effect 'between medium and large'. Overall effect (construction and operation) '**between major and substantial adverse**'.

CT VP-D

5.5.124 Two residential receptors at Birchall Green Farm. See effects on LVIA VPs 3 and 6 above ('**severe adverse**').

CT VP-E

5.5.125 Two residential properties on east side of lane east of Birchall Green Farm, **both lying c. 150m north east of site** at higher elevation.

5.5.126 Views from properties not assessed by me - may currently be screened by mature intervening vegetation, but no guarantee it will remain in future. **Potential views of Area 2, possibly Areas 3 and 4**.

5.5.127 'High' sensitivity residential receptors. Potentially, magnitude of effect 'between medium and large', with overall effect (construction and operation) '**between major and substantial adverse**'.

CT VP-F

5.5.128 Residential receptors at Oakall Green. See effects on LVIA VP1 above ('**between substantial and severe adverse**').

CT VP-G

5.5.129 At / in vicinity of proposed southern access point to site, looking in all directions with views towards substation areas / Area 4, potentially views of Areas 2 and 3. See also LVIA VPs 14 and 15 along north-south footpath G/525(C) east of substation.

5.5.130 As with the eastern northern access point, it appears that the LVIA assessor did not realise that a completely new access into the site would have to be constructed here, since none exists at present (although there is a small, disused, metal pedestrian gate adjacent to Monk Wood).

5.5.131 Nor did the LVIA consider that the lane may have to be widened to accommodate construction traffic, which could entail the removal of a 160m length of grassed verge, ditch, hedge and veteran trees. All are ancient features which make highly valuable contributions to character, visual amenity, heritage and biodiversity, and the area's special qualities.

CT VP-G: at site's south-easternmost point on lane looking north west

CT VP-G: looking north west towards proposed southern access point

CT VP-G: looking east towards proposed southern access point

5.5.132 The views across the site from / in the vicinity of the access point are of a highly rural landscape with many extant historic features including field patterns and ancient woodlands, albeit the pylons and overhead cables detract somewhat at close quarters (although I noted that in many views, the pylons are surprisingly visually well-integrated into the landscape when seen against a well-wooded backdrop - see image below - and thus do not detract nearly as much as when seen in silhouette against a pale backdrop such as the sky - see photo overleaf).

Pylon on application site - view looking north west from Oakall Green

5.5.133 This area is highly tranquil. From the start of the construction period, levels of disruption would be very high, especially during removal of roadside verges, hedges and trees, when the full extent of the proposed works would become evident.

5.5.134 On the north side of the lane, it is likely that one oak (T83, possibly veteran) would be removed, and a c. 15m length of roadside hedge (H86), along with associated grassed verges. NB as noted above, the visibility splays were established on the basis of a 30mph speed limit; however, the limit here is unrestricted, so it is likely that the splays would have to be wider. This would almost certainly require more hedge, verge and tree removal.

5.5.135 The proposed access would require a c. c. 20 - 25m wide hardstanding apron, leading to a 6.74m wide access track. The required 'security' scheme elements would be visible at close quarters - gates and fencing, signage, CCTV and lighting. There would be high adverse visual and other effects arising from the inevitable mud / dust / noise / clutter / damage and so on.

5.5.136 The access track would lead the eye to the substation area. Mature field boundary vegetation (an ancient hedge) would have to be removed to accommodate the access track and two substations. There would be control / metering rooms, a communications cabinet a transformer, and two metal storage containers. All would be fenced - the main substation fencing would have to be high security (see photo in list at para. 2.4.2). These would be visible from the lane, along with the array areas being erected in Area 4. Arrays in Areas 2 and 3 could also potentially be visible.

5.5.137 Construction noises across the site would certainly be audible from the lane, especially piling.

5.5.138 During operation, the view across the site would be entirely different from that which is currently enjoyed by the many people who travel along the lane for recreational purposes, having been effectively 'modernised' and industrialised.

5.5.139 It is likely that as well as the accesses, security fencing / gates, substation areas and solar arrays, other scheme elements would be visible, including access tracks, transformer cabins, any earthworks / berms, and the uncharacteristic planting.

5.5.140 As noted previously, because the site is so large, it is difficult to appreciate the full scale and extent of the proposed development - the LVIA's CGIs only show parts of what would in fact would be very broad views of the site.

5.5.141 As noted previously, the proposed screen planting around the substation areas is not only highly uncharacteristic, it would also create new field shapes, destroying distinctive landscape features and patterns which are many hundred years old. Also, it would simply not be effective. Furthermore, it is not safe to rely on vegetation to screen. And, there is the issue of whether hedges should be managed at 3m high to screen views, or at 1.5m to maximise biodiversity.

5.5.142 Finally, as the lane is due south of the panels, it is very likely that high levels of adverse effects arising from glint / glare would be experienced by receptors.

5.5.143 These are 'high' sensitivity recreational receptors. The magnitude of visual effect would be '**very large**'. The overall effect (during construction and operation) would be '**severe adverse**'.

CT VP-H

5.5.144 This VP is actually a view route. The route is the publicly-accessible footpath which runs along the inner eastern edge of Monk Wood Nature Reserve (and SSSI etc.), between a point in Monk Wood just west of CT VP-G at the site's southern access point, and CT VP-I where the public footpath crossing the site meets Grimley Brook at the northern tip of the Wood (the site's north-westernmost boundary).

5.5.145 The length of the view route is c. 1.3km: from one end to the other, at a normal walking pace it can take more than half an hour to travel.

5.5.146 Interestingly, here, Monk Wood's outline is exactly as it was centuries ago, so the path may have been a perambulatory route since that time. The indented shape is almost certainly the result of assarting, where woodland was cleared to accommodate the tip of a field, perhaps for shelter / shade. What this means is that as the footpath follows the Wood's outline, the available view depends on the direction in which one is walking. Thus, along the length of the path, different parts of the site and its (and the Wood's) contextual landscapes are visible at different points along the way, and the views are very attractive.

5.5.147 Currently, there are few wide, open views across the site because the woodland edge is well-vegetated; however, there are several small gaps which allow clear views, and often one can walk for long sections where the view is simply filtered through light leaf-cover in summer, and thin branch-cover in winter.

Looking east from path on eastern edge of Monkwood, adjacent site

5.5.148 At its southern end, a c. 400m-long section of the path would be **c. 20m from Area 4**. At a point along the central section, the path would be **c. 30m from Area 3, and c. 50m from Area 1.** From there, the c. 650m-long northern section would be **c. 85m from Area 1 and c. 40m from Area 5**. Area 2 could potentially be visible as it lies on rising ground, c. 280m to the north east.

5.5.149 According to the applicant's MEP and other documents, the existing woodland edge planting would be reinforced with new hedgerow and tree planting to increase visual screening. In fact, it is shown as a very wide, dense belt.

5.5.150 I am not certain whether this would be appropriate given a) the SSSI designation, b) the fact that biodiversity would almost certainly decrease along the path[8], and c) the historicity of the boundary and its value as a landscape feature. Nor am I convinced that it would effectively screen views in future - it certainly cannot be relied on to do so.

5.5.151 Furthermore, whilst it may be feasible to screen views of the site from the path, this would completely alter the nature and quality of the views: part of the charm of walking along the Wood's edge is the variety of visual experiences available along the way, from enclosed to filtered to open. If the entire site was screened from view by a hedge and / or trees, this special quality would be lost. Then again, if not screened, levels of adverse visual effects would be high.

5.5.152 Receptors are recreational, and of 'high' sensitivity. The magnitude of visual effect would be '**very large**'. The overall effect (during construction and operation) would be '**severe adverse**'.

[8] Some of the greatest biodiversity in dense woodland occurs along the edges and / or within open glades / rides (often along the routes of well-used paths, as is the case here), largely due to more sunlight reaching the ground. If new screening vegetation was planted at the edge of the woodland as proposed, the amount of sunlight reaching the path would decrease.

CT VP-I

5.5.153 View from western end of footpath crossing site (G/524/(C)) looking east. See effects on LVIA public footpaths G/524(C) & G/526(C) above ('**severe adverse**').

CT VP-J

5.5.154 Residential receptors at Boatley and Lovely Cottages (see LVIA VPs 3 and 6) ('**severe adverse**').

5.6 Summary of effects on views and visual amenity

5.6.1 The LVIA identified 18 VPs on / on the periphery of the site.

5.6.2 My review identified many omissions, flaws, erroneous assumptions and other issues in the visual assessment, for example:

i) the LVIA assessor appeared not to be very familiar with the LVIA process, and did not follow published guidance;

ii) many highly-valuable landscape elements, features, factors and qualities were not identified;

iii) the assumption was made that no new access points would have to be created, or existing ones widened;

iv) another assumption was that no landscape features would have to be removed;

v) also, the assumption was made that existing and proposed screen planting would become fully effective after 10 years and would reduce levels of effects to acceptable levels - in fact, that is not possible in most cases, and some of the proposed screen planting is highly uncharacteristic;

vi) construction effects were not assessed;

vii) the only scheme elements factored in to the visual effects assessment appear to be the solar panels, the main substation, and the proposed screen planting, whereas there would be numerous industrialising features scattered throughout the site;

viii) many near-, middle- and long-distance VPs frequented by highly sensitive visual receptors were either not identified or were scoped out, so effects were not assessed.

ix) The visual and other effects of glint / glare were not assessed. All receptors at near-distance VPs along and south of the public footpath crossing the site would be subject to the phenomenon, and it is highly likely that the effects would be experienced at middle-and long-distance VPs south of the site.

5.6.3 Notwithstanding the above, the LVIA did conclude that for the first ten years or so (i.e. before the proposed screen planting became effective), apart from at VPs 11, 12 and 13 - see below - **levels of visual effects on all receptors would be moderate adverse or higher**.

5.6.4 As noted previously, had this scheme been the subject of an EIA, this would have meant that the effects were '**significant adverse**'.

5.6.5 In fact, the LVIA assessed the level of sensitivity of receptors at VPs 11, 12 and 13 as 'low' instead of 'high'. It did not factor in effects arising from the access points, and assumed that the roadside hedges which currently screen views would remain tall. Thus, the magnitude of effect was underestimated as well. In reality, levels of effects experienced by these receptors are also likely to be '**significant adverse**'.

5.6.6 For the reasons set out in the above sections, I do not agree that residual effects would be lower - in my opinion, the high / very high levels of adverse effects would be experienced throughout the operational period.

5.6.7 In addition, my own assessment identified several other key near-distance VPs at which effects would be '**significant adverse**'.

5.6.8 **In summary, *all* visual effects arising during construction / decommissioning and operation would be 'significant adverse'**.

6. Conclusions

6.1 This review concluded that the applicant's LVIA did not follow published guidance, and contains numerous omissions and flaws. As a result, the levels of adverse effects on landscape character and visual amenity to which the proposed development would give rise have been underestimated.

6.2 Indeed, from the material submitted, it difficult to understand the very large scale and extent of the proposed development. For comparison, it should be noted that the site is c. 1.3km long from end to end, and the site area is 36ha; **the settlement / built-up area at nearby Hallow is c. 1.3km long, and covers c. 32ha**.

6.3 This type of scheme is categorised as Schedule 2 EIA development, because it could potentially give rise to 'significant' adverse environmental effects; however, on the basis of the information submitted by the applicant, MHDC concluded it would not.

6.4 Yet, for some reason, the applicant's LVIA assumed that the scheme was EIA development, and went on to form judgements about whether any of the effects would breach the set significance threshold. It found that significant visual adverse effects would arise at several viewpoints, but concluded that in most cases, over time, levels of effects would be reduced by the proposed screen planting.

6.5 Unfortunately, the screen planting proposals are problematic, since not only would they be ineffective, they would also be inappropriate, and would in themselves give rise to adverse landscape and visual effects. Furthermore, vegetation cannot and should not be relied upon to screen views.

6.6 My own assessment concluded that very high levels of adverse effects would be experienced at all the near-distance viewpoints identified. It also concluded that the proposals would give rise to very high levels of adverse effects on landscape character, mainly due to the industrialisation of a highly tranquil, unspoilt and ancient rural landscape, and the permanent loss of highly valuable historic features, which also contribute to the area's great biodiversity (especially in and around adjacent Monk Wood SSSI).

6.7 Finally, my assessment concluded that in the majority of cases, effects on both character and views could simply not be mitigated. **National policy advises that renewable energy projects should be located where impacts are, or can be made, acceptable**.

6.8 Importantly, if it is found that there is certainty about / a high probability of the adverse residual effects arising from non-EIA development being categorised as significant, it **may trigger the requirement for EIA**.

6.9 It is clear that in this case, not only would landscape and visual effects be significant adverse, but also there is the potential for the scheme to give rise to significant adverse effects on GI, heritage / historic landscape character, biodiversity, recreational resources, highways safety, soil, water and air quality, and human health and well-being.

6.10 In my opinion, the harm that would be caused would not outweigh the scheme benefits (no landscape or visual benefits were identified in the LVIA).

6.11 The LVIA process entails consideration of whether the receiving landscape could *accommodate the proposed development without undue consequences for… the achievement of landscape planning polices and strategies*'.

6.12 The planning policy context is set out in the applicant's submission, and reference should also be made to GSFAG's response to the application, which includes a full analysis of whether the scheme complies or is in conflict with the relevant policies / strategies.

6.13 Regarding character, appearance and amenity, in my opinion, for the reasons set out in this review, the proposed development would not comply with the requirements of several national and local policies and strategies, including:

i) NPPF paragraphs 130, 170 a), b), d) and e), 180 and 197.

ii) South Worcestershire Development Plan (SWDP) policies SWDP 5 (C): Green Infrastructure; SWDP 6: Historic Environment; SWDP 21: Design; SWDP 22: Biodiversity and Geodiversity; and SWDP 25: Landscape Character.

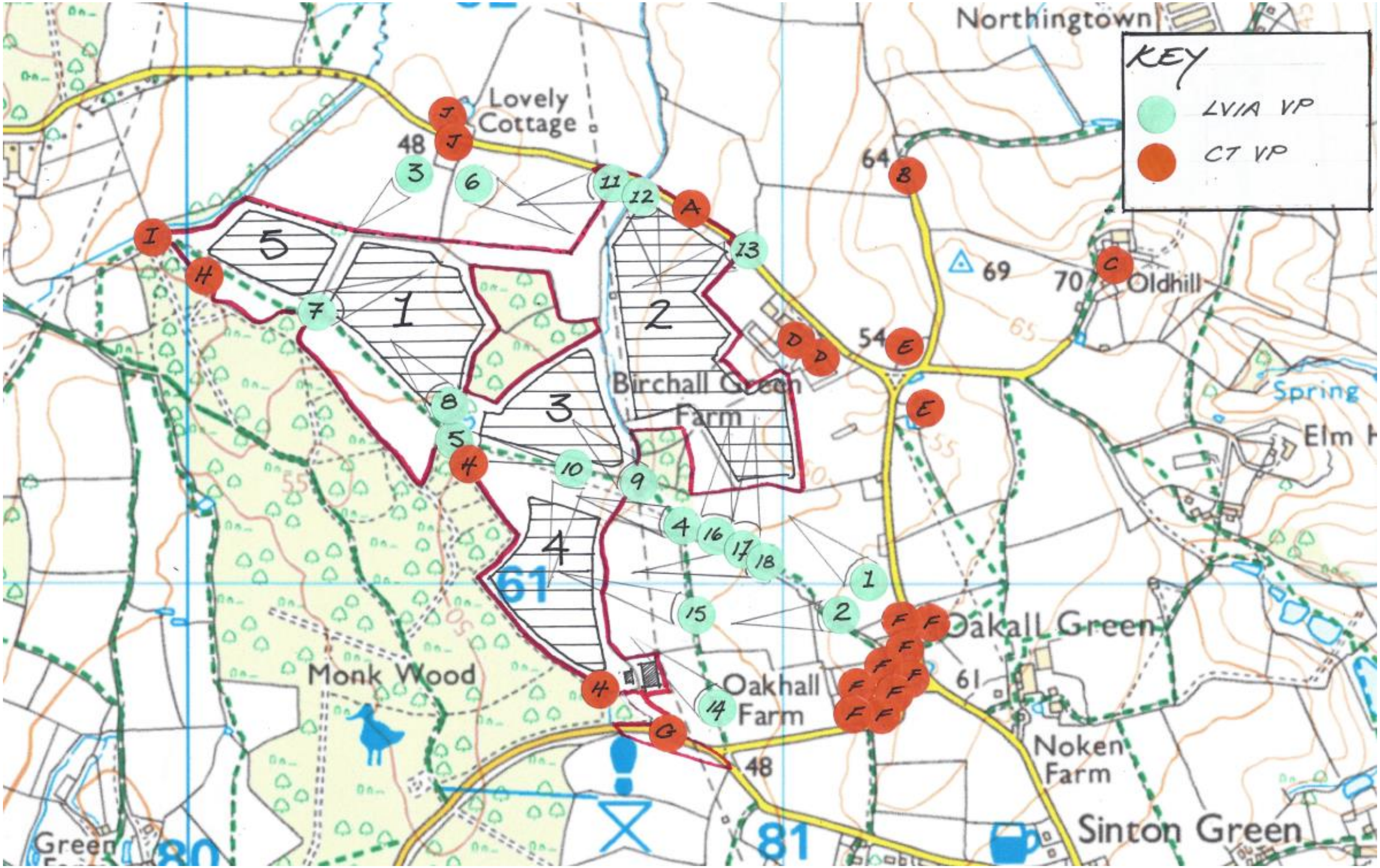
iii) Worcestershire Green Infrastructure Strategy (2013), the Worcestershire Green Infrastructure Framework (2012), and the 2012 Worcestershire Landscape Character Assessment Supplementary Guidance.

iv) Malvern Hills District Local Plan policies QL1 - The Design of New Buildings and Related Development; QL21 - Landscaping, QL22 - Protection of Trees, Woodlands and Hedgerows; and DS3 - General Development Requirements.

Carly Tinkler BA CMLI FRSA MIALE December 2021

Appendix CT-A

Near-distance viewpoint location plan



KEY
LVIA VP
CT VP
Northingtown
Lovely Cottage
48
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69
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Oldhill
54
65
Birchall Green Farm
Spring
Elm H
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Oakall Green
Oakhall Farm
Noken Farm
Monk Wood
Sinton Green
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