LAND NORTH OF LITTLE CHEVENEY FARM, SHEEPHURST LANE, MARDEN, KENT

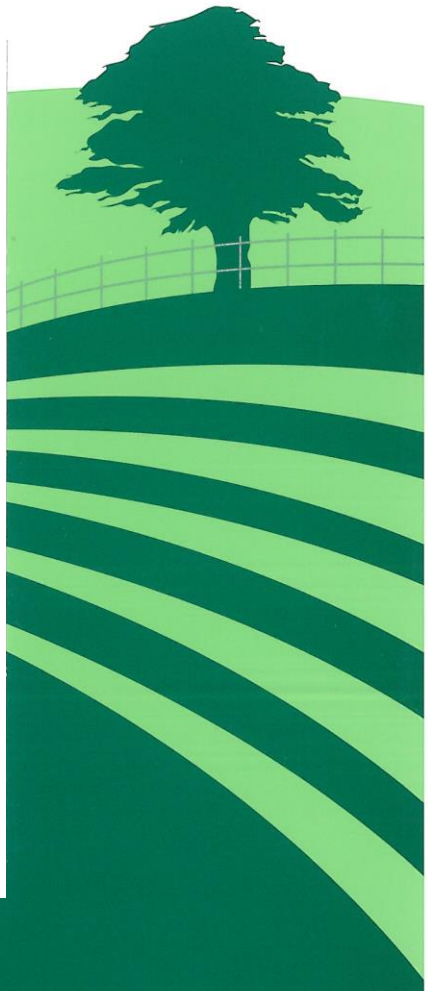
PROOF OF EVIDENCE ON AGRICULTURAL MATTERS ON BEHALF OF THE APPELLANT BY

TONY KERNON BSc(Hons), MRICS, MBIAC

VOLUME 1: TEXT

LPA Reference: 22/501335/FUL

December 2023



KERNON
COUNTRYSIDE CONSULTANTS LIMITED

LAND NORTH OF
LITTLE CHEVENEY FARM,
SHEEPHURST LANE,
MARDEN, KENT

PROOF OF EVIDENCE
ON AGRICULTURAL MATTERS
ON BEHALF OF
THE APPELLANT
BY

TONY KERNON BSc(Hons), MRICS, MBIAC

VOLUME 1: TEXT

LPA Reference: 22/501335/FUL

December 2023

Authorised By APK 12/23.

Greenacres Barn, Stoke Common Lane, Purton Stoke, Swindon SN5 4LL

T: 01793 771333 Email: info@kernon.co.uk Website: www.kernon.co.uk

---

CONTENTS

1 INTRODUCTION TO THE WITNESS

1.1 This Proof of Evidence has been prepared by Tony Kernon.

1.2 I am a graduate in Rural Land Management (BSc (Hons)), a Chartered Surveyor (MRICS) and a Fellow of the British Institute of Agricultural Consultants (FBIAC).

1.3 I have specialized in rural planning and agricultural development matters for the last 35 years. I have been widely involved in solar farm proposals over the last 10 years, including Nationally Significant Infrastructure Projects and Development Consent Order schemes, across England and Wales.

1.4 My Curriculum Vitae is at **Appendix KCC1**.

1.5 As a Chartered Surveyor I am bound by the RICS Practice Statement "Surveyors acting as Expert Witness", 4th edition. A declaration to this effect is provided at the end of my evidence (section 10).

1.6 In preparing for this Inquiry I have visited the site, walked all of the fields, undertaken some trial pit digging to assess the land quality results, and I have interviewed the farmer.

2 INTRODUCTION TO THE EVIDENCE

Relationship to Appeal Statement

2.1 This Proof of Evidence on Agricultural Matters replaces the "Agricultural Evidence" report by myself dated April 2023 **[CD1.29]**. There is no requirement to review that report as all matters are now addressed in the Proof of Evidence. This Proof considers the "Appeal Scheme" (as defined in the Statement of Common Ground).

Scope of Evidence

2.2 The development proposed is the installation of ground-mounted PV solar arrays, associated infrastructure, fences, gates etc together with the creation of woodland and biodiversity enhancements. The total site area is 74.5 ha.

2.3 The application was refused on 28th October 2022. Reason for Refusal No 1 states:

"**The site includes a significant proportion of the best and most versatile agricultural land which has economic and other benefits that NPPF requires to be recognised. The proposal is also contrary to National Energy policies and Planning Practice Guidance and policy DM24 of the Maidstone Borough Local Plan 2017 which direct solar farms towards lower grade agricultural land. The proposed use of the best and most versatile agricultural land has not been adequately demonstrated to be necessary**".

2.4 My Proof addresses the issues raised in the reason for refusal and the policy implications.

2.5 The Council's Statement of Case in paragraphs 23 to 34 expand on, in particular, three main matters, which I cover in my Proof.

- policy DM24.2 allegedly setting a mandatory preference for the types of land to be used;
- the breadth and detail in the Appellant's Sequential Analysis Study (February 2022) **[CD1.8]**, although a response to this is mostly dealt with by Mr Cox;
- policy DM24.3 with the Council raising concerns about the loss of food production and the constraints on land use during the operational period.

2.6 Third parties have raised issues regarding the use of Best and Most Versatile agricultural land (BMV), and effects of the proposals on food production, and these issues are covered in my Proof.

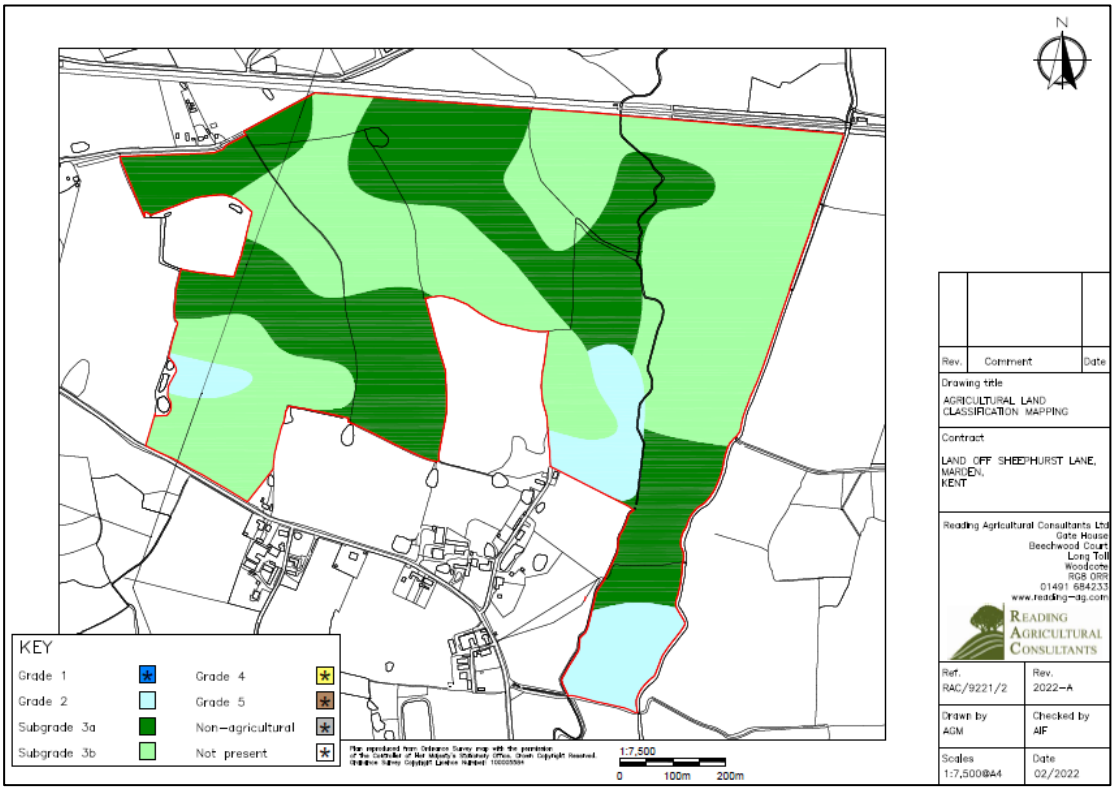
Summary of Conclusions

2.7 The Appeal site comprises six fields in agricultural use.

2.8 A detailed Agricultural Land Classification (ALC) survey **[CD1.16]** identified that 47% of the site comprised land in ALC Grades 2 and 3a, which fall within the definition of the "best and most versatile" agricultural land (BMV). Poorer quality land accounts for 53% of the site.

2.9 This BMV land does not form a large block, however. It is mixed in a complex pattern with land of Subgrade 3b, which is moderate quality land, as shown below (being the ALC plan for the site).

Insert 1: The ALC Distribution Plan



2.10 The installation of solar PV arrays does not adversely affect the land quality. It will not result in damage to soils. Only a small area of land will be adversely affected, being the area required for tracks, inverters and the substation.

2.11 There was no objection from Natural England.

2.12 There should be no reason to reject the proposal based on the inclusion of BMV land within the proposed area.

Structure of Evidence

2.13 This Statement sets out my analysis in the following order:

(i) section 3 describes how agricultural land is classified;

(ii) section 4 sets out the relevant planning policy and guidance;

(iii) section 5 describes the proposals, information provided and the officer analysis;

(iv) section 6 describes the land quality and farming circumstances of the Appeal site;

(v) section 7 sets out an analysis of the potential effects on agricultural land and the reason for refusal;

(vi) section 8 assesses other agricultural considerations, including the land quality in the wider area and the availability of alternative areas;

(vii) ending with a summary and conclusions in section 9;

(viii) and a Declaration in section 10.

2 AGRICULTURAL LAND QUALITY ASSESSMENT

The ALC System

3.1 Agricultural land is measured under a system of Agricultural Land Classification (ALC). This grades land based on the long-term physical limitations of land for agricultural use, including climate (temperature, rainfall, aspect, exposure and frost risk), site (gradient, micro-relief and flood risk) and soil (texture, structure, depth and stoniness) criteria, and the interactions between these factors determining soil wetness, droughtiness and utility. The system is described in Natural England's Technical Information Note TIN049 (2012) (**Appendix KCC2**).

3.2 Land is divided into five grades, 1 to 5. Grade 3 is divided into two subgrades. Land falling into ALC Grades 1, 2 and Subgrade 3a is the "**best and most versatile**" (BMV) (as defined in the National Planning Policy Framework (2021), Annex 2). Natural England estimate that 42% of agricultural land in England is of BMV quality (see TIN049 in **Appendix KCC2**).

3.3 The site comprises a mixture of Grades 2, 3a and 3b. Each grade is defined in the ALC Guidelines, an extract from which is reproduced as **Appendix KCC3**. The description highlights variability of production possibilities within each of the grades, so that the grading may reflect yield, or versatility, but not necessarily both.

3.4 The definitions of Grade 2 and Subgrades 3a and 3b are as follows:

- Grade 2: "**land with minor limitations that affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown. On some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops, such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than grade 1**";
- Subgrade 3a: "**land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops**";
- Subgrade 3b: **"land capable of producing moderate yields of a narrow range of crops, principally:**
  - **cereals and grass;**
  - **lower yields of a wider range of crops;**
  - **high yields of grass which can be grazed or harvested over most of the year**".

3.5 The ALC methodology requires soils to be examined down to, if achievable, 1.2 metres. This is done using a soil auger, such as the example shown below, recording soils as they are removed. Examples are shown below.

Insert 2 - 4: Example of Auger Sampling

3.6 Periodic pits are dug to determine stoniness and to better describe soil profiles. The size of the pit will depend upon the type of soil. Two examples are shown below.

Insert 5 & 6: Examples of Soil Pits

3.7 Auger samples are taken on a regular 100m grid, and pits are dug at locations considered to represent the soil types found.

4 PLANNING POLICY AND GUIDANCE OF RELEVANCE

4.1 This section of my Statement considers:

(i) national policy statements;

(ii) national planning policy;

(iii) related guidance;

(iv) local planning policy.

National Policy Statements

4.2 The **Overarching National Policy Statement for Energy (EN-1)** (presented to Parliament November 2023) may be a material consideration for all applications. The extent to which the NPS will be relevant will depend upon a case-by-case judgement depending upon the extent to which the matters are already covered by existing planning policy.

4.3 Paragraph 5.11.4 notes that "**development of land will affect soil resources, including physical loss of and damage to soil resources, through land contamination and structural damage. Indirect impacts may also arise from changes in the local water regime, organic matter content, soil biodiversity, and soil process**". Paragraph 5.11.12 notes that "**applicants should seek to minimise impacts on the best and most versatile agricultural land identified as land in Grades 1, 2 and 3a of the Agricultural Land Classification and preferably use land in areas of poorer quality (Grades 3b, 4 and 5)**".

4.4 The **National Policy Statement for Renewable Energy Infrastructure (EN-3)** (presented to Parliament November 2023) sets out at 1.1.1 that "**there is an urgent need for new electricity generating capacity to meet our energy objectives**". Paragraph 1.1.2 states that "**electricity generation from renewable sources is an essential element of the transition to net zero and meeting our targets for the Sixth Carbon budget**". The document then sets out specific guidance for different technologies, with section 2.10 covering "Solar Photovoltaic Generation".

4.5 Paragraph 2.10.28 is set under the subtitle of "factors influencing site selection and design". It advises that while land type should not be a predominating factor in determining the suitability of the site's location, applicants should, where possible use non-agricultural land. Where the use of agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land.

4.6 The development of ground mounted solar arrays is not prohibited on land of ALC Grades 1, 2 or 3a paragraph 2.10.30 advises, but the impacts must be considered.

4.7 Paragraph 2.10.31 and 32 recognise that, at the NSIP scale, it is likely that applicants will use some agricultural land. Consideration should be given to whether continued agricultural use can continue to maximise the efficiency of land use.

4.8 Paragraphs 2.10.33 and 34 advise on the need for soil survey and encourage the development of Soil Management Plans to help minimise adverse effects on soil health.

4.9 Paragraph 2.10.68 recognises that "**solar panels can be decommissioned relatively easily and cheaply**". Paragraph 2.10.69 recognises that some infrastructure may be appropriately retained.

4.10 Paragraph 2.10.89 recognises the potential for solar farms to increase biodiversity value, in some cases resulting in significant benefits, especially on previously intensively managed land.

4.11 Paragraph 2.10.127 advises on ensuring that damage to soil during construction is mitigated and minimised, aiming to preserve soil health and soil structure to minimise soil carbon loss and maintain water infiltration and soil biodiversity.

4.12 Paragraph 2.10.145 advises that the Secretary of State should take into account the economic and other benefits of BMV agricultural land. The Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to minimise the impacts on soils or soil resources.

National Planning Policy Framework

4.13 The National Planning Policy Framework (NPPF) (2023) sets out at paragraph 174 (b) that the economic and other benefits of the best and most versatile agricultural land should be recognised. It does not set any prohibition on the use, or loss, of such land.

4.14 Paragraph 175 and the related footnote 58 are set in the context of plan making. They are therefore aimed at local planning authorities and are not directly relevant for decision making. They require plans to allocate land with the least environmental effect, where consistent with other policies in the Framework. Footnote 58 states that "**where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality**".

Guidance

4.15 There is no definition of what is "significant" development in the context of footnote 58 of the NPPF.

4.16 The threshold for consultation with Natural England is where there will be the loss of more than 20 ha of BMV agricultural land (as set out in Appendix 4 (y) of the Town and Country Planning (Development Management Procedure) (England) Order 2015) (DMP Order). The Order does not define significant, but Natural England's "Guide to assessing development proposals on agricultural land" (updated 5 February 2021) advises local planning authorities that they "should take account of smaller losses "under 20 ha) if they're significant when making your decision", implying that 20 ha is a suitable threshold in most cases.

4.17 There is no definition of what is meant by "loss" in the DMP Order or the Guide. The IEMA Guide "A New Perspective on Land and Soil in Environmental Impact Assessment" (February 2022) defines impacts for EIA purposes as "**permanent, irreversible loss of one or more soil functions or soil volumes (including permanent sealing or land quality downgrading)** "**including effects from temporary developments**"…" (Table 3, page 49).

4.18 The IEMA Guide notes that effects from temporary developments, "**can result in a permanent impact if resulting disturbance or land use change causes permanent damage to soils**".

4.19 Therefore, in respect of the IEMA guidance, the "loss" of agricultural land is where there is an irreversible loss of soil functions or volumes from permanent sealing or permanent land quality downgrading.

4.20 The Planning Practice Guidance suite section on "Renewable and Low-carbon energy" advises at 5-013-20150327 that particular factors a local planning authority will need to consider include whether the proposed use of agricultural land has been shown to be necessary and poorer quality land has been used in preference, and the proposed use allows for continued agricultural use.

Local Plan

4.21 The Maidstone Local Plan was adopted in October 2017. There is no development management policy that specifically addresses development involving agricultural land.

4.22 Reason for Refusal No 1 refers to policy DM24 “Renewable and Low-Carbon Energy Schemes”. This sets out under criterion (1) that applications will need to demonstrate that they have taken account of criteria (i) to (vi), none of which refer to agricultural land.

4.23 The policy then sets out two development management considerations:

“**2. Preference will be given to existing commercial and industrial premises, previously developed land, or agricultural land that is not classified as the best and most versatile.**

3. Provision for the return of the land to its previous use must be made when the installations have ceased operation”.

4.24 The Council produced a Planning Policy Advice Note on Solar development over 50KW. This contains a flow chart, which is reproduced in **Appendix KCC4**. Page 9 of the document, with the flow chart, sets out that if land is of Grades 1 and 2 “**the Council would not normally support development on the best agricultural land**”. If the site is Subgrade 3a, the flow chart requires (in summary):

- an explanation of why poorer quality land cannot be used;
- information about the availability of land at the same classification locally;
- information about the effect on farm viability;
- consideration of the cumulative impact of solar farms on Subgrade 3a land.

4.25 No additional information is needed for land of Subgrade 3b.

4.26 The Policy Advice Note goes on in section I to advise on grazing around panels by sheep, geese or pigs, as reproduced in **Appendix KCC4**.

Commentary

4.27 Planning policy and guidance seeks to provide a degree of protection for soil resources, particularly the Best and Most Versatile agricultural land. The objective is to ensure that the resource is not lost. Policy does not provide a bar to development of such land, but it does require the economic and other benefits to be recognised.

4.28 The focus of assessment is on the loss of the resource, by permanent sealing or downgrading.

4.29 As I describe in more detail later, that is the way Natural England has been assessing solar farm proposals. They made no comment or objection to the use of agricultural land in this case, even though the site includes more than 20 ha of BMV.

4.30 The focus is not on the use of the land. There is no policy requiring active use or use to any level of intensity of agricultural land, BMV or otherwise. The policy seeks to prevent the loss without it being recognised. Loss is defined as permanent loss by sealing over or permanent downgrading.

5 THE PROPOSALS AND THE CONSTRUCTION PROCESS

The Site

5.1 The site involves agricultural land, as outlined in red on the aerial image below (taken from plan 27899/150 Rev C).

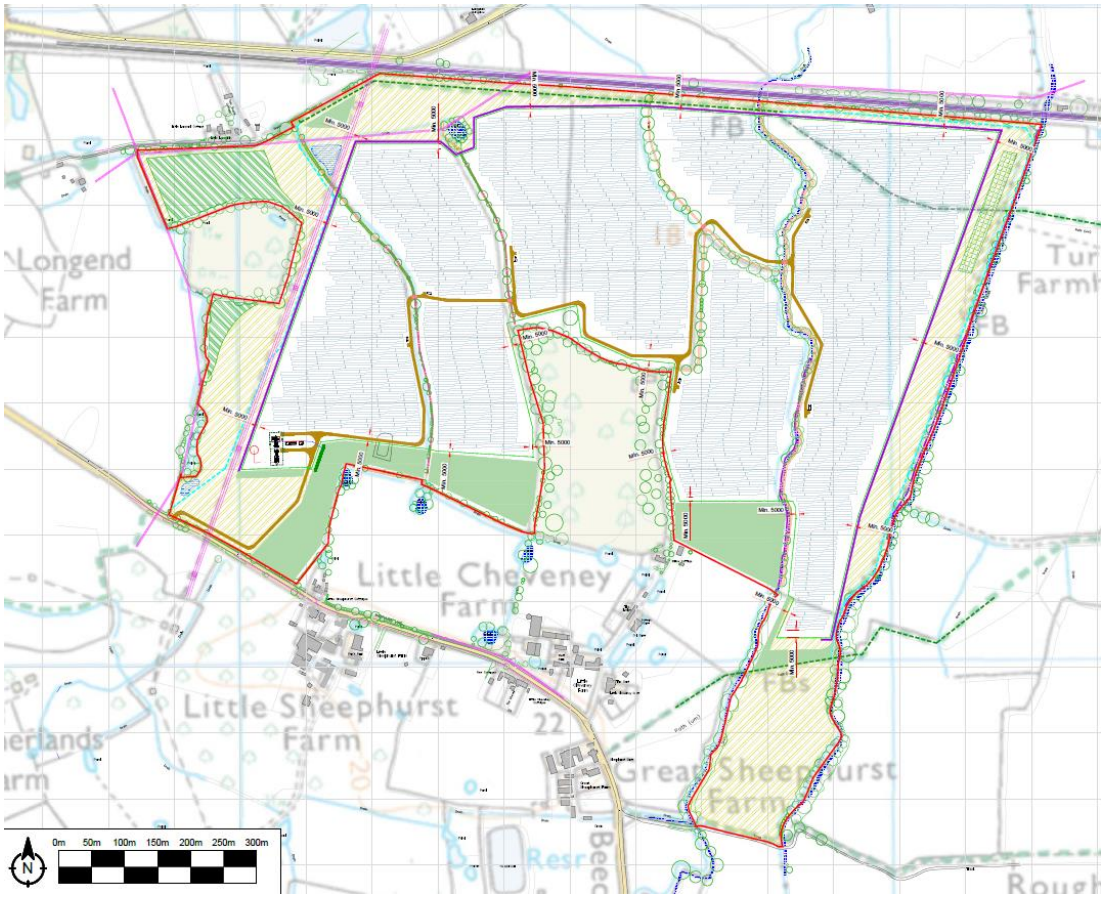
Insert 7: The Application Site

5.2 The boundary of the site includes 74.5 ha of agricultural land.

The Proposals

5.3 It is proposed to install solar PV arrays across part of the site. These would be installed with an east-west orientation. There will be a need for 15 no. transformer stations and related facilities as shown on plan AW0143-PL-003, April 2023. Part of this is reproduced below. This is for the Appeal Scheme.

Insert 8: Extract from the Revised Application Plan



5.4 It will be noted that extensive areas, estimated at almost 25 ha, are proposed for biodiversity areas and will not involve the installation of PV arrays. These are areas outside the site fences, as shown above.

The Construction Process

5.5 My Statement now considers the works involved in developing a solar farm, with a particular focus on how it might affect agricultural land.

5.6 A Construction Method and Decommissioning Statement forms one of the application documents **[CD1.6]**.

5.7 This Statement now describes the construction process, with the installation of the solar PV arrays considered first, then the fixed infrastructure including tracks, inverters and the substation.

5.8 The solar PV arrays are installed in five key stages:

(i) marking out;

(ii) piling-in of legs;

(iii) bolting together of frames;

(iv) bolting-on of panels;

(v) cabling and trenching.

5.9 Marking-out is done on foot and is not damaging to soils, as shown below.

Photo 1: Marking Out in Progress

5.10 The next stage is to insert the legs. These are carried out and laid out as marked. This stage is non-instrusive. It does involve machinery carrying the legs, however, and should ideally take place when soils are suitably dry. Typically a tractor and farm trailer are used to transport the legs to the fields, then each leg is lifted off by hand.

5.11 A team then arrives to knock the stanchions / legs in. From operations we have observed it takes a little over a minute per pole to knock the pole into the ground and move the machine to the next pole[1]. This operation is shown in the photograph below. This was inserting legs into a clay soil.

[1] This observation was made on clay soils at the Purton Solar Farm, Wiltshire, in 2015. Ground conditions will inevitably affect installation speed.

Photo 2: Legs Being Installed

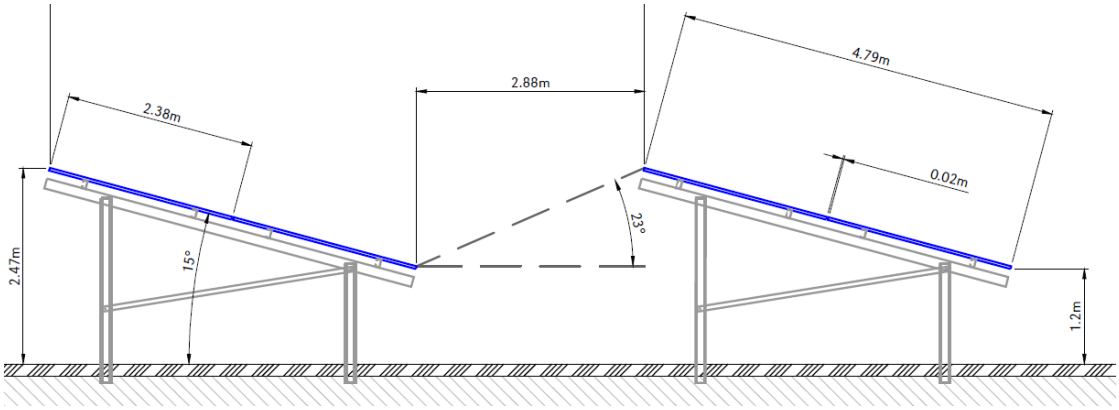
5.12 The design varies between sites, but the limited impact of installing legs on the underlying land is illustrated below. It can be seen that there is no evidence of damage to the soils, even with the works taking place in winter.

Photo 3: Legs Installed (this at Bentham Farm, Purton, Summer 2015)

Photo 4: Legs Being Installed (this at Tiln Farm, Retford, in Janaury 2023)

5.13 The panel design at this site will be taller than the Bentham example shown above, and this will enable sheep to be grazed. An excerpt from the panel design plans is shown below. This is taken from Plan 27899/105 Rev A.

Insert 9: Excerpt Showing Panel Design



5.14 The minimal damage, if carried out in dry conditions, of bolting-on the panels is shown below. It can be seen that the ground has not been affected.

Photo 5: After Panels Bolted-on

5.15 The British weather can be difficult and soils can sometimes become wet and hence easily damaged when trafficked. They are normally easily repaired, with no lasting damage, however. In wet weather the situation can change. The following photograph shows panels installed in winter, on a site with clayey soils and when ground conditions were generally poor. The soil was easily restored following installation, as shown in photo 7. This photograph is included to show that rectification is possible. This kind of surface damage should be avoided so far as possible during construction.

Photo 6: Panels Installed in Poorer Conditions

Photo 7: The Same Site Restored and Seeded (taken a few rows down from the previous picture)

5.16 The area recovered well, and is shown below 7 years later. There was no evidence of any compaction or deterioration in land quality.

Photo 8: The Same Area 7 Years Later

5.17 It is necessary to connect electric cables between the panels and to run the cables back to the substation. This involves trenches, dug with a machine. Immediately after digging these look disruptive to the soil, but they are installed in a similar way to field drainage pipes. Typically topsoil and subsoil are separated, as below.

Photos 9 and 10: Cabling Channels During Cable Installation

5.18 The installation of cables is one of the few operations that involves digging whereby the soil structure could potentially be affected. The trenches are always narrow, but soil does have to be dug up to install the cable. In this country utility operators have been burying services (water, oil, gas, telecomms) for many years. In areas where there is a clear subsoil and topsoil distinction, the topsoil should be placed on one side of the trench, and the subsoil on the other. Then once the cable has been laid the subsoil can be added back first, then the topsoil second, to reinstate the soil structure to its original order and state.

5.19 Soils are restored and settle within days, and return to grass growth rapidly.

Photo 11: The Area Two Weeks Later

This photo was taken 14 days after the trench was first dug.

5.20 Overall, therefore, the panel installation will not result in adverse effects on soils or agricultural land quality.

5.21 Agricultural land generally, depending upon the soil type, is susceptible to damage when trafficked in wet conditions, such as shown below. So far as possible travelling across the land in wet conditions should be avoided, and panels should be installed when ground conditions are suitable.

Photos 12 and 13: Soils Being Affected by Winter Vehicle Travel

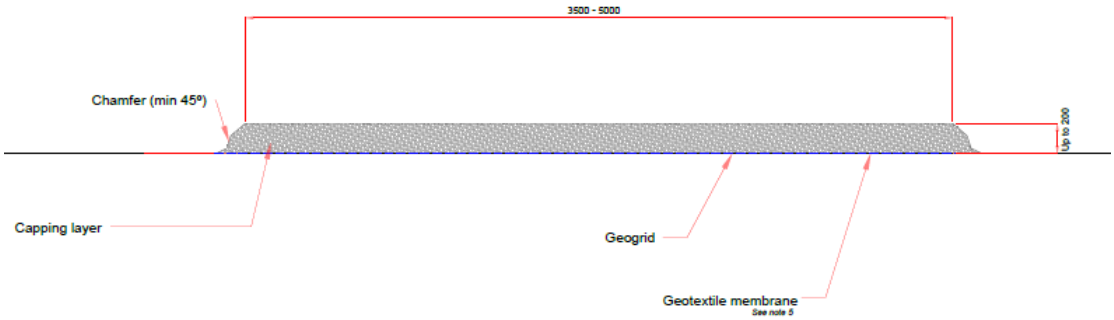
5.22 I walked the farm on 28th February 2023. The farmer was spreading manure that day with the following machinery, which shows that even in winter the ground conditions can be suitable for large machinery.

Photo 14: Farm Muck Spreading Machinery

Fixed Equipment

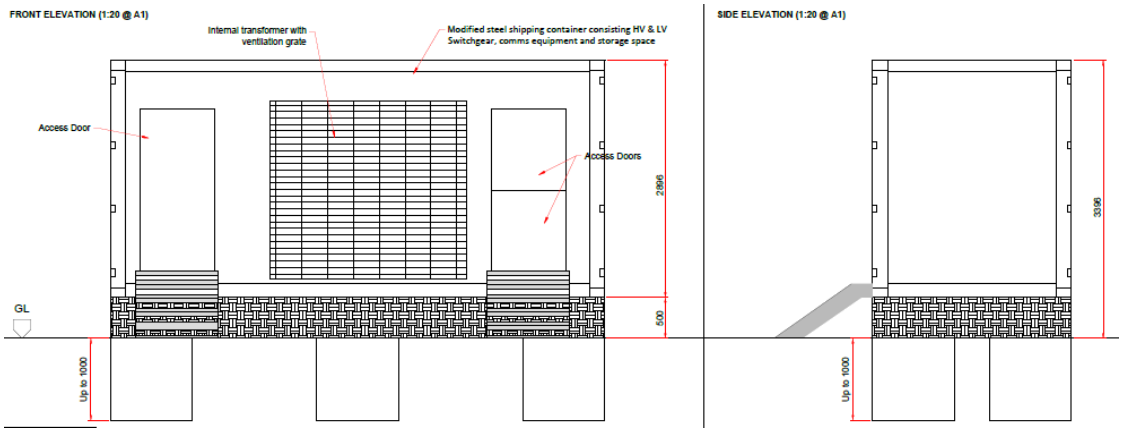
5.23 The tracks will be created by placing a capping layer onto a geotexture membrane on top of the existing soil, as shown below. Consequently there will be no removal of soil, and no need to disturb soil profiles.

Insert 10: Proposed Track



5.24 The transformers are expected to measure about 6.1m by 2.5m, and with a concrete base will involve an area of about 7m by 3m (circa 21 sqm each). There will be some removal of soil to insert the foundations.

Insert 11: Proposed Inverter Transformer (front elevation)



5.25 The HV compound energy storage area is shown below, with the area shown in the photograph that follows, looking south towards the site.

Insert 12: Proposed HV Compound from 27899/050 Rev E)

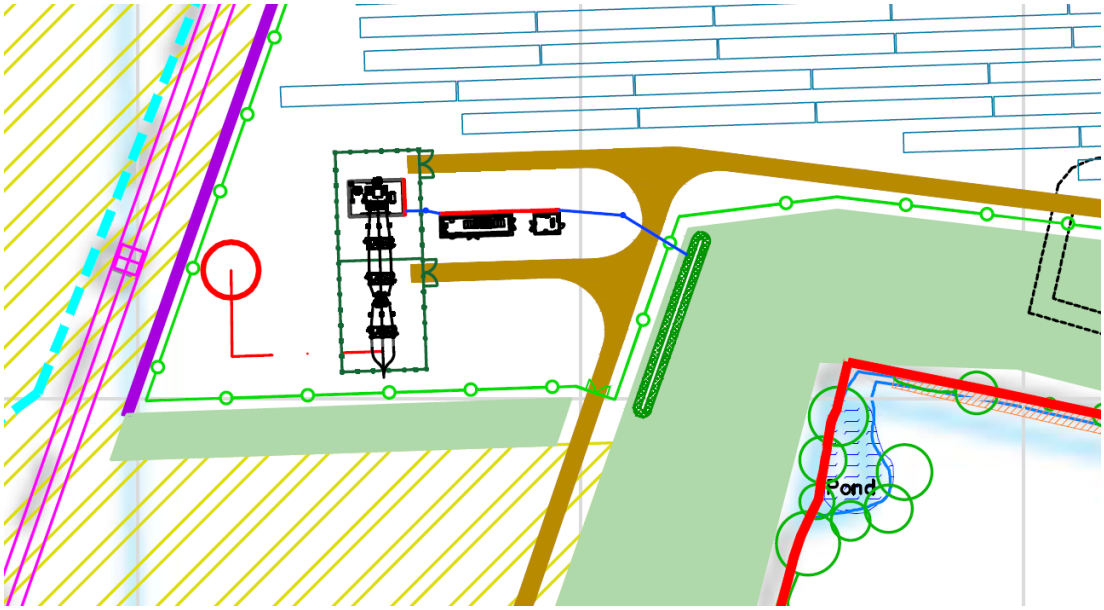
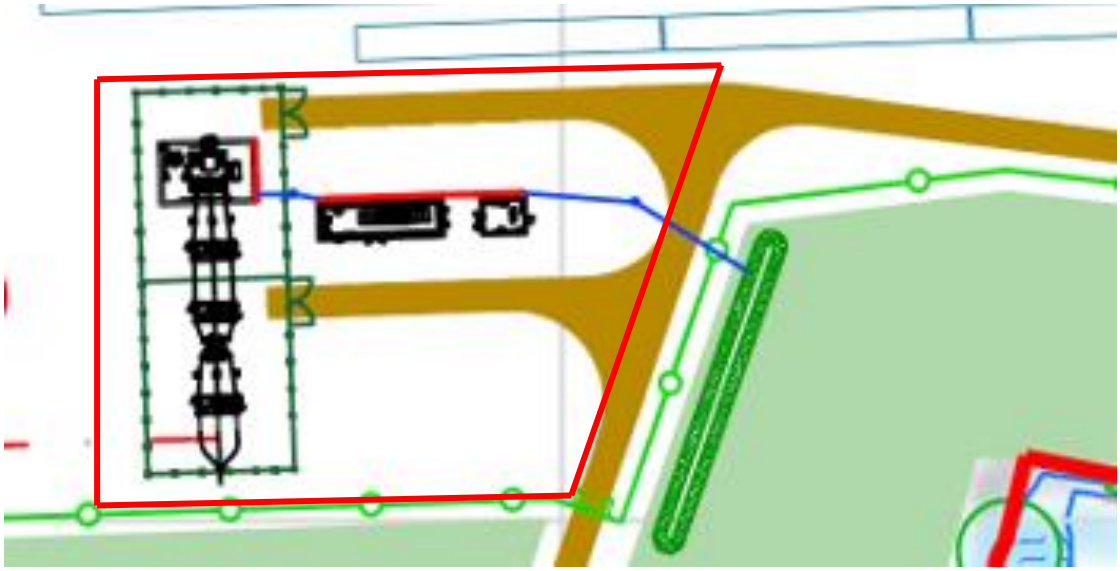


Photo 15: Looking South at HV Compound

5.26 This is an area of about 0.4 ha, allowing for associated topsoil temporary storage bunds, as shown indicated below.

Insert 13: Area Measured for Substation



Land Loss

5.27 The area involved with the fixed equipment is approximately estimated below, allowing for passing bays.

Table 1: Estimate of Fixed Equipment

Component	No/length	Dimensions	Area (sqm)	Area (ha) (rounded)
HV compound	1	-	4,000	0.4
Switchgear	1	-	80	0.01
Monitoring cabin	1	-	30	0.00
Transformer stations (with base)	15	7m x 3m	21	0.03
Tracks	3400m	3.5m wide	11,900	1.19
Total				**1.6**

5.28 The areas involved, by ALC grade, are as follows, rounded up to the nearest 0.1 ha.

Table 2: Fixed Equipment by ALC Grade

Component	**ALC Grade**				**Total**
	2	**3a**	**2 + 3a (BMV)**	**3b**	
HV compound	0.0	0.0	0.0	0.4	0.4
Switchgear	0.0	0.0	0.0	0.01	0.01
Monitoring cabin	0.0	0.0	0.0	0.0	0.0
Transformer stations	0.0	0.01	0.01	0.02	0.03
Tracks	0.0	0.34	0.34	0.85	1.19
Total	**0.0**	**0.35**	**0.35**	**1.28**	**1.63**

5.29 Therefore the fixed equipment (excluding panels) where land is disturbed, including bases, involves:

- a total area of 1.63 ha;
- of which 0.35 ha is Subgrade 3a;
- such that only 0.35 ha of BMV land is affected.

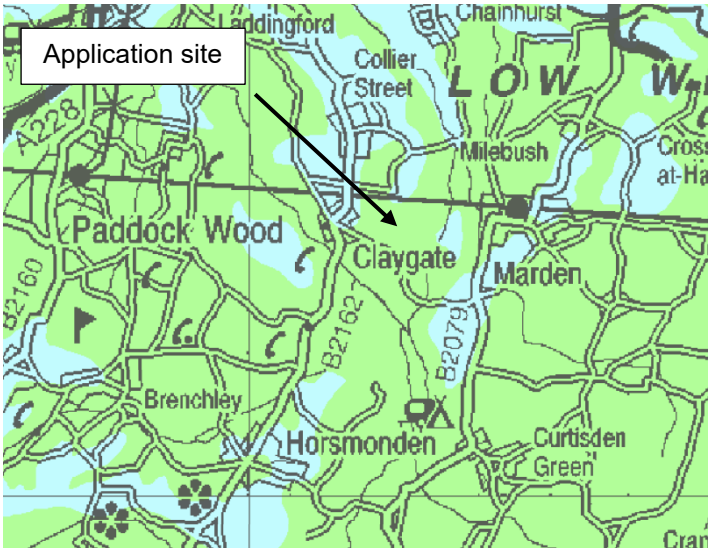
5.30 These areas will be capable of being restored to comparable quality at the decommissioning phase.

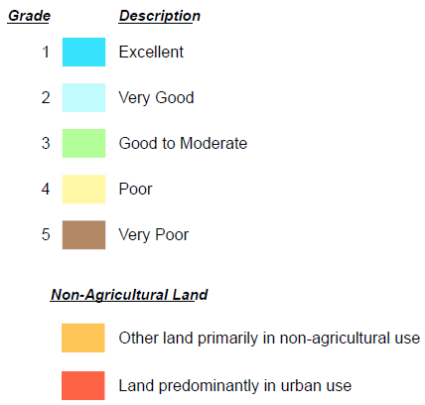
6 LAND QUALITY AND FARMING CIRCUMSTANCES

Land Quality

6.1 The site lies in an area shown on the "provisional" ALC maps produced by MAFF in the 1970s as undifferentiated Grade 3. These maps cannot be used for site-specific use, as described in Natural England's TIN049.

Insert 14: Provisional ALC (site indicated)



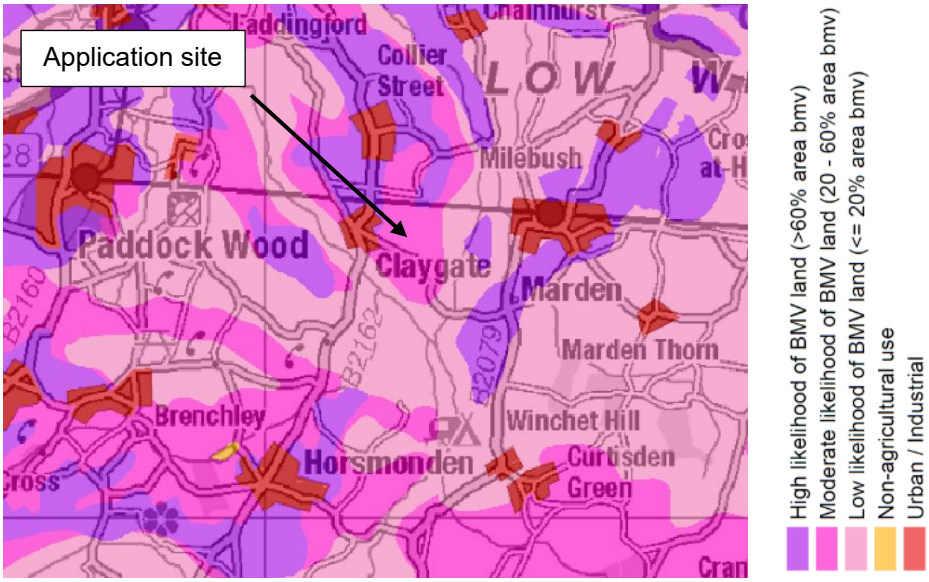


6.2 In 2017 Natural England produced a series of Predictive Best and Most Versatile maps, dividing the country into three areas:

- low likelihood (<20% area BMV);
- moderate likelihood (20 – 60% area BMV);
- high likelihood (>60% area BMV).

6.3 The site is shown as falling into the low (eastern part) and moderate (western part) likelihood of BMV, as shown below.

Insert 15: Predictive BMV Map Extract



6.4 A detailed ALC survey was carried out by Reading Agricultural Consultants in March 2022 and their report forms one of the application documents. They examined the land at 93 locations. Their report describes the soils, identifying medium, heavier and clayey topsoils in a complex pattern across the site. See plate 1 at 3.7 of their report, reproduced (text and plans only) for ease of reference at **Appendix KCC5**.

6.5 The RAC survey graded the 74.5 ha as follows (Table 3 of their report).

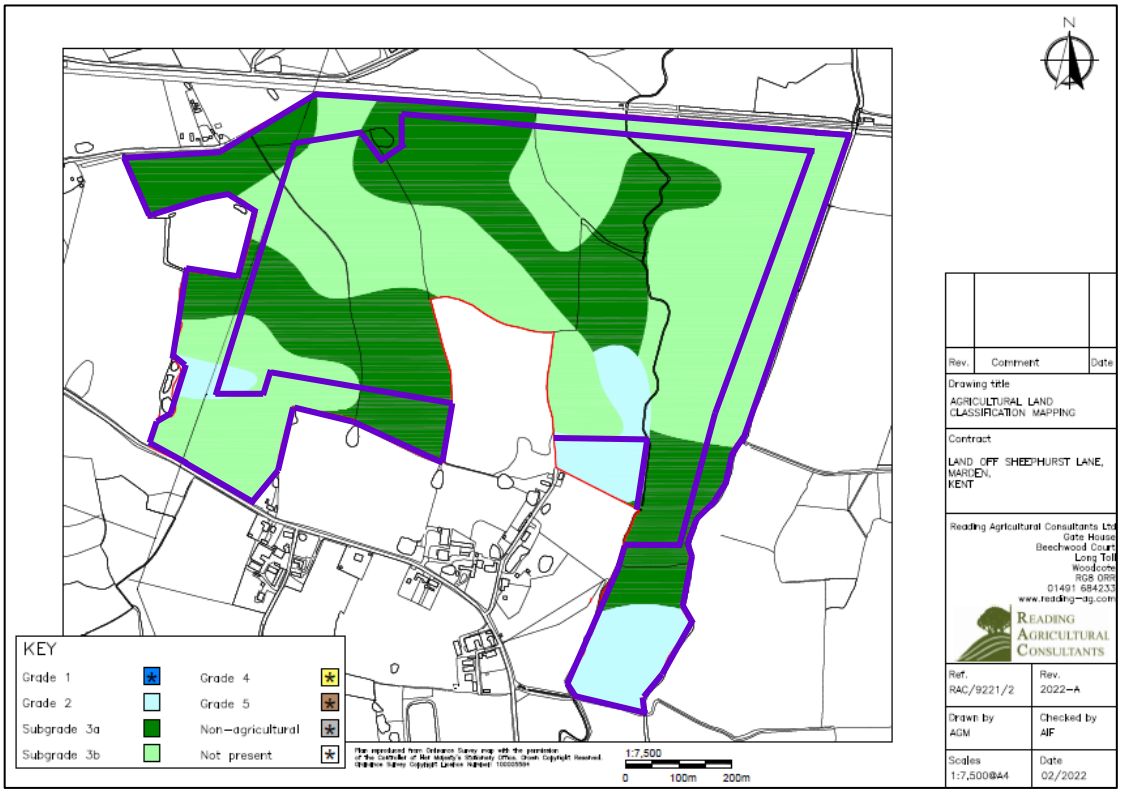
Insert 16: Results of RAC ALC

Table 3: ALC areas

Grade	Description	Area (ha)	%
Grade 2	Very good quality	6.9	9
Subgrade 3a	Good quality	28.2	38
Subgrade 3b	Moderate quality	39.4	53
Total		74.5	100

6.6 The distribution of the grades is shown below, being their ALC map. This is taken from the ALC report by RAC **[CD1.16]**. On the map I have marked the areas proposed for biodiversity areas, all edged in purple. It will be noted that the majority of the Grade 2 land falls within the biodiversity areas.

Insert 17: RAC ALC, with Biodiversity and Excluded Areas Edged



6.7 The application site includes the biodiversity areas and the breakdown of the whole site is provided above. In terms of panel areas and biodiversity areas, the breakdown has been remeasured as follows.

Table 3: ALC Breakdown (total to 74.5 ha)

Grade	Panel Area (ha)	Biodiversity and Excluded Areas (ha)	Total area (ha)
2	1.9	5.0	6.9
3a	19.1	9.1	28.2
3b	27.8	11.6	39.4
Total	**48.8**	**25.7**	**74.5**

6.8 Within the fence for the panel areas, the breakdown is therefore:

- total area 48.8 ha;
- BMV area 21.0 ha;
- BMV proportion 43%.

Farming Circumstances

6.9 The planning application was accompanied by an "Agricultural Land Use Statement" by Bidwells, March 2022. This describes Eckley Farms in section 6. The site comprises 7.5% of the arable area of the farm.

6.10 I visited the farm in February 2023. The farm comprises approximately 600 ha of land, of which 497 ha is cropped. The farm has three principal blocks of land. The main unit is at Saynden Farm, Staplehurst, with outlying blocks of land near Leeds Castle and at Little Cheveney Farm.

6.11 The farm runs an all-arable cropping rotation with winter wheat the principal crop rotated with winter beans, spring oats and oilseed rape, and with spring linseed grown as a spring crop if other winter crops have failed.

6.12 The farm uses inorganic fertilisers and incorporates poultry manure and compost from nearby fruit farms to build organic matter. The farm operates a minimum-tillage farming system, and has been experimenting with applying foliar fertilisers.

6.13 The farm is run by one man with some part-time help.

6.14 Approximately 120 ha of the farm are within agri-environmental schemes, including field margins, and works to hedges and ditches.

6.15 The application site covers 74.5 ha. Within that site area, 68.1 ha is currently cropped, and 6.4 ha are field margins, grassed headland etc. These include grassland margins around most fields, such as those shown below.

Photos 16 and 17: Field Margins

6.16 A further 60.9 ha of land forming part of Little Cheveney Farm will continue to be farmed. The farmyard comprises four agricultural buildings, shown below, including a 500 tonne crop store. That will continue to be fully used by the agricultural land retained at Little Cheveney Farm.

Photo 18 – 21: Farm Buildings, Little Cheveney Farm

6.17 The land under and around the panels will be kept as grassland and used for grazing sheep.

7 AGRICULTURAL LAND QUALITY CONSIDERATIONS

Council's Reason for Refusal

7.1 Reason for Refusal No 1 states:

> "**The site includes a significant proportion of the best and most versatile agricultural land which has economic and other benefits that NPPF requires to be recognised. The proposal is also contrary to National Energy policies and Planning Practice Guidance and policy DM24 of the Maidstone Borough Local Plan 2017 which direct solar farms towards lower grade agricultural land. The proposed use of the best and most versatile agricultural land has not been adequately demonstrated to be necessary**".

7.2 The reason for refusal (RR1) references the economic and other benefits that the NPPF refers to. RR1 also refers to directing solar farms towards lower grade land and that the use of BMV land has not been demonstrated to be necessary. The reason does not state that the land quality will be affected, or that the land will be lost to agricultural use, now or in the future.

7.3 The officer's report to Committee refers to the land quality, noting that 47% of the site is of BMV quality (6.10). It is noted in 6.11 that sheep could graze the site but the proposals would cause "**the loss of full productive capacity of BMV land for a considerable period of time**".

7.4 In paragraphs 6.12 and 6.13 the officer criticises the Appellant's evidence about the availability, or otherwise, of land of poorer quality. Reference is made to other solar farm developments, and it is stated that this site "**performs very poorly in comparison to those examples**" (6.12).

Council's Statement of Case

7.5 In the Statement of Case on behalf of the Local Planning Authority by Martin Robeson Planning Practice, it is stated in paragraph 24 that the Council's refusal arises out of the second limb of policy DM 24 which provides a mandatory preference (which Mr Robeson defines as "precedence") to use poorer quality land. The Council's concern relates mostly to the rigour of the alternative site's assessment.

Analysis Undertaken

7.6 In this section of my evidence I assess the land quality considerations. I do so in the following order:

(i) is land quality affected?
(ii) is the BMV land capable of full exploitation?
(iii) will there be benefits for the land?
(iv) what is the land quality in the wider area?
(v) what is the policy position?

7.7 In section 8 of my evidence I go on to consider the comments in the officer report and Statement of Case about the economic and food producing aspects of BMV and other land.

Is the Land Quality Affected?

7.8 With the exception of the area under the proposed tracks and fixed infrastructure, the land quality is not adversely affected by the installation of the panels. The legs are inserted by machines in minutes, and are rammed in without the need to dig up or otherwise disturb soils. That was shown in the earlier photos, with one reproduced below.

Photo 22: Legs Installed

7.9 The installation process would not normally result in topsoils becoming churned up and rutted, but in some circumstances that is inevitable. As shown in the photographs in section 4, even where land becomes churned up and muddy, that is surface damage that can easily be rectified by mechanical means once the soils dry. Therefore there will be no long-term damage to soils, and no consequential downgrading of the land quality, other than for areas of fixed equipment.

7.10 Therefore the “loss” of land of BMV quality is limited to those fixed infrastructure areas, which as calculated earlier amounts to 0.35 ha of Subgrade 3a. That is not a “significant” loss in terms of the NPPF footnote 58. These areas can be restored to comparable grade at decommissioning.

7.11 There is now a widespread acceptance that the installation of solar panels does not negatively affect land quality. For example:

(i) in the decision dated 15th April 2022 on the Nationally Significant Infrastructure Project EN010101 at Little Crow, Lincolnshire, which included 36.6 ha of Subgrade 3a, the Secretary of State agreed with his Inspector that the effect would be "**medium term, reversible, local in extent and of negligible significance during the operational phase with a moderate beneficial effect for the quality of soils because intensive cropping would be replaced with the growing of grass**" (para 4.50);

(ii) in the appeal decision dated 13th February 2023 for the solar farm at Bramley, Hampshire (APP/H1705/W/22/3304561) **[CD7.5]** the Inspector, noting that 53% of the site was of BMV, noted (para 58) "**The agricultural land would not be permanently or irreversibly lost, particularly as pasture grazing would occur between the solar panels. This would allow the land to recover from intensive use, and the soil condition and structure to improve. The use of the soils for grassland under solar panels should serve to improve soil health and biodiversity and the proposed LEMP, which could be secured by a condition attached to any grant of planning permission, includes measures to improve the biodiversity of the land under and around the panels**".

(iii) in the NSIP decision at Longfield Solar Farm of 26th June 2023, (EN 010118) the Secretary of State agreed with his Examining Authority that the use of 150 ha of BMV, as part of a larger site, should be ascribed "**a small amount of negative weight in the planning balance**" (para 4.59). It was concluded that about 6 ha would be lost, and the rest would be lost temporarily. There would be no jeopardising of "**the UK's food security either now or in the future**" (para 4.57);

(iv) in the planning appeal decision on 27th June 2023 for land south of the Leeming Bar substation **[CD7.15]**, the Inspector considered whether or not land was Grade 2 or subgrade 3b. In her decision (APP/G2713/W/23/3315877) the inspector noted:

- agricultural use could continue during the operational phase (para 20);
- there would likely be improvements to soil health from being rested from intensive arable use (para 21);
- a change from arable to grassland use is not a matter subject to planning controls (para 22);
- there would not be temporary or permanent loss of BMV land (para 25);
- the proposals (in that case of 65 ha) would not be detrimental to the nation's food security (para 26);

(v) in the planning appeal decision of 18th December 2023 on a site at Thaxted **[CD7.23]** including 54.9ha of BMV, the Inspector concluded that "**I am satisfied that the agricultural land quality of the majority of the BMV on the site would not be harmed and the loss of production from the site would not cause a notable harm**

to food security. Any permanent loss of BMV would be small and not significant" (APP/C1570/W/23/3319421).

7.12 Natural England did not object to the use of BMV land in this application. That is consistent with other responses they have provided. For example in the case at Thaxted, Essex, referenced above, they commented as follows (and a similar response has been provided to numerous other solar farm applications). The proposal involved 19 ha of Grade 2 and 35.9 ha of subgrade 3a BMV land, and NE commented: "**the proposed development would not appear to lead to the loss of over 20 ha 'best and most versatile' agricultural land) para 170 and 171 of the National Planning Policy Framework). This is because the solar panels would be secured to the ground with limited soil disturbance and could be removed in the future with no permanent loss of agricultural and quality likely to occur. Therefore, we consider that the proposed development is unlikely to lead to significant and irreversible long-term loss of best and most versatile agricultural land, as a resource for future generations**". The Inspector referred to this paragraph in her decision **[CD7.23].**

7.13 Planning policy and guidance is concerned with the loss of the BMV resource, not its use. Loss is where there is an irreversible or permanent loss or downgrading of agricultural land.

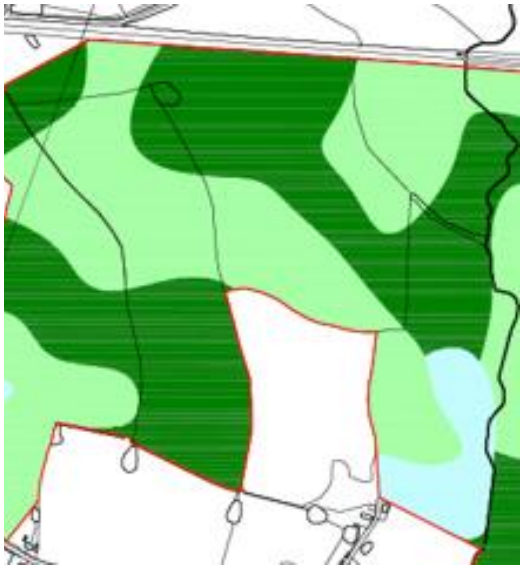
7.14 As set out above, there will be no loss of BMV agricultural land under the panels. The losses are restricted to the small areas for fixed equipment, as set out in Table 2 above, and involve only 0.35 ha of Subgrade 3a. These losses are capable of restoration on decommissioning.

Is the BMV Land Capable of Full Exploitation?

7.15 The site comprises a mixture of mostly Subgrade 3a and Subgrade 3b, but from a farming perspective the two are not capable of being farmed separately.

7.16 The following extract from the ALC plan, adjacent to an aerial photograph showing patchy crop establishment (oilseed rape, 5th May 2018) show that in practical terms the fields are farmed, and are farmable, only as whole fields, with no separation of cropping between Subgrades 3a and 3b land.

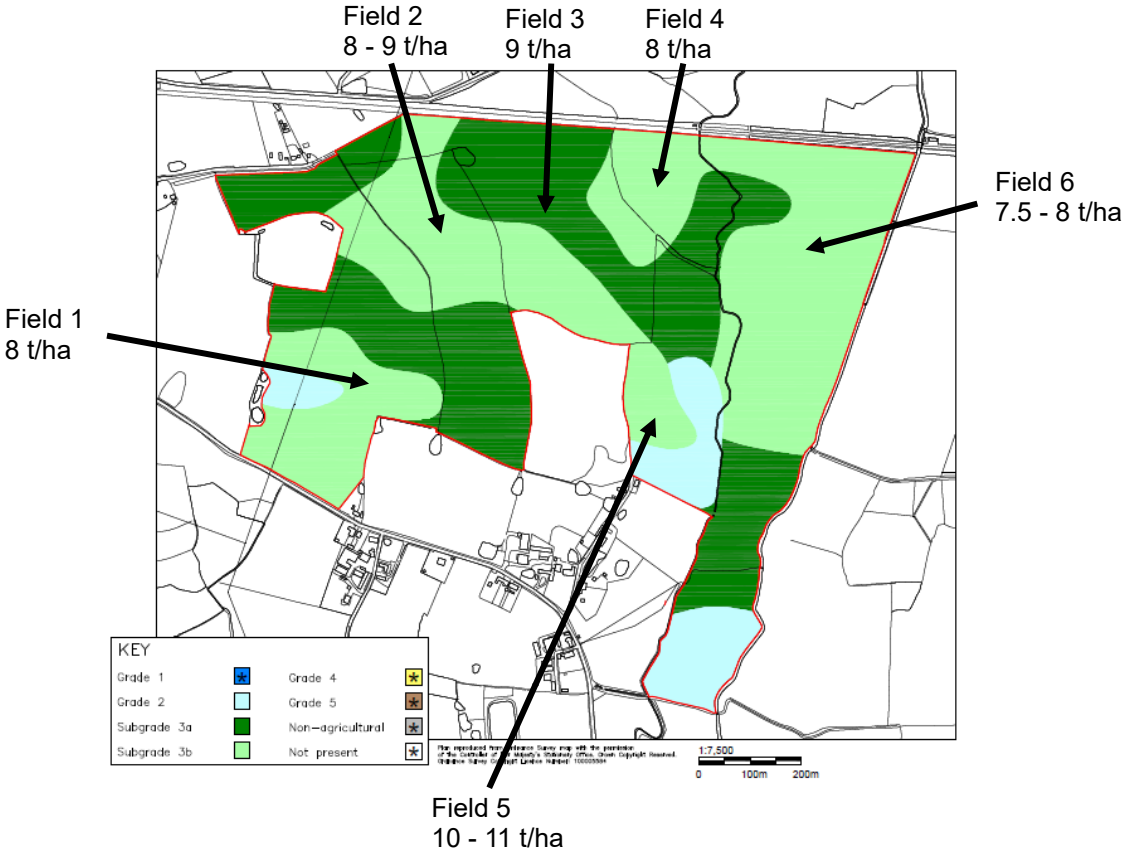
Inserts 18 and 19: Comparison of ALC Map and 2018 Cropping



7.17 The type of crop grown is dictated by the Subgrade 3b land within each field.

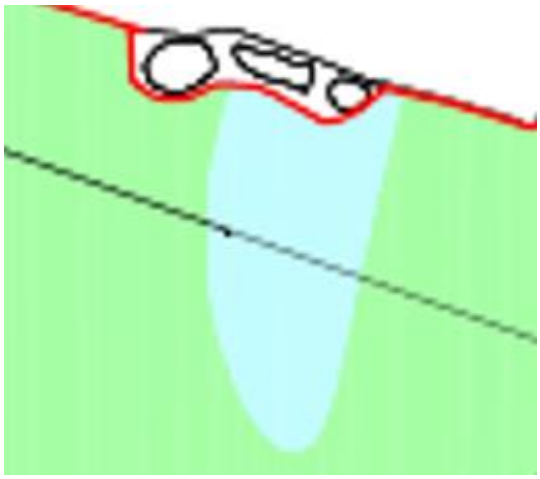
7.18 I set out a field by field analysis below, based on information provided by the farmer. This identifies, for winter wheat, a typical average yield per hectare across each field as shown below, superimposed on the ALC plan.

Insert 20: Likely Yield Per Hectare



7.19 Field 1 contains a patch of Grade 2 on the western side, but that is indistinguishable on the ground, and the farmability of this area is also affected by a powerline pole. The area is shown below, with the ALC map adjacent looking in the same direction.

Insert 21 and Photo 23: Grade 2 in Field 1



7.20 The patchy establishment of oilseed rape in 2018 in field 2 was clear in the aerial photograph earlier. There is similar patchy establishment in 2023, as shown below looking north and south over the field.

Photo 24: Looking North Over Field 2

Photo 25: Looking South over Field 2

7.21 The soil profiles do not vary greatly between the Subgrade 3a and Subgrade 3b land, as compared below.

Photos 26 and 27: Comparison of Grades (Subgrade 3a and 3b)

7.22 Field 3 is similarly a mix of subgrades, with mixed crop establishment success. The following photograph was taken looking north-west along the Subgrade 3a land, with Subgrade 3b to left and right. There was no evident difference in crop growth at this stage.

Photo 28: Looking NW in Field 3

7.23 Field 4, which is mostly Subgrade 3b, has however established better, as shown below. The bare patches in the foreground are from wet lying land next to the ditches.

Photo 29: Looking NE over Field 4

7.24 Field 5 contains a mix of Subgrade 3b with Subgrade 3a and Grade 2. It generally, overall, yields the best on this part of the farm. The crop, looking south over the Grade 2 land, is shown below, followed by a soil profile.

Photo 30: Looking South in Field 5

Photos 31 and 32: Soil Pit in Field 5

7.25 Field 6 is in wheat, and is shown below, looking north over Subgrade 3b then south over Subgrade 3a towards Grade 2.

Photo 33 and 34: Field 6

7.26 None of the fields are significantly different to each other, and as described in the ALC report the determining factor of wetness or droughtiness depends upon the Wetness Class. In practical terms this is land that is suited only to combinable crops, not root crops, and the ALC grade will affect little other than potential yield.

7.27 The objective in presenting this evidence is not to question the ALC results. Parts of the site are of BMV quality. However the variation in soils is not particularly marked and all the land is suited really only for combinable cropping or grassland. The BMV land is not significantly different to the non-BMV land with which it is mixed in a complex pattern.

7.28 Accordingly the only benefit that can be achieved from the BMV land within the site will relate to yields (ie production) rather than a wider range of cropping opportunities. The production of food, or industrial crops, is not a focus of Government policy, and there is no requirement for land to be farmed, or at any level of intensity. I consider that in section 8 of my evidence.

7.29 Accordingly the BMV land, mixed as it is with land of poorer quality in all the fields, is not capable of separate exploitation.

Will There Be Benefits from the Proposals for Soils?

7.30 There is increasing recognition of the need to look after our soils and that continuous arable production is generally having a negative effect on soils.

7.31 The land will be in grassland, and it is expected to be managed by grazing of sheep. This is common practice, and entirely feasible, as shown below. Managed or grazed grassland is shown in the following photographs.

Photos 35 - 37: Managed Grassland

7.32 What we know about soils in the UK is that continual arable production, as is practised on part of the site, is generally not good for soils, and that conversion to grassland is generally good for soils and the biological functions they support. Conversion of arable land to grassland receives funding under the Countryside Stewardship Scheme which, for

example, pays farmers £326 per hectare for managed conversion (Tier level SW7, 2023/24 rates). Conversion of arable land to grassland in this manner does not affect the quality of the land, and it does not need planning consent.

7.33 Some other known harms and benefits are summarised below:

(i) soil is an important natural capital resource, but our understanding of soils is hindered by a lack of data. In the Environment Agency's "Summary of the State of the Environment: Soil" report of January 2023[2], they note that UK soils currently store about 10 billion tonnes of carbon, equal to 80 years of annual greenhouse gas emissions.

(ii) the report notes that soil biodiversity and the many biological processes and soil functions that it supports "**are thought to be under threat**". The statistics are concerning:

- almost 4 million hectares of soil are at risk of compaction;
- over 2 million hectares of soil are at risk of erosion;
- intensive agriculture has caused arable soils to lose about 40 to 60% of their organic carbon.

(iii) the state of soil biology is poorly researched, but the report identifies that intensive agriculture reduces soil biodiversity. A recent study identified 42% of fields may be overworked, as evidenced by an absence or rarity of earthworms. It is noted that "**tillage had a negative impact on earthworm populations, and organic matter management did not mitigate tillage impacts**" (page 11).

(iv) the UK Food Security Report 2021 also notes that, whilst grain is generally the most efficient form of production in terms of calories per hectare, it has a significant environmental impact "**due to the lack of biodiversity in conventional grain fields, damage to soil through ploughing, environmental harms caused by fertilisers and pesticides, and the oil use embedded in fertilisers and field operations**".

(v) the Environment Agency "State of the Environment: soil" report notes that bare soils, reduced hedgerows and increased field sizes mean that, in England and Wales, an estimated 2.9 million tonnes of topsoil is lost to erosion every year. Erosion regularly exceeds the rate of formation of new soils (which is at about 1 tonne per hectare per year) on many soils, with 40% of arable soils at risk, especially lighter soils on hillslopes and peats in upland areas. "**Significant decreases in erosion risk occurred when fields changed from winter cereal use to permanent grassland**", the EA reported.

[2] Research and analysis: Summary of the state of the environment: soils, Environment Agency (26 January 2023)

Management practices in arable land can make a big difference, but the constant vegetation cover of grassland reduces erosion significantly.

(vi) organic matter in soil acts like a sponge and can hold up to 20 times its weight in water. Most arable soils have lost 40 to 60% of their organic carbon[3]. The British Society of Soil Science record (Science Note: Soil Carbon, BSSS (2021)) (**Appendix KCC5**) the declining state of soil carbon (soil organic carbon and soil inorganic carbon), and note that the greatest and most rapid soil carbon gains can be achieved through land use change, eg converting arable land to grassland. Sustainable soil management practices are needed for all soils.

(vii) the role of soil organic carbon in soils is complex, as described in the British Society of Soil Science Note "Soil Carbon" (2021). As described under the heading "Soil Carbon Functions" on page 4, **"a soil with a greater SOC content has a more stable structure, is less prone to runoff and erosion, has greater water infiltration and retention, increased biological activity and improved nutrient supply compared to the same soils with a smaller SOC content. Even small increases in SOC can markedly influence and improve these properties**".

(viii) it is noted in that same report at the top of page 5 that "**Significant long-term land use change (e.g. conversion of arable land to grassland or woodland) has by far the biggest impact on SOC, but is unrealistic on a large scale because of the continued need to meet food security challenges**".

(ix) biodiversity across farms is also in a poor state. The 2019 State of Nature Report (The State of Nature 2019, The State of Nature Partnership (2019)) recorded increases and decreases in different species, but overall a decline in the abundance and distribution of the UK's species since 1970, continuing a trend started hundreds of years earlier. The House of Commons Environmental Audit Committee (House of Commons Environmental Audit Committee: Biodiversity in the UK, bloom or bust?, First report of session 2021-22 (23 June 2021)) recorded this in stark terms. The Summary started as follows: "**the world is witnessing a colossal decline in global biodiversity**".

7.34 Additionally there will be no need for heavy machinery to traffic the soils during the operation phase. Accordingly there will be no compacting of soils. The combination of increasing organic matter levels and lack of machinery activity will allow a natural enhancement of the soil.

[3] EA, ibid, page 8.

What is the Land Quality in the Wider Area?

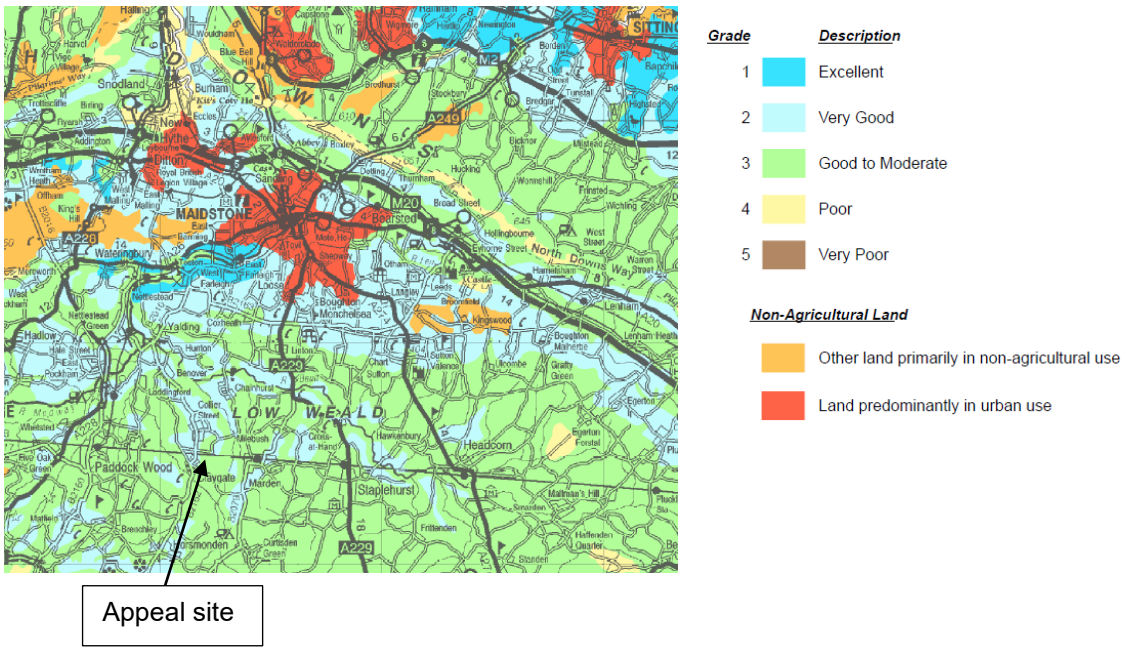
7.35 The provisional ALC maps from the 1970s are of limited use, but provide the only measured estimates available. The statistics for Maidstone, which was recorded as having an area of 39,335 ha, are shown below compared to the England figures.

Table 4: Provisional ALC Breakdown

Grade	England (%)	Maidstone (%)
1	2.7	1.6
2	14.2	27.4
3	48.2	60.4
4	14.1	2.0
5	8.4	0.0
Non-agricultural	5.0	2.9
Urban	7.3	5.9

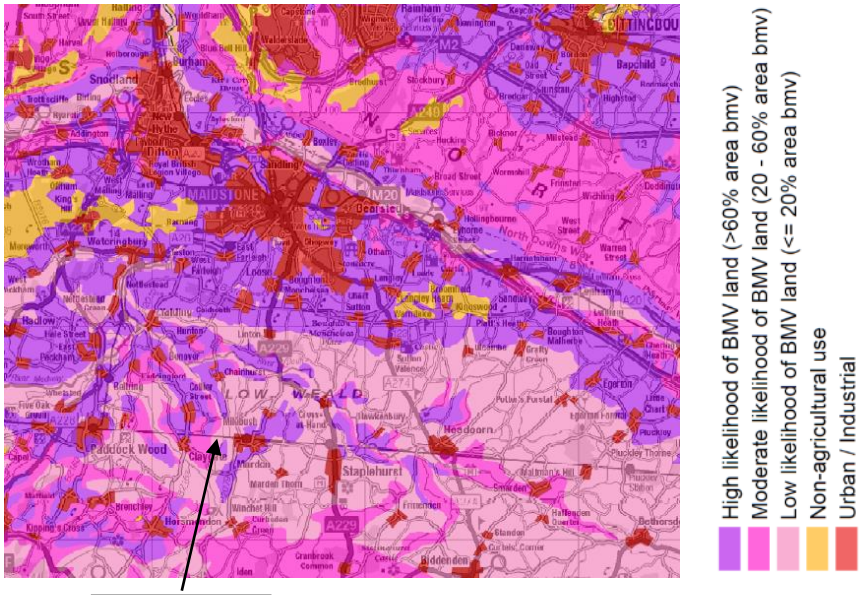
7.36 The land quality of the Borough is better than the England average. The amount of Grade 2 in the Borough is about twice the national average. This is mostly in the north of the Borough, and the pattern becomes more mixed in the southern part of the Borough, where the Appeal site is located. This is shown below.

Insert 22: Provisional ALC



7.37 The predictive likelihood BMV map for the same area is reproduced below. The site is identified. It is evident that the Appeal site lies in the area of generally poorer quality land within the Borough.

Insert 23: Predictive Likelihood of BMV



7.38 Therefore based on the available land quality data, and the evidence from the provisional and predictive BMV maps, where the local area is shown as falling into the low and moderate likelihood of BMV, the site is some of the poorest quality available, albeit intermixed with some smaller areas of high likelihood of BMV land.

7.39 The Appellants Sequential Analysis Study (Pegasus, February 2022) **[CD1.8]** and updated study (April 2023, **[CD1.31]**) considers the land quality of the study corridor. Whether or not that study area is adequate is considered in the evidence of Mr Cox, but it is evident that, in terms of agricultural land quality, similar conclusions are likely to have been reached had the Study width been broadened.

What is the Policy Position?

7.40 There is no policy bar on using land of BMV quality for solar farms. That is clear in the Secretary of State and Inspector decisions quoted from earlier.

7.41 Policy in the NPPF requires, in the context of plan making, that where significant development of land is demonstrated to be necessary, poorer quality land should be used in preference. Paragraph 175 is a plan-making policy, and so is not directly applicable. Even if it was applicable, that trigger point is not reached here. Only 0.35 ha of BMV land is affected by the tracks, transformers etc. This is not "**significant development**".

7.42 Local Plan Policy DM24 does not bar the use of BMV land. Criterion 2 sets out that "**preference will be given to** …. **agricultural land that is not classified as the best and**

most versatile". "**Preference**" is in my opinion not equivalent to "**policy does very explicitly require avoidance of the BMV agricultural land, even if still farmed to a lower type of production**", as the case officer report to Committee stated at 6.15.

7.43 The Council's Statement of Case expresses the view that "**preference in this context relates to 'precedence' rather than 'a greater liking' (OED**" (para 24). The interpretation of policy is ultimately a matter of law that will need to be examined at the Inquiry.

7.44 In either interpretation (ie precedence or preference) it is clear that the policy does not prohibit the use of BMV land.

7.45 Therefore neither the NPPF (2023) nor the Local Plan DM24 (2017) require avoidance of BMV land.

7.46 The case officer report refers to the Planning Practice Guidance on the subject. This is dated back to 2015 and sets out that factors a local planning authority will need to consider include "**whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land: and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays**" (5-013-20150327). That is not policy "**very explicitly requiring avoidance of BMV agricultural**" land, as the case officer report alleges in the report to committee at 6.15.

7.47 The weight to be given to the 2015 NPPG advice is a matter of planning policy and law. It is clear that the policy context for the development of renewables has shifted very considerably since 2015, as set out in the evidence of Mr Cox. This is perhaps most succinctly summed up in the first two sentences of EN-3 (as presented to Parliament November 2023):

- "**there is an urgent need for new electricity generating capacity to meet our energy objectives;**
- **electricity generation from renewable sources is an essential element of the transition to net zero and meeting our statutory targets for the sixth carbon budget**".

7.48 I have been advising on development involving agricultural land since 1987. The degree of protection for land of BMV quality came in at that time, initially for Grades 1 and 2, but for grades 1, 2 and 3a from 1992. In comparison to the policy context for energy, the policy

context and weight afforded to BMV land has not changed materially or significantly since 1992.

7.49 Neither has food production policy changed significantly since 1992, other than to shift funding away from production towards environmental matters, as I explore in section 8.

7.50 These policy assessments have been considered in many NSIP and TCPA solar farm decisions recently, including all those set out in paragraph 7.11 above.

7.51 The Council's Planning Policy Advice Note "Large Scale Solar PV Arrays" (2014) **[CD3.19]** does not require the avoidance of BMV land. The Note sets out in 3.18 that the presence of BMV land "**will therefore be a significant issue**". The flow chart on page 9 clearly allows for development of Subgrade 3a if there is an explanation of why the development needs to be located on such land (**see Appendix KCC4**).

7.52 The Appeal site is a mix of mostly Subgrades 3a and 3b, with some Grade 2. The Council's own Planning Practice Guidance allows for solar farm development on Subgrade 3a. The officer report to committee does not represent the Council's own position accurately.

7.53 The explanation above provides an explanation about the availability of lower quality land and the relative abundance of BMV land in the area. Farming considerations required in the flow chart are covered in section 6. The alternative site assessment is considered further in the evidence of Mr Cox.

Conclusions

7.54 There will be only a small amount of BMV lost, some 0.35 ha. This is capable of restoration at decommissioning, but a cautious approach is taken in this assessment.

7.55 The BMV land involved is mostly Subgrade 3a and is all mixed with Subgrade 3b such that it is not capable of being cropped and farmed differently.

7.56 Policy does not "**very clearly require avoidance of BMV land**", as the report to committee alleges. Indeed it does not require avoidance at all.

7.57 There is no policy objection to the use of BMV and, as set out in the decisions above, it is recognised that the land is not affected.

8 AGRICULTURAL LAND USE CONSIDERATIONS

Council's Reason for Refusal

8.1 Reason for Refusal No 1 makes no reference to food production directly, but notes that:

"**The site includes a significant proportion of the best and most versatile agricultural land which has economic and other benefits that NPPF requires to be recognised**".

8.2 As established in section 5 of my evidence above, there is no adverse effect on land quality (except for the small areas for fixed equipment), and there will be benefits for the soils.

8.3 The officer's report to Committee refers to the land being used for grazing by sheep thereby continuing agricultural use of the land "**but causing the loss of full productive capacity of BMV land for a considerable period of time**" (paragraph 6.11 refers). The report at 6.12 notes that the Appellants argue that the site would remain in agricultural use and that biodiversity benefits would be delivered, but that this argument is not accepted by the Council (6.13).

8.4 The case officer's position seems to be that BMV agricultural land must be avoided for economic reasons and that it must be capable of being used for its full productive capacity.

Statement of Case

8.5 Paragraph 33 of the Council's Statement of Case sets out that the third arm of DM24 requires reinstatement of the previous use. The Council does not appear to question that full reinstatement will be achieved. The Statement of Case notes other matters, as follows:

"**Consideration will be given to the adverse issues arising from the timescale over which the site will be out of agricultural use in terms of the length of the temporary permission, together with time taken for construction and export of energy to the grid. These include issues concerning the loss of food production and the constraints on land use during that period. It would not be reasonable to impose a condition to require sheep to graze the land**".

Analysis Undertaken

8.6 In this section of my evidence I assess the land use considerations, in the following order:

(i) is there policy requiring agricultural land to be farmed?

(ii) is there policy requiring BMV agricultural land to be farmed to its full productive capacity?

(iii) is there a need for farmland to be used to its full productive capacity?

(iv) what are the economic and employment considerations from changing from arable to solar and sheep grazing?

(v) are there wider economic benefits?

(vi) are there other benefits?

Is There Policy Requiring Agricultural Land to be Farmed?

8.7 There is no Government, or local, policy that requires agricultural land to be farmed.

8.8 **The Definition of "Agriculture"**. The use of land for "agriculture", which is defined in the Town and Country Planning Act 1990 (s336), is not "development" (as defined in s55 (2) (e). You do not need planning consent to use land for agriculture, or to change between any different agricultural enterprises. The definition of agriculture is not all about food production. The definition from section 336 is as follows:

> "agriculture" includes horticulture, fruit growing, seed growing, dairy farming, the breeding and keeping of livestock (including any creature kept for the production of food, wool, skins or fur, or for the purpose of its use in the farming of land), the use of land as grazing land, meadow land, osier land, market gardens and nursery grounds, and the use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes, and "agricultural" shall be construed accordingly;

8.9 The definition of agriculture allows a wide range of agricultural uses. Some relate to food production, others do not. There is no requirement to use land for food production, or to use it for any particular intensity of use. Consequently the considerable interest and push for "rewilding" or regenerative agriculture, which encourages low intensity use with a focus on biodiversity, which was widely reported in recent years, is still an agricultural use.

8.10 It follows that a landowner can do what he or she wants with their land within the definition of agriculture. They could rewild and graze it unintensively, they could graze it with horses, plant short-rotation coppice, plant ancillary woodland, or fallow it. They could farm it intensively, subject to limits on nutrient loading (covered by other legislation and rules), or farm it organically. They could grow industrial crops, energy crops, or food for human consumption. Food production is not an obligation.

8.11 **National Policy**. The NPPF paragraph 174 refers to the "economic and other benefits" of BMV land. Natural England drew the Council's attention to paragraph 174, which requires the economic and unspecified "other benefits" of BMV land to be recognised. It is not a food production policy.

8.12 Nor is footnote 58 of the NPPF a food production policy. The footnote attaches to paragraph 175, which is a plan making paragraph not a decision-taking paragraph. The sentence to which footnote 58 is attached requires plans to "**allocate land with the least**

environmental or amenity value". BMV land has no particular environmental or amenity value over non-BMV land.

8.13 **Local Plan Policy**. In common with national policy, the Local Plan makes no reference to the use of agricultural land in their renewable energy policy. Food production is not referred to in DM24 or the supporting text.

Is There Policy Requiring BMV Land to be Farmed?

8.14 Just as there is no policy requiring farmland *per se* to be farmed, there is also no policy that requires BMV land to be farmed, or farmed to any level of intensity.

Is There a need for Farmland to be Used to its Full Productive Capacity?

8.15 The Council's reason for refusal is seemingly based around the alleged loss of use of land for full capability food production as a consequence of the installation of panels.

8.16 Government policy and initiatives do not require or even seek to encourage food production.

8.17 Government policy and financial incentives on farmland are focused on enhancing biodiversity and tackling the loss of environmental diversity. That has been the position of Government for many years, and recent events, such as Covid-19 and the invasion of Ukraine, have not resulted in any change to the approach.

8.18 The Sustainable Farming Incentive, the full guidance for which was updated on 2nd September 2022, is one of three new environmental schemes post Brexit. The SFI aims to improve water quality, biodiversity, climate change mitigation and animal health and welfare. There is no mention of food production. The SFI, the guide advises, aims to:

- encourage actions to improve soil health;
- recognise how moorland provides benefits to the public;
- improve animal health and welfare by helping farmers with the costs of veterinary advice for livestock.

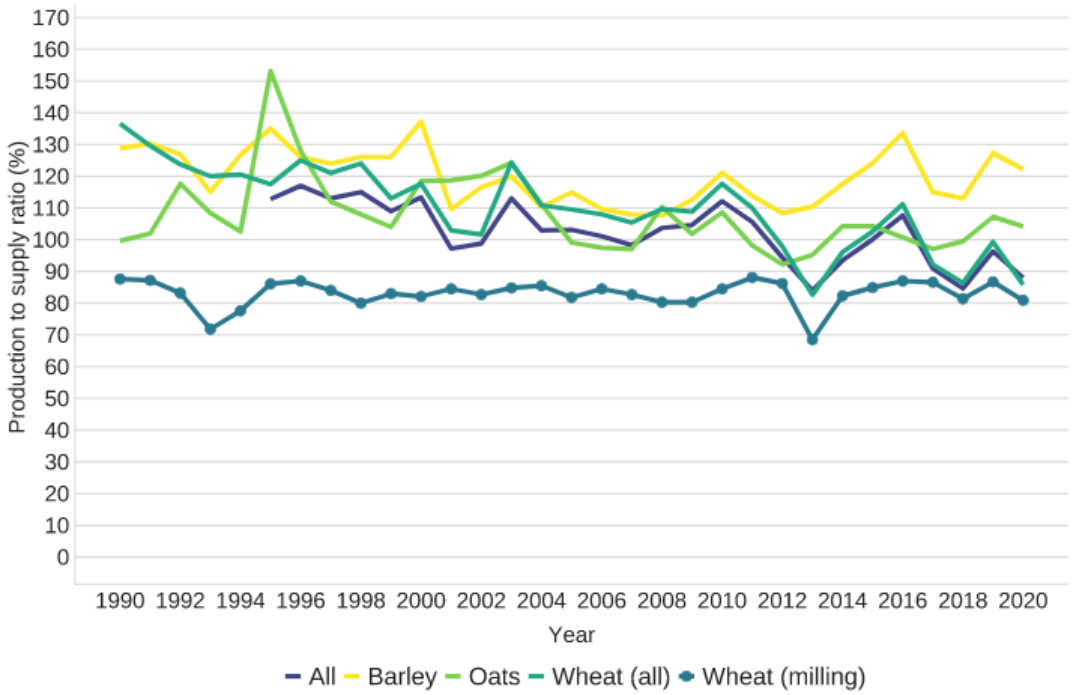
8.19 The Government Food Strategy (June 2022) does not seek to increase food production. The "Foreword" recognises near self-sufficiency in wheat, most meat, eggs and some vegetables, but not in soft fruit although the trend is favourable. But the strategy does not seek to alter that in the main commodities. The Strategy states:

"**Overall, for the foods that we can produce in the UK, we produce around 75% of what we consume. That has been broadly stable for the past 20 years and in this food strategy we commit to keep it at broadly the same level in future**".

8.20 The Growth Plan 2022 (HM Treasury, September 2022) sets out in paragraph 3.48 that agricultural production growth has been weak for many years, and this needs to change. A review is underway of frameworks for regulation, innovation and investment, with plans which were then stated to be set out later in the autumn. In context, however, the whole of section 2 of The Growth Plan is about tackling energy prices, with a drive for development of home-grown renewable technologies (2.10 refers). Farming by contrast warrants one paragraph.

8.21 The Bidwells' report submitted with the planning application[4] **[CD1.15]** at section 5 refers to the UK's position on arable crops. In terms of grains, domestic production generally exceeds consumption, as shown below. It is only in hard wheats that we produce less than we consume, because hard wheats are not suited to growing well in our climate. Hence we export other grains and import hard grains.

Insert 24: Domestic UK Grain Production as Percentage of Consumption



8.22 The Food Security Report notes that grain alone does not provide a healthy and nutritious diet or meet consumer demand for a varied diet. The analysis shows, however, that in terms of calories, we are self-sufficient. The report notes:

"**However, from a purely calorific perspective, the (below average) grain yield in 2020 of 19 million tonnes would be sufficient to sustain the population. It is equivalent to 283kg per person, 0.8 kilos per day. A kilo of wheat provides 3,400**

[4] Sheepwash Solar Farm – Eckley Farms: Agricultural Land Use Statement, Bidwells (March 2022).

calories (and barley slightly more at 3520 calories), making 0.8 kilos of grain over 2,600 calories, compared to recommended calorie intake of 2 to 2500 for adults. From these figures it is easy to demonstrate that, even without accounting for other domestic products like potatoes, vegetables, grass-fed meat and dairy, and fisheries, current UK grain production alone could meet domestic calorie requirements if it was consumed directly by humans in a limited choice scenario".

8.23 Self-sufficiency in livestock products is also high. In meat, milk and eggs the UK produces a roughly equivalent volume to what it consumes. In 2020 production per person equated to:

- 61kg meat;
- 227 litres of milk;
- 172 eggs.

8.24 Currently significant areas of arable land are being funded to be used for grassland or non-productive purposes. As of 1st April 2023 some 161,000 ha, statistically at least 42% of which will be BMV, were being funded under the Countryside Stewardship Scheme for uses such as 2 year legume leys (AB15), field margins (SW1, SW4), flower rich margins (AB8), arable reversion to grassland with low fertiliser (SW7) and nectar flower mixes (AB1)[5] (CSS codes in brackets for reference).

8.25 In August 2023 Government published its Biomass Strategy[6] which aims to encourage increased biomass production from agricultural land. Currently 121,000 ha is in biomass production. The details of the strategy are not important for this appeal, but the fact that Government is prioritising non-food land uses is important. It shows that food production is not a concern or key objective of Government.

8.26 The most recent position statements balancing the use of agricultural land with energy production are EN-1 and EN-3 (as laid before parliament in November 2023). These do not present a bar on the use of BMV land. The statements do not set out policy for food production or increasing food production. Instead they refer to policy to prevent loss of resources and provide efficient use of land.

8.27 There is no need for farmland to be used to is full productive capacity, or for growing. The position is made clearly by Government.

[5] Defra "Countryside Stewardship and Environmental Stewardship Option Summaries at 1st April 2023" (31st August 2023)
[6] Department for Energy Security and Net Zero, Biomass Strategy (10th August 2023)

What are the Economic and Employment Considerations?

8.28 The land is used for a rotation of wheat, barley, oilseed rape, beans, oats and linseed. Yields, as set out in section 4, are variable. The average yield of the fields within the Appeal site if growing wheat were set out earlier. The various fields averaged yields between 7.5 t/ha and 10-11 t/ha. The average yield across England in 2022 was 8.6 t/ha ("Cereal and oilseed production in the United Kingdon 2022, Defra") (12 October 2023).

8.29 Yield maps for the fields within the Appeal site show considerable variation. There are wet areas, areas where establishment was poor, shaded areas and some high yielding areas.

8.30 The Appeal site, based on 2022 production, produces about average yields on the whole, with a couple of fields yielding slightly above average.

8.31 If we take, for the purposes of attempting an economic and productivity assessment, the "average" and "high" performance budgets from the Pocketbook for Farm Management 2024 (September 2023), to represent non-BMV and BMV land respectively, we can crudely quantify the benefits. The table below shows a per hectare yield and gross margin for two crops, being winter wheat and winter oilseed rape.

Table 5: Assessment of Economic and Production Differences

Item	**Winter Wheat**		**Oilseed Rape**	
	Average	High	Average	High
Yield (t/ha)	8.6	10.0	3.5	4.0
Difference (t/ha)	**-**	**1.4**	**-**	**0.5**
Gross Margin (£/ha)	1,116	1,389	944	1,116
Difference (£)	**-**	**273**	**-**	**217**

John Nix Pocketbook for Farm Management, September 2023

8.32 Within the Appeal site, some 35.1 ha is Grade 2 and Subgrade 3a (see Table 3). 91% of the area is actually cropped (68.1 ha out of 74.5 ha, see section 4). However if we assumed all the BMV land was fully cropped, the implications of the 35.1 ha of BMV within the Appeal site are as follows:

- yield uplift of 49 tonnes of wheat or 17.5 tonnes of oilseed rape;
- economic Gross Margin (ie output minus direct variable costs) of £7,000 - £9,600 per annum.

8.33 We know that this is a greater impact than would be expected in reality, but nevertheless it shows that in terms of economic and food productivity terms the effects are modest.

8.34 If it was determined that solar panels must not be placed on BMV land but only on non-BMV land, and if the above crude estimate is accepted for the comparison, then the effect of moving the 35.1 ha of panels from the BMV land within the site to non-BMV land, would be a maximum production benefit of 49 tonnes of wheat.

8.35 Defra recorded that the United Kingdom produced just over 24 million tonnes of cereals in 2022, of which 15.5 million tonnes was wheat (Cereal and oilseed production in the United Kingdon 2022, Defra (12 October 2023)). Clearly the effect of moving the proposed panels from the BMV land within the Appeal site to poorer quality land would be insignificant in terms of England's production.

8.36 The land will continue to be used, being used for sheep production. An agricultural land use will continue and food will be produced.

8.37 The economic and other benefits have thus been considered, and are modest.

Grazing Under Panels

8.38 The land under and around the panels will be capable of being used for grazing sheep. This makes considerable sense, as it provides a methodology for keeping grass growth down as well as providing an economic benefit.

8.39 The grazing of solar farms with sheep is common practice. Some examples are shown at Photos 35-36. It is often difficult to photograph sheep under and around panels, but they are commonly used to maintain the areas. It makes economic sense as well as practical sense.

Are There Other Benefits?

8.40 The benefits for soil and soil biodiversity were described in section 6. There will be other biodiversity benefits. These were referred to in the Bidwell's report, but do not seem to have been referred to by the case officer.

8.41 The State of Nature Report 2019 (The State of Nature Partnership, 2019) reported increases and decreases in different species, but overall a decline in the abundance and distribution of the UK's species since 1970, continuing a trend started hundreds of years earlier. The Food Security Report 2021, referred to earlier, noted that wheat production has a significant environmental impact including "**due to the lack of biodiversity in conventional grain fields**".

8.42 The Secretary of State and Inspectors have recognised that there are other benefits from converting arable land to grassland.

8.43 There will also be an increased need for farm labour. The Pocketbook for Farm Management labour estimates for cereals and lowland sheep production are compared below.

Table 6: Labour Estimates

Crop	**Hours/ha/year**
Winter cereals, including hauling straw	14
Winter oilseed rape	9
Sheep – 4 hours per ewe at 10 ewes/ha	40

Conclusions

8.44 The reason for refusal seems to be based on an assumption that arable land should be used for its full productive capabilities and a misunderstanding that policy seeks to avoid its use for solar panels.

8.45 The reason for refusal is wrong on this. Policy does not seek to avoid BMV agricultural land. Policy does not require such land to be farmed, or farmed to its productive capabilities. The land affected is a mix of mostly Subgrade 3a and 3b. The Council's Planning Guidance Note differentiates between Grade 1 and 2, and Subgrade 3a. There is no bar on using Subgrade 3a.

8.46 There is no emerging policy of which we are aware that changes the emphasis to food production (see above).

8.47 There is no evidence that we need to farm land intensively for food production. The statistics indicate otherwise. There will continue to be food production from the land and there will be biodiversity benefits.

8.48 There is no food production policy, guidance or need to locate solar development only on non-BMV land.

9 SUMMARY AND CONCLUSIONS

Reasons for Refusal

9.1 The reason for refusal followed the officer's report to Committee. That report set out that policy "**very explicitly requires avoidance of the BMV agricultural land, even if still farmed to a lower type of production**" (officer report 6.15).

9.2 The Council's Statement of Case has developed this. It is stated that policy requires BMV land to be used as a matter of precedence (ie before). The Statement of Case also sets out that the loss of food production for the duration of the permission is a concern, and that agricultural use may not continue.

Land Quality Matters

9.3 In my opinion the Council's approach is neither a correct nor accurate interpretation of planning policy. Nowhere in Government policy, Local Plan policy, the Planning Practice Guidance suite or the Council's Policy Note is there a policy or requirement to avoid using BMV land for solar panels.

9.4 As set out in the NPS EN-3 (November 2023) there is an urgent need for renewable energy for energy security and climate change reasons. No comparable position exists in terms of food production.

9.5 The Council's position, that policy "**very explicitly requires avoidance of BMV agricultural land**", and that policy requires BMV land to be used as a matter of precedence, goes beyond the development plan policy. This is a matter of law to be explored at the Inquiry. There is no bar to the use of BMV land for solar panels.

9.6 Planning policy and Government initiatives do not require, or encourage, the use of land (BMV or otherwise) for food production or intensive agricultural use.

9.7 Policy does not seek to prevent the use of BMV or non-BMV land for non-food uses. Biodiversity, biomass and other initiatives clearly seek non-food uses of BMV and other land.

9.8 The policy simply requires that the economic and other benefits of BMV land be considered, with a focus on assessing the effects from the loss of the BMV resource. Loss is generally defined as involving the permanent, irreversible loss from sealing of agricultural land or permanent downgrading of agricultural land quality.

9.9 With the exception of the limited areas of land required for tracks and infrastructure, which cover 0.35 ha of Subgrade 3a land, the agricultural land will not be adversely affected. It will not be downgraded. This is widely recognised in planning decisions.

9.10 Therefore there is no conflict with policy in the NPPF and Local Plan DM24.

Food Production Matters

9.11 The Council's Statement of Case develops and expands the reason for refusal to raise concerns about food production and continued agricultural use.

9.12 There is no policy, or Government incentive, to use land for its full productive capabilities. Government has clearly stated that we have food security concern. There is no requirement to farm land intensively. There is no requirement to farm land for food production at all. Emerging schemes encourage the opposite of intensive food production.

9.13 There will be clear benefits for soil health and biodiversity and wider biodiversity from converting arable land to grassland.

9.14 The economic and food production implications, were the BMV land within the Appeal site to be retained for arable use and the panels deployed to lower quality land instead, have been recognised and would be modest.

9.15 Policy DM24 requires that provision is made to return the land to its previous use once the installations have ceased operation. The land will be returned.

9.16 Policy DM24 does not set out a food production concern, as set out in the Council's Statement of Case. That concern is not based on policy or any factual analysis about food security.

9.17 The land can be grazed for the duration of the operational phase, and that makes practical as well as economic sense.

Overall Conclusion

9.18 The agricultural issues should be given limited weight as very little BMV land is affected. There are clear benefits from the land being put to grassland for the duration of the scheme.

10 DECLARATION

10.1 In accordance with the requirements of the Royal Institution of Chartered Surveyors Practice Statement, "Surveyors acting as expert witnesses" (4th edition, 2014):

(i) I confirm that my report includes all facts which I regard as being relevant to the opinions which I have expressed and that attention has been drawn to any matter which would affect the validity of those opinions.

(ii) I confirm that my duty to this Appeal as an expert witness overrides any duty to those instructing or paying me, that I have understood this duty and complied with it in giving my evidence impartially and objectively, and that I will continue to comply with that duty as required.

(iii) I confirm that I am not instructed under any conditional fee arrangement.

(iv) I confirm that I have no conflicts of interest of any kind other than those already disclosed in my report.

(v) I confirm that my report complies with the requirements of the Royal Institution of Chartered Surveyors (RICS), as set down in *Surveyors acting as expert witnesses*: RICS practice statement.

Signed:

(Tony Kernon)

Dated: 18th December 2023

Greenacres Barn, Stoke Common Lane, Purton Stoke, Swindon, Wiltshire SN5 4LL
Telephone: 01793 771333 • Email: info@kernon.co.uk • Website: www.kernon.co.uk