CD13.8a

CONSTRUCTION OF A TEMPORARY SOLAR FARM, MERIDEN ROAD, FILLONGLEY

AGRICULTURAL EVIDENCE ON BEHALF OF THE APPELLANT BY

TONY KERNON BSc (Hons) MRICS FBIAC

LPA Reference: PAP/2023/0071

PINS Reference: APP/R3705/W/24/3349391

March 2025

KERNON
COUNTRYSIDE CONSULTANTS LIMITED

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Authorised By APK 03/25

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CONTENTS

Appendices

1 INTRODUCTION TO THE WITNESS

The Witness

1.1 This evidence has been prepared by Tony Kernon. I am a Chartered Surveyor and a Fellow of the British Institute of Agricultural Consultants. I have specialised in assessing the effects of development proposals on agricultural land for over 35 years, and act nationwide for local planning authorities and applicants alike across England and Wales.

1.2 As part of preparing this evidence I have reviewed the relevant application material, visited the site and inspected the land and soils.

1.3 My Curriculum Vitae is at **Appendix KCC1**. As a Chartered Surveyor giving evidence, I am bound by the RICS Practice Statement "Surveyors Acting as Expert Witnesses", 4th Edition (February 2023). A declaration is provided below.

1.4 In accordance with the requirements of the Royal Institution of Chartered Surveyors Practice Statement, "Surveyors acting as expert witnesses" (4th edition, amended 2023):

(i) I confirm that my report has drawn attention to all material facts which are relevant and have affected my professional opinion.

(ii) I confirm that I understand and have complied with my duty to this Appeal as an expert witness which 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 or other success-based fee arrangement.

(iv) I confirm that I have no conflicts of interest.

(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 (2023).

Signed: 

(Tony Kernon)

Dated: 7th March 2025

2 INTRODUCTION TO THE ISSUES AND THE EVIDENCE PRESENTED

Reason for Refusal

2.1 The Reason for Refusal makes no reference to agricultural land quality or agricultural land use issues.

The Rule 6 Party's Position

2.2 The Rule 6 Party (R6P) have raised agricultural land loss and impacts on agricultural land use as main issues.

Case Management Conference

2.3 At the Case Management Conference on 7th January 2025, the Inspector asked for evidence to be provided on agricultural matters, including on the benefits for agriculture that the Council had raised.

2.4 A separate Statement of Common Ground on agricultural issues was also requested.

Statements of Common Ground

2.5 Statements of Common Ground (SoCG) have been reached with both North Warwickshire Borough Council (NWBC) [**CD 12.7**] and Fillongley Parish Council (FPC) [**CD 12.8**], specifically on agricultural matters.

Agreements and Issues Arising

2.6 In respect of NWBC there is considerable agreement, including:

- with the exception of small areas, the proposed works do not adversely affect land quality;
- the land quality of all areas can be restored fully on decommissioning;
- soil should not be adversely affected and soils should benefit from being rested from intensive arable uses;
- the interpretation of planning policy.

2.7 There are no areas of disagreement with NWBC.

2.8 In respect of FPC, there is also considerable agreement, including:

- soils should not be adversely affected, subject to good practice;
- soils should benefit from being rested from intensive arable uses;
- agricultural use, in the form of grazing sheep, can continue under and around the panels.

2.9 The areas of disagreement are identified and are fairly limited. These are, in summary:

- whether the supporting posts, CCTV posts and fences adversely affect agricultural land quality;
- (dependent upon the above) whether the land quality of all areas can be restored fully on decommissioning;
- whether policy requires a sequential approach utilising poorer quality land in preference, and if so whether that policy has been satisfied in this case.

2.10 Neither NWBC nor FPC have provided comments on the statement that the Government has not identified a current food security problem. It is therefore assumed that there is no disagreement with this statement, but my evidence covers this in case it is disputed.

The Evidence

2.11 My evidence covers the effects of the development on agricultural land, agricultural land use and agricultural land economics. Without a specific reason for refusal, the topics covered have been drawn from the Rule 6 Party's statements, the application material and the officer's report, and refined by the Statements of Common Ground.

2.12 Consequently the evidence covers a large number of issues. Overall my evidence reviews:

(i) the policy of relevance to the development of solar farms on agricultural land;
(ii) what the physical impacts are on agricultural land and how these should be assessed against policy;
(iii) what the land use impacts are, and the economic and food production matters arising from any effects;
(iv) what the benefits are in terms of soils and farm economics;
(v) and then seeks to draw these matters together.

2.13 This evidence is intended to enable the harms and benefits to be quantified so that they can be considered in the overall planning balance.

Structure of Evidence

2.14 In that context my evidence is structured as follows:

(i) **section 3** reviews the application material, officer report and Statements of Common Ground in order to identify issues;
(ii) **section 4** sets out the relevant policy, guidance, Written Ministerial Statements etc;
(iii) **section 5** describes the land quality and farming considerations;
(iv) **section 6** describes the proposals and how they might affect land;

(v) **section 7** assesses the effects on soils;

(vi) **section 8** reviews economic and food production implications;

(vii) **section 9** reviews land quality in the wider area;

(viii) **section 10** provides a summary and conclusions.

3 ANALYSIS OF MATTERS RAISED

Application Documents

3.1 The planning application was accompanied by a report "Agricultural Land Impact Statement" by Stantec (August 2023) [**CD 1.6**]. Separately the land quality was set out in an "Agricultural Land Classification (ALC) Report" by Roberts Environmental Ltd (February 2023) [**CD 1.3**].

3.2 The Stantec report concluded that the majority of the land would be unaffected by the Proposed Development. The report identified that most of the land in the wider area falls within a similar category of a "**high likelihood of BMV**".

Natural England

3.3 Natural England's comments are reported in the officer's report. Natural England raise no objection, noting that "**the agricultural land classification grading would remain unaffected by solar developments and therefore not alter the grading in the long-term**".

Case Officer Report

3.4 The case officer reviewed agricultural matters in paragraphs 4.44 to 4.46, concluding in 4.46 that the value of the site (in respect of the BMV) is a substantial harmful impact that needs to be considered in the planning balance.

3.5 The case officer made that planning balance consideration in paragraphs 4.62 to 4.66 in respect of BMV. The generally high land quality value of the District was noted.

3.6 As set out in paragraph 4.65, for the reasons set out, the officer concluded that "**it is not considered that the impact is of such weight to warrant a reason for refusal**".

3.7 The decision was deferred and reported to a later meeting of the Board. The officer's report updated the Board following the Written Ministerial Statement of May 2024. The officer analysed a number of appeal decisions that had been brought to the Council's attention. Paragraph 2.20 concluded on this matter as follows:

> "**Members are advised that the use of BMV is not a reason for refusal as a matter of principle. The final planning balance has to be assessed on the individual circumstances of each respective case and that is why different appeal decisions can be found**".

3.8 The officer then reviewed the Written Ministerial Statement and advised the Board in 2.24 as follows:

> "**The use of BMV has to be justified and cumulative impacts also assessed. The applicant has done so here – the locational determinant to be able to connect to the Grid, the BMV assessment in Appendix 1 and there being no agricultural evidence submitted to show a material loss of food production**".

Rule 6 Party

3.9 The "Statement of Behalf of Fillongley Parish Council" (Tyler Parkes Partnership Ltd, 18th November 2024) [**CD 9.9**] raises a number of matters, which I will address in this evidence. These are:

(1) evidence from other applications shows that the ability to find alternative sites of lower quality is not constrained (4.53 – 4.55);

(2) the May 2024 Written Ministerial Statement requires a greater onus on developers in respect of the highest land quality (4.57);

(3) footnote 62 of the NPPF (as it was then) sets out that food production should be considered (4.58);

(4) it is accepted that there is no requirement to undertake a sequential approach to site selection, and no policy prevention to the use of BMV, but it is not clear why the development cannot go elsewhere, including in a different local authority area (4.61 – 4.67);

(5) it would be a waste of BMV land to use it for sheep grazing, proposed hedges will render future arable use impractical, and some land will be lost (4.68).

3.10 Overall the R6P's case is that the impacts equate to moderate harm, as stated in paragraph 4.69 (below) and restated in 5.4:

> "**4.69 In summary, it appears that the appeal proposal has been largely driven by a willing landowner, a large site in single ownership, and the ease of connection to the grid. These are perfectly understandable commercial objectives – but they do not satisfy the requirements of planning policy and practice for the reasons given. The lack of evidence for the selection of the appeal site is material to the consideration of the appeal proposal, and the Parish Council consider the use of a site comprising 95% BMV agricultural land for a solar scheme that will limit the agricultural use of this high quality land to sheep grazing for 40 years carries adverse weight against the scheme, a harm considered moderate in the planning balance**".

Council's Statement of Case

3.11 In the Council's Statement of Case the matter is reviewed in paragraphs 9.21 to 9.25 in respect of the dual use of land/BMV. It is concluded in 9.25 that "**in the current appeal, based upon the specifics of this scheme, the dual use of the land/BMV impact is considered to represent a limited benefit**".

Issues Arising

3.12 There are no technical issues, such as questions about the land quality results or farm impacts. This is agreed in items A and B of the Statements of Common Ground with both NWBC and FPC.

3.13 All parties agree that the site is currently in arable uses (item C of both SoCGs). All parties agree that arable farming will not be possible with the panels in place (item G of both SoCGs). All parties agree that sheep can graze the land (item H).

3.14 All parties agree that, subject to a soils management plan being secured, soils should not be adversely affected (item I), and indeed soils should benefit from being rested (item J).

3.15 NWBC agree that except for small areas, the land quality is not adversely affected and even those areas will be restored fully on decommissioning (item F).

3.16 FPC consider that land quality is disturbed by the bases for the transformer stations, customer substations, tracks, and from the supporting posts for the panels, CCTV posts and fences, and consider that there is no evidence that these areas can be successfully restored on decommissioning. This is, therefore, a disagreement issue to be considered (items E and F).

3.17 NWBC agree that the NPPF does not place a bar on solar development on BMV land, nor does it require sequential approach to be followed (items K and L). FPC agree with these points but add the following comment, making this a disagreement issue to be considered (items K and L):

> "**However, planning policy does require in respect of solar development that applicants should, where possible, utilise suitable previously developed land. Policy requires that where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of Best and Most Versatile agriculture land, with the highest quality agricultural land being least appropriate for solar**

development and as the land grade increases, there is a greater onus on developers to show that the use of higher quality land is necessary".

3.18 Both NWBC and FPC agree that solar panels is a form of farm diversification (item M).

3.19 Both NWBC and FPC were invited to agree that Government has not set out a requirement for agricultural land to be used for food production (item N). NWBC agree, but FPC comment that it is a relevant consideration. Neither NWBC nor FPC commented on whether the Government has identified a food security problem (item O).

3.20 The issues which I address in my evidence are therefore:

- whether (and if so how much) BMV land is lost permanently by the proposals (section 6);
- the effects on soils, identified by the Council as a benefit (section 7);
- what the economic and, in particular, food production implications are (section 8);
- whether there is land of poorer quality elsewhere to which the development should be directed (section 9).

4 PLANNING POLICY AND GUIDANCE OF RELEVANCE

4.1 This section:

(i) describes the ALC system;

(ii) considers local planning policy;

(iii) considers national planning policy;

(iv) considers National Policy Statements; and

(v) considers related guidance

The ALC System

4.2 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**).

4.3 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 (2024), Annex 2). Natural England estimate that 42% of agricultural land in England is of BMV quality (see TIN049 in **Appendix KCC2**).

Local Plan

4.4 The case officer's report references the Local Plan (September 2021) policy LP16 which seeks to protect the natural environment. This policy makes no specific reference to agricultural land or agricultural land quality, and I would not have identified it as a BMV policy.

NPPF

4.5 The National Planning Policy Framework (NPPF) (December 2024) sets out at paragraph 187 (b)[1] 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.

[1] The officer's report refers to paragraph 180 but this is now paragraph 187.

4.6 Paragraph 187 and the related footnote 65 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 and Framework. Footnote 65 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"**.

4.7 Paragraph 88 notes that planning policies and decisions "**should enable** … **b) the development and diversification of agricultural and other land-based rural businesses**".

National Policy Statements

4.8 The **Overarching National Policy Statement for Energy (EN-1)** (January 2024) may be a material consideration for all applications.

4.9 Paragraph 5.11.4 notes that **"development of land will affect soil resources, including physical loss of and damage to soil recourses, through land contamination and structural damage. Indirect impacts may also arise from the 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)**.

4.10 The **National Policy Statement for Renewable Energy Infrastructure (EN-3)** (January 2024) 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 notes that **"electricity generation from renewable sources is an essential element of the transition to net zero and meeting our statutory targets"**. The document then sets out the specific guidance for different technologies, with section 2.10 covering "Solar Photovoltaic Generation".

4.11 Paragraph 2.3.9 confirms that as most renewable energy resources can only be developed where the resource exists and where economically feasible, and because there are no limits on the need established, the Secretary of State "**should not use a consecutive approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land**)".

4.12 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. Paragraph 2.10.30 confirms that there is no prohibition on the use of BMV land, but the effects should be considered.

4.13 Other guidance in NP-3 includes:

- 2.10.68 recognises that solar panels can be decommissioned easily;
- 2.10.89 recognises the potential solar farms have to increase biodiversity;
- 2.10.127 advises on minimising the effect on soil resources.

Guidance

4.14 There is no definition of what is "significant" development in the context of footnote 65 of the NPPF (which, as noted, is set in the context of plan making). The threshold for consultation with Natural England is where there will be a 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). Natural England were consulted. In their response of 5th April 2023 they raised no objections, noting that there would be no significant permanent loss of BMV land.

4.15 There is no definition of what is meant by "loss" in the DMP Order. 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)** …" (Table 3, page 49). The IEMA Guide notes that this can include **"effects from temporary developments"**, which is defined as follows: **"temporary developments can result in a permanent impact if resulting disturbance or land use change causes permanent damage to soils"**.

4.16 The Planning Practice Guidance suite from 2015, in the section on "Renewable and Low-carbon energy", advises at 5-013-20150327 that factors a local planning authority will need to consider will 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. It is noted that this guidance is now nine years old.

WMS

4.17 The case officer's update following the deferral specifically refers to the Secretary of State for Energy Security and Net Zero's Written Ministerial Statement (WMS) "Solar and Protecting our Food Security and Best and Most Versatile (BMV) Land"[2]. This statement notes in the first paragraph that food security is an essential part of national security and confirms the commitment to maintain the current level of food we produce. The second paragraph sets out concerns about energy security and prices and summarises the Government's position of racing ahead with the deployment of renewable energy, especially solar.

4.18 The WMS explains that "**even in the most ambitious scenarios** [solar] **would still occupy less than 1% of agricultural land**". The Minister had clearly considered the potential impact on agricultural land and land use of delivering the Government's objectives for renewable energy by solar. In that context, the second paragraph of the WMS confirms that the Government is racing ahead with deployment of renewable energy.

4.19 The WMS re-states the Government's position in respect of the use of BMV land. It does not amend the national policy, nor does it alter the weight to be given to the use of BMV land. Nor does it set out a food-producing policy. These are all assessed in my evidence.

Government Statement

4.20 On 18th July 2024 the Secretary of State made a Statement in the House of Commons under the title of "Clean Energy Superpower Mission". This reported, inter alia, that "**credible external estimates suggest that ground-mounted solar used just 0.1% of our land in 2022. The biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind: it is the climate crisis, which threatens our best farmland, food production and the livelihoods of farmers**".

Food Security Report 2024

4.21 On 11th December 2024 the Government published the UK Food Security Report 2024 [**CD 6.63**]. I attach the front cover and section 2.2.4 in **Appendix KCC3**. This analyses land use change. From the paragraph at the top of the third page the analysis is as follows:

> "**Looking ahead, based on current government policy framework for incentivising types of land use, it is expected that there will be increases in land use change from agricultural land to other uses. These uses include woodlands, grasslands,**

[2] Issued 15th May 2024 by Claire Coutinho under the last administration.

and restored peatland, as well as some being devoted to economic infrastructure like energy and housing. The impact this will have on food production will be affected by the kind of land being taken out of production. For instance, the impact is negligible if it is unproductive land which is taken. It is plausible that with continued growth in output and conducive market conditions, that food production levels could be maintained or moderately increased alongside the land use change required to meet our Net Zero and Environment Act targets and commitments. However, analysis projecting decades into the future involves significant uncertainties. The government is due to publish a land use framework to guide land managers on the balance of opportunities and risks".

4.22 A consultation preceding the Land Use Framework [**CD 6.66**] was published in late January 2025. This is only a consultation, but the land use analysis from that document is reproduced in **Appendix KCC4**. The analysis shows that across the UK 85% of the Utilised Agricultural Area is used for animal feed or animal production (see page 12 of 36). The expectation is that 19% of England's total agricultural land may need to change use of management by 2050 (see page 15 of 36).

4.23 The Government is committed to conserving and managing 30% of the UK's land for biodiversity targets (see page 24 of 36). Overall, as set out at the top of page 16 of 36:

> "**The Government is committed to maintaining food production. Our assessment is that, based on historical trends of productivity improvement, and supported by new and emerging innovations, the impact of these land use changes on domestic food production will be offset by productivity improvements. We expect that recent trends of increased productivity from agricultural land will continue. Working in partnership, Government will put in place a policy environment to support those changes**".

4.24 Page 27 of 36 notes that "**we need to build new homes and clean energy, water infrastructure and transport infrastructure at scale and at pace**".

5 THE SITE, FARMING ENTERPRISES, SOIL AND LAND QUALITY

The Site

5.1 The Appeal Site is agricultural land forming part of a local land-based rural business.

5.2 The Appeal Site is outlined in red on the Google Earth image below, relative to Fillongley. The site includes whole fields.

Insert 1: The Appeal Site and Photograph Locations

Photo from Google Earth, June 2021

5.3 The Appeal Site is mostly large fields. These are shown in the photographs below, taken from the following locations.

Insert 2: Location of Photographs

Photo 1: Looking Southwest over the Southern Field

Photo 2: Looking Northeast over the Southeastern Field

Photo 3: Looking North over the Northeastern Field

Photo 4: Looking South over the Central Field

Photo 5: Looking West towards the Western Field

Farming Circumstances

5.4 The Appeal Site is part of a substantial farm business that operates approximately 400 ha in Warwickshire, with another farm in Shropshire. The farm produces beef cattle and wheat, and is based at Nailcote, on the western edges of Coventry. The farm finishes 800 – 1,000 head of cattle per year.

5.5 The land, along with two other parcels in the Fillongley area, is used for arable purposes. The normal cropping is two years of winter wheat, one year of winter barley, and a break crop of either field beans or maize. The barley, beans and maize are all used for animal feed. The wheat achieves milling quality typically one year in three and otherwise is used for animal feed.

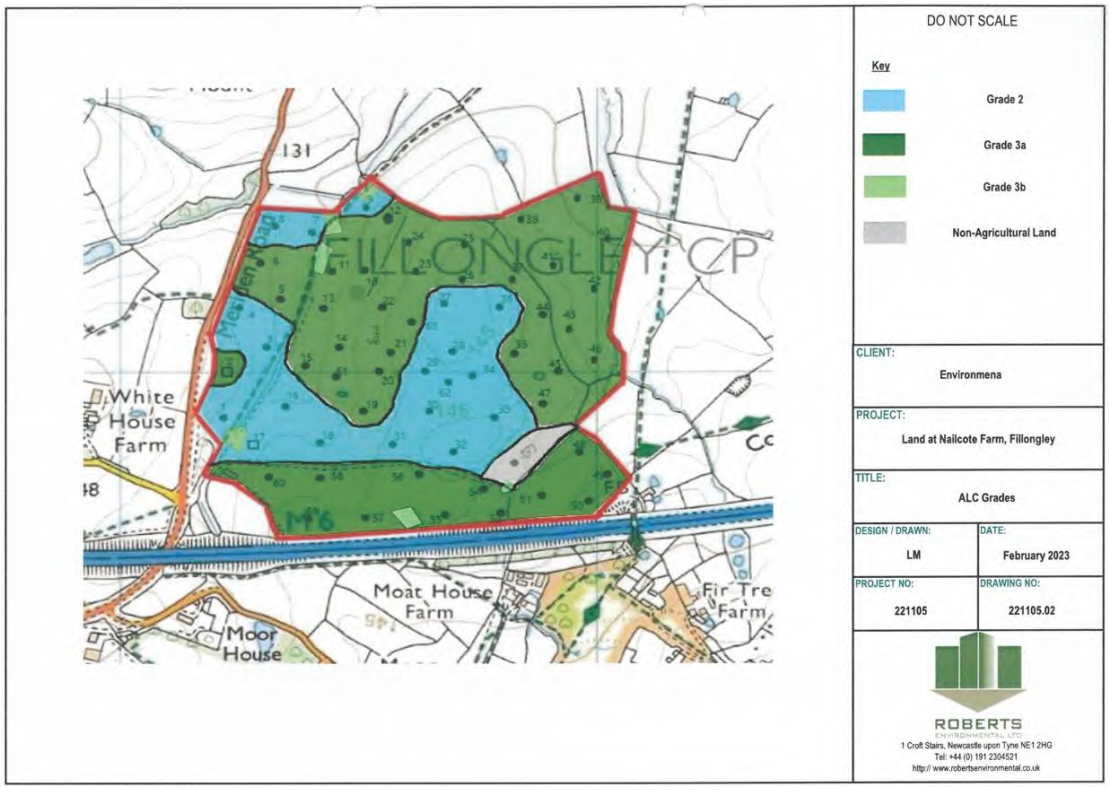
5.6 The farm minimises cultivations so far as possible, but would normally plough before a crop of maize.

Land Quality

5.7 An Agricultural Land Classification (ALC) report by Roberts Environmental Ltd was submitted with the application. The ALC identified that the site is a mixture of Grade 2

and Subgrade 3a with a small amount of Subgrade 3b. The land quality maps with the Appeal Site outlined in red, is shown below, taken from the ALC report.

Insert 3: ALC of the Appeal Site



5.8 During the preparation for the Appeal, Roberts Environmental Ltd were asked to review the ALC report. They have identified some minor errors in the measuring. They have produced a revised ALC report dated March 2025 [**CD 1.49**], and slightly revised ALC results.

5.9 The revised land quality of the Appeal Site is set out in the following table. This rounds to the nearest 0.1 ha. The results are agreed, as set out in the two SoCGs (items A and B).

Table 1: ALC Results

ALC Grade	**Area (ha)**	**Proportion (%)**
2 Very good	19.9	32.6
3a Good	38.8	63.6
3b Moderate	1.2	2.0
NA Non-agricultural	1.1	1.8
Total	**61.0[1]**	**100.0**

[1]The total is 60.93 ha

Soils

5.10 The soils are described in the Roberts Environmental report as being of two principal types. Type 1 soils are sandy clay loam topsoils to about 35cm depth, with an upper subsoil of medium sandy loam. Type 2 soils are sandy clay loam topsoils but to a shallower, circa 20cm, depth over a band of heavy clay loam and a lower subsoil of clay. The pattern is complex across the central and western field.

5.11 For the purposes of understanding the soil resource as part of the planning balance, I have dug a small number of pits (each to about 40cm) to examine topsoils, at the locations shown on Insert 4.

Insert 4: ALC Map Showing Tony Kernon Pit Locations

Photos 6 – 9: Pit A, Type 1 Soil


Photos 10 – 11: Pit B, Type 2 Soils


5.12 There are a number of wet patches evident across the central field, which will need to be avoided during construction if they remain wet, such as the example below.

Photo 12: Example of Wet Area

5.13 The western, lower part of the central field has a reduced amount of surface stone, indicating that smaller soil particles have over time eroded down the slope to this area, as shown below.

Photo 13: Western End of the Central Field

5.14 With the exception of a small area of grassland occupied by a clay pigeon club, the land is all in arable use.

6 BMV AND WHETHER LAND IS LOST

6.1 This section focuses on the proposals as they may affect agricultural land, focusing on the physical effects of construction. NWBC agree in the SoCG that land will not be lost and all areas affected can be fully restored (items E and F). FPC set out that land quality can be affected by transformer stations, substations and access tracks, as set out by the Appellant, as well as supporting posts, CCTV posts and fences (item E). FPC take the view that there is no clear evidence of successful restoration of other similar sites to the original land quality on decommissioning (item F).

The Site Layout

6.2 The proposed site layout, in respect of the solar PV array areas, is shown below, taken from the application plan. Due to the scale of printing the panels appear as blocks.

Insert 5: Panel Layout

Construction Process and Impact

6.3 There is no disagreement about the lack of harm to agricultural land and soils from the construction of the proposed solar farm by Natural England or NWBC. FPC's concern is limited to the specific items set out in the SoCG.

6.4 A description of the construction process, and how it does not significantly affect land quality, is set out in **Appendix KCC5**.

6.5 There will be only minor disturbance to soils and land quality in areas needed for fixed infrastructure. The east-west access track mostly follows an existing track, shown below, and therefore does not involve the loss/use of productive farmland.

Photo 14: Existing Track

6.6 The substation and parking area involve an area of land currently used as a manure store, as shown below.

Photo 15: Area for Substation and Parking

6.7 Small fixed equipment such as the transformer stations generally sit on small bases. An example of solar farm equipment is shown below.

Photo 16: Example of Solar Farm Equipment

6.8 Consequently almost no currently farmed agricultural land will be affected by fixed infrastructure. This will all be capable of full restoration to the same ALC grade on decommissioning. This is agreed by NWBC, as set out in the SoCG at item E.

6.9 This is not agreed by FPC, however. As set out in their SoCG at items E and F, FPC consider that the supporting posts, CCTV posts and fencing posts could all affect land quality, and they consider that there is no evidence that successful restoration on decommissioning is possible.

6.10 The posts/legs used for solar panel arrays are lightweight and usually are a 'C' shape or similar. They displace very little soil, which is simply pushed to one side similar to pushing a spade into the ground. The photographs below show panel posts.

Photos 17 to 19: Panel Posts

6.11 The posts do not require any digging or movement of soils. The soils simply moves to the side, and once the post is removed the soil will naturally expand to fill the void.

6.12 The same is true of the CCTV posts and deer fencing. The photograph below shows fences and a typical camera unit.

Photo 20: Fences and Camera Units

6.13 Individually, and collectively, these do not result in a downgrading of agricultural land quality as the individual and cumulative impact is minimal.

6.14 The installing of piles is not dissimilar to the installation of frameworks for numerous farming activities, such as polytunnels, hops, orchards and vineyards, as the examples below show.

Photos 21 to 24: Photos of Other Agricultural Activities

6.15 Orchards are typically now planted with a 10 to 15 year life expectancy. The removal of orchard trees after this period of time results in a much greater disturbance to soils but does not result in the downgrading of agricultural land. Short-rotation coppice is often in place for similar periods of time (eg willow coppice) and is not expected to result in any change to land quality.

6.16 Three ponds are proposed as part of the Proposed Development. It is expected that these ponds would be restored to agricultural land at the end of the operational phase.

Conclusion

6.17 There will be no permanent effect on agricultural land. Temporarily, for the duration of the operational phase, small areas will be affected for tracks, ponds and infrastructure.

7 SOIL CONSIDERATIONS

7.1 Soil is an important resource, and the installation of a solar farm needs to take account of the underlying resource. As described in section 6 and **Appendix KCC5**, the land and soil is not generally disturbed by the installation process.

7.2 The Council's Statement of Case at 9.24 reports that a long term break from arable cropping could naturally allow the land to recover and enhance. Paragraph 9.25 concludes that the dual use of the land/BMV impact is considered to represent a limited benefit.

The Soil Resource

7.3 The soil is described in the ALC report, but in fairly brief terms. That does not matter: benefits from conversion from arable to grassland are widely recognised.

Effects on Soils

7.4 The benefits to soils from being rested from continual arable use are many. The land will be in grassland, and it is expected to be managed by grazing of sheep. This is common practice, and entirely feasible.

7.5 What we know about soils in the UK is that continual arable production, as is practised on 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 agri-environmental packages available for farmland.

7.6 As set out at item J of the SoCGs, both NWBC and FPC agree that the resting of soils can result in multiple benefits to soils. As a consequence I have set out the benefits in **Appendix KCC6**, and include conclusions reached at a number of recent appeals, but do not cover it in depth in this section.

7.7 Both NWBC and FPC agree that subject to a Soil Management Plan, soils should not be adversely affected. See the SoCGs item I.

Conclusion

7.8 By adhering to good practice, soils will not be damaged during the installation process. Any damage that does occur is readily rectifiable. Long term the soil will benefit from being in grassland and grazed by sheep. This is agreed by all parties.

8 ECONOMIC AND FOOD PRODUCTION CONSIDERATIONS

Introduction to This Chapter

8.1 NWBC has not raised any concern about any adverse effects on food production or agricultural economics. However, as per items N and O of the SoCG, they have declined to comment.

8.2 The Parish Council does raise food production in its Statement of Case, particularly as follows:

(i) in 4.63, in the context of whether poorer quality land is available, the Parish Council states that "**retaining such high-quality agricultural land in arable use becomes all the more important**";

(ii) in 4.65 they reference an Appeal case where the Inspector identified an unacceptable indent on the contribution of that site towards food security;

(iii) in 4.68 the Parish Council refers to the land being used for sheep production, which they describe as a sub-optimal use, and state that "**it would be a waste of BMV for this land to be used for sheep grazing**".

8.3 In the SoCG FPC refers to planning policy generally (item N), but declined to comment as to whether the UK Government has identified a food security concern (item O). Therefore I address this matter in detail.

Food Production On the Site

8.4 The Appeal Site is largely not used directly for food production (ie straight to the human food market). As described earlier, the Appeal Site is broadly in three land uses:

(i) winter barley, field beans and maize grown for feeding cattle at the main farm;

(ii) winter wheat sold for animal feed;

(ii) and if achievable winter wheat sold for milling, which is direct to the human food chain.

Planning Policy

8.5 The starting point must be that, whilst the use of land for agriculture is not "development" as defined in the Town and Country Planning Act 1990, legislation only controls the change of use from agriculture. It does not to any degree require any particular level of activity on the land.

8.6 A landowner can farm the land intensively for food production. Equally a landowner can use the land for non-food crops or for energy crops. They could use the land intensively,

unintensively, organically, inorganically, for grazing horses, for biodiversity, for rewilding, to grow hay to feed horses, or to plant it as woodland. They can use their land seasonally for camping (for up to 50 tents for up to 60 days under the GPDO 2015 (as amended), Schedule 2, Part 4, Class BC). They can grow energy crops, industrial crops, or no crops.

8.7 In short, food production is not a requirement. It is left entirely to the land owner or occupier.

8.8 Government policy refers to land of the Best and Most Versatile quality. It does so in the context of protecting the resource. Policy does not, at any point, set out that agricultural land should be used for food production, or that BMV land (as that is the issue in this case) should be used for food production. Footnote 62 of the NPPF, added in December 2023, required that the availability of land for food production is considered, but it gave no further guidance, and the sentence was deleted from the footnote in the December 2024 revisions to the NPPF (now footnote 65).

8.9 Local planning policy does not require agricultural land to be used for food production. Planning policy does not refer to any particular level of intensity of agricultural use.

8.10 The WMS of 15th May 2024 refers to food production and restates the Government's previous objective of broadly maintaining current levels of production. The WMS (May 2024) does not alter the policy on food security or the use of BMV. The Secretary of State does not amend the approach of "racing ahead" with solar deployment. The Secretary of State does so recognising that solar could involve 1% of farmland. Clearly the use of up to 1% of farmland is not considered to be problematic for UK food supplies, otherwise a different approach would have been taken.

8.11 The new Secretary of State has assessed the matter afresh and concluded that we should continue to permit solar development. When addressing Parliament on 18th July he stated that "**the biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind; it is the climate crisis which threatens our best farmland, food production and the livelihoods of our farmers**".

8.12 As set out in section 4, the consultation to the forthcoming Land Use Framework sets out the very latest thinking (January 2025). It is proposed to use land for energy, housing and biodiversity in addition to food production, but this is not expected to result in any diminution in overall production due to productivity improvements.

Analysis

8.13 There are no Government incentives that relate to food production and increasing food production. Government initiatives and funding under schemes such as the Sustainable Faming Incentive, relate to soil and biodiversity improvements. These initiatives do not fund food production.

8.14 As context, the Government Food Strategy (June 2022) does not seek to increase food production. The "Foreword" recognised near self-sufficiency in wheat, most meat, eggs and some vegetables, but not in soft fruit although the trend is favourable. The strategy does not seek to alter that position in respect of 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 the future"**.

8.15 The shortfall is not necessarily because we cannot produce more. It is largely due to consumer choice to eat food out of season, or to import more cheaply. In many crops, meat, dairy and eggs, we are self-sufficient.

8.16 In the UK Food Security Report (2021), which preceded the Food Strategy, it is noted that, for example, the mix of grain grown in the UK differs from the grain consumed in the UK. It was noted that grain does not provide a healthy or nutritious diet or meet consumer demand for a varied diet. However, the report noted the following:

> **"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 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"**.

8.17 In a Press Release of 6th December 2022, from Defra, the Government's stated position is that "**the UK has a large and highly resilient food supply chain. Our high degree of food security is built on supply from diverse sources: strong domestic production as well as imports through stable trade routes**" (Defra Press Release 6th December 2022). This is reproduced at **Appendix KCC7**.

8.18 Therefore there is no policy or requirement to use land for growing food, and the Government has clearly set out that there is no food security concern. Further, as set out in the WMS of 15th May 2024, the Government holds that position even having considered the effects on land use of meeting their renewable energy targets.

Food Production Implications

8.19 I do not believe either the District or Parish Council is suggesting that agricultural land per se is not needed to meet our obligations to provide renewable energy. The Parish Council's argument focuses on the use of BMV land. Consequently the appropriate quantification is the incremental difference between production on BMV land and production on non-BMV land. That is because, if BMV land is avoided, land of poorer quality will be used instead, so production from that land will be affected.

8.20 We are not aware of any research that explicitly compares production and economics between BMV and non-BMV land. Therefore, as a crude measure, we have used the difference between "average" and "high" performance enterprises in the John Nix Pocketbook for Farm Management to compare the potential difference.

8.21 The difference in production between "high" and "average" yields from the Pocketbook are shown below. The source figures are set out in **Appendix KCC8**.

Table 2: High and Average Yields from the Pocketbook

Yield (t/ha)	**Crop**		
	Winter Feed Wheat	**Winter Feed Barley**	**Winter Beans**
Average yield	8.3	7.3	4.3
High yield	9.5	8.4	4.9
Difference	1.2	1.1	0.6

8.22 If we assume that in a typical year half the Appeal Site is wheat, and the rest is divided equally between barley and beans, the incremental benefit in terms of crop production from the circa 64 ha of farmable agricultural land will be:

- 32 ha wheat x 1.2t/ha equals 38.4 tonnes wheat;
- 16 ha barley x 1.1 t/ha equals 17.6 tonnes barley;
- 16 ha beans x 0.6t/ha equals 9.6 tonnes of beans.

8.23 That annual impact of circa 65 tonnes of produce can be considered against UK and England annual production. The UK produced just over 19 million tonnes of cereals in 2024, of which 11.1 million tonnes were wheat (Defra, Cereal and Oilseed production in the United Kingdom 2024, 7th January 2025).

Factors to Consider in the Balance

8.24 Having quantified the incremental impact on annual production should the solar farm be refused on the BMV land, I set out some statistics relating to other land-use policies.

8.25 The WMS (15th May 2024) sets out that "**even in the most ambitious scenarios**" meeting the renewable targets through solar "**would still occupy less than 1% of the UK's agricultural land**". The following statistics are presented as they provide some context for this figure:

(i) the Utilised Agricultural Area (UAA) of land in England in 2024 was 8.7 million hectares (Agricultural Land Use in England at 1 June 2024, Defra, 26th September 2024);

(ii) the estimated proportion of BMV land in England is 42% (Technical Information Note TIN049, Natural England, **Appendix KCC2**). Applying that to the UAA means 3.7 million ha of BMV land was utilised in 2024;

(iii) if the 1% of agricultural land figure referenced in the WMS came into effect it would amount to about 88,000 ha of agricultural land, of which (on a straight statistical application) 37,000 ha (42%) could be BMV;

(iv) according to the latest Agricultural Land Use in England at 1 June 2024 (**Appendix KCC9**) statistics (Defra, 26th September 2024) the area of uncropped arable land increased by 107% to 581,000 ha. Of this 276,000 ha were left as bare fallow and 305,000 ha were used for environmental benefit;

(v) the dataset identified that 3,600 ha were used for solar panels and also used for grazing production in 2024, and a further 3,700 ha were used for solar panels but not used for agricultural production;

(vi) the Government's Biomass Strategy (Department for Energy Security and Net Zero, August 2023) set out that currently 121,000 ha is in biomass production and the strategy seeks to see this increase;

(vii) currently there are of the order of 900,000 horses in the UK. The split between England and the other countries is not known exactly, but in terms of sports horses about two thirds are in England. If that applied to the total, then some 590,000 horses are in England, which if each requires 0.4 ha of land for grassland (grazing and hay) means about 240,000 ha of land is used for horses grazing and feeding. If 42% of that is BMV, some 100,000 ha of BMV is used for grazing or feeding horses. This I include only to illustrate the land use choices we make and the land potentially available.

8.26 The land could, in any event, continue to be used for food production through sheep grazing and rearing, in parallel with the generation of renewable energy. Therefore the

impact on food production is offset by sheep grazing, producing lamb and wool, and requiring agricultural labour.

8.27 Two recent appeal decisions where food production was an issue for consideration concluded as follows.

8.28 In a decision at Thaxted in December 2023 (3319421) [**CD 7.38**] the Inspector at paragraph 102 stated:

> "**I heard no compelling evidence that taking out of production almost 55ha of BMV on the appeal site, for a 40 year duration, would have a significant negative impact on food security either on its own or cumulatively with other BMV losses, nor that it would be likely to increase imports from other countries. The Government Food Strategy, published in 2022, stated that the UK is largely self-sufficient in wheat, most meats, eggs, and some sectors of vegetable production. Nothing in the Government food strategy policy paper changes the Government's policy towards the development of BMV as set out above**".

8.29 In a decision post the May 2024 WMS (Penhale Moor, 3334658) [**CD 7.32**] the Inspector stated in paragraph 27:

> "**World events, particularly the fall-out from the conflict in Ukraine, and climate change have brought the issue of food security into sharper focus. That said, at the end of 2022, some time after the above Ukraine conflict started, DEFRA identified that the UK's food supply chain remains highly resilient with the nation's high degree of food security built on supplies from diverse sources. As far as I am aware that position has not changed. Moreover, the 2024 WMS where it discusses food security refers to maintaining the current level of food production**".

8.30 In a decision dated 4th March 2025 (Burcot Farm, 3350890) [**CD 7.46**], for a wholly-BMV site of 93 ha of BMV, the Inspector concluded in paragraph 27 as follows:

> "**The appellant's evidence indicates that the maximum production from the highest yielding crop grown on the land is in the region of 536 tonnes of wheat per annum. Given nationally cereal production is in the region of 20 – 25 million tonnes per annum, the impact of the loss of this land for arable production would be negligible. Even if the crops were not used for livestock feed, this level of loss would not have an adverse impact on food security**".

Economic Benefits

8.31 Using the same approach to my assessment of the benefits to food production of BMV, the economic benefits can also be estimated and are also limited. The gross margin uplifts from the Pocketbook (**Appendix KCC8**) for the three crops are show in Table 3.

Table 3: High and Average Gross Margins from the Pocketbook

GM (£/ha)	Crop		
	Winter Feed Wheat	**Winter Feed Barley**	**Winter Beans**
Average (£)	1,110	906	645
High (£)	1,338	1,097	786
Difference (£)	228	191	141

8.32 Assuming the same crop mix as for the food assessment, the economic effects before fixed costs are:

- 32 ha wheat £7,296;
- 16 ha barley £3,056;
- 16 ha beans £2,256.

8.33 The economic impact in terms of Gross Margins from using non-BMV elsewhere would be of the order of £12,600 per annum. Whilst the measures are not directly comparable, as a guide to scale the Total Income from Farming (TIFF), being the business profit plus remuneration to those working the farm across the UK in 2023 was £7,232,000,000 (see page 334 in **Appendix KCC8**).

8.34 The individual farm will benefit from income from the panels and the income lost from arable will be offset by the income gained from sheep production.

8.35 Overall there is no significant adverse economic harm. The economic benefits of the BMV are limited.

Conclusion

8.36 The contribution of the site to national food production is negligible. In any event there is no policy requirement, no initiative, and no identified need for the land to be used for food production. The economic benefits are limited. This will need to be considered in the planning balance (section 7).

9 WHETHER POORER QUALITY LAND COULD BE USED IN PREFERENCE

Introduction to This Chapter

9.1 My evidence now considers land quality in the wider area. I do so in the context that planning policy does not set a sequential test.

9.2 This is a matter raised by the Parish Council, and from their Statement of Case appears to be the central plank of their case. In respect of the use of BMV land, the Parish Council acknowledges "**that there is no requirement to undertake a sequential approach to site selection**" (paragraph 4.61) but notes variously as follows:

(i) "**as land grade increases, there is a greater onus on developers to show that the use of higher quality land is necessary**" (4.57);

(ii) "**there is no clear justification why an alternative site outside of non-BMV agricultural land**" (I think they mean outside of BMV land) "**or a smaller site elsewhere, would not be acceptable**" (4.61);

(iii) "**the Appellant could have investigated surrounding authority areas with lower agricultural land and outside the Green Belt**" (4.63).

Planning Policy

9.3 The NPPF requires only that the economic and other benefits of BMV land be recognised. It does not place a bar on the use of agricultural land, nor does it set a sequential test.

9.4 Footnote 65 of the NPPF does set out that, where significant development of agricultural land is demonstrated to be necessary, poorer quality land should be preferred to that of a higher quality. This footnote is attached to paragraph 88, which is a plan making, not decision taking, paragraph.

9.5 In a case such as a solar farm, where the underlying land quality resource is not affected (ie there is neither sealing nor land quality downgrading), the BMV resource is protected. The decision therefore comes down to a land use decision. There is no policy or initiative that requires agricultural land, or BMV land, to be used for productive agricultural use.

9.6 Two recent appeal decisions address this point, the second post the 2024 WMS:

- in the Little Cheveney Farm decision (3321094) [**CD 7.39**] the Inspector reported as follows in paragraph 43:

  "**On behalf of the Council it was suggested that the expressed preference for the use of lower quality land should be interpreted as giving precedence to the use of that land. In turn it was argued that this would require an**

assessment akin to a sequential assessment to enable the best choice to be made. That is not an interpretation accepted by the Appellant, and I also do not agree that preference can be equated with precedence in this context. In support of the position the Appellant quotes from the advice of NPS EN-3, which states that *"While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land."* Although this advice is primarily intended for use in the considerations of NSIP schemes, as I have noted above the contents of NPSs can be a material consideration in other casework. I consider that to be the case here, in part because the proposed output of the solar farm is close to the NSIP threshold";

- in the Berden Hall Farm decision (S62A/22/0006) [**CD 7.41**] the Inspector considered, in a wholly-BMV case, the effects including the effects on food production. He then turned to consider alternative sites in paragraph 58, as follows:

  "**That brings me to how one should approach this matter in the light of the Framework, the Written Ministerial Statements and the PPG. Notwithstanding all this material, the Courts have set out that the PPG does not mandate the consideration of alternatives and still less does it require a sequential test to be adopted[3]. There is nothing in the 2015 Written Ministerial Statement or the 2024 Written Ministerial Statement that requires anything of that sort and neither does footnote 62 to the Framework. As was pointed out in the Court case referred to above, where the Framework requires a sequential test, for example in relation to flood risk, this is clearly set out**".

Land Quality in the Area

9.7 I turn now to assess land quality in the wider area. This can only be done at a fairly high level. To determine land quality accurately it is necessary to access the land and sample, usually on a regular 100 metre grid. A surveyor can normally sample 20 – 25 points per day. This is described in Natural England's TIN049 (**Appendix KCC2**) and in a guide (in **Appendix KCC10).**

9.8 To set all of this in context, BMV land is not a rare resource. Natural England estimate in TIN049 (**Appendix KCC2**) that 42% of agricultural land is BMV. Taking just the area of agricultural land in active agricultural use, which was 8.7 million hectares on 1st June 2024[4], this means some 3.7 million hectares of BMV is in active agricultural use. Once

[3] Bramley Solar Farm Residents Group v Secretary of State 2023 EWHC 2842 Admin (Paragraph 179)
[4] Agricultural Land Use in England at 1 June 2024, Defra (26 September 2024)

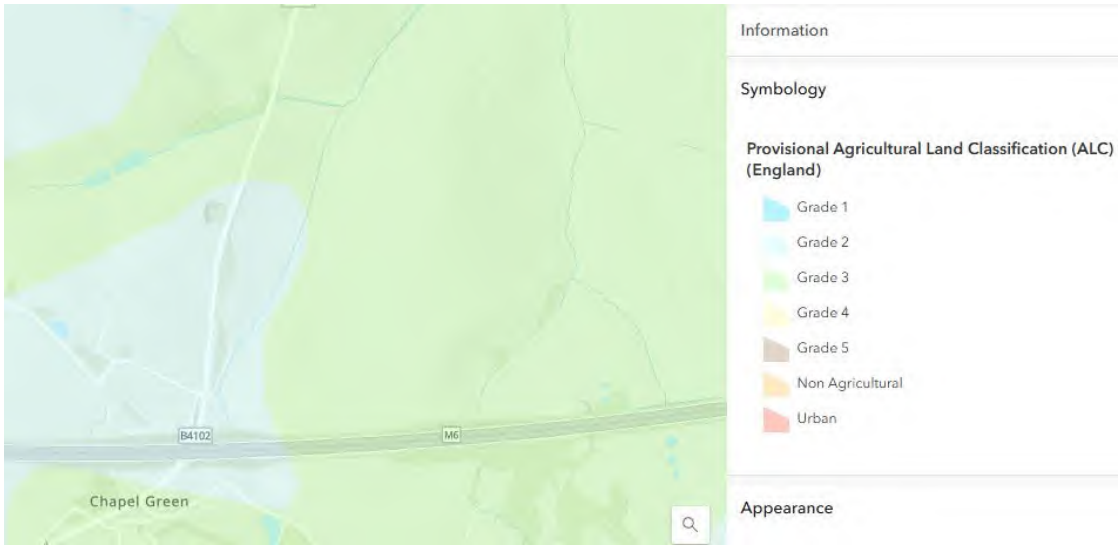
large areas of poorer quality land, such as the various moors, Lake District, Pennines etc are taken into account, generally gentle sloping or level areas on the eastern side of England have a higher proportion of BMV than 42%.

9.9 Reference is often made to the provisional ALC maps, published at a scale of 1:250,000. These have now been digitised, which means that you can zoom in and seemingly collect ALC data for whole or parts of fields. However, as explained by Natural England in TIN049 (**Appendix KCC2**) these maps are not intended for such use. They are not the result of field survey and were published under an old ALC methodology. Therefore they do not allow site-specific analysis.

9.10 Further, they do not attempt to identify subgrades of Grade 3.

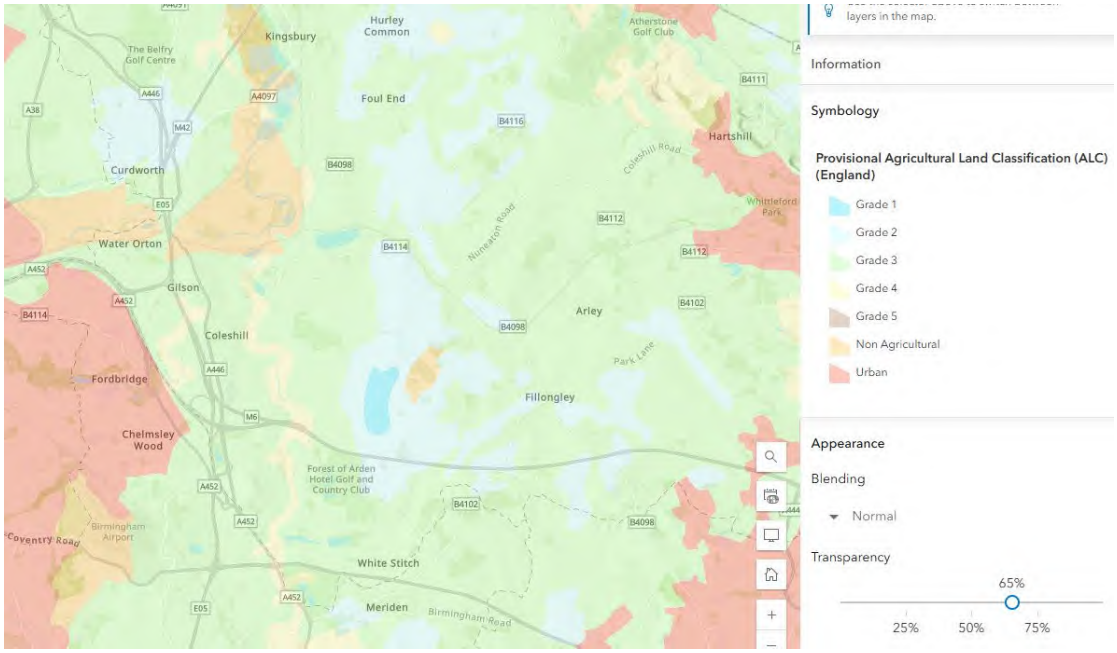
9.11 Taken from the digitised version of the base plan the Appeal Site is shown as mostly undifferentiated Grade 3 but with Grade 2 in the west, as shown below.

Insert 6: Provisional ALC for the Site



9.12 In the wider view, most land is shown as similarly undifferentiated Grade 3, with numerous areas of Grade 2 to the northwest and east, and small areas of Grade 1.

Insert 7: The Provisional ALC Map



9.13 The Agricultural Land Impact Statement by Stantec, submitted with the application, provided the breakdown of land quality from the provisional maps for England, the West Midlands, Warwickshire County and NWDC areas. The statistics are as follows.

Insert 8: Table from Stantec Report

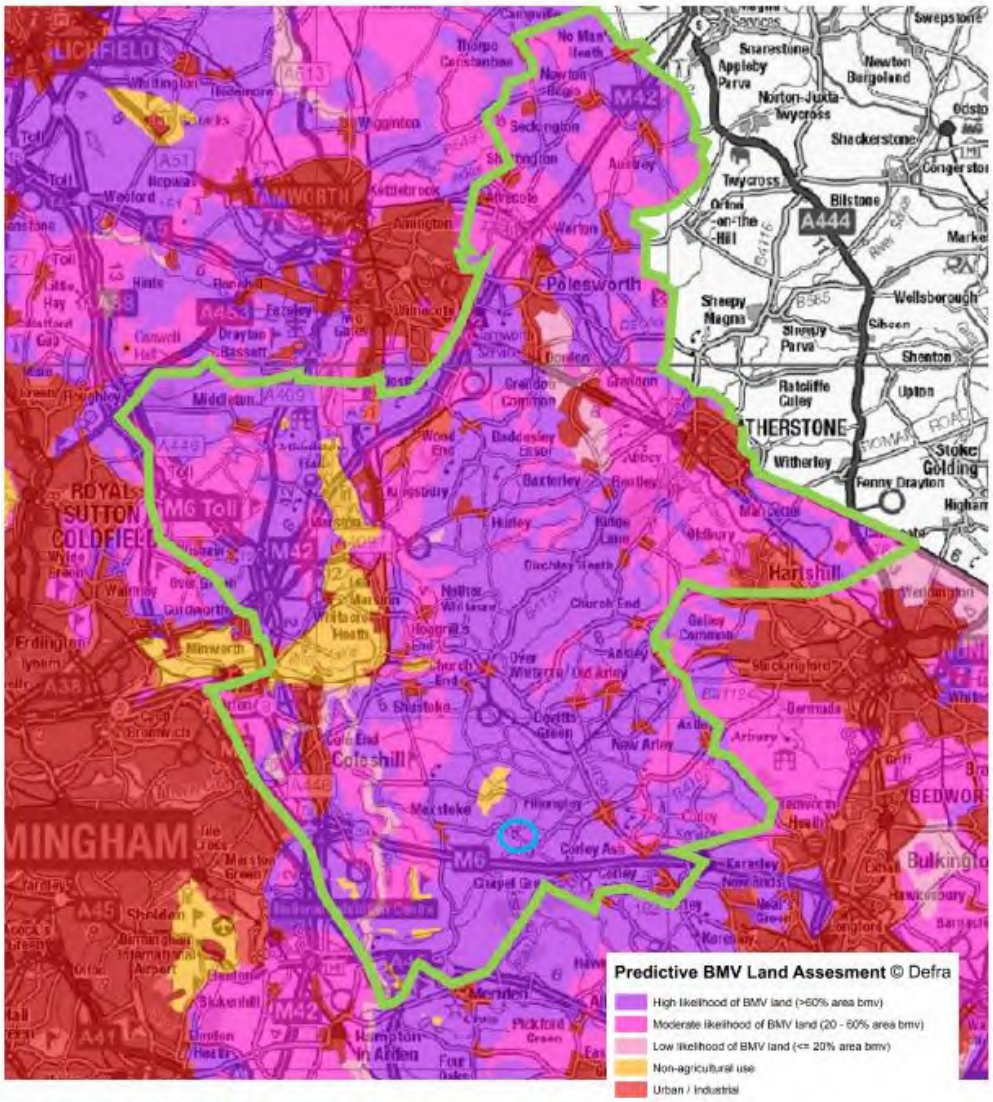
Table 5.1 Provisional Agricultural Land Classification – England, West Midlands Region, Warwickshire County and North Warwickshire District

ALC Grade	England (%)	West Midlands Region (%)	Warwickshire County (%)	North Warwickshire District (%)
1 Excellent	2.7	1.1	0.1	0.4
2 Very Good	14.2	17.7	11.9	19.7
3 Good-Moderate	48.2	53.3	74.5	67.3
4 Poor	4.1	14.6	7.9	7.1
5 Very poor	8.4	2.5	0.1	0.0
Non-Agricultural	5.0	2.3	1.0	3.9
Urban	7.3	8.6	4.4	1.6

9.14 In 2017 Natural England published maps showing the Likelihood of BMV. These divided land into three categories: high (>60% area BMV); moderate (20 – 60% area BMV); low (<20% area BMV). The Stantec report also provided this data.

Insert 9: Likelihood of BMV Map with NWDC Boundary (from the Stantec Report)

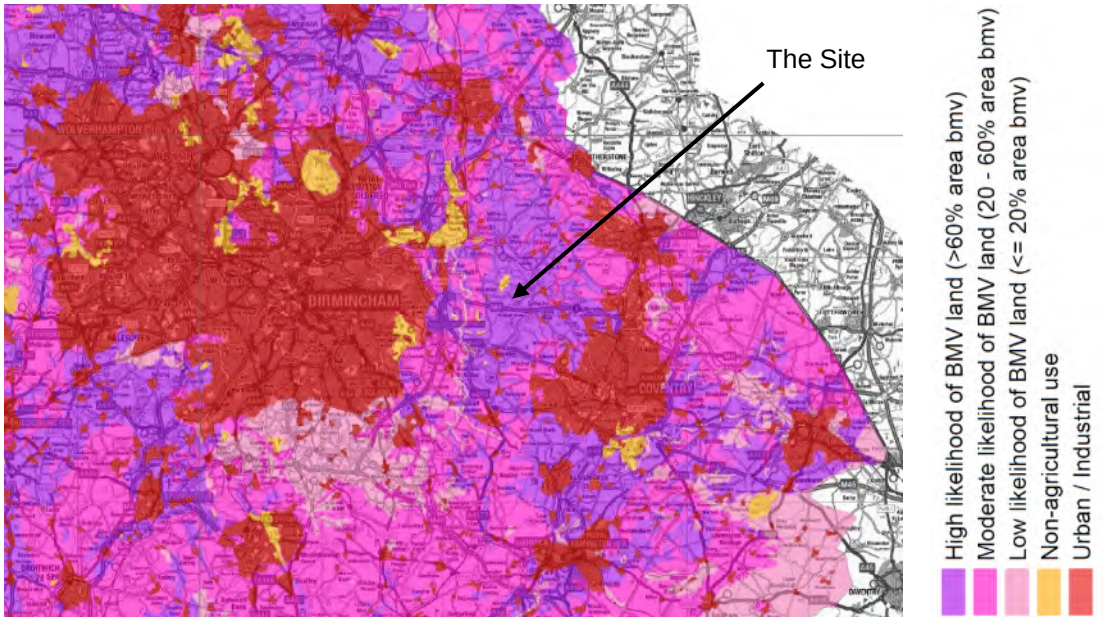
Figure 5.2 Extract of Defra West Midlands Region Likelihood of Best and Most Versatile (BMV) Agricultural Land map with North Warwickshire authority boundary and location of application Site indicated.



Source: Defra (2001) and Barton Willmore, now Stantec

9.15 The Parish Council's argument is that sites beyond the boundaries of the District Council should be considered. The Likelihood of BMV map below shows a wider area. It is evident that areas of low likelihood of BMV lie south of Birmingham or near to Daventry, but no such areas are near to Coventry at any significant scale.

Insert 10: Wider Likelihood of BMV Extract



9.16 Determining the quality of agricultural land requires a soil survey with a spade and auger, and this is an intrusive survey that requires landowner approval and can proceed at about 20 - 25 ha per day in the field. No detailed ALC survey data is available for land in the local area except for the site (ie there are no published results).

9.17 The available published data, with the site shown as mostly undifferentiated Grade 3, shows that in the local area this is the poorest quality land.

9.18 The available Likelihood of BMV maps show the site, and most of the local area, as falling into a high likelihood of BMV.

9.19 The application reports provided the mapping and the statistical analysis. There is no indication of areas of poorer quality that could be found without undertaking an ALC survey or a wide area, which is neither realistic nor proportionate. Nor is it required by policy.

9.20 The Parish Council do not identify any land of lower quality. Their argument is that the solar development should be moved out of the local area or, seemingly accepting the evidence submitted with the application, out of the Borough. The wider analysis of the Likelihood of BMV Land maps shows that the development would have to be a considerable distance away if land of a low likelihood of BMV is to be targeted.

9.21 There is no analysis from the Parish Council that those areas are acceptable for other reasons or that they would have a grid connection.

Conclusion

9.22 There is no clear or obvious alternative location, were that to be a policy requirement, which is expected to be mostly non-BMV land in the wider area.

10 SUMMARY AND CONCLUSIONS

The Issues

10.1 There is no reference to agricultural land quality, or food production in the Reason for Refusal. In its Statement of Case the Borough Council concluded that "**the dual use of the land/BMV impact is considered to represent a limited benefit**" (9.25).

10.2 Agricultural issues have been raised by the Rule 6 Party, the Parish Council. In their Statement of Case they raise two principal arguments:

(i) the use of BMV agricultural land for solar combined with sheep grazing is a waste of the BMV resource and such land should be kept in arable use for food production;

(ii) whilst there is no bar on the use of BMV land for solar, and there is no requirement to follow a sequential best in site selection, the Appellants have not demonstrated adequately that they could not use poorer quality land further away, including potentially out of the Borough.

10.3 Statements of Common Ground have been agreed separately with NWBC and FPC. It is clear that the following matters are agreed:

- the land quality assessment (items A and B);
- the site is in arable farming use (item C);
- with the panels in place, the land cannot be used for arable but it can still be used for sheep grazing (items G and H);
- soils will not be adversely affected (item I) and should benefit from being rested (item J).

10.4 NWBC agree, following the conclusions of Natural England, that only small areas of agricultural land will be physically disturbed, but these can be restored (items E and F). FPC take the view that the disturbance could be wider, and they have not seen evidence of successful restoration following decommissioning (items E and F).

10.5 NWBC agree that planning policy does not place a bar on the use of BMV, and does not require a sequential approach to site selection (items K and L). FPC agree, but point out that policy expresses a preference for the use of poorer quality land (items K and L).

10.6 Neither NWBC nor FPC disagree that policy does not require agricultural land to be used for food production, or that Government has not set out a food security problem, but FPC point out that they consider this a relevant planning policy matter (items N and O).

10.7 Accordingly the issues not agreed are:

- the extent to which agricultural land quality will be adversely affected;
- whether the availability of poorer quality land has been adequately considered.

Planning Policy

10.8 It is common ground between all parties that:

(i) planning policy does not place a bar on the use of BMV land;

(ii) planning policy does not require agricultural land to be used for food production, nor does planning policy identify any particular preference for using land for food production;

(iii) planning policy, in the context of plan making, expresses a preference for the use of poorer quality land, but it does not set out a sequential test.

The Effect of the Development

10.9 It is common ground between the Appellant, NWBC and Natural England that:

(i) the agricultural land of the Appeal Site will not be lost as a result of the Proposed Development. This is a temporary and reversible proposal;

(ii) nor will the land quality be downgraded as a result of the Proposed Development. The land and soil resource are unaffected. There is no harm to the BMV resource, therefore.

10.10 Whilst FPC are cautious about impacts on land quality, the adverse effects that the Parish Council raises relate mostly to the use of the land. In short, does the use of the land for arable production carry more weight than its use for solar and grazing, and should lower quality land even outside the Borough be considered instead?

10.11 The land is used for arable cropping, with the majority of the produce used to feed beef cattle or sold for animal feed, with the farmers periodically achieving a milling quality with the wheat which does go direct into the human food chain.

10.12 The agricultural produce implications of refusing development on BMV, and requiring instead that poorer quality land be used, are negligible in a local and national context. The incremental difference is of the order of 65 tonnes of wheat, barley and beans, compared to UK production annually of circa 20+ million tonnes.

10.13 Planning policy and Government incentives do not require or support agricultural production. As a comparison, at 1st June 2024 there was 305,000 ha of arable land across England in agri-environmental management.

10.14 Farm economics are also poor. Whilst weather may have influenced the amount, at 1st June 2024 a further 276,000 ha of arable land was simply not being cropped.

10.15 The Appeal Site will continue to produce agricultural produce as it will be used to graze sheep in conjunction with the panels.

10.16 Therefore as regards to FPC's charge that BMV land should be used for arable cropping and that using it for sheep grazing is a waste, policy takes no such position. Nor is there any evidence that such a position is required.

10.17 The land quality resource is not harmed, and the land use as arable is not required nor is it a policy preference. Therefore the requirement from FPC to identify poorer quality land, potentially via smaller parcels of land or beyond the boundaries of the Borough, is not a reasonable one. It is not required by policy.

10.18 Further, the evidence indicates that the developer would need to look very much further afield if they were to be likely to find sites of poorer quality.

Conclusion

10.19 NWBC was right, in my opinion, to not refuse the proposals on the basis of agricultural land use impacts.

10.20 Those impacts are minor and will need to feed into the overall planning balance, alongside the recognised benefits for soils, and the wider environmental and economic benefits.

APPENDIX KCC1

Curriculum Vitae

CURRICULUM VITAE

ANTHONY PAUL KERNON

SPECIALISMS

- Assessing the impacts of development proposals on agricultural land and rural businesses
- Agricultural building and dwelling assessments
- Equestrian building and dwelling assessments (racing, sports, rehabilitation, recreational enterprises)
- Farm and estate diversivification and development
- Inputs to Environmental Impact Assessment
- Expert witness work

SYNOPSIS

Tony is a rural surveyor with 35 years experience in assessing agricultural land issues, farm and equestrian businesses and farm diversification proposals, and the effects of development proposals on them. Brought up in rural Lincolnshire and now living on a small holding in Wiltshire, he has worked widely across the UK and beyond. He is recognised as a leading expert nationally in this subject area. Married with two children. Horse owner.

Tony's specialism is particularly in the following key areas:

- assessing the need for agricultural and equestrian development, acting widely across the UK for applicants and local planning authorities alike;
- farm development and diversification planning work, including building reuse and leisure development, Class Q, camping etc;
- assessing development impacts, including agricultural land quality and the policy implications of losses of farmland due to residential, commercial, solar or transport development, and inputs to Environmental Assessment;
- and providing expert evidence on these matters to Planning Inquiries and Hearings, court or arbitrations.

QUALIFICATIONS

Bachelor of Science Honours degree in Rural Land Management, University of Reading (BSc(Hons)). 1987. Awarded 2:1.
Diploma of Membership of the Royal Agricultural College (MRAC).
Professional Member of the Royal Institution of Chartered Surveyors (MRICS) (No. 81582). (1989).

OTHER PROFESSIONAL ACTIVITIES

Co-opted member of the Rural Practice Divisional Council of the Royal Institution of Chartered Surveyors. (1994 - 2000)
Member of the RICS Planning Practice Skills Panel (1992-1994)
Member of the RICS Environmental Law and Appraisals Practice Panel (1994 - 1997).
Fellow of the British Institute of Agricultural Consultants (FBIAC) (1998 onwards, Fellow since 2004).
Secretary of the Rural Planning Division of the British Institute of Agricultural Consultants (BIAC) (1999 – 2017).
Vice-Chairman of the British Institute of Agricultural Consultants (2019 – 2020)
Chairman of the British Institute of Agricultural Consultants (2020 – 2022)

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Purton Stoke, Swindon SN5 4LL
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Website: www.kernon.co.uk

Professional Advisers to Rural Business and on the Environment

EXPERIENCE AND APPOINTMENTS

1997 ------> **Kernon Countryside Consultants.** Principal for the last 27 years of agricultural and rural planning consultancy specialising in research and development related work. Specialisms include essential dwelling and building assessments, assessing the effects of development on land and land-based businesses, assessing the effects of road and infrastructure proposals on land and land-based businesses, and related expert opinion work. Tony specialises in development impact assessments, evaluating the effects of development (residential, solar, road etc) on agricultural land, agricultural land quality, farm and other rural businesses.

1987 - 1996 **Countryside Planning and Management**, Cirencester. In nearly ten years with CPM Tony was involved in land use change and environmental assessment studies across the UK and in Europe. From 1995 a partner in the business.

1983 - 1984 **Dickinson Davy and Markham**, Brigg. Assistant to the Senior Partner covering valuation and marketing work, compulsory purchase and compensation, and livestock market duties at Brigg and Louth.

RECENT RELEVANT EXPERIENCE

TRAINING COURSES

Landspreading of Non Farm Wastes. Fieldfare training course, 24 – 25 November 2009
Foaling Course. Twemlows Hall Stud Farm, 28 February 2010
Working with Soil: Agricultural Land Classification. 1 – 2 November 2017

TRANSPORT ENVIRONMENTAL ASSESSMENT CONTRIBUTIONS

1992	**Port Wakefield Channel Tunnel Freight Terminal, Yorkshire**
1993	**A1(M) Widening, Junctions 1-6 (Stage 2)**
1994 - 1995	**A55 Llanfairpwll to Nant Turnpike, Anglesey (Stage 3)**
1994 - 1995	**A479(T) Talgarth Bypass, Powys (Stage 3)**
1995	**Kilkhampton bypass (Stage 2)**
1997	**A477 Bangeston to Nash improvement, Pembroke**
2000	**Ammanford Outer Relief Road**
2001	**A421 Great Barford Bypass**
2001	**Boston Southern Relief Road**
2003	**A40 St Clears - Haverfordwest**
2003	**A470 Cwmbrach – Newbridge on Wye**
2003	**A11 Attleborough bypass**
2003 - 2008	**A487 Porthmadog bypass (Inquiry 2008)**
2004	**A55 Ewloe Bypass**
2004	**A40 Witney – Cogges link**
2005 – 2007	**A40 Robeston Wathen bypass (Inquiry 2007)**
2005 – 2007	**East Kent Access Road (Inquiry 2007)**
2006	**M4 widening around Cardiff**
2007 – 2008	**A40 Cwymbach to Newbridge (Inquiry 2008)**
2007	**A483 Newtown bypass**
2008 – 2009	**A470/A483 Builth Wells proposals**
2009 – 2017	**A487 Caernarfon-Bontnewydd bypass (Inquiry 2017)**
2009 – 2010	**North Bishops Cleeve extension**
2009 – 2010	**Land at Coombe Farm, Rochford**
2009 – 2011	**A477 St Clears to Red Roses (Inquiry 2011)**
2010 – 2011	**Streethay, Lichfield**
2010 – 2012	**A465 Heads of the Valley Stage 3 (Inquiry 2012)**
2013 – 2016	**A483/A489 Newtown Bypass mid Wales (Inquiry 2016)**
2013 - 2016	**High Speed 2 (HS2) rail link, Country South and London: Agricultural Expert for HS2 Ltd**
2015 – 2017	**A487 Dyfi Bridge Improvements**

2016 – 2018	**A465 Heads of the Valley Sections 5 and 6 (Inquiry 2018)**
2017 - 2018	**A40 Llanddewi Velfrey to Penblewin**
2017 – 2018	**A4440 Worcester Southern Relief Road**
2019 – 2020	**A40 Penblewin to Red Roses**
2019 – 2020	**A55 Jn 15 and 16 Improvements**

NSIP/DCO SOLAR INPUTS

2020 – 2023	**Heckington Fen**
	Mallard Pass
	Penpergwm
	Parc Solar Traffwll
	Alaw Môn
	Parc Solar Caenewydd
	Tween Bridge Solar Farm
	Gate Burton
	Great North Road Solar
	Helios Renewable Energy Project
	Dean Moor
	Oaklands Solar

EXPERT EVIDENCE GIVEN AT PUBLIC INQUIRIES AND HEARINGS

1992	**Brooklands Farm**: Buildings reuse	**Bonehill Mill Farm**: New farm building
	Chase Farm, Maldon: Removal of condition	
1993	**Haden House**: Removal of condition	**Manor Farm**: New farm dwelling
1994	**Brooklands Farm**: 2nd Inquiry (housing)	**Cameron Farm**: Mobile home
	Barr Pound Farm: Enforcement appeal	**Land at Harrietsham**: Enforcement appeal
	Fortunes Farm Golf Course: Agric effects	
1995	**Village Farm**: New farm dwelling	**Attlefield Farm**: Size of farm dwelling
	Claverdon Lodge: Building reuse	**Bromsgrove Local Plan**: Housing allocation
	Harelands Farm: Barn conversion	**Lichfield Local Plan**: Against MAFF objection
	Castle Nurseries: Alternative site presentation	**Hyde Colt**: Mobile home / glasshouses
1996	**Church View Farm**: Enforcement appeal	**Highmoor Farm**: New farm dwelling
	Flecknoe Farm: Second farm dwelling	**Gwenfa Fields**: Removal of restriction
1997	**Basing Home Farm**: Grain storage issue	**Yatton**: Horse grazing on small farm
	Viscar Farm: Need for farm building / viability	**Newbury Local Plan**: Effects of development
	Lane End Mushroom Farm: Need for dwelling	
1998	**Moorfields Farm**: New farm dwelling	**Two Burrows Nursery**: Building retention
	Maidstone Borough LPI: Effects of dev'ment	**Dunball Drove**: Need for cattle incinerator
	Glenfield Cottage Poultry Farm: Bldg reuse	
1999	**Holland Park Farm**: Farm dwelling / calf unit	**Lambriggan Deer Farm**: Farm dwelling
	Northington Farm: Existing farm dwelling	
2000	**Twin Oaks Poultry Unit**: Traffic levels	**Coldharbour Farm**: Buildings reuse
	Meadows Poultry Farm: Farm dwelling	**Heathey Farm**: Mobile home
	Hazelwood Farm: Beef unit and farm dwelling	**Wheal-an-Wens**: Second dwelling
	Shardeloes Farm: Farm buildings	**Apsley Farm**: Buildings reuse
	Aylesbury Vale Local Plan: Site issues	**Home Farm**: Size of grainstore
	Deptford Farm: Buildings reuse	**A34/M4 Interchange**: Agricultural evidence
2001	**Lambriggan Deer Farm**: Farm dwelling	**Weyhill Nursery**: Second dwelling
	Blueys Farm: Mobile home	**Mannings Farm**: Farm dwelling
2002	**A419 Calcutt Access**: Effect on farms	**Land Adj White Swan**: Access alteration
	Cobweb Farm: Buildings reuse / diversification	**Happy Bank Farm**: Lack of need for building
	Philips Farm: Farm dwelling	**Lower Park Farm**: Building reuse / traffic
	West Wilts Local Plan Inquiry: Dev site	**Stourton Hill Farm**: Diversification
	Manor Farm: Building reuse	
2003	**Fairtrough Farm**: Equine dev and hay barn	**Darren Farm**: Impact of housing on farm
	Hollies Farm: Manager's dwelling	**Greenways Farm**: Farm diversification

	Land at Springhill: Certificate of lawfulness	**Land at Four Marks**: Dev site implications
	Oak Tree Farm: Mobile home	
2004	**Chytane Farm**: Objector to farm dwelling	**Oldberrow Lane Farm**: Relocation of buildings
	Crown East: Visitor facility and manager's flat	**Forestry Building, Wythall**: Forestry issues
	Swallow Cottage: Widening of holiday use	**Lower Dadkin Farm**: Mobile home
	Etchden Court Farm: New enterprise viability	**Villa Vista**: Viability of horticultural unit
	Attleborough Bypass: On behalf of Highways Agency	
2005	**Howells School**: Use of land for horses	**Newton Lane**: Enforcement appeal
	Otter Hollow: Mobile home	**Manor Farm**: Change of use class
	Springfield Barn: Barn conversion	**South Hatch Stables**: RTE refurbishment
	Ashley Wood Farm: Swimming pool	**Trevaskis Fruit Farm**: Farm dwelling
	The Hatchery: Mobile home	**Tregased**: Enforcement appeal
	Stockfields Farm: Building reuse	
2006	**Manor Farm**: Replacement farmhouse	**Bhaktivedanta Manor**: Farm buildings
	Sough Lane: Farm dwelling	**Military Vehicles**: Loss of BMV land
	Whitewebbs Farm: Enforcement appeal	**Ermine Street Stables**: Enforcement appeal
	Land at Condicote: Farm dwelling	**Featherstone Farm**: Replacement buildings
	Rye Park Farm: Enforcement appeal	**Flambards**: Mobile home and poultry unit
	Woodrow Farm: Buildings reuse	**Manor Farm**: Effect of housing on farm
	Rectory Farm: Retention of unlawful bldg	**Goblin Farm**: Arbitration re notice to quit
	Walltree Farm: Retention of structures	**Terrys Wood Farm**: Farm dwelling
	Weeford Island: Land quality issues	**Etchden Court Farm**: Mobile home
	College Farm: Relocation of farmyard	**Hollowshot Lane**: Farm dwelling and buildings
2007	**Woolly Park Farm**: Manager's dwelling	**Barcroft Hall**: Removal of condition
	Park Gate Nursery: Second dwelling	**Kent Access Road**: Effect on farms
	Penyrheol las: Retention of bund	**Greys Green Farm**: Enforcement appeal
	Hucksholt Farm: New beef unit in AONB	**A40 Robeston Wathen bypass**: Underpass
	The Green, Shrewley: Mobile home	**Woodland Wild Boar**: Mobile homes
	Brook Farm: Retention of polytunnels	
2008	**Weights Farm**: Second dwelling	**Whitegables**: Stud manager's dwelling
	Hill Farm: Mobile home	**Balaton Place**: Loss of paddock land
	Relocaton of Thame Market: Urgency issues	**Point to Point Farm**: Buildings / farm dwelling
	Spinney Bank Farm: Dwelling / viability issues	**Norman Court Stud**: Size of dwelling
	Higham Manor: Staff accommodation	**High Moor**: Temporary dwelling
	Robeston Watham bypass: Procedures Hearing	**Land at St Euny**: Bldg in World Heritage Area
	Monks Hall: Covered sand school	**Baydon Meadow**: Wind turbine
	Porthmadog bypass: Road scheme inquiry	
2009	**Claverton Down Stables**: New stables	**Meadow Farm**: Building conversion
	Hailsham Market: Closure issues	**Bishop's Castle Biomass Power Station**: Planning issues
	Gambledown Farm: Staff dwelling	**Foxhills Fishery**: Manager's dwelling
	Oak Tree Farm: Farm dwelling	**Bryn Gollen Newydd**: Nuisance court case
	A470 Builth Wells: Off line road scheme	**Swithland Barn**: Enforcement appeal
	Hill Top Farm: Second dwelling	**Woodrow Farm**: Retention of building
	Sterts Farm: Suitability / availability of dwelling	
2010	**Poultry Farm, Christmas Common**: Harm to AONB	**Stubwood Tankers**: Enforcement appeal
	Wellsprings: Rention of mobile home	**Meridian Farm**: Retention of building
	Redhouse Farm: Manager's dwelling	**Swithland Barn**: Retention of building
	Lobbington Fields Farm: Financial test	
2011	**Fairtrough Farm**: Enforcement appeal	**A477 Red Roses to St Clears**: Public Inquiry
	Etchden Court Farm: Farm dwelling	**Upper Bearfield Farm**: Additional dwelling
	Trottiscliffe Nursery: Mobile home	**North Bishops Cleeve**: Land quality issues
2012	**Tickbridge Farm**: Farm dwelling	**Langborrow Farm**: Staff dwellings
	Blaenanthir Farm: Stables and sandschool	**Heads of the Valley S3**: Improvements

	Land at Stonehill: Eq dentistry / mobile home	**Seafield Pedigrees**: Second dwelling
	Cwmcoedlan Stud: Farm dwelling with B&B	**Beedon Common**: Permanent dwelling
2013	**Barnwood Farm**: Farm dwelling	**Upper Youngs Farm**: Stables / log cabin
	Spring Farm Barn: Building conversion	**Tithe Barn Farm**: Enforcement appeal
	Baydon Road: Agricultural worker's dwelling	**Lower Fox Farm**: Mobile home / building
	Stapleford Farm: Building reuse	**Tewinbury Farm**: Storage barn
	Meddler Stud: Residential development	**Church Farm**: Solar park construction
	Deer Barn Farm: Agricultural worker's dwelling	
2014	**Land at Stow on the Wold**: Housing site	**Land at Elsfield**: Retention of hardstanding
	Allspheres Farm: Cottage restoration	**Queensbury Lodge**: Potential development
	Land at Stonehill: Equine dentistry practice	**Kellygreen Farm**: Solar park development
	Spring Farm Yard: Permanent dwelling	**Spring Farm Barn**: Building conversion
	Land at Valley Farm: Solar park	**Land at Willaston**: Residential development
	Land at Haslington: Residential development	**Bluebell Cottage**: Enforcement appeal
	Manor Farm: Solar farm on Grade 2 land	**Clemmit Farm**: Mobile home
	Penland Farm: Residential development	**Honeycrock Farm**: Farmhouse retention
	Sandyways Nursery: Retention of 23 caravans	**The Mulberry Bush**: Farm dwelling
2015	**The Lawns**: Agricultural building / hardstanding	**Redland Farm**: Residential dev issues
	Harefield Stud: Stud farm / ag worker's dwelling	**Emlagh Wind Farm**: Effect on equines
	Newtown Bypass: Compulsory purchase orders	**Fox Farm**: Building conversion to 2 dwellings
	Barn Farm: Solar farm	**Wadborough Park Farm**: Farm buildings
	Hollybank Farm: Temporary dwelling renewal	**Delamere Stables**: Restricted use
	Five Oaks Farm: Change of use of land and temporary dwelling	
2016	**Clemmit Farm**: Redetermination	**Meddler Stud**: RTE and up to 63 dwellings
	The Lawns: Replacement building	**Land off Craythorne Road**: Housing dev
	Land at the Lawns: Cattle building	**Berkshire Polo Club**: Stables / accomm
2017	**Low Barn Farm**: Temporary dwelling	**Harcourt Stud**: Temporary dwelling
	High Meadow Farm: Building conversion	**Clemmit Farm**: Second redetermination
	Windmill Barn: Class Q conversion	**Stonehouse Waters**: Change of use of lake
	Land at Felsted: Residential development	
2018	**Thorney Lee Stables**: Temporary dwelling	**Watlington Road**: Outline app residential
	Benson Lane: Outline app residential	**A465 Heads of the Valley 5/6**: Agric effects
	Park Road, Didcot: Outline app residential	**The Old Quarry**: Permanent dwelling
	Coalpit Heath: Residential development	**Chilaway Farm**: Removal of condition
2019	**Mutton Hall Farm**: Agric worker's dwelling	**Leahurst Nursery**: Temporary dwelling
	Clemmit Farm: Third redetermination	**Icomb Cow Pastures**: Temp mobile home
	Ten Acre Farm: Enforcement appeal	**Forest Faconry**: Construction of hack pens
	Harrold: 94 Residential dwellings	
2020	**Stan Hill**: Temp dwelling/agric. buildings	**Hazeldens Nursery**: Up to 84 extra care units
	Allspheres Farm: Enlargement of farm dwelling	**Leahurst Nursery**: Agricultural storage bldg
2021	**Ruins:** Dwelling for tree nursery	**Sketchley Lane, Burbage**: Industrial and residential development
2022	**Thornbury**: Local BMV	**Park Solar Traffwl**: Solar Hearing
	Penpergwym: Solar Farm Hearing	
2023	**Mudds Bank**: Equestrian workers dwelling	**Scruton Solar Farm**: Effects on BMV and food
	Mallard Pass NSIP: Issue specific hearing	**Land at East Burnham**: Equestrian facilities
	Bramford Solar: Loss of BMV / food	**Fladbury**: Housing on BMV land
	Gate Burton NSIP: BMV and Food	**Pound Road, Axminster**: BESS and BMV
	Heckington Fen NSIP: Issue Hearing	**Wymondley Solar**: Use of BMV
	Cutlers Green Solar: Use of BMV	**Little Acorn Farm, St Keyne**: Worker's dwelling
	Twigworth, Glos: Use of BMV land	
2024	**Sheepwash Solar, Kent**: Use of BMV land	**East End Solar, Harlow**: Use of BMV
	Washdyke Solar, Grantham: Use of BMV	**Sittingbourne, Kent**: Housing on BMV
	Copper Bottom Solar, Camborne: Use of BMV	**Murrells End Solar, Gloucester**: BMV

APPENDIX KCC2

Natural England's Technical Information Note TIN049

Natural England Technical Information Note TIN049

Agricultural Land Classification: protecting the best and most versatile agricultural land

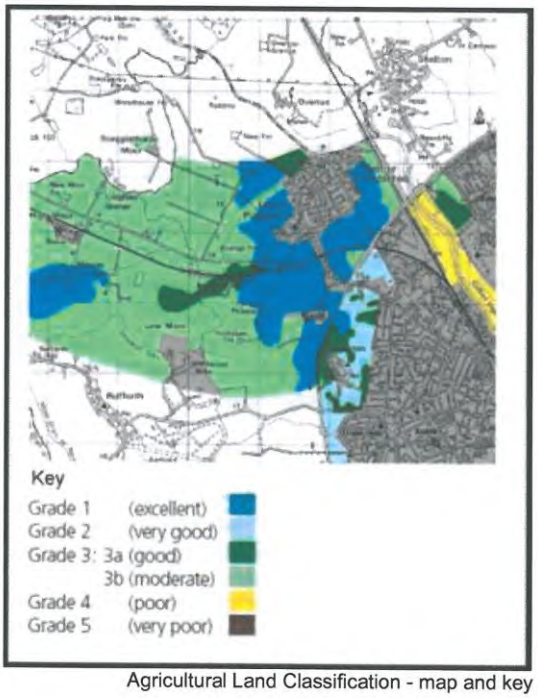
Most of our land area is in agricultural use. How this important natural resource is used is vital to sustainable development. This includes taking the right decisions about protecting it from inappropriate development.

Policy to protect agricultural land

Government policy for England is set out in the National Planning Policy Framework (NPPF) published in March 2012 (paragraph 112). Decisions rest with the relevant planning authorities who should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of higher quality. The Government has also re-affirmed the importance of protecting our soils and the services they provide in the Natural Environment White Paper The Natural Choice:securing the value of nature (June 2011), including the protection of best and most versatile agricultural land (paragraph 2.35).

The ALC system: purpose & uses

Land quality varies from place to place. The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. It helps underpin the principles of sustainable development.



Agricultural Land Classification - map and key

Second edition 19 December 2012
www.naturalengland.org.uk

NATURAL ENGLAND

Agricultural Land Classification: protecting the best and most versatile agricultural land

The ALC system classifies land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a by policy guidance (see Annex 2 of NPPF). This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non food uses such as biomass, fibres and pharmaceuticals. Current estimates are that Grades 1 and 2 together form about 21% of all farmland in England; Subgrade 3a also covers about 21%.

The ALC system is used by Natural England and others to give advice to planning authorities, developers and the public if development is proposed on agricultural land or other greenfield sites that could potentially grow crops. The Town and Country Planning (Development Management Procedure) (England) Order 2010 (as amended) refers to the best and most versatile land policy in requiring statutory consultations with Natural England. Natural England is also responsible for Minerals and Waste Consultations where reclamation to agriculture is proposed under Schedule 5 of the Town and Country Planning Act 1990 (as amended). The ALC grading system is also used by commercial consultants to advise clients on land uses and planning issues.

Criteria and guidelines

The Classification is based on the long term physical limitations of land for agricultural use. Factors affecting the grade are climate, site and soil characteristics, and the important interactions between them. Detailed guidance for classifying land can be found in: *Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988):

- **Climate:** temperature and rainfall, aspect, exposure and frost risk.
- **Site:** gradient, micro-relief and flood risk.
- **Soil:** texture, structure, depth and stoniness, chemical properties which cannot be corrected.

The combination of climate and soil factors determines soil wetness and droughtiness. Wetness and droughtiness influence the choice of crops grown and the level and consistency of yields, as well as use of land for grazing livestock. The Classification is concerned with the inherent potential of land under a range of farming systems. The current agricultural use, or intensity of use, does not affect the ALC grade.

Versatility and yield

The physical limitations of land have four main effects on the way land is farmed. These are:

- the range of crops which can be grown;
- the level of yield;
- the consistency of yield; and
- the cost of obtaining the crop.

The ALC gives a high grading to land which allows more flexibility in the range of crops that can be grown (its 'versatility') and which requires lower inputs, but also takes into account ability to produce consistently high yields of a narrower range of crops.

Availability of ALC information

After the introduction of the ALC system in 1966 the whole of England and Wales was mapped from reconnaissance field surveys, to provide general strategic guidance on land quality for planners. This Provisional Series of maps was published on an Ordnance Survey base at a scale of One Inch to One Mile in the period 1967 to 1974. These maps are not sufficiently accurate for use in assessment of individual fields or development sites, and should not be used other than as general guidance. They show only five grades: their preparation preceded the subdivision of Grade 3 and the refinement of criteria, which occurred after 1976. They have not been updated and are out of print. A 1:250 000 scale map series based on the same information is available. These are more appropriate for the strategic use originally intended and can be downloaded from the Natural England **website**. This data is also available on 'Magic', an interactive, geographical information website **http://magic.defra.gov.uk/**.

Since 1976, selected areas have been re-surveyed in greater detail and to revised

guidelines and criteria. Information based on detailed ALC field surveys in accordance with current guidelines (MAFF, 1988) is the most definitive source. Data from the former Ministry of Agriculture, Fisheries and Food (MAFF) archive of more detailed ALC survey information (from 1988) is also available on **http://magic.defra.gov.uk/**. Revisions to the ALC guidelines and criteria have been limited and kept to the original principles, but some assessments made prior to the most recent revision in 1988 need to be checked against current criteria. More recently, strategic scale maps showing the likely occurrence of best and most versatile land have been prepared. Mapped information of all types is available from Natural England (see *Further information* below).

New field survey

Digital mapping and geographical information systems have been introduced to facilitate the provision of up-to-date information. ALC surveys are undertaken, according to the published Guidelines, by field surveyors using handheld augers to examine soils to a depth of 1.2 metres, at a frequency of one boring per hectare for a detailed assessment. This is usually supplemented by digging occasional small pits (usually by hand) to inspect the soil profile. Information obtained by these methods is combined with climatic and other data to produce an ALC map and report. ALC maps are normally produced on an Ordnance Survey base at varying scales from 1:10,000 for detailed work to 1:50 000 for reconnaissance survey

There is no comprehensive programme to survey all areas in detail. Private consultants may survey land where it is under consideration for development, especially around the edge of towns, to allow comparisons between areas and to inform environmental assessments. ALC field surveys are usually time consuming and should be initiated well in advance of planning decisions. Planning authorities should ensure that sufficient detailed site specific ALC survey data is available to inform decision making.

Consultations

Natural England is consulted by planning authorities on the preparation of all development plans as part of its remit for the natural environment. For planning applications, specific consultations with Natural England are required under the Development Management Procedure Order in relation to best and most versatile agricultural land. These are for non agricultural development proposals that are not consistent with an adopted local plan and involve the loss of twenty hectares or more of the best and most versatile land. The land protection policy is relevant to all planning applications, including those on smaller areas, but it is for the planning authority to decide how significant the agricultural land issues are, and the need for field information. The planning authority may contact Natural England if it needs technical information or advice.

Consultations with Natural England are required on all applications for mineral working or waste disposal if the proposed afteruse is for agriculture or where the loss of best and most versatile agricultural land agricultural land will be 20 ha or more. Non-agricultural afteruse, for example for nature conservation or amenity, can be acceptable even on better quality land if soil resources are conserved and the long term potential of best and most versatile land is safeguarded by careful land restoration and aftercare.

Other factors

The ALC is a basis for assessing how development proposals affect agricultural land within the planning system, but it is not the sole consideration. Planning authorities are guided by the National Planning Policy Framework to protect and enhance soils more widely. This could include, for example, conserving soil resources during mineral working or construction, not granting permission for peat extraction from new or extended mineral sites, or preventing soil from being adversely affected by pollution. For information on the application of ALC in Wales, please see below.

Further information

Details of the system of grading can be found in: *Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

Please note that planning authorities should send all planning related consultations and enquiries to Natural England by e-mail to **consultations@naturalengland.org.uk**. If it is not possible to consult us electronically then consultations should be sent to the following postal address:

Natural England
Consultation Service
Hornbeam House
Electra Way
Crewe Business Park
CREWE
Cheshire
CW1 6GJ

ALC information for Wales is held by Welsh Government. Detailed information and advice is available on request from Ian Rugg (**ian.rugg@wales.gsi.gov.uk**) or David Martyn (**david.martyn@wales.gsi.gov.uk**). If it is not possible to consult us electronically then consultations should be sent to the following postal address:

Welsh Government
Rhodfa Padarn
Llanbadarn Fawr
Aberystwyth
Ceredigion
SY23 3UR

Natural England publications are available to download from the Natural England website: **www.naturalengland.org.uk**.

For further information contact the Natural England Enquiry Service on 0300 060 0863 or e-mail **enquiries@naturalengland.org.uk**.

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APPENDIX KCC3

Extracts from the UK Food Security Report 2024


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Menu

Home > Environment > Food and farming > Producing and distributing food > United Kingdom Food Security Report 2024

Department for Environment, Food & Rural Affairs

Official Statistics

United Kingdom Food Security Report 2024: Introduction

Published 11 December 2024

Contents

Executive Summary
UK Food Security
Scope
Defining food security
Climate analysis

Part of the United Kingdom Food Security Report 2024

Presented to Parliament pursuant to Section 19 of the Agriculture Act 2020

ISBN 978-1-5286-5232-2

2.2.4 Land use

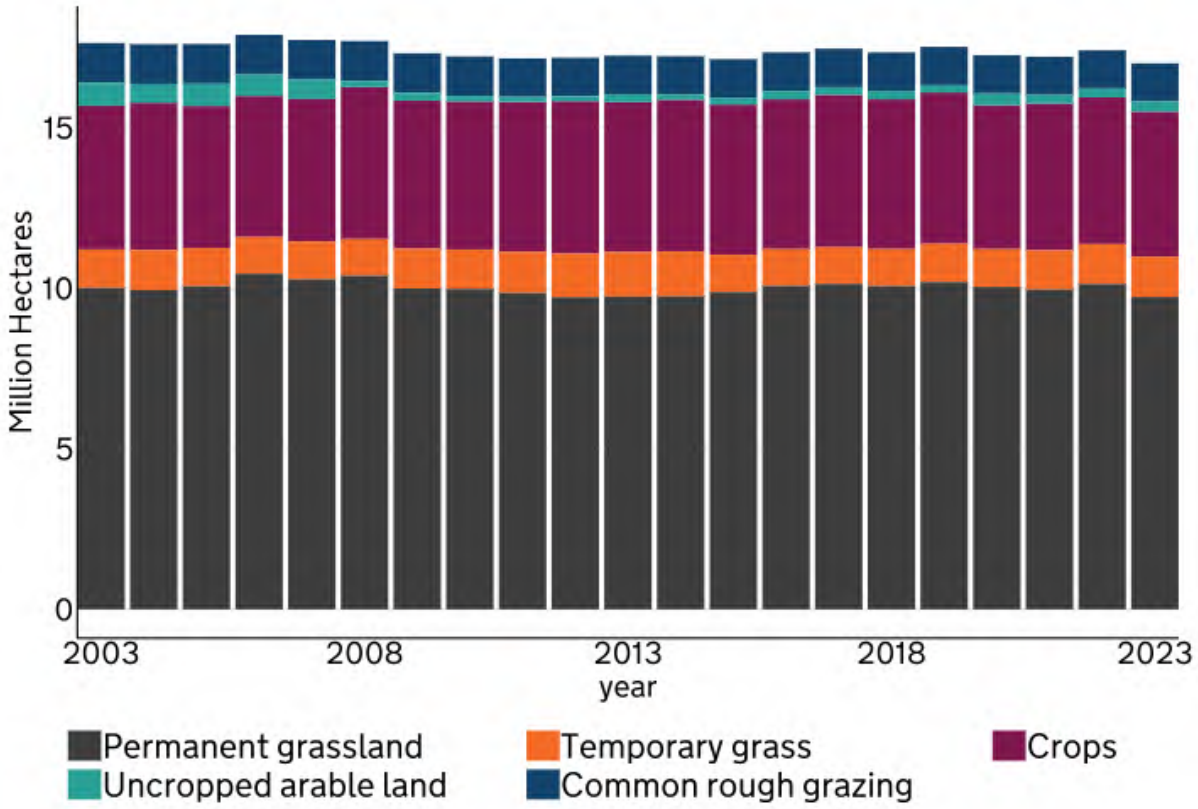
Rationale

Measuring utilised agricultural area (UAA) gives a high-level view of how the UK is using the agricultural land available to produce the UK's food. Land available for food production gives an indication of the long-term sustainability of our domestic production. This is because it is unusual for land to enter agricultural use, so it is necessary to monitor UAA levels for any trends towards a decline. However, there is not a direct link between UAA and food production and indeed a decline in UAA with increased efficiencies can still produce an increase in food production. It is productivity with respect to land that is significant when seeing how production responds to land use changes.

Headline evidence

Figure 2.2.4a: Total utilised agricultural area (UAA) by type, 2003 to 2023

Source: Agricultural Land Use in the UK (Defra)



Download the data for this chart (ODS, 79.7 KB)

The total UAA has seen a gradual but small decrease over the long term. In 2023 there were 17.0 million hectares of UAA covering 70% of land in the UK. This represents a 3.5% decrease from 2003 and a 1.4% decrease from 2020. The distribution of area for different types of land has remained broadly the same. UAA is made up of arable, horticultural, uncroppable arable, common rough grazing, grassland (temporary and permanent), and land for outdoor pigs. It does not include woodland or other non-agricultural land. Not all land is equal; gradient, soil quality, rainfall, water levels and other factors make much of the UK's agricultural area unsuitable for crops, while other parts are suitable only for specific crops. The high proportion of grassland primarily reflects the unsuitability of much of the UK's land for growing crops, and the relative suitability of those areas for grazing.

Supporting evidence

Change from UAA to other uses

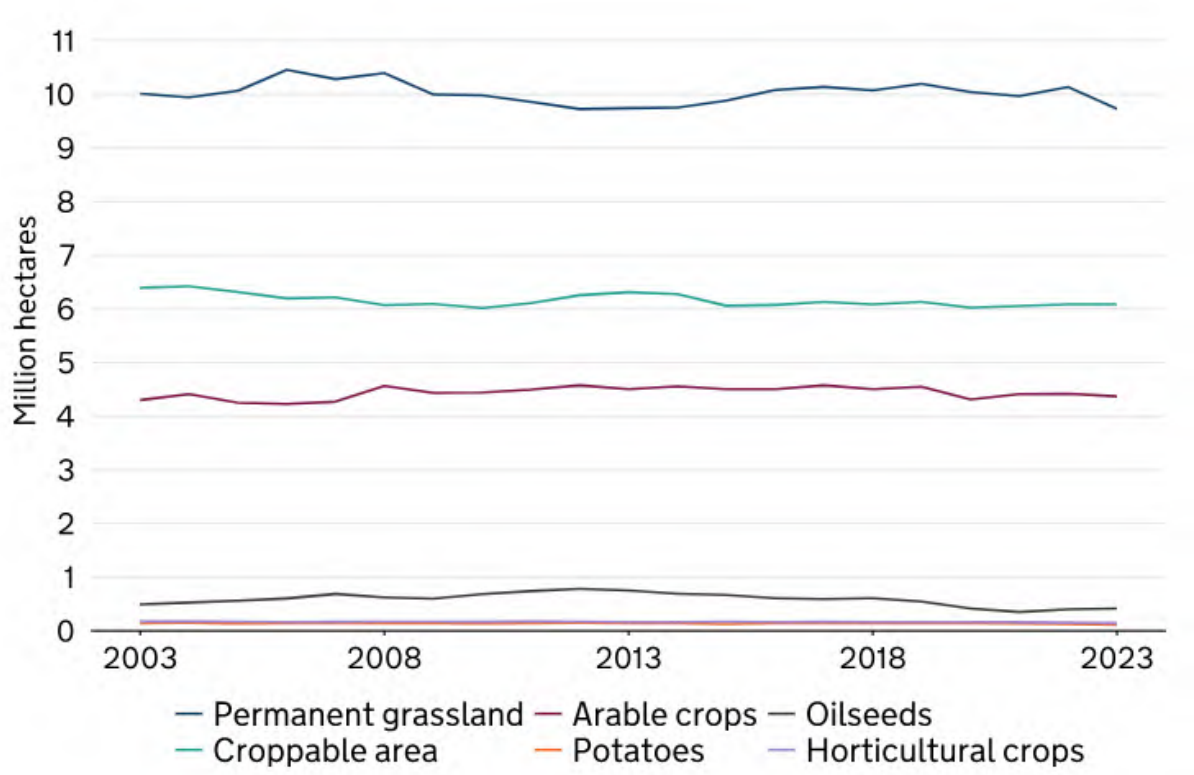
While there has been a small reduction over the long term, the UK is broadly maintaining its level of total UAA at around 70%, with some year-on-year variation. Greater fluctuation happens in terms of uses within UAA (see below) although that is also quite stable. Defra will be publishing the UK wide agricultural land use figures for 2024 on 12 December 2024. Looking ahead, based on current government policy framework for incentivising types of land use, it is expected that there will be increases in land use change from agricultural land to other uses. These uses include woodlands, grasslands, and restored peatland, as well as some being devoted to economic infrastructure like energy and housing. The impact this will have on food production will be affected by the kind of land being taken out of production. For instance, the impact is negligible if it is unproductive land which is taken. It is plausible that with continued growth in output and conducive market conditions, that food production levels could be maintained or moderately increased alongside the land use change required to meet our Net Zero and Environment Act targets and commitments. However, analysis projecting decades into the future involves significant uncertainties. The government is due to publish a land use framework to guide land managers on the balance of opportunities and risks.

Climate changes mean that types and quality of land are a moving picture (for which there is a data gap). Land classification data is being reviewed so it is challenging to map in the UK where losses and gains are for production.

Change and uses within UAA

Figure 2.2.4b: UK croppable area by area type, 2003 to 2023

Source: Agriculture in the UK (Defra)



Download the data for this chart (ODS, 79.7 KB)

Changes in how UAA is used has been a much more important variable affecting food production than changes in total UAA available. How UAA is used is largely determined by land type and factors such as weather. The majority of UAA (57%) is permanent grassland. Permanent grassland is land used for at least 5 consecutive years to grow grasses, legumes, herbs and wildflowers. It is land which is not included in the crop rotation and is typically land unsuitable for cultivation. Permanent grassland is often part of a livestock farming system, as it can be used to provide forage. The area of permanent grassland has remained relatively stable but did decrease by 3.1% between 2020 to 2023.

The croppable area consists of cereals, oilseed, potatoes, other arable crops, horticultural crops, uncropped arable land, and temporary grass. The total croppable area in the UK was just over 6.0 million hectares in 2023 and accounted for just over a third (36%) of UAA. This remained broadly unchanged between 2020 and 2023, increasing by 1%. Within this, some crops had greater changes than others. Much of the annual variation between specific crops is due to factors such as the weather and prices rather than any long-term and more systematic variation. Year-on-year land use change is typically in the range of 0% to 5%. The scale of change over the last 3 years is largely within or close to this typical range, although there have been noticeable declines in areas of both potatoes and horticulture.

The total area of **arable** crops increased by 1.3% between 2020 and 2023 and stands at just under 4.4 million hectares. Published figures for England at 1 June indicate that overall areas of arable crops declined from 2023 to 2024, largely

due to flooding and difficult weather conditions. This resulted in failed crops and a partial switch to spring plantings. **Cereal** crops accounted for 71% of the total area of arable crops across the UK. The total area of cereal crops in the UK increased by 1.0% between 2020 and 2023 to almost 3.1 million hectares. This also represents a 2.0% increase in area of cereals from 2013. The total area of **oilseeds** (oilseed rape, linseed and borage) increased by 0.6% between 2020 and 2023 (418 thousand hectares). However, this is a 44% decrease from 2013.

The area of land sown in the UK for **potatoes** decreased by 19% between 2020 and 2023 (to 115 thousand hectares), which continues the decline in this area since 2019. It is also a 17.5% decrease in the area of potatoes since 2013. The area of **horticultural** crops (of which 91% is used to grow fruits and vegetables), decreased by 12.6% between 2020 and 2023 (to 145 thousand hectares). Indicator 2.1.2 Arable products (grain, oilseed and potatoes) and Indicator 2.1.4 Fruits and vegetables explore production volumes.

APPENDIX KCC4

HM Government Land Use Consultation

(January 2025)

HM Government

Land Use Consultation

January 2025

We are the Department for Environment, Food and Rural Affairs. We are responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.

This publication is available at www.gov.uk/defra

Any enquiries regarding this publication should be sent to us at:
landuseconsultation@defra.gov.uk

Responding to the consultation

Please respond to this consultation using the Citizen Space consultation hub at Defra https://consult.defra.gov.uk/land-use-framework

For ease of analysis, responses via the Citizen Space platform would be preferred, but alternative options are provided below if required:

By email to: landuseconsultation@defra.gov.uk

In writing to:

Land Use Consultation

Third Floor, Mallard House,

Kings Pool, 1-2 Peasholme Green,

York,

YO1 7PX

Please note, any responses sent by post must have arrived at the above address by the closing date of the consultation (25 April) to be counted. Any responses received after this date will not be analysed. To ensure your response is included in the analysis, please consider responding online via Citizen Space.

Consultation period

This consultation will open on 31 January and close on 25 April 2025

Compliance with the consultation principles

This consultation is being conducted in line with the Consultation Principles set out in the Better Regulation Executive guidance which can be found at: https://www.gov.uk/government/publications/consultation-principles-guidance

If you have any comments or complaints about the consultation process, please address them to:

By e-mail: consultation.coordinator@defra.gov.uk

After the consultation

Information provided in response to this consultation document, including personal information, may be subject to publication or release to other parties or to disclosure in accordance with the access to information regimes such as Freedom of Information Act 2000 (FOIA), Environmental Information Regulations 2004 (EIR) and the Data Protection Act 2018.

If you want information, including personal data, that you provide to be treated as confidential, please say so clearly in writing when you submit your response to the consultation and explain why you need these details to be kept confidential. If we receive a request for disclosure under the FOIA or EIR, we will take full account of your explanation, but due to the law we cannot provide an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as a confidentiality request. Defra is the data controller in respect of any personal data that you provide, and Defra's Personal Information Charter, which gives details of your rights in respect of the handling of your personal data, can be found at:

https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/personal-information-charter

Contents

Foreword

Our land is our greatest natural asset - the source of food, the bedrock of nature, the support system of the environment on which we all rely. It is the place we live, work and rest. The people who work on and look after the land, and make decisions about how land should be used, have been pivotal in this country's history and are central to its future. Because these decisions are not marginal, the use of our land underpins everything in our economy and our society.

The land can do so much at once. Growing fresh produce and rearing animals, storing carbon and creating habitats for precious wildlife, providing homes and community spaces, siting the infrastructure that supports our society - a single plot can contribute in so many ways. There are increasing opportunities and demands on our land, requiring land use to be more dynamic than ever. Across both rural and urban landscapes, we must maintain food security in a time of global uncertainty, protect communities from the impacts of a warming climate, host growing infrastructure networks and settlements, and make room for healthier natural ecosystems to reverse nature's decline.

That is why this Government is launching a national conversation about land use, to minimise trade-offs and optimise the use of our land.

At a national and local scale, we need better spatial planning. For too long, a haphazard approach has been taken to the way infrastructure is sited or homes are built. In order to grow the economy and meet the challenges of future decades, we need to use our data to make better decisions. This will also bring better lives - supporting homes to be built where there is access to water and clean air, and major infrastructure built where it least disrupts nature.

On the ground, our natural world is under threat, with England now one of the most nature-depleted countries in the world. Much-loved British birds and wildlife are at risk of national extinction, whilst our rivers, lakes and seas have unacceptable levels of pollution. Some of our most treasured landscapes are in poor condition, despite the best efforts of many. Meanwhile the impacts of global warming threaten not just our land but the livelihoods that depend on it.

Farming is already going through change: taking on new models of agricultural practice, adapting food production in a changing climate, and building resilience to increased flooding or other global shocks like changing patterns of pests and disease. I know from conversations with farmers and landowners that they not only understand this need for change, but that they are actively delivering it. They know their land best, and it is right that they lead this transition with clarity about land use change so they can plan their businesses.

We as a Government must support this. That is why we have committed £5 billion to farming in the next two years alone, and alongside this are creating the right conditions and incentives to bring in private sector investment to accelerate the adoption of sustainable farming.

By publishing a Land Use Framework, we will go further by creating a toolkit to support decision making and inform discussion on how we can guarantee our long-term food security, how we can support development and how we can achieve our targets on nature and climate that deliver multiple benefits and support economic growth.

This is not going to tell people what to do with their fields or replace the planning system. What the Framework will do is reflect your feedback from this consultation, set out a direction for England's land use and recognise the challenges that land managers will need us to address so that they can deliver our shared vision.

The Land Use Framework will interact with other foundational strategies we are developing in DEFRA; the Environmental Improvement Plan, a 25-year roadmap for farming, and a food strategy. And across government, the Land Use Framework will support sustainable growth, interacting with the Strategic Spatial Energy Plan as we accelerate to clean power by 2030, and driving our ambition to build 1.5 million new homes. This is critical to the delivery of this Government's missions, and the long-term prosperity of our country.

I am consulting before publishing a Framework to ensure that this work is truly informed by what would make this toolkit most useful, what principles should guide us, and what we need to change to help deliver it. As part of this national conversation, there will be workshops across the country, bringing farmers, conservation groups and planners to the table, to put the insights of those who best understand our landscapes at the centre of our work to develop a Land Use Framework.

Only with your input can we publish a Framework in 2025 that truly speaks for England's land, those who manage it, and those who benefit from it.

Our vision for land use in England

Land in England is changing in response to the climate and biodiversity crises, global shocks, the needs of consumers and businesses, and Government policy. In recent years, farmers have seen some of their most valuable land impacted by increasingly frequent extreme weather events. At the same time, communities have rightfully demanded change to clean up our rivers, lakes and seas.

We want to meet these challenges head on and start a public discussion on how land can deliver our missions for Growth and Clean Energy, boost food security, and meet our statutory climate and nature targets. This Government will be an active partner in the delivery of a fair land use transition which will:

- **Make space for nature recovery, water, and emissions reduction.** England's land use will need to change as we move towards 2050 to help deliver our legally binding targets under the Environment Act and Climate Change Act.

- **Support sustainable and resilient food production.** The food system needs to support farmers and landowners to invest in the long-term viability of their businesses, contribute to food security and increase their resilience to climate change.

- **Deliver new infrastructure and housing.** Decision makers at every level need information and tools to deliver sustainable development, including 1.5 million new homes new energy and water infrastructure, and the relatively small area of land use change it requires. We want to use strategic spatial planning to assess gains and losses against national and regional objectives, moving responsibility for managing land use trade-offs away from individual projects.

- **Fix the foundations for resilient long-term economic growth.** Supporting sustainable economic growth over the coming decades will mean investing in its natural capital foundations and long-term climate resilience.

- **Co-create plans for delivery.** Land use change that improves the overall productivity of land alongside wider social and environmental benefits will only happen with the right skills, data, incentives and structures in place. We want to collaborate with land managers, businesses, and communities to define what these are and our plan to deliver them.

This consultation sets out our analysis of the scale of long-term land use change required and is the start of a conversation about how and where it could be delivered. This conversation will aim to define how we can use England's land to give the best combination of benefits, and how we can support land managers and other decision makers to deliver this.

Purpose of this consultation

Policy decisions that impact how land is used are often far too remote from the lived experience of farmers, developers, planners, and the citizens whose work shapes our places and landscapes. The Devolution White Paper set out our plan to shift power away from Whitehall and into the hands of those who know the land and their communities best. This consultation process will help define what role the Framework will play in this transition. It is not our intention to use the Framework to bind decision makers or prescribe specific land uses in specific places; we want it to inform decisions, not impose them.

A thriving natural environment and stable climate are the foundations of our economy and are essential to food security and profitable farm businesses. Changes in English land use are required to reverse the decline of our natural environment, help absorb greenhouse gases, adapt to the impacts of climate change, and increase the resilience of our food systems, infrastructure, homes and communities.

These foundations will support Government's commitment to build 1.5 million homes and the new infrastructure needed to deliver resilient and sustainable growth and clean energy[1].

Advances in spatial data science, including earth observation data, mean we can now map potential long-term changes in land use more effectively. We want to use the analysis included in our accompanying annex to support discussions on how land is used, and the changes to policy needed to support land managers and communities.

A Land Use Framework will develop and support delivery of a shared vision for English land use[2]. This consultation document will inform the subsequent development of a Land Use Framework in 2025. **Section 1** of this consultation starts with evidence to underpin decisions on land use change[3]. **Section 2** sets out draft principles for decision making. **Section 3** outlines potential policy levers that could be developed as part of a Land Use Framework such as improving access to data and developing targeted land management incentives. **Section 4** describes the process of co-creation that will inform the Land Use Framework.

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[1] Including the actions shaped by the industrial strategy consultation: *Invest 2035: the UK's modern industrial strategy* (October 2024)

[2] Many of the policies in scope of this consultation are devolved. The territorial scope has been limited to England. The UK Government will work closely with the devolved Governments in Scotland, Wales and Northern Ireland to develop the Land Use Framework for England.

[3] Details of this evidence, its assumptions and its limitations are provided in the Analytical Annex.

The Framework will be published in 2025. It will include:

1. Principles that Government will apply to policy with land use implications.
2. A description of how policy levers will develop and adapt to support land use change.
3. A release of land use data and analysis to support public and private sector innovation in spatial decision making, and the development of tools to support land managers in practice.

The evidence base that underpins this consultation is a basis for wider reform that includes a Farming Roadmap, a Food Strategy and the review of the Environmental Improvement Plan. It also supports the Government's wider strategic planning agenda, including the Industrial Strategy, long-term housing strategy, New Towns Taskforce, National Integrated Transport Strategy, Ten Year National Infrastructure Strategy and the Strategic Spatial Energy Plan.

These land use challenges are not unique to England. With the other UK nations, we have an opportunity to learn from others and to lead by example in managing the land use challenges that are shared by every country committed to the Paris Agreement on Climate Change and Convention on Biological Diversity. The Land Use Framework will play a critical role in delivery of our domestic and international commitments, including our Carbon Budgets, National Biodiversity Strategies and Action Plans, and Nationally Determined Contribution to international action on climate change.

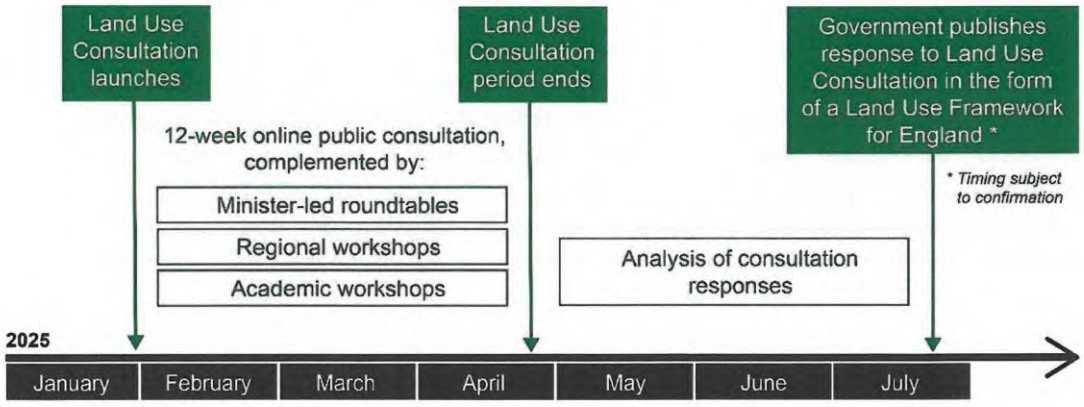

Figure 1: Timeline of key milestones and activities in the Land Use Consultation process

A long-term view of land use change

By land area, England is still a predominantly rural and agricultural country. Of England's total land area, 85% can be classed as rural[4]. This land provides the critical underpinnings of our economy from food and rural housing to clean water and wildlife habitats. 67% of England's land is agricultural, made up of 38% arable land and 29% grassland[5]. Our natural capital generates an annual flow of benefits, including food production, of £37bn[6] in England alone.

Nevertheless, by population, England is largely urban: in 2020, 83% of people lived in urban areas (settlements of more than 10,000 inhabitants)[7].

More detail on England's current land uses and the value they provide is set out in the Analytical Annex accompanying this consultation.

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[4] See the Rural-Urban Classification for Output Areas in England (2011, most recent year for which data is available): https://assets.publishing.service.gov.uk/media/610c08e4d3bf7f044024465a/RUCOA_leaflet_Jan2017.pdf

[5] This describes Utilised Agricultural Area as a proportion of England's total land area: https://www.gov.uk/government/statistics/agricultural-land-use-in-england.

[6] 2022 value derived from the ONS publication "UK natural capital accounts 2024": https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapitalaccounts/2024. Please refer to Section 1.2 of the Analytical Annex for more information on the value of natural capital.

[7] Statistical Digest of Rural England, April 2024: https://assets.publishing.service.gov.uk/media/661d3b95ac3dae9a53bd3dd3/16_04_2024_-_1_-_Population.pdf

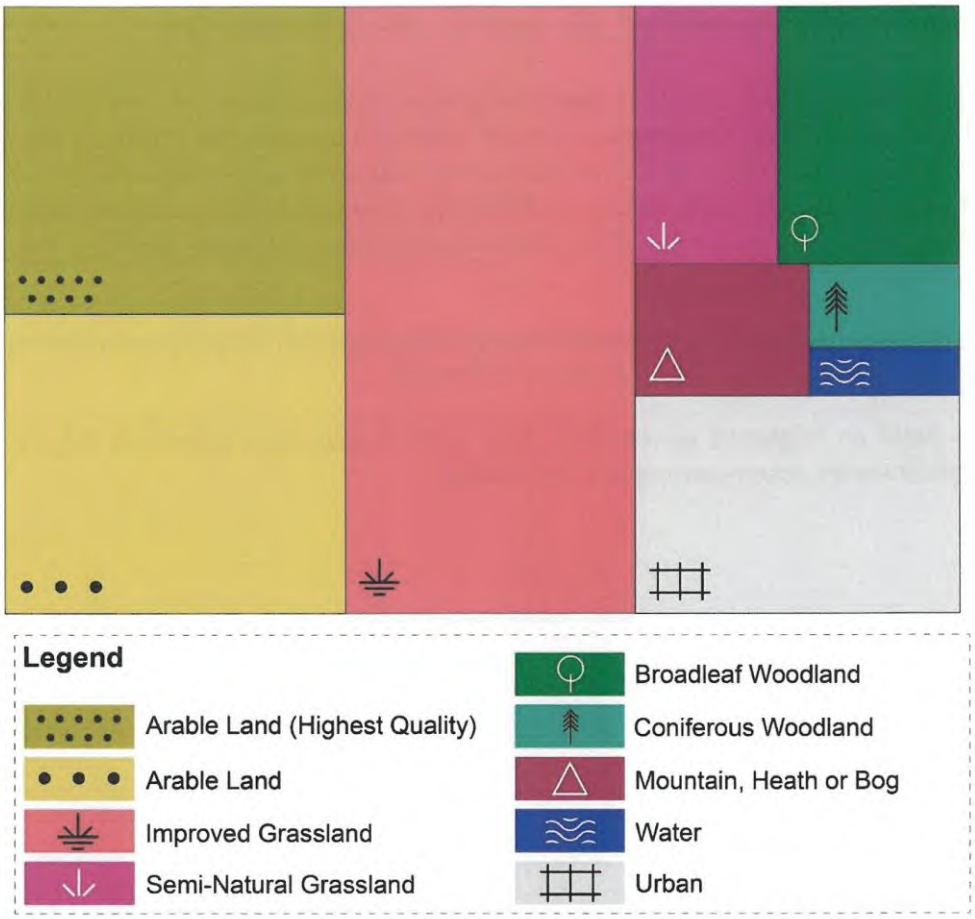

Figure 2: Approximate proportions of England's total land area occupied by different types of land use (derived from UKCEH spatial data, broken down by Agricultural Land Classification grade which assesses land's capacity to produce food).

Arable land is mainly used to produce crops for food and animal feed. Grassland is primarily used for animal grazing and silage, with improved grassland being more intensively managed for agricultural production, and having lower species diversity, than semi-natural grassland. While data is not available for England and the figure is likely to be lower, 85% of the UK's Utilised Agricultural Area (UAA) in 2023, across both arable and grassland, was used for animal feed or animal production. A small proportion of the UK's UAA is used for growing crops for bioenergy. [8]

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[8] JNCC Report No. 307, Guidance on the interpretation of the Biodiversity Broad Habitat Classification (terrestrial and freshwater types), July 2000: https://data.jncc.gov.uk/data/0b7943ea-2eee-47a9-bd13-76d1d66d471f/JNCC-Report-307-SCAN-WEB.pdf
Food Security Report 2024: https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2024/

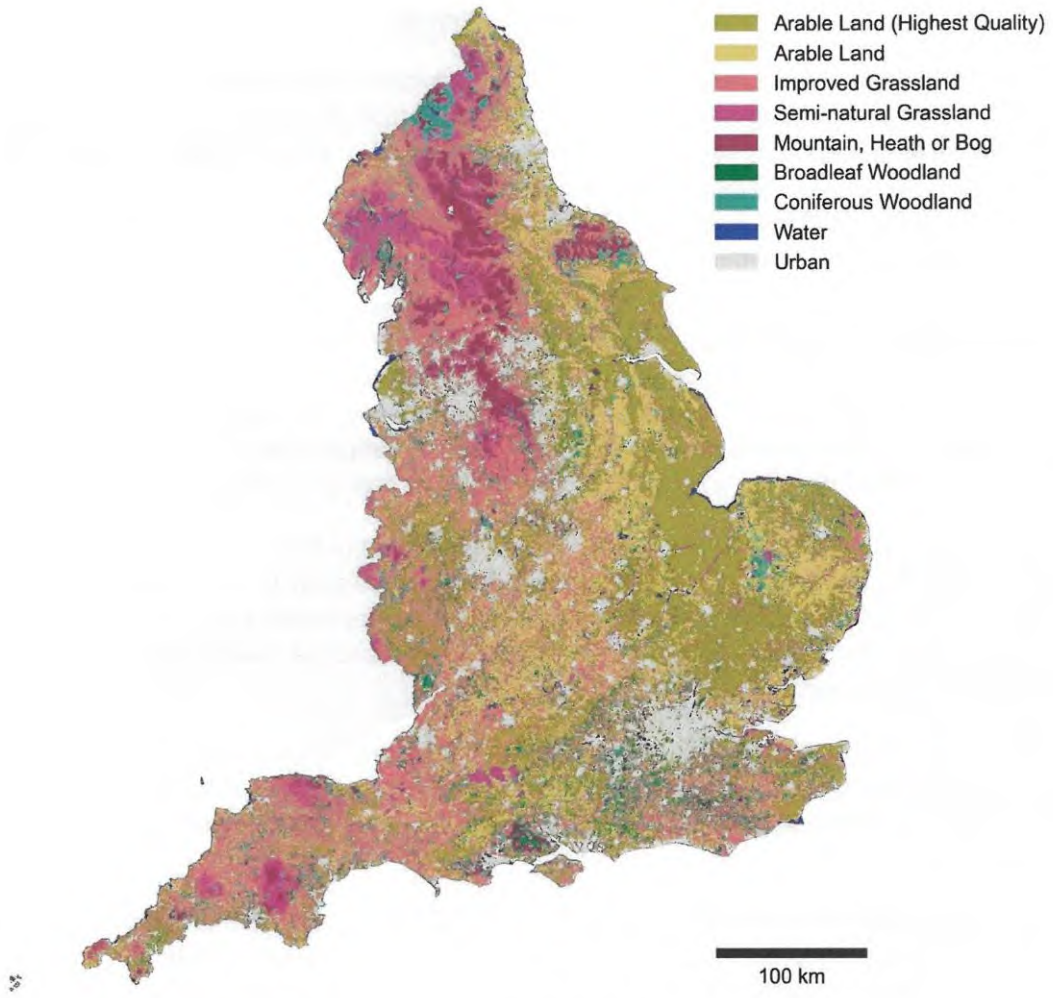

Figure 3: Land in England today, showing how the use and capability of land varies widely at a range of scales, driven by complex geography and drivers of land use decisions (derived from UKCEH spatial data, broken down by Agricultural Land Classification grade which assesses land's capacity to produce food).

What we mean by land use change

To make space for nature, water, and emissions reduction, while also delivering new infrastructure and housing and maintaining food production, there will need to be a range of different land use changes by 2050. These changes are critical to make agriculture and food production more resilient to climate change. They are also necessary to meet our statutory Carbon Budgets under the Climate Change Act and statutory environmental targets under the Environment Act.

To provide context for the co-design of a Land Use Framework we need a consistent way of categorising these different types of land use change. For the purposes of our analysis, we used five categories[9] to define types of land management and land use changes. These are described below, alongside the approximate percentage of England's total agricultural land that our analysis shows may need to change as we move towards 2050. The figures below describe a dynamic picture that may change over time.

Our analysis explores how land use decisions could meet our Environment Act and Climate Targets without undermining food production[10] or objectives such as national security[11]. The land use changes described in Figures 4 and 5 therefore represent a balanced approach to meeting our range of priorities, including several types of land use change that achieve wider benefits without taking land out of food production.

The spatial analysis set out in the Analytical Annex aims to reduce trade-offs by avoiding land use change on our best agricultural land. It shows how landowners and land managers can make decisions that limit the scale of land use change and support profitability.

This analysis shows that most changes are about making land more multifunctional alongside food production, rather than taking land out of production entirely. It also illustrates that the new homes and infrastructure that are needed to deliver our Growth and Clean Energy Superpower Missions are a relatively small driver of land use change.

On the agricultural land not subject to specific land use change, we expect the majority to undertake land management changes (Category 1), such as changes to meet the Environmental Improvement Plan objective of having 60% of soils under sustainable management. Please refer to Table 3 of the Analytical Annex for detailed definitions of categories.

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[9] Please refer to Table 3 in Section 3 of the Analytical Annex for more information on the five categories used to describe types of land management and land use change in our analysis.

[10] The scope of our analysis, including which targets are quantified, is described in the Analytical Annex.

[11] For example, we have considered the critical importance of the national security purposes of the Ministry of Defence Estate.

Figure 4: The approximate percentages of England's total agricultural land area that our analysis shows may need to change in use or management by 2050[12].

Category 1 – Land management change Changes in the way the land is farmed, without introducing new habitats or planting trees. It falls outside of the scope of land use change discussed in this document. *Examples: Planting cover crops to reduce soil loss, or reducing fertiliser use to prevent water pollution.*	**Not in scope**
Category 2 – Small changes maintaining the same agricultural land use Introducing nature within fields, in margins and / or small portions, providing environmental and climate benefits alongside food production. *Examples: Arable field margins, riparian features such as river buffer strips.*	**1%** (50kha)
Category 3.1 – Changes in agricultural land use, for both food and environmental / climate benefits This is mainly about incorporating more trees alongside food production.	**4%** (370kha)
Category 3.2 – Changes in agricultural land use, mainly for environmental and climate benefits with limited food production. The land is being farmed mainly for other benefits than food. *Examples: Creation / restoration of species-rich grassland habitats; responsible management of peat; planting of short rotation coppice.*	**5%** (430kha)
Category 4 - Change away from agricultural land, for environmental and climate benefits. Land use becomes non-agricultural. Land is fully dedicated to delivering environmental and climate benefits. *Examples: Restoration and maintenance of peat-forming and peat-dependent habitats; creation of woodland; creation / restoration of coastal and lowland heathland habitats.*	**9%** (760kha)

[12] See Table 3 in the Analytical Annex for a description of the changes to land management (category 1) which are not summarised here.

The Government is committed to maintaining food production. Our assessment is that, based on historical trends of productivity improvement, and supported by new and emerging innovations, the impact of these land use changes on domestic food production will be offset by productivity improvements[13]. We expect that recent trends of increased productivity from agricultural land will continue. Working in partnership, Government will put in place a policy environment to support those changes.

The scale of land use change required to deliver 1.5 million new homes is relatively small: around 30 thousand hectares (0.2%) by the end of the Parliament[14] and around 150 thousand hectares (1.1%) if housebuilding were continued at the same rate to 2050[15]. The Land Use Framework will be informed by the additional spatial analysis and public consultation required to determine suitable locations for new homes and infrastructure.

Delivering new infrastructure will also require changes to English land use. These are also relatively small overall; the land area taken by all key utilities across England in 2022, including solar and wind farms, power stations, water works, gas works, and refuse disposal places, covered just 0.2% of land[16]. We can build the homes and infrastructure we need while meeting our wider objectives such as food security and environmental targets to 2050. Though small in comparison to wider land uses, the cumulative footprint of infrastructure and housing delivery in the longer term justifies reducing trade-offs between land uses today. This includes continuing to reflect the agricultural potential of land in spatial planning.

Figure 5 shows how the changes outlined in Figure 4 and delivering new homes may change total land uses in England from today, through 2035 to 2050. The Analytical Annex provides more details of the assumptions and uncertainties reflected in this analysis. We will continue to refine this analysis as we improve the underpinning data and hear feedback through this consultation and wider engagement. Our intention is not for any analysis to prescribe changes, only for it to support understanding of how different changes at local and regional levels can add up to outcomes such as food production and nature restoration at the national level.

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[13] See Section 4.5 of the Analytical Annex for more detail on productivity trends.

[14] This estimate assumes the same split of new homes between new build completions, conversions and change of use as for recent years. Details of this calculation and more information on the demand for land for infrastructure, housing and other development are available in section 2.2 of the Analytical Annex.

[15] This figure is based on the expected growth in households to 2050 as a proportion of the existing urban land area and should be understood as an order of magnitude rather than a precise calculation.

[16] 2022 figures: https://www.gov.uk/government/statistics/land-use-in-england-2022

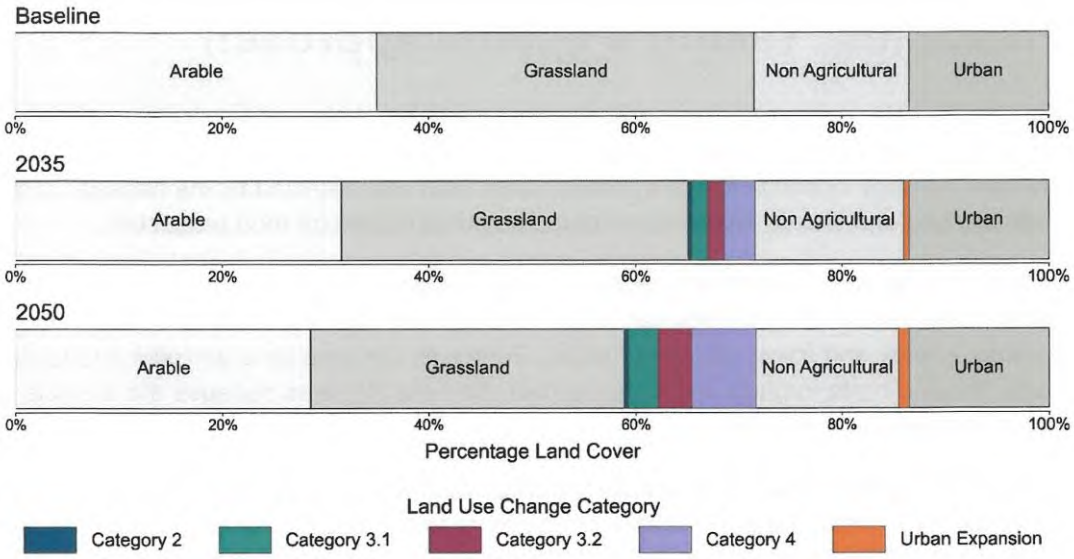

Figure 5: Estimated type and extent of land use changes needed to 2035 and 2050. Categories of land use change are defined in Figure 4 and the Analytical Annex[17].

QUESTION 1: To what extent do you agree or disagree with our assessment of the scale and type of land use change needed, as set out in this consultation and the Analytical Annex?

[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

Please explain your response, including your views on the potential scale of change and the type of change needed, including any specific types of change.

[17] Note that the baseline differs slightly from the official statistics. Please refer to Section 3.2 of the Analytical Annex for assumptions and uncertainties.

Principles: Taking a spatial approach

The opportunities to produce food, make space for nature, water, and emissions reduction, and deliver new infrastructure and housing, are different in every part of England. For example, suitable locations for clean power generation are restricted by the capacity of the electricity grid and should take account of the potential of land for food production.

Climate change impacts such as sea levels rising and extreme weather are changing where wildlife, trees, livestock and crops can thrive, and the land that is suitable for construction of housing, energy and transport infrastructure. Even with our ambitious emissions reduction plans, these climate impacts will increase over the next 20 years because the impacts of past emissions are locked in.

We have developed principles to support strategic spatial planning and the targeting of land use incentives. The purpose of these principles is to transform how Government makes policy and the information we provide to decision makers. For the principles to be meaningful they need to be integrated into decision making processes and supported by data, decision support tools and resources. That is why we are seeking your views on the principles themselves and how they could be applied.

1. **Co-design:** Support for participation and leadership at the local and regional scale to develop and align spatial strategies and assess the fairness of changes in land use.
2. **Multifunctional land:** Enable multiple benefits on land, targeted according to opportunity, societal needs (such as the health benefits of co-locating new homes and nature), and environmental pressures (such as reducing pollution).
3. **Playing to the strengths of the land**[18]**:** Support and spatially target land use change to locations where benefits are greater and trade-offs are lower. Give priority to land uses that are more scarce or spatially sensitive (for example grid capacity places restrictions on new renewable generation sites or protecting land that is best suited for food production).
4. **Decisions fit for the long-term:** Take a long-term view of changing land suitability, prioritising resilience (including to the impacts of climate change). This could include planning for new homes that are resilient to climate impacts, such as flooding and overheating.
5. **Responsive by design:** Land use policy, including spatial prioritisation and targeting, needs to be responsive to new data, opportunities and pressures.

[18] Please refer to Section 4 of the Analytical Annex for background evidence to support taking a spatial approach

These principles will be updated after reviewing consultation responses, and applied to future policy on land use, for example, as part of the Food Strategy, Farming Roadmap, Industrial Strategy, long-term housing strategy, National Integrated Transport Strategy, Ten Year National Infrastructure Strategy, the Strategic Spatial Energy Plan, a revised Carbon Budget Delivery Plan, and the review of the Environmental Improvement Plan.

QUESTION 2: Do you agree or disagree with the land use principles proposed?

[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

Please provide any reasons for your response including any changes you believe should be made.

QUESTION 3: Beyond Government departments in England, which other decision makers do you think would benefit from applying these principles?

- **Combined and local authorities (including local planning authorities)**
- **Landowners and land managers (including environmental and heritage groups)**
- **Others (please specify)**

Making the best use of land

This Land Use Consultation takes a long-term view of English land use. We know that to achieve this vision we will need to radically improve the access that landowners, land managers and communities have to the resources needed to support long-term and spatial decision making. There are practical delivery challenges and opportunities faced by communities, businesses, developers, landowners and farmers today. This section aims to address these, drawing on our engagement and analysis, as well as insights from a range of previous publications on land use[19]. It proposes policy changes to address land use challenges under four themes: aligned incentives, joined-up decisions, accessible and high-quality data, and skills.

These proposals and questions are not intended to be comprehensive, and instead provide the starting point for an open process of policy co-creation.

1. Aligned incentives

Context

Most English land is in private ownership and land ownership in England is highly concentrated. Land management incentives and influences include public payments (for example, to farmers for environmental benefits), cultural and social influences, market signals from the wider food system and economy, private nature markets, guidance and advice, regulation, and tax reliefs. Investors, farmers and other businesses want certainty about how Government will act to align incentives and shape emerging markets to support the food, environment, infrastructure, economic and climate outcomes that the nation needs.

An increasing number of land managers are seeing that Environmental Land Management actions can support their businesses in adapting to more sustainable farming practices, changes in consumer demand, and changing weather conditions driven by climate change. Our Environmental Land Management schemes have helped farmers increase adoption of these. Alongside of which there is growing recognition that a much greater role for private nature markets[20] will be required to support businesses towards more sustainable models. Emerging nature markets are already offering additional incentives and Government has a role to play in shaping these emerging markets, including with clear standards, to enable them to scale up rapidly.

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[19] These include recent reports by the Royal Society and British Academy, the House of Lords Land Use in England Inquiry, and the Land Use for Net Zero, Nature and People Hub.

[20] Nature markets enable private investment in nature through creating units or credits that can be bought and sold. They allow businesses to invest with farmers and other land and coastal managers to enhance the ability of land, freshwater and marine habitats to provide carbon, biodiversity, clean water and other benefits.

Policy levers and enablers

Incentivising changes for long-term food security

The impacts of climate change and nature loss, from extreme weather events to declines in pollinator populations, are a significant risk to food production. We must reduce these risks, as well as supporting our food and farming system to become more resilient. Farming businesses that are able to plan and invest for the long term are the backbone of a resilient farming system and our food security. Farmers are rightfully asking for greater clarity on what is needed from the land. Being transparent on the level of change needed will provide those businesses with more information around which they can plan.

Farmers and land managers are already changing land use and management practices to adapt to more frequent and severe droughts and floods. These decisions are made at the farm level but need the right frameworks, incentives and conditions from Government and the wider food chain. Incentives will need to reflect the mix of land ownership structures, including tenancies, in farming and the wider food chain.

Incentives will also need to reflect the extent to which the benefits of land use change apply to those making the changes, or the wider public. Many land use and management changes for public benefits bring about costs to those managing the land. We want to work with the sector to develop a long-term sustainable plan for how these costs will be met. To achieve the right incentives and conditions, we will work in partnership with farmers to co-create our long-term Farming Roadmap.

Government will put the right incentives in place to support appropriate land use change. The design of these will need to consider the important role of domestic food production in our food security. Alongside land use change, agricultural yields will need to increase on some land. We will also need to ensure that the agricultural potential of land is fully considered in land use decisions taken outside the farming system so that less of our high-quality farmland is taken out of production. A broad range of approaches will be explored in our long-term Farming Roadmap, including proposals to help achieve increased agricultural yields, approaches to increase the uptake of regenerative agriculture[21] and multifunctional land uses and farming practices.

We are also developing, in partnership with the food sector, a Food Strategy which will bring together all aspects of the food system around four pillars of health, growth, environmental sustainability, and food security. This approach will ensure, alongside land use change, that

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[21] The term "regenerative agriculture" currently does not have a comprehensively described scientific definition, but it is widely acknowledged that regenerative agriculture proceeds from a foundation of promoting soil health. Source: Pettorelli et al. (2024) Prioritising Land Use in the Midst of a Climate and Nature Emergency - Ten Key Messages for Scientists, Civil Society, and Policy Makers. A report from the Zoological Society of London (ZSL) and the British Ecological Society (BES), London, UK

we achieve improved health outcomes, robust food security, growth in the food system, and a thriving natural environment.

QUESTION 4: What are the policies, incentives and other changes that are needed to support decision makers in the agricultural sector to deliver this scale of land use change, while considering the importance of food production?

In the next few decades, global land use will come under increasing pressure. Agricultural production will need to keep pace with the growing demand for food whilst reducing emissions. There are also new pressures such as demand for land for the production of feedstocks for biofuels and other forms of renewable energy.

The nature of global agricultural markets, where changing relative prices can incentivise processors and consumers to substitute one product for another, and farmers to switch land between different crops, means that land use decisions in different countries are interconnected through international trade. For example, if one country takes policy actions that either reduce domestic agricultural production or increase the consumption of agricultural products, then its agricultural imports will increase or exports decrease such that its net agricultural trade position will weaken. This will tend to encourage an expansion in agricultural production in other countries, possibly with significant negative environmental impacts.

The principles are intended to transform policy and incentives for land use change in England, protecting land with the greatest long-term potential for food production. This will help to reduce the risk of displacing food production and any associated environmental impacts abroad. Targeting land use incentives to the right locations will help achieve this and deliver better value for public spending by achieving greater benefits from the land use or management changes that are paid for.

Prioritising where changes should take place does, however, raise important questions of fairness. The more we prioritise food production by spatially targeting incentives, the more that changes may become concentrated in less agriculturally productive landscapes. While this could bring new economic opportunities to these rural communities, over the next 25 years we are likely to see wider social changes as well. We want to assess where these long-term changes are likely to be most significant so that we can co-create a fair and managed transition, and support people to take advantage of emerging opportunities. Our proposed approach to spatial prioritisation of outcomes and the spatial targeting of financial incentives for land use change will be set out in the Farming Roadmap and will take responses to this consultation into account.

QUESTION 5: How could Government support more land managers to implement multifunctional land uses that deliver a wider range of benefits, such as agroforestry systems with trees within pasture or arable fields?

QUESTION 6: What should the Government consider in identifying suitable locations for spatially targeted incentives?

QUESTION 7: What approach(es) could most effectively support land managers and the agricultural sector to steer land use changes to where they can deliver greater potential benefits and lower trade-offs?

QUESTION 8: In addition to promoting multifunctional land uses and spatially targeting land use change incentives, what more could be done by Government or others to reduce the risk that we displace more food production and environmental impacts abroad? Please give details for your answer.

Monitoring land use change or production on agricultural land

Accounting for displaced food production impacts in project appraisals

Protecting the best agricultural land from permanent land use changes

Other (please specify)

Increasing private investment into nature-based solutions

The scale of action needed to deliver our climate and nature objectives means that more private investment in land use change will be needed. We know that healthy ecosystems provide many private as well as public benefits, and the private sector can contribute to protecting and improving natural capital assets.

In addition to existing mechanisms such as Biodiversity Net Gain, the Woodland Carbon Code and the Peatland Code, there is an opportunity to explore additional action that can drive innovation, efficiency, and private investment into nature. We are already taking action. The Planning and Infrastructure Bill will legislate for a Nature Restoration Fund to streamline certain environmental obligations on development and fund strategic nature recovery measures. The Terms of Reference for the independent commission on the water sector regulatory system set out that it will consider how to enable greater use of nature-based solutions in the context of strategic planning for water, where these represent good value for money. We will publish a call for evidence on further opportunities to increase private investment into nature from economic sectors who impact upon or benefit from our shared natural capital.

QUESTION 9: What should Government consider in increasing private investment towards appropriate land use changes?

Making space for nature

The Government is committed to effectively conserving and managing 30% of the UK's land by 2030 (30by30) to support delivery of the Environment Act biodiversity targets[22], including those to halt and reverse declines in species abundance. While significant areas of England have potential to meet the 30by30 criteria, driving forward progress on 30by30 requires further action to ensure more land is under effective, long-term management for nature (see section 2 of the Analytical Annex). We are developing a delivery strategy to accelerate progress towards 30by30 both inside and outside Protected Landscapes, and will publish it later this year.

Our Protected Landscapes (National Parks and National Landscapes) cover nearly a quarter of England's land area and include half of our priority habitats and Sites of Special Scientific Interest (SSSIs). They are also working landscapes reflecting generations of farming systems. Protected Landscapes are key to our biodiversity commitments and this Government has committed to make them greener, wilder and more accessible while recognising their culture and heritage. We are developing a package of measures to ensure they are able to deliver the objectives for nature, water, rural housing and climate in the Land Use Framework.

QUESTION 10: What changes are needed to accelerate 30by30 delivery, including by enabling Protected Landscapes to contribute more? Please provide any specific suggestions.

- **Strengthened Protected Landscapes legislation (around governance and regulations or duties on key actors) with a greater focus on nature**
- **Tools: such as greater alignment of existing Defra schemes with the 30by30 criteria[23]**
- **Resources: such as funding or guidance for those managing Protected Landscapes for nature**
- **Other (please specify)**

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[22] Our legally binding Environment Act targets, which include halting the decline in species abundance by 2030, and restoring or creating more than 500,000 hectares of wildlife-rich habitat by 2042. See Annex 1 for more details.

[23] 30by30 on land in England: confirmed criteria and next steps: https://www.gov.uk/government/publications/criteria-for-30by30-on-land-in-england/30by30-on-land-in-england-confirmed-criteria-and-next-steps

Bringing nature closer to communities

The Government will deliver 1.5 million new homes in the right places, supporting our towns and cities to grow. These new homes need to be near to businesses, employment opportunities, and connected to nature and critical infrastructure.

Adapting to climate change and making room for nature will require efforts to introduce connected networks of green infrastructure into our villages, towns and cities. And there is evidence that exposure to green space is associated with improved well-being and health outcomes. New developments are incorporating green infrastructure such as sustainable drainage, and many citizens are choosing to plant trees, grow food or make room for wildlife in their gardens. Areas of public land not suitable for housing or other development[24], recreational land[25], and areas of the green belt could go further in following these examples and deliver a greater range of benefits like providing shade, connecting green spaces and reducing flood risk.

This would be guided by the Green Infrastructure Framework and might mean remediating derelict brownfield sites for development, reducing areas of impermeable paving, or adding features like orchards or habitats to existing parks and green spaces. The revised National Planning Policy Framework (NPPF)[26] has introduced golden rules for major development on released green belt land which require the provision of new, or improvements to existing, green spaces that are accessible to the public.

QUESTION 11: What approaches could cost-effectively support nature and food production in urban landscapes and on land managed for recreation?

The Government recognises the importance of increasing responsible access to the outdoors for people's health and wellbeing and is working to ensure this is safe and appropriate. Part of this includes our manifesto commitments to create nine new national river walks and three new national forests in England, expanding access to the great outdoors.

We intend to support access to green and blue spaces in urban and rural environments, and green routes for active travel to and through these spaces. We will make further announcements on plans to develop policy on access to nature in due course.

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[24] https://www.gov.uk/government/news/planning-overhaul-to-reach-15-million-new-homes

[25] Such as sports fields, golf courses, shoots, horse paddocks and racecourses

[26] See paragraphs 156c and 157 National Planning Policy Framework - GOV.UK

Empowering local people to bring community spaces back into community ownership

Community spaces have a significant role to play in developing social networks, encouraging community participation, and promoting civic pride. The Assets of Community Value scheme in England currently provides communities with a route to nominate any building or land which furthers the social wellbeing and interest of the community. Communities then have a right to bid on these assets if their owner puts them up for sale.

Through the English Devolution Bill, we will introduce a strong new 'right to buy' for valued community assets, such as empty shops, pubs and community spaces. Community Right to Buy will help local people acquire valued community spaces if they come up for sale, keeping these assets in the hands of the community. More details will be announced in due course.

2. Joined-up decisions on land use change

Context

The Town and Country Planning System and the Nationally Significant Infrastructure Project (NSIP) planning regimes include the key legislative and policy frameworks that steer the associated land use change from housing, transport, energy generation, and other infrastructure. Improving the data and coordination between environmental planning and development planning will help developers and planners to minimise negative impacts on natural capital. There is, however, little formal guidance, information, or structure to support land managers' decisions on competing land use demands outside the planning system.

Feedback from land managers and developers suggests that their businesses need a more joined-up, strategic approach to land use strategy and planning at a local level, linked to regional and national priorities. This is necessary to avoid siloed land use decision-making and to mitigate the risk of unintended consequences or unanticipated costs. For example, more connected strategies could help guide development decisions towards less biodiverse sites that result in quicker development, and proposals or incentives for nature restoration to land with less potential to produce food.

Policy levers and enablers

Strategic spatial planning for development and infrastructure

Optimising how we use England's land will be essential to delivering the Government's Growth mission and the Clean Energy Superpower mission (including the accelerating to net zero pillar). By strengthening housing targets and allowing development on poor quality land, we will deliver 1.5 million homes over this Parliament and ensure enough houses are

built for the needs of the population over the coming decades. The Government has set out that it will introduce a universal system of strategic planning throughout England in the forms of Spatial Development Strategies (SDS). These SDSs will be produced during this Parliament by combined authorities and partnerships of county councils and unitary authorities for areas where there is no devolved authority. SDSs will set the overarching spatial strategy for local plans.

We need to build new homes and clean energy, water infrastructure and transport infrastructure at scale and at pace. Both new and existing homes and infrastructure will need landscapes that reduce their climate change risks, for example by making more space for water upstream and reducing the impact of floods. Ensuring that plans for delivery consider wider land use outcomes and identifying priority areas for growth will be essential for a pro-growth, pro-infrastructure planning system.

The largest expansion of the power grid since the creation of the National Grid, to connect homes and businesses to new sources of clean energy, is a small but important additional source of demand on land. Delivering 1.5 million homes and the next generation of new towns, supported by enhanced transport and civic infrastructure, will also place demands on land. These will be relatively small overall, but with high and often concentrated impacts.

To align the rapid deployment of energy infrastructure with wider land use objectives, the UK, Scottish and Welsh Governments have jointly commissioned the National Energy System Operator to create a Strategic Spatial Energy Plan (SSEP). Throughout its development, the SSEP will consider wider demands on land and sea, including food production, transport, water supply, nature recovery and fisheries. Outputs of the Land Use Framework, including the principles and analysis underpinning it, will support development of the SSEP. This will ensure that the land with the greatest long-term potential for food production is better protected.

Development and wider land uses are intrinsically linked to the water catchments they impact and depend upon. The Government's Independent Commission on the Water Sector Regulatory System will make recommendations to ensure there is a strategic spatial planning approach to the management of water across sectors of the economy, tackling pollution and managing pressures on the water environment and supply at a catchment, regional and national scale.

QUESTION 12: How can Government ensure that development and infrastructure spatial plans take advantage of potential co-benefits and manage trade-offs?

Understanding how spatial choices impact infrastructural considerations will be key to delivering on all Government missions. Different land uses have varying transport implications, as trip generation and travel patterns will change based on the activity in a particular place, requiring different levels of transport infrastructure. We are committed to delivering a transport system that works better for people across the country and enables growth and access to opportunities. Key to this is adopting a vision-led approach to identifying transport solutions that is better integrated into land use considerations and establishes well-designed, sustainable and popular places.

QUESTION 13: How can local authorities and Government better take account of land use opportunities in transport planning?

Connecting plans and strategies

We want there to be greater local and regional democratic accountability over land-use decision making, including spatial strategies for land at local and regional scales. This includes strengthening connections between national, regional and local plans for land.

We have heard that the range of locally led, land-related plans and strategies has sometimes led to a siloed or confusing picture of land use change. There are opportunities in joining them up and presenting land managers with a more consistent and structured view of what the greatest opportunities for their land are likely to be.

Local Nature Recovery Strategies (LNRSs[27]) are being developed across the country to prioritise actions and areas for environmental enhancements. LNRSs will also enable Local Plans to better reflect the needs of nature recovery by helping Local Planning Authorities determine which areas should be mapped and safeguarded. To help connect plans at different scales, Government will collate relevant data generated through LNRSs and our biodiversity targets monitoring programme, share it with local leaders, and use it in the evaluation and development of national policy.

QUESTION 14: How can Government support closer coordination across plans and strategies for different sectors and outcomes at the local and regional level?

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[27] Local Nature Recovery Strategies (LNRSs) are a new system of spatial strategies for nature recovery, currently in preparation across the country. The first LNRSs were published in 2024 with the remainder during 2025. It is required by law that LNRSs will be periodically reviewed and updated, taking stock of what has been delivered over the period so that priorities and actions can up updated as needed. The Land Use Framework will inform and assist this process after the first LNRSs are published.

Planning for climate resilient land use change

Even with our ambitious targets to reduce greenhouse gas emissions, it will still be necessary to adapt to climate change. Long-term, chronic impacts, such as average temperature change and sea level rise, and short-term acute impacts, like heatwaves, flooding and drought, will increasingly affect our communities, infrastructure, health, food security, water quality and nature.

To manage these impacts, we will need to adapt the way we currently manage land. That includes actions such as supporting wildlife to move to more suitable climates, helping farmers and growers to diversify the crops they grow and the farming methods they use, re-naturalising our water bodies and making space for water, and making spatial and long-term decisions about where and how we build homes and infrastructure that reduce risks from flooding.

Understanding climate adaptation plans of owners, managers and developers of land and infrastructure will enable us to support resilient land use change and support delivery of our National Adaptation Programme. We are therefore considering whether the Climate Change Act's Adaptation Reporting Power (ARP)[28] could be used to invite or require more organisations and major landowners to report in this process.

QUESTION 15: Would including additional major landowners and land managers in the Adaptation Reporting Power process (see above) support adaptation knowledge sharing? Please give any reasons or alternative suggestions

[Yes / No / I don't know]

[28] For details, see Chapter 8 of *The Third National Adaptation Programme (NAP3) and the Fourth Strategy for Climate Adaptation Reporting*, available at https://assets.publishing.service.gov.uk/media/64ba74102059dc00125d27a7/The_Third_National_Adaptation_Programme.pdf

QUESTION 16: Below is a list of activities the Government could implement to support landowners, land managers, and communities to understand and prepare for the impacts of climate change. Please select the activities you think should be prioritised and give any reasons for your answer, or specific approaches you would like to see.

- **Providing better information on local climate impacts to inform local decision making and strategies** (for example, translating UK Climate Projections[29] into what these mean in terms of on-the-ground impacts on farming, buildings, communities and nature)
- **Providing improved tools and guidance for turning climate information into tangible actions** (for example, how to produce an adaptation plan for different sectors)
- **Developing and sharing clearer objectives and resilience standards** (for example, a clear picture and standards of good practice for each sector under a 2°C climate scenario[30])
- **Supporting the right actions in the right places in a changing climate** (for example, prioritising incentives for sustainable land uses where they will be most resilient to climate change)
- **Other (please specify)**

3. Accessible and high-quality data

Context

There is a wealth of data available on the natural capital of England's land, but it is sometimes inaccessible or unsuitable for practical use. Research into land's potential for different purposes can rarely be applied at the field or site level.

Consistent sharing and use of non-sensitive data and evidence is a key priority to support effective land use decisions. This will mean:

- improving the quality of data used at the field, site or street scale,
- making it more accessible, and
- enabling the tools required to better integrate it into decision making.

[29] Met Office UK Climate Projections: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp

[30] The climate changes we will experience if there is 2°C of global average temperature increase above pre-industrial baselines by 2100.

Policy levers and enablers

Improving land use data

The geospatial data that exists for England is spread across a wide range of classifications, standards, metrics, and data languages. The Department for Science, Technology and Innovation's Land Use Data Improvement Project is a project with Ordnance Survey to assess spatial data for cross-cutting strategic land use policy priorities and test ways to improve interoperability for spatial data. Defra's Natural Capital and Ecosystem Assessment (NCEA) programme is improving access to high quality, interoperable data by conducting a comprehensive baseline survey of England's natural capital assets. This will be available under Open Government Licence[31]. We want to understand the key opportunities, from users of this data and those working with spatial data in the private sector, to make data more accessible to decision makers.

QUESTION 17: What changes to how Government's spatial data is presented or shared could increase its value in decision making and make it more accessible?

- **Updating existing Government tools, apps, portals or websites**
- **Changes to support use through private sector tools, apps or websites**
- **Bringing data from different sectors together into common portals or maps**
- **Increasing consistency across spatial and land datasets**
- **More explanation or support for using existing tools, apps or websites**
- **Greater use of geospatial indicators such as Unique Property Reference Numbers (UPRNs) and INSPIRE IDs to allow data to be more easily displayed on a map**
- **Other (please specify)**

QUESTION 18: What improvements could be made to how spatial data is captured, managed, or used to support land use decisions in the following sectors? Please give any reasons for your answer or specific suggestions.

- **Development and planning: such as environmental survey data**
- **Farming: such as supply chain data and carbon or nature baseline measurements**
- **Environment and forestry: such as local and volunteer-collected environmental records**
- **Recreation and access: such as accessible land and route data**
- **Government-published land and agricultural statistics**

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[31] https://defraenvironment.blog.gov.uk/2024/03/28/mapping-our-natural-assets-the-natural-capital-and-ecosystem-assessment-programme/

Land use data's interaction with other datasets

Interactions between different datasets can also generate new insights for decision makers. Our ability to combine a broad range of datasets and apply the latest advances in spatial data science and analysis is critical to the Ten Year National Energy Plan, Strategic Spatial Energy Plan, and the delivery of our target for new homes. Government is developing a Connectivity Tool combining transport and land use data to generate a national measure of connectivity for any location in England and Wales. This Connectivity score measures people's ability to get where they want to go – using walking, cycling and public transport to reach jobs, shops and essential services. It also allows users to input new public transport routes and gauge the effect these would have on an area's connectivity.

Understanding land's capability

For food production to be properly valued in land use decisions, we need to know where the land with the greatest potential for food production is. The Agricultural Land Classification (ALC) system provides a valuable tool for assessing the suitability of land for agricultural use, particularly in development planning decisions. However, the ALC maps are outdated, not at a scale suitable for the assessment of individual fields or sites and not suited to changing land suitability as a result of climate change. To ensure that the ALC system supports effective land use planning decisions, Government is considering:

- Updating the ALC system, including the underlying data and methodologies, to ensure that land quality data is accurate and comprehensive.
- Enhancing the availability and accessibility of ALC data, including through improved mapping and databases.
- Improving guidance on ALC surveys and the use of ALC grades in local planning policies.

QUESTION 19: What improvements are needed to the quality, availability and accessibility of ALC data to support effective land use decisions?

Reducing data costs where it benefits the public or economy

The public sector holds and maintains many authoritative datasets. Some of the data produced is freely available, and some incurs a cost to users. For example:

- HM Land Registry keeps the definitive record of land ownership in England and Wales but charges fees for access to certain information.
- Ordnance Survey provide vital data sources to inform land use decisions and guide recreational users, but some data sets incur a cost to commercial users above a certain transactional threshold.

We want to move towards a system where data is more widely accessible for the public benefit, whilst considering these organisations' current operational and funding models.

For HM Land Registry, we want to do this by making more data free to access, with plans to change the structure of their fees. This includes reviewing whether they are aligned with the Government's strategic ambitions, how they can be made less complex and fairer for customers, and lower barriers to accessing data. These proposals will explore options to increase transparency of land and property data to support innovation and enable citizen participation in co-design of land use policy.

QUESTION 20: Which sources of spatial data should Government consider making free or easier to access, including via open licensing, to increase their potential benefit?

4. The right skills in the right places

Context

A fair land use transition that underpins long-term economic growth cannot be delivered without a secure, skilled workforce. We have heard through workshops across England that communities in the regions with significant potential economic opportunities through land use change often lack access to the skills and resources that would be needed to deliver it. This risks missing opportunities for economic growth, addressing regional inequalities and delivering nature recovery and climate change policies.

Policy levers and enablers

Supporting land managers with new skills for changing land uses

Land management encompasses a wide range of skills, from farming and ecology to helicopter piloting for peat restoration projects. Defra will engage with skills organisations, including Skills England, to ensure a common understanding of the scale and pace of change required.

Defra will continue to work in partnerships with established industry providers to upskill and certify farming advice. A new professional body, The Institute for Agriculture and Horticulture (TIAH), is reducing fragmentation in the existing learning landscape, driving greater skills uptake.

Consistency will also be needed across the farming advice sector over land use change and productivity. We want to enable the alignment of farm plans with local and national priorities and will consider how to achieve this through trusted advisors, guidance and services.

QUESTION 21: What gaps in land management capacity or skills do you anticipate as part of the land use transition? Please include any suggestions to address these gaps.

- **Development and planning**
- **Farming**
- **Environment and forestry**
- **Recreation and access**
- **Other (please specify)**

Accelerating sharing of best practice and evidence

Defra is working alongside the Agriculture and Horticulture Development Board (AHDB), research institutes and the new UK Agri-Tech Centre to accelerate adoption of new technologies and land management practices by sharing knowledge and best practice.

The two-way knowledge transfer between the research community and practitioners is invaluable, for example in the development of best practice around regenerative farming in a local context. There is, however, a perception that the skills, resources and evidence base are lagging behind the findings of innovative farmers and land managers. There is, therefore, an opportunity to ensure that all farmers and land managers can benefit from the skills, resources, innovation and technology best practice provided through academia, industry leaders and Government.

QUESTION 22: How could the sharing of best practice in innovative land use practices and management be improved?

Sharing lessons from nature restoration and climate adaptation practice

One way in which we will look to test, trial or seek feedback on practical approaches is through convening a new group of major public, private and third sector landowners in England. This group, working with Defra, will support delivery of the terrestrial Environment Act targets and related nature recovery, such as 30by30, through action on their estates[32]. One of the roles of this group will be to consider how reporting on climate mitigation and adaptation can help share good practice.

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[32] This will include producing land management plans for their estates; piloting and testing approaches to land use management, change, or investment; reporting and sharing best practice on progress; and will include support and like-minded action from Defra and wider government departments.

Co-creation and engagement on a Land Use Framework: next steps

This consultation and the Land Use Framework that will follow will be the start of a conversation about how we use land. This section describes how the Government will support this conversation with those delivering, or affected by, land use change, including communities, businesses, developers, landowners and farmers.

Our plan for policy co-creation

We want to understand what our proposed principles mean for your area, and how we can improve them. We also want to involve you in developing the policy levers that will enable a fair land use transition.

We will do that by running workshops in six different regions in England. The workshops will run during the 12 weeks of consultation, in February and March. We will also run Minister-led roundtables with key stakeholder groups. The insights and feedback we gather through these events will feed into both the Land Use Framework and the farming system roadmap.

The Land Use Framework to be published in 2025 will take account of the combined contributions from the online consultation, workshops and roundtables. We want to continue the conversation even after the Land Use Framework is published and are considering options for how the Framework could be reviewed or updated over time. This would allow new information such as progress against targets, updated analysis and new agricultural innovation into account. In Scotland, a Land Use Strategy is produced every five years.

QUESTION 23: Should a Land Use Framework for England be updated periodically, and if so, how frequently should this occur?

- **Yes, every 5 years**
- **Yes, every 3 years**
- **Yes, another frequency or approach. Please provide details.**
- **No**
- **I don't know**

Making Government effective in policy co-creation

For this process to be meaningful, we know that Government will need to speak with one voice on land use and clarify how its different policy objectives interact spatially. Implementing the principles in this consultation (page 18) would support this, but broader changes to how the Government coordinates land-related policies across departments may also be required. Government will consider how best to co-ordinate and provide:

- A strategic oversight function to ensure the right information and policy is in place to enable delivery against a long-term land use vision;
- A cross-governmental spatial analysis function to produce evidence-based advice on strategic implications across different demands on land;
- Processes to embed land use considerations in strategic Government decisions;
- Open policy-making processes in collaboration with research organisations.

QUESTION 24: To what extent do you agree or disagree with the proposed areas above? Please include comments or suggestions with your answer.

[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

APPENDIX KCC5

Analysis of Whether Land is "Lost"

ANALYSIS OF WHETHER LAND IS "LOST"

Introduction

1 Neither the Council nor the Rule 6 Party have set out a case that land will be lost.

2 This appendix:

- describes the construction process and its effects on land;
- reviews recent appeals on this matter.

Stages of Construction

3 This report now describes the construction process, with the installation of the solar PV arrays considered first, then the fixed infrastructure including tracks, fixed infrastructure, containers and the construction compounds. Photographs are used to illustrate the stages, but it should be remembered that the panel designs may vary from those in the photographs.

Solar PV Arrays

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

(i) marking out;
(ii) piling-in of piles;
(iii) bolting together of frames and adding panels;
(iv) cabling and trenching.

5 **Marking Out**. Marking-out is done on foot and is not damaging to soils, as shown below. Small pegs are inserted to identify the position for the piles.

Marking Out in Progress

6 **Piling**. The installation of the piles and the framework and panels is carried out rapidly. The process involves following the marking out on the ground and laying out the stanchions. This stage is non-intrusive. It does involve machinery carrying the piles,

however, and should ideally take place when soils are suitably dry. Typically, a tractor and farm trailers are used to transport the piles to the fields, then each pile is lifted off by hand.

7 A team then arrives to knock the piles in. From operations we have observed, it takes a little over a minute per pole to knock the pile into the ground and move the machine to the next pile. This operation is shown on the photograph below. This was inserting piles into a clay soil. The small size of the machinery should be noted. A person carrying a pile can also be seen.

Piles Being Installed

8 The design varies between sites, but the limited impact of installing piles on the underlying land is illustrated below, where the lack of soil disturbance or vehicle damage on dry soils is clear.

Piles Installed (this is at Bentham Farm, Purton, Summer 2015)

Piles Being Installed (this is at Tiln Farm, Retford, in January 2023)

9 **Assembling Frames and Panels**. The minimal damage, if carried out in suitable conditions, caused during the process of assembling the frames and bolting-on the panels onto the frames is shown below. The only vehicular access needed is to carry the panels in.

After Panels Bolted-On

10 **Cabling**. 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 works look disruptive to the soil. As they are excavated the topsoil and subsoil are separated, as shown below. The following photograph shows how limited the effect on soils is of internal site cabling installation.

Trenching in Progress

11 The installation of cables is one of the few operations that involves digging whereby the soil structure could potentially be affected. The trenches within the site are usually narrow, but soil does have to be dug up to install the cable. 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. There are field drains under agricultural fields across the country that have been installed in a similar manner, and which have not affected the ALC grade.

12 Overall, therefore, the panel installation and cable connections will not result in adverse effects on soils or agricultural land quality.

Infrastructure and Fixed Equipment

13 The internal tracks mostly follow the existing track, shown below, with minor works needed to extend the gateways into the fields.

Internal Track

14 Solar inverter/transformer stations involve a container standing on a base typically around 20-40 square metres each. They typically stand on a concrete base blocks. Typical equipment is shown below.

Typical Equipment

Fencing and Cameras

15 Fencing proposed is mostly typical deer fencing, as shown below.

Typical Fencing

Parking

16 The construction area and subsequent parking is currently partly a hardstanding used for bales storage, with a manure heap to the east, and existing hardstanding as shown below.

Existing Hardstanding

Areas of Land Affected

17 The amount of land physically affected by movement is therefore very limited.

Is Land Lost?

18 The process of installing the solar PV arrays is not generally disturbing to land, as described above. The piles make little impact and do not involve any movement of soil. They do not alter land quality.

19 The installing of piles is not dissimilar to the installation of frameworks for numerous farming activities, such as polytunnels, hops, orchards and vineyards, as the examples below show.

Photos of Other Agricultural Activities




20 Only in the areas where there is removal of soil, to create bases for the small extra length of tracks and the transformer stations, is there the potential for agricultural land quality to be affected. These areas collectively amount to less than 0.1 ha.

21 These areas are all capable of restoration to comparable grade at the decommissioning phase. Their "loss", therefore, is temporary and for the duration of the operational phase only. It is not a permanent loss. It is also only a small area.

Planning Appeal Decisions

22 There is widespread recognition that across the great majority of the solar farm site land is not "lost" in these circumstances, as per the following recent planning decisions, selected from a wide choice of appeals:

(i) in the planning appeal decision on 27th June 2023 for land south of the Leeming Bar substation, the Inspector considered whether or not land was Grade 2 or Subgrade 3b. In her decision (APP/G2713/W/23/3315877) the inspector noted that agricultural use could continue during the operational phase (para 20). She concluded in paragraph 25 as follows:

"**As such, the proposal would not result in either the temporary or permanent loss of BMV land as the land would continue to be used for some agricultural purposes whilst also being used to produce solar energy. Nor would the proposal be detrimental to the soil quality, so a return to arable production at a later date would still be possible**";

(ii) in the decision on land west of Thaxted of 18th December 2023 (APP/C1570/W/23/3319421), which involved 55 ha of BMV, the Inspector was clear that the land would not be adversely affected except for areas of tracks and fixed infrastructure, and any woodland planting that is not removed at decommissioning. The Inspector noted in paragraph 112:

"**Accordingly, 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 notable harm to food security. Any permanent loss of BMV would be small and not significant**";

(iii) in the decision for a 47MW solar farm at Little Cheveney Farm, Marden (APP/U2235/W/23/3321094), a site containing 47% BMV, the Inspector noted the preference to use poorer quality land (paragraph 46), and that the land would not be lost but would retain some grazing use (paragraph 50). He noted the benefits for soil and concluded that the temporary loss of some BMV was of limited weight (paragraph 51);

(iv) in the decision at Kemberton, Telford (APP/L3245/W/23/3329815) the Inspector noted that the piling "**would cause minimal disturbance to the soil and the quality of the land**" (which in that case was 29% Subgrade 3a) (paragraph 52). Overall he was satisfied that there would be no temporary or permanent loss of BMV (paragraph 54) and overall there was no conflict with the development plan or Framework (paragraph 60);

(v) in the decision at Great Wymondley (APP/X1925/V/23/3323321) the Secretary of State agreed with his Inspector on a site of 85 ha of wholly BMV quality (Grades 2 and 3a) that BMV land would not be adversely affected (IR 12.57) and could be farmed, and that there was no policy to require land to be farmed in a particular way (IR 12.57);

(vi) in the decision at Penhale Moor (APP/D0840/W/23/3334658) the Inspector concluded in paragraph 30 that "**the proposal would not lead to either the temporary or permanent loss of agricultural land**".

APPENDIX KCC6

The Benefits for Soils

THE BENEFITS FOR SOILS

1 All parties agree that ther can be benefits to soils form being rested from intensive arable uses. This appendix summarises these benefits.

The Soil Resource

2 The soil is described in the ALC report, but in fairly brief terms. That does not matter: benefits from conversion from arable to grassland are widely recognised.

Effects on Soils

3 The benefits to soils from being rested from continual arable use are many.

4 The land will be in grassland, and it is expected to be managed by grazing of sheep. This is common practice, and entirely feasible.

5 What we know about soils in the UK is that continual arable production, as is practised on 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 agri-environmental packages available for farmland.

6 Some of the 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[5], 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

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

"**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. 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[6]. The British Society of Soil Science record (Science Note: Soil Carbon, BSSS (2021)) 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**".

[2] EA, ibid, page 8.

(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 These benefits are recognised in the sector-specific National Policy Statement for Renewable Energy Infrastructure (EN-3, adopted 17th January 2024) at paragraph 2.10.89, which notes that "**solar farms have the potential to increase the biodiversity value of a site, especially if the land was previously intensively managed**".

8 The benefits have been recognised by many Inspectors in appeal decisions. A few references are:

(i) in the decision on the Nationally Significant Infrastructure Project 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) (reference EN010101);

(ii) in the appeal decision for a solar farm at Bramley, Hampshire (APP/H1705/W/22/3304561) the inspector, noting that 53% of the site was of BMV, noted (paragraph 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 biodiversity of the land under and around the panels**";

(iii) in the planning appeal decision on 27th June 2023 for land south of the Leeming Bar substation (APP/G2713/W/23/3315877) the inspector noted "**I am satisfied from the evidence before me that resting the land from intensive agriculture would be likely to improve soil health by increasing the organic matter in the soil and**

improving soil structure and drainage, even if a return to arable farming would then start to reverse this improvement" (paragraph 21);

(iv) in the decision for a 47MW solar farm at Little Cheveney Farm, Marden (APP/U2235/W/23/3321094), a site containing 47% BMV, the Inspector noted the benefits for soil, commenting in paragraph 51 that "**there is nothing to contradict the Appellant's evidence that the land would benefit from a change in the nature of its use – essentially that a 'rest' from intensive arable production would enhance land quality**" (note: this is soil quality, not ALC grade).

APPENDIX KCC7

Defra Press Release 6th December 2022

Food supply and food security

Defra Press Office, 6 December 2022 - Weekly stories

There has been some coverage of calls by the National Farmers Union (NFU) for more government support for farmers to safeguard the nation's food supplies.

We understand that farmers are facing increasing costs as a result of the impacts of the conflict in Ukraine and global economic shocks including the spike in oil and gas prices, and have announced a range of measures throughout the course of the year to help mitigate these challenges and support industry.

The UK's food supply chain remains resilient, with supply from diverse sources guaranteeing a high level of food security.

A Government spokesperson said:

" The UK has a large and highly resilient food supply chain. Our high degree of food security is built on supply from diverse sources; strong domestic production as well as imports through stable trade routes.The government is in regular contact with the food and farming industries to ensure they are well

prepared for a range of scenarios, and we continue to take all the necessary steps to ensure people across the country have the food they need."

To support the food and farming industry in the face of these pressures, the government has:

- Brought forward 50% of direct payments earlier this year to help farmers with cashflow
- Delayed proposed changes in the use of urea fertiliser back in March to help farmers manage costs and give them more time to adapt
- Brought forward New slurry storage grants which will help farmers reduce their reliance on artificial fertilisers
- Continued progress of the roll out of the Sustainable Farming Incentive scheme, and over 4000 applications have now been started. This pays farmers for actions, including improving soil health, which will reduce dependence on manufactured fertilisers which are linked to gas prices
- Removed the 25% tariff on US maize imports, which are a key ingredient for animal feed
- Brought in The Energy Bill Relief scheme, meaning businesses will be paying less than half of predicted wholesale energy costs this winter
- Cut fuel duty for petrol and diesel by 5p per litre across the UK until March 2023
- Reduced employer national insurance by increasing the Employment Allowance
- Put the brakes on bill increases by freezing the business rates multiplier - worth £9.3 billion over the next five years.
- Relaxed marketing rules so that farmers who breed turkeys, geese or ducks for their meat have the option to slaughter their flocks early and freeze these products
- Brought in Swifter compensation payments to farmers affected by avian influenza
- And earlier this year we confirmed the release of an extra 10,000 visas under the Seasonal Worker Visa Route, with 2,000 of these going to the poultry sector, meaning in total 40,000 visas are available for seasonal workers in 2022 to help ensure businesses have the workforce they need

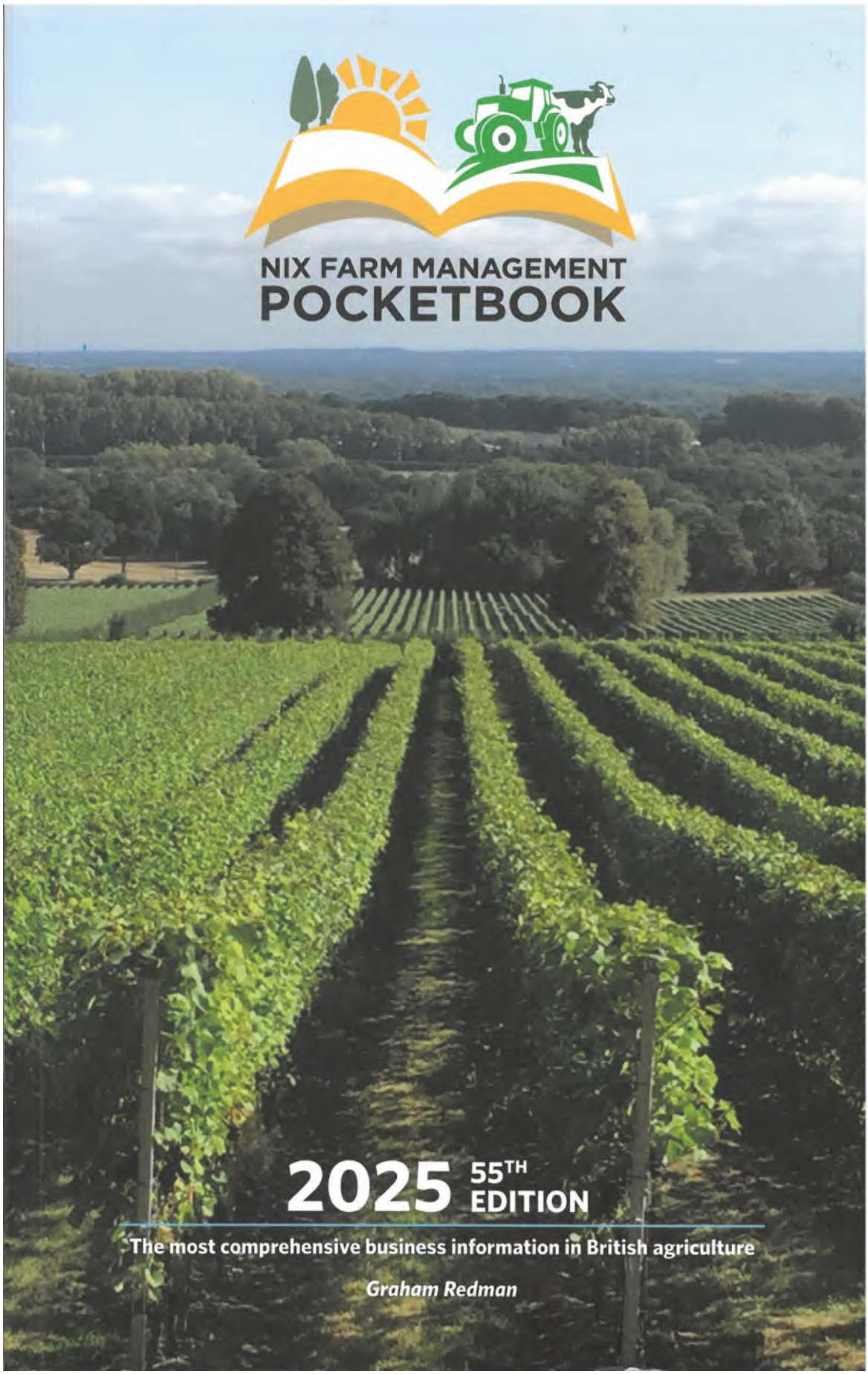
The Food and Farming Minister met representatives from the UK egg sector on 6 December to discuss the challenges that the industry is currently facing. This is part of our regular and close engagement with the sector.

Follow Defra on Twitter, and sign up for email alerts here.

Tags: direct payments, farming, food security, food supply, gas prices

Appendix KCC8

Extracts from John Nix Pocketbook for Farm Management


NIX FARM MANAGEMENT
POCKETBOOK
2025
55TH EDITION
The most comprehensive business information in British agriculture
Graham Redman

WHEAT

Feed Winter Wheat

Production level	Low	Average	High	
Yield: t/ha (t/ac)	7.1 (2.9)	8.3 (3.4)	9.5 (3.8)	
	£	£	£	£/t
Grain at £190/t	1,349	1,577 (639)	1,805 (731)	
Straw in Swath	188 (76)	188 (76)	188 (76)	
Total Output	**1,537 (622)**	**1,765 (715)**	**1,993 (807)**	***213***
Variable Costs £/ha *(£/ac)*:				
Seed.....		82 (33)		*10*
Fertiliser.....		295 (119)		*36*
Sprays.....		278 (112)		*33*
Total Variable Costs		655 (265)		*79*
Gross Margin £/ha (ac)	**882** (357)	**1110** (449)	**1,338** (542)	***134***

Fertiliser Basis 8.3t/ha

Nutrient	Kg/t	Kg/Ha	£/Ha
N	*23*	190	£184
P	7.0	58	£58
K	10.5	87	£52

Seed:

£/t C2	£515
Kg/Ha	175
% HSS	30%
£/t HSS	£354

prays £/ha:

Herbicides	£121
Fungicides	£110
Insecticides	£3
PGRs	£16
Other	£27

1. *Yields*. The average yield is for all winter feed wheat, i.e. all varieties and 1st and subsequent wheats. See over for First and Second Wheats. The yield used for feed and milling wheats including spring varieties is 8.18t/ha (overall 10-year average *Defra)*.

   The table below offers a weighted estimate of yield variations according to wheat type based on a national yield of 8.4t/ha. Percentages compare yield categories with 'all wheat'. These yields are used in the gross margins.

   Calculation of spread of 'average yields depending on wheat type –

	Yield Adjustment	Winter	1st WW	2nd WW	spring	Total
t/ha		101%	102%	93%	85%	100%
Total	100%	8.27	8.40	7.61		**8.18**
Feed	101%	8.35	8.48	7.69		8.27
Bread	93%	7.69	7.81	7.08	6.02	7.61
Biscuit	99%	8.18	8.32	7.54		8.10

2. *Straw* is sold in the swath. Assuming 1 hectare is worth 2.5 tonnes baled straw at 4.2t/ha. So £75/tonne baled = £188/ha for winter wheat.
3. *Seed* is costed with a single purpose dressing. Up to a third of growers require additional seed treatments, specifically to supress BYDV. This can add £170/t of seed (£30/ha). This has not been added in the gross margins.
4. This schedule does not account for severe *grass weed infestations* such as Black Grass or Sterile Brome. Costs associated with managing such problems can amount to up to £190/hectare additional agrochemical costs. Yield losses increase as infestation rises:

BARLEY

Winter Feed Barley

Production level	Low	Average	High	
Yield: t/ha (t/ac)	6.2 (2.5)	7.30 (3.0)	8.4 (3.4)	
	£	£	£	£/t
Grain at £174/t	1,079	1,270	1,462	
Straw in Swath	204 (82)	204 (82)	204 (82)	
Total Output	**1,282 (519)**	**1,474 (597)**	**1,665 (674)**	***202***
Variable Costs £/ha *(£/ac)*:				
Seed.....		113 (46)		*15*
Fertiliser.....		244 (99)		*33*
Sprays.....		211 (86)		*29*
Total Variable Costs		568 (230)		*78*
Gross Margin £/ha (ac)	**715** (290)	**906** (367)	**1,097** (444)	***124***

Fertiliser Basis 7.3t/ha				**Seed:**		**Sprays:**	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/t C	515	Herbicides	£88
N	*19*	140	£136	£/t HSS	343	Fungicides	£79
P	8.5	62	£62	Kg/Ha	175	Insecticides	£3
K	10.5	77	£46	£/Ha Hy	210	PGRs	£18
				C:Hy:HSS	50:25:25	Other	£24

1. *Prices*. Feed barley has a lower nutritional value to wheat so is normally discounted to feed wheat, by about 8% as used here (the average over 5 and 20 years).
2. *Hybrid Varieties.* Yields about 10% higher than the conventional varieties. Fertiliser is adjusted accordingly (25% of seed in this margin is hybrid).
3. *Straw* is sold in the swath. Assuming 1 hectare is worth 2.25 tonnes baled straw at 3.8t/ha (winter) and 2.0 tonnes baled at 3.4t/ha (spring). So £90/tonne baled barley Straw = £204/ha for winter barley, £182/ha for spring barley. Prices high in the West.

Winter Malting Barley Notes

Prices. Here, winter malting barley has a 10%, £17.40/t premium over feed barley. The gross margin accounts for 25% that does not meet malting standards.
Most spring barley grown is malting varieties, grown for a premium. Spring malting premiums usually exceed those for winter varieties. Here the premium over feed barley is13%, £23.00/t. This also allows for 20% failed samples.

FIELD BEANS

Winter Beans

Production level	Low	Average	High	
Yield: t/ha (t/ac)	3.7 (1.5)	4.30 (1.7)	4.9 (2.0)	
	£	£	£	£/t
Output at £235/t	869.5 (352)	1,011 (409)	1,152 (466)	*235*
Variable Costs £/ha *(£/ac)*:				
Seed.....		139 (56)		*32*
Fertiliser.....		78 (32)		*18*
Sprays.....		149 (60)		*35*
Total Variable Costs		366 (148)		*85*
Gross Margin £/ha (ac)	**504** (204)	**645** (261)	**786** (318)	***150***

Fertiliser Basis 4.3t/ha				**Seed:**		**Sprays:**	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/t C2	700	Herbicides	£71
N	*0*	0	£0	Kg/Ha	250	Fungicides	£42
P	11	47	£47	% HSS	50%	Insecticides	£8
K	12	52	£31	£/t HSS	414	PGRs	£0
						Other	£27

Spring Beans

Production level	Low	Average	High	
Yield: t/ha (t/ac)	3.3 (1.3)	3.90 (1.6)	4.5 (1.8)	
	£	£	£	£/t
Output at £240/t	792 (321)	936 (379)	1,080 (437)	*240*
Variable Costs £/ha *(£/ac)*:				
Seed.....		146 (59)		*37*
Fertiliser.....		71 (29)		*18*
Sprays.....		142 (58)		*37*
Total Variable Costs		359 (146)		*92*
Gross Margin £/ha (ac)	**433** (175)	**577** (234)	**721** (292)	***148***

Fertiliser Basis 3.9t/ha				**Seed:**		**Sprays:**	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/t C2	715	Herbicides	£71
N	*0*	0	£0	Kg/Ha	250	Fungicides	£26
P	11	43	£43	% HSS	45%	Insecticides	£21
K	12	47	£28	£/t HSS	423	PGRs	£0
						Other	£24

1. *Price*. This is based on a human consumption price of £242/tonne achieved by 60% and feed specification for the rest at £224/tonne. *All beans* are grown with a potential for sale into a human consumption market. However, insect damage, dis-colouring or other damage means some is sold for feed.

FINANCE

Total Income From Farming (TIFF)

	TIFF £ Million	TIFF per Entrepreneur £ Million
2000	2,389	10,861
2010	5,122	26,691
2020	5,763	29,045
2021	7,531	37,746
2022	8,589	42,788
2023	7,232	36,040

** TIFF per full-time entrepreneur equivalent. DEFRA Data. Real terms*

TIFF is Total Income from Farming. It is the business profits plus remuneration to farmers, partners and directors and others with an entrepreneurial interest in the business. It is calculated on a calendar year basis and is the main aggregate measure of UK farming's income (profitability). There are no imputed charges (such as a rental value for owned land or value of the farmer's own labour).

Average English Farm Business Income (FBI) (£/farm Real Terms 2022/23 prices)

Farm Type	*2019/20*	2020/21	2021/22	2022/23
Cereals	*63,500*	*70,000*	*115,000*	*144,000*
General Cropping	85,000	67,000	132,000	133,000
Dairy	74,000	81,000	119,500	218,000
Grazing L'stock (Lowland)	*11,000*	*19,500*	*32,500*	*21,000*
Grazing Livestock (LFA)	20,500	26,500	33,000	25,000
Specialist Pigs	*42,000*	*50,500*	*14,000*	*68,000*
Specialist Poultry	*92,500*	*77,000*	*138,000*	*106,000*
Mixed	*26,500*	*41,000*	*71,000*	*70,000*
All Types	*41,500*	*46,000*	*72,000*	*86,000*

FBI is the main farm-level measure of farming income (profitability). It is similar to TIFF but is based on a March to February year and calculated per farm rather than aggregated for TIFF.

Appendix KCC9

Agricultural Land Use in England at 1 June 2024

GOV.UK

Department
for Environment,
Food & Rural Affairs

Accredited official statistics

Agricultural land use in England at 1 June 2024

Updated 26 September 2024

Applies to England

Contents

This publication is available at https://www.gov.uk/government/statistics/agricultural-land-use-in-england/agricultural-land-use-in-england-at-1-june-2024

This release contains the estimates of crop areas, land use and land ownership on commercial agricultural holdings in England on 1 June 2024 from the June Survey of Agriculture. Cereal and oilseed areas were published on 29 August. They are included here for completeness and remain unchanged.

Three new questions were introduced to the survey this year to gather information on how land use is changing. First estimates are now available on the area of arable land used for environmental benefit but not in production and the area of agricultural land used for solar panels (including and excluding land also used for grazing or production).

All results tables are available in the datasets at

Agricultural land use in England at 1 June (https://www.gov.uk/government/statistics/agricultural-land-use-in-england)

Agricultural land ownership and tenure structure in England at 1 June (https://www.gov.uk/government/statistical-data-sets/agricultural-land-ownership-in-england)

Key points

Agricultural land use

- The utilised agricultural area (UAA) is 8.7 million hectares in 2024, a 1.0% decrease since 2023 and accounts for 67% of the total area of England.
- The total croppable area accounts for just over half (57%) of UAA whilst permanent grassland accounts for an additional 38%.

Crops

- The total area of arable crops saw a 6.4% decrease between 2023 and 2024, falling to 3.5 million hectares. This was primarily due to flooding and difficult weather conditions which resulted in failed crops and a partial switch to spring plantings.

- The area of uncropped arable land increased by 107% to 581 thousand hectares. Of this area, 276 thousand hectares were left as bare fallow and the remaining 305 thousand hectares were used for environmental benefit.
- The area of wheat decreased by 11% to 1.4 million hectares, whilst barley increased by 6.2% to 849 thousand hectares.
- The area of oilseed crops decreased by 26% to 274 thousand hectares in 2024. Oilseed rape accounts for 91% of this area and fell by 27% to 250 thousand hectares in 2024.
- Potatoes increased by 1.2%, rising to 83 thousand hectares in 2024.
- The area of horticultural crops covers 113 thousand hectares of land, a decrease of 3.2% compared to 2023.

Land ownership

- The area of agricultural land owned in England decreased by 1.0% to 6.1 million hectares in 2024. Land rented in for a year or more remained at 2.9 million hectares.

Section 1 Detailed results

1.1 Utilised agricultural area

The utilised agricultural area in England is 8.7 million hectares in 2024 and accounts for 67% of the total England area. This area includes all arable and horticultural crops, uncropped arable land including bare fallow and arable land used for environmental benefit, land used for outdoor pigs, temporary and permanent grassland and common rough grazing (Figure1).

Figure 1 - Agricultural land use areas in England at 1 June

(a) From 2024 uncropped arable land was collected as two separate categories: bare fallow and arable land used for environmental benefit but not in production. Areas for both are available in the agricultural land use dataset that accompanies this publication.

The amount of land used for solar panels was collected separately for the first time in 2024 via two categories to differentiate between land used only for solar and that also used for grazing or agricultural production. The data only covers land use and therefore excludes rooftop panels.

Land used for solar panels and also grazed or used for agricultural production covered 3.6 thousand hectares in 2024 and is included in the permanent grassland area. Solar panels on land not used for agricultural production accounted for 3.7 thousand hectares and is included in the other land on agriculture holdings area (Figure 1). Detailed breakdowns are available in the accompanying dataset. (https://www.gov.uk/government/statistics/agricultural-land-use-in-england)

1.2 Croppable area

The area of land available for cropping increased by 1.6% to 5.0 million hectares and accounts for 57% of UAA. The croppable area consists of cereals, oilseeds, potatoes, other arable crops, horticultural crops, uncropped arable land and temporary grassland.

Figure 2 shows that in the years prior to 2024, the proportion of croppable land used for each purpose remained similar; however, in 2024 some categories did see changes. In particular, cereal and oilseed crops saw

decreases in area as a result of bad weather causing difficult planting conditions. Consequently, the area of uncropped arable land increased by 107% to 581 thousand hectares. Of this area, 276 thousand hectares were left as bare fallow and the remaining 305 thousand hectares were used for environmental benefit.

This additional detail about uncropped arable land was collected for the first time in 2024 to give more insight into how the land is used. Arable land used for environmental benefit but not in production includes pollen and nectar flower mixes, winter bird food, buffer strips on arable land, flower rich margins and in field strips. This area would previously have been recorded as uncropped arable land along with bare fallow as a single item.

Figure 2 - Total croppable area in England at 1 June

(a) From 2024 uncropped arable land was collected as two separate categories: bare fallow and arable land used for environmental benefit but not in production. Areas for both are available in the agricultural land use dataset that accompanies this publication.

1.3 Arable crops

The total area of arable crops saw a 6.4% decrease between 2023 and 2024, falling to 3.5 million hectares. This was largely due to a decrease in the cereals area, which accounts for 71% of arable crops. Difficult weather conditions in the autumn and restricted opportunities for spring drilling affected cereal plantings and led to the decreased area.

The wheat area decreased by 11% to 1.4 million hectares in 2024. This is the lowest wheat area since 2020 when crop plantings were last affected by very wet weather in the autumn. Barley increased by 6.2%, from 799 thousand hectares in 2023 to 849 thousand hectares in 2024. A 17% decrease in winter sown barley was more than offset by a 28% increase in spring sown area as a result of a partial switch to spring planting (Figure 3).

The total area of oilseed rape decreased by 27%, from 342 thousand hectares in 2023 to 250 thousand hectares in 2024. This was due to a 28% fall in winter sown oilseed rape, which accounts for 98% of the total oilseed rape area.

For more detailed information please go to the full Cereal and oilseed areas in England release (https://www.gov.uk/government/collections/crops).

Figure 3 - Area of wheat, barley and oilseed rape in England at 1 June (thousand hectares)

The total potato area increased by 1.2% to 83 thousand hectares in 2024, the first increase in area since 2019. This rise was driven by a 7.2% increase in early crop potatoes, with the area of main crop potatoes remaining stable.

Other arable crops covered 648 thousand hectares in 2024, a decrease of 3.4% since 2023. Field beans saw the largest area change, decreasing by 37% to 132 thousand hectares. Maize accounts for over a third of the other arable crops area and increased by 8.8% to 237 thousand hectares in 2024.

1.4 Horticultural crops

Horticultural crops covered 113 thousand hectares in June 2024, falling by 3.2% since 2023. This area is mostly used to grow fruit and vegetables, which covers 90% of the total horticultural area.

The total area of orchards and small fruit decreased by 5.0% between 2023 and 2024 to 28 thousand hectares, with orchards covering 18 thousand hectares in 2024 and small fruit grown on the remaining 10 thousand hectares. Figure 4 shows the breakdown of small fruit areas and highlights the increase in area used to grow wine grapes seen in recent years.

Figure 4 - Breakdown of small fruit areas in England at 1 June

The area used to grow vegetables and salad for human consumption decreased by 5.2%, to 73 thousand hectares in 2024. This was largely due to lower areas of carrots, onions and other vegetables and salad. Carrots saw the largest proportional decrease, falling by 27% as a result of difficult weather conditions (Figure 5).

Figure 5 - Breakdown of vegetable and salad areas in England at 1 June

1.5 Land ownership

The total area of land owned in 2024 was 6.1 million hectares, a decrease of 1.0% compared to 2023.

Land rented in for a year or more remained almost unchanged at 2.9 million hectares in 2024. Farm Business Tenancies account for 44% of this area and remained broadly stable at 1.3 million hectares. Land under Full Agricultural Tenancies has continued to decline, falling by 2.1% to 1.1

million hectares. Land covered by other agreements of a year or more increased by 1.1% in 2024 (Figure 6).

Figure 6 - Breakdown of area of land rented in for a year or more in England at 1 June (hectares)

Section 2 About these statistics

2.1 Survey methodology

Full details of the survey methodology are available on the Structure of the agricultural industry guidance web page (https://www.gov.uk/structure-of-the-agricultural-industry-survey-notes-and-guidance).

The June Survey of Agriculture and Horticulture has been run predominantly online since 2011, with an option for farmers to complete a paper form if they prefer. The survey is annual and samples around 30,000 holdings most years, with a full census run once a decade. The last census was run in 2021.

The June 2024 survey was sent to a sample of 56,000 commercial holdings and responses were received from 30,000 holdings, representing a response rate of 53%. This is a larger sample than usual which will enable us to provide detailed geographical breakdowns later in the year and help to understand changes currently happening within the farming sector, e.g. changes in land use following the introduction of ELM schemes. Commercial holdings are defined as those with more than five hectares of agricultural land, one hectare of orchards, 0.5 hectares of vegetables or 0.1 hectares of protected crops, or more than 10 cows, 50 pigs, 20 sheep, 20 goats or 1,000 poultry.

Table 1 provides details of the sample survey population broken down by farm size. The size of a farm is determined by its Standard Labour Requirement (SLR) which is the typical number of full-time workers required on the holding based on its activity.

Table 1: June 2024 population size and sampling rate

Stratum	Description	Sampling rate (%)	Population size
1	SLR < 0.5	30%	50,264

Stratum	Description	Sampling rate (%)	Population size
2	SLR >= 0.5 and < 1	51%	15,271
3	SLR >= 1 and < 2	71%	13,527
4	SLR >= 2 and < 3	80%	6,773
5	SLR >= 3 and < 5	80%	6,675
6	SLR >= 5	80%	7,182
10	SLR unknown	97%	5,649
	All	**52%**	**105,341**

For pig and poultry sectors, an additional data collection exercise was run to collect data from a central point for some of the largest companies. Cattle results are sourced from the Cattle Tracing System (CTS). The data include returns from all holdings with cattle so are not subject to survey error.

2.2 Changes to June Survey design

Three new questions were introduced to the survey this year to gather information on how land use is changing. First estimates are now available on the area of arable land used for environmental benefit but not in production and the area of agricultural land used for solar panels (including and excluding land also used for grazing or production).

Arable land used for environmental benefit but not in production includes pollen and nectar flower mixes, winter bird food, buffer strips on arable land, flower rich margins and in field strips. It would previously have been recorded as uncropped arable land along with bare fallow as a single item.

2.3 Data analysis

The data are subject to rigorous validation checks which identify inconsistencies within the data or large year-on-year changes. Any records that have not been cleaned by the results production stage are excluded from the analysis.

Population totals are estimated for each question on the survey to account for the non-sampled and non-responding holdings. This survey uses the technique known as ratio raising, in which the trend between the sample data and base data (previous year s data) is calculated for each stratum. The calculated ratio is then applied to the previous year s population data to give England level estimates. For holdings where we do not have base data (new holdings or long-term non-responders) the sample estimates are raised according to the inverse sampling fraction.

2.4 Confidence indicators

Confidence intervals and tick based indicators are shown alongside all of our estimated figures and can be found in the data tables within the dataset (https://www.gov.uk/government/statistics/agricultural-land-use-in-england). These both help to show where there is more variability around results and highlight whether year-on-year changes are statistically significant or not. Whilst these are a useful indicator, they do not take into account any other sources of survey errors, such as non-response bias or administrative data errors.

2.5 Data notes

- All figures relate to commercial holdings.
- All percentage changes are based on unrounded figures.
- Totals may not necessarily agree with the sum of their components due to rounding.
- Proportional breakdown rounding may be adjusted to add up to 100%.

2.6 Data uses and users

Results from the June Survey of Agriculture and Horticulture have a wide range of uses and users with requests for data being made on a frequent basis. A document providing information of specific uses and users can be found on our guidance and notes (https://www.gov.uk/guidance/structure-of-the-agricultural-industry-survey-notes-and-guidance).

2.7 Other survey results and publications

The next releases from the June Survey will be UK results and are expected to be in December. The definitive publication date will be announced on the research and statistics (https://www.gov.uk/search/research-and-statistics) webpage on gov.uk.

More detailed results from the June Survey can be found on our Structure of the agricultural industry in England and the UK at June web page (https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june). This includes various time series of crop areas and livestock numbers dating back as early as 1866 and detailed geographical breakdowns of the results.

2.8 Feedback

We welcome feedback and any thoughts to improve the publication further. Please send any feedback to: farming-statistics@defra.gov.uk.

Section 3 - What you need to know about this release

3.1 Contact details

Responsible statistician: Sarah Thompson

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3.2 Accredited official statistics

Accredited official statistics are called National Statistics in the Statistics and Registration Service Act 2007. An explanation can be found on the Office for Statistics Regulation website (https://osr.statisticsauthority.gov.uk/accredited-official-statistics/).

Our statistical practice is regulated by the Office for Statistics Regulation (OSR). OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

These accredited official statistics were independently reviewed by the Office for Statistics Regulation in 2014. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled accredited official statistics .

You are welcome to contact us directly with any comments about how we meet these standards (see contact details). Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Since the latest review by the Office for Statistics Regulation, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- Reviewed and amended the validation checks carried out on response data including validation against new administrative data sources to better assure ourselves of the quality of the statistics.
- Enhanced trustworthiness by removing pre-release access.

APPENDIX KCC10

Guide to ALC

AGRICULTURAL LAND CLASSIFICATION

The ALC System

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).

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.

ALC Methodology

A detailed ALC requires examination of the soils on a regular 100m grid line, to sample at a density of one per hectare. The use of a regular grid seeks to avoid any selective bias.

If the 100m gridline falls on a location that cannot be surveyed, such as within a hedgeline or on a farm track, the auger point will be moved to the closest possible location.

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.

Example of Auger Sampling



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.

Examples of Soil Pits


Soil pits are dug at locations considered to represent the soil types found.

Samples of soils that represent the main soil types found may be sent to a laboratory for particle size distribution, to determine the proportion of sand, silt and clay.

Following survey the results are analysed against the criteria in the ALC Guidelines (Agricultural Land Classification of England and Wales: revised guidelines and criteria for assessing the quality of agricultural land, MAFF (October 1988)).

Once the grade of each auger point has been calculated, these are plotted on a map. The surveyor then reviews the patterns, decides if any points are anomalies that are discounted due to pattern limitation, and then estimates the boundaries between the grades.

The areas of each grade are then measured.

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