

**Appendix KCC6**  
**Appeal Decision 3315877**



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## Appeal Decision

Hearing held on 31 May 2023

Site visits made on 30 May and 1 June 2023

**by Alison Partington BA (Hons) MA MRTPI**

**an Inspector appointed by the Secretary of State**

**Decision date: 27<sup>th</sup> June 2023**

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**Appeal Ref: APP/G2713/W/23/3315877**

**Land south of Leeming Substation, west of the village of Scruton, bordering Fence Dike Lane, part of Low Street and Feltham Lane, DL7 0RG**

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
  - The appeal is made by Lightrock Power Ltd against the decision of Hambleton District Council.
  - The application Ref 21/01362/FUL, dated 29 April 2021, was refused by notice dated 8 August 2022.
  - The development proposed is the installation of a solar photovoltaic array/solar farm with associated infrastructure.
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### Decision

1. The appeal is allowed and planning permission is granted for the installation of a solar photovoltaic array/solar farm with associated infrastructure at land south of Leeming Substation, west of the village of Scruton, bordering Fence Dike Lane, part of Low Street and Feltham Lane, DL7 0RG in accordance with the terms of the application, Ref 21/01362/FUL, dated 29 April 2021, subject to the conditions set out in Annex A.

### Application for costs

2. At the Hearing an application for costs was made by Lightrock Power Ltd against North Yorkshire Council. This application is the subject of a separate Decision.

### Procedural Matters

3. On 1 April 2023 Hambleton District Council merged with other Councils in North Yorkshire to form North Yorkshire Council. However, the development plan for the area formally covered by the District Council remains in place until such time as it is revoked or replaced. I have determined the appeal on this basis.
4. The Parish Council has raised concerns that the author of the Agricultural Considerations Report produced for the appellant by Kernon Countryside Consultations has not provided a signed declaration as required for RICS Surveyors acting as an Expert Witness. As such, they state that little weight should be given to this evidence. However, the appeal is being determined by way of an informal hearing not a public inquiry and so participants are not called upon as "expert witnesses", and signed declarations are not required as they are in proofs of evidence submitted to an inquiry.

### **Main Issue**

5. The main issue in the appeal is the effect of the proposed development on, and the potential loss of, agricultural land.

### **Reasons**

6. The appeal site comprises a number of agricultural fields that are used for a mix of arable and pasture. A short distance to the north of the site lies Leeming Bar Substation which would provide a grid connection for the proposed solar farm via an existing underground cable.

### *Planning Policy Context*

7. Policy S1 of the *Hambleton Local Plan (adopted February 2022)* (HLP) sets out a number of sustainable development principles. These include making efficient and effective use of land, protecting and enhancing the high quality natural and historic environment, and supporting development and infrastructure provisions that take available opportunities to mitigate and adapt to climate change.
8. Policy RM6 of the HLP supports renewable and low carbon energy installations where all potential adverse impacts are, or can be made, acceptable. Similarly, paragraph 158 of the *National Planning Policy Framework* (the Framework) also indicates that applications for renewable and low carbon development should be approved if the impacts are, or can be made, acceptable.
9. HLP Policy S5 indicates that development in the countryside will only be supported where it is in accordance with national planning policy or other policies in the HLP and would not harm the character, appearance and environmental qualities of the area. In addition, where significant development is demonstrated to be necessary, the loss of the best and most versatile (BMV) agricultural land should be avoided wherever possible. If the benefits of the development justify the loss, areas of the lowest grade available must be used except where other sustainability considerations outweigh agricultural land quality considerations.
10. The Written Ministerial Statement on solar energy (25 March 2015) indicates that the use of BMV for solar farms has to be justified by the most compelling evidence.
11. The *Planning Practice Guidance* (PPG) on Renewable and low carbon energy, which also dates from 2015, provides a list of planning considerations that relate to large scale ground mounted solar photovoltaic farms<sup>1</sup>. These include: encouraging the effective use of land by focussing such developments on previously developed and non-agricultural land provided it is not of high environmental value; and where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays.
12. However, the Framework which has been updated on several occasions since 2015, makes no such requirement and only indicates where significant development of agricultural land is demonstrated to be necessary, areas of

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<sup>1</sup> Paragraph ID:5-013-20150327

poorer quality land should be preferred to those of higher quality<sup>2</sup>. In addition, whilst the draft *National Policy Statement for Renewable Energy (EN-3) (March 2023)*, seeks to avoid the use of BMV land where possible, it also indicates that land type should not be a pre-dominating factor in determining the suitability of the site location. Whilst this is a draft and relates largely to proposals that form part of the National Infrastructure regime, it still gives an indication of the government's most recent thinking on this issue.

#### *Agricultural Land Quality*

13. The national Agricultural Land Classification map indicates that the site is Grade 2 land. However, as I heard at the hearing this is indicative of the type of land in the area rather than providing an assessment of any particular field. As a result, the appellant submitted an Agricultural Land Classification report (the Amet report). This indicates that the majority of the site is Grade 3b agricultural land with a small portion (5ha) being Grade 2. However, a similar report produced for the Council (the ADAS report) indicates that the majority of the land is Grade 2 with a small amount (5.85ha) being Grade 3b. Both reports find the principal limitation to agricultural use of the land is soil droughtiness. Whilst I note the concerns raised regarding the location of one of the appellant's trial pits, from what I heard at the hearing I consider that the methodology used for both assessments was appropriate.
14. An assessment of both the Amet and the ADAS reports on behalf of the appellant concluded that the difference in the classification of the land turns on whether or not there is the potential to alleviate the compacted layer that both surveys found generally occurs at a depth of around 30-50cm, (although in some places is deeper), by standard agricultural operations. This conclusion was not disputed by other parties.
15. The *Revised guidelines and criteria for grading the quality of agricultural land (MAFF 1988)* (MAFF guidelines) highlights that sandy soils readily form compacted layers if cultivated or traversed when wet. Where such damage can be corrected by normal soil management methods it indicates it does not affect the grading. However, it also states that where significant compaction occurs below 35cm it may be difficult or impossible to ameliorate practically or economically. Such compaction is therefore said to be a long-term limitation which is taken into account through reduced permeability and available water capacity in the wetness and droughtiness assessments.
16. The reports both indicate that the compaction layer occurs below 35cm. Mr Shepherd, a local farmer indicated at the hearing that this was far deeper than a traditional 'plough pan' which would form directly below the layer of the plough at around 20cm. He also indicated that, in his view, it would not be possible to carry out subsoiling to this depth. In addition, the appellant's evidence states that the farmer of West House Farm, whose land comprises the larger part of the appeal site, has tried subsoiling but found it did not benefit yields and was uneconomic to carry out.
17. There was significant evidence provided in support of the different land gradings, including information on yields and evidence on root growth, although the MAFF guidelines clearly states that yield maps are excluded from

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<sup>2</sup> Footnote 58

determining agricultural grade. It was also disputed whether the compaction layer was likely to be a natural or man-made feature.

18. Nonetheless, irrespective of whether this compaction layer is a man-made or natural feature, given its depth, the advice from the MAFF guidelines which is supported by evidence from the farmers, is that both practically and economically it is not possible to ameliorate this compaction layer by normal soil management methods. As such, I consider it is a long term limiting factor that should be taken into account when considering the grading of the land. I therefore consider that the Amet report which takes the impact of the compaction layer into account provides a more reasonable assessment of the agricultural land quality. Given this I consider that the majority of the appeal site does not form BMV agricultural land.

*Loss of agricultural land*

19. However, even if it were considered to be BMV agricultural land, Policy S5 of the HLP does not prevent the use of such land but requires that the benefits need to justify its loss. Similarly, the national guidance outlined above does not prevent the use of such land.
20. The proposal would change the use of the land for a period of 40 years, which accords with the life expectancy of new panels. Whilst this is a significant period of time it is not permanent. Furthermore, during the operational period the land around the solar panels would be used for the grazing of sheep, with both farmers expecting to expand their current flocks. Given the height and angle of the proposed panels I consider grass will be able to grow under the panels satisfactorily as well as between the rows of panels, enabling such grazing to take place.
21. As a result, apart from the small areas used for the fixed infrastructure, the majority of the land would still be used for some agricultural purposes during the 40 year period the solar farm operated and it is the intention that it would be returned fully to agricultural land at the end. Moreover, 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.
22. I note the concerns that the productivity and versatility of the land would be reduced. Nevertheless, the specific way agricultural land is used is not a matter that is subject to planning controls. As such, there would be nothing in planning terms to prevent the farmers using the fields that form the appeal site for the grazing of sheep at present or even leaving them fallow. Given this, the fact that the proposal would limit the ability to carry out any arable farming does not, in my opinion, mean that it results in the loss of agricultural land when it can still be used for other agricultural uses. Furthermore, current government schemes actually encourage farmers to take land out of production and put it to grass, meadows, or trees for carbon capture.
23. Various concerns were also raised regarding the potential impact, particularly of the construction phase, on soil quality. A condition requiring a Soil Resource Management Plan can ensure how and when construction work takes place so that damage to the soil is minimised. In addition, I consider that the advice in the *Construction Code of Practice for the Sustainable Use of Soils on*

*Construction Sites (DEFRA 2009)*, does not mean that it is necessary to remove all the top soil on the site prior to any construction taking place. In my view this guidance relates to sites where soil would have to be removed as part of the construction process, rather than every construction site. This is borne out for example, by the advice regarding Soil Resource Plans in section 5.1 which says such plans should provide maps showing the areas where soil is to be stripped and where it is being left in-situ.

24. Whilst the panels will need to be cleaned on a periodic basis, the appellant indicated that this only requires the use of water, but in any case, this can be controlled by a condition to ensure it does not impact on soil quality.
25. 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.

#### *Food Security*

26. Whilst the reason for refusal refers to the impact of the proposal on the nation's food security, the Council agreed in the Statement of Common Ground and at the hearing, that there are no national or local policies, guidance or strategies that relate to food security and production. The appellant highlighted numerous government documents that state, and statistics that show, that there is no food security problem in the country and that the level of food production is good, and none of this was disputed by the Council. This accords with the fact, noted above, that they are paying farmers to take land out of production and/or utilise less intensive production methods. Moreover, I note that the majority of crops grown on the appeal site at present are largely used for industrial purposes rather than supplying the food chain, whereas if it were to be used for grazing of sheep it would be contributing food for human consumption. As such, I am satisfied that the proposed use of the land would not be detrimental to the nation's food security.

#### *Alternative Sites*

27. I have not been provided with any evidence that indicates that there is any national or local policy requirement to carry out an assessment of alternative sites for solar farm developments. Nevertheless, the appellant provided a sequential assessment. This concluded that there were no sequential preferable sites in the area. Moreover, the Council have not put forward any brownfield or lower grade alternative sites.
28. It was suggested that the area of search in the assessment could have been wider and that it should have considered more than just the Leeming Bar substation. To this end the Parish Council drew my attention to some other appeal decisions where a more substantial catchment area was required. However, given the proposal is seeking to use the spare grid capacity at this sub-station, and bearing in mind the limited opportunities that currently exist for grid connections nationally, I consider it is, in this case, justified to only consider sites within an area that could also make use of this capacity, rather than capacity that may exist at other substations elsewhere. In addition, from the technical considerations set out by the appellant at the hearing regarding

how connections to the substation need to be made, I consider that the area of search utilised in the appellant's assessment is reasonable.

29. Whilst the levels of solar irradiance are higher in the south of England, given the government's requirement to significantly increase the amount of energy produced from solar power, which I outline in more detail below, I am not persuaded that solar developments should only take place further south in the country.
30. Overall, I consider that even if the proposal is considered to represent the loss of Grade 2 agricultural land, there are no alternative sites available on lower grade land.

*Conclusion on main issue*

31. Bringing all these points together, I consider that the majority of the appeal site does not form BMV agricultural land. So, to accord with the policies outlined above consideration needs to be given to whether it would harm the character and appearance of the area and if any adverse impacts can be made acceptable. I return to this below.
32. Moreover, even if it was BMV agricultural land, it would not result in the loss of this agricultural land and there are no lower grade alternative sites available, so subject to the above considerations its use would be justified.

**Benefit arising from the provision of renewable energy**

33. The proposal would have an installed capacity of 49.9MW, estimated to provide sufficient electricity to power around 10,800 homes. The site benefits from an immediate connection to the grid by way of an underground cable to the nearby substation.
34. In recent years both the Government and the local council have declared an Environmental and Climate Change Emergency. Various recent government publications have highlighted the need to significantly increase generation from onshore wind and solar energy production, as it seeks to ensure that by 2035 all our electricity will come from low carbon sources. To achieve this ambitious target, it is clear that considerable growth in large scale solar farms will be necessary and this cannot be achieved solely by the use of brownfield land or roof top installations. In addition, the Council, in seeking to be carbon neutral by 2034, identifies the need to look at viable solar /renewable energy as one of its actions, even if there may not be any quantifiable target for renewable energy production in the area. The proposed development would make a valuable contribution to achieving these local and national goals.
35. Concerns have been raised regarding the manufacturing of the panels and how "green" solar power is. Be that as it may, the government clearly identifies solar energy as a renewable form of energy and one in which they want to see significant growth. Nor is there any requirement for the energy produced to be "needed" or used "locally". Moreover, the efficiency of the panels has increased markedly in recent years.
36. The support in both national and local policy for renewable energy is caveated by the need for the impacts to be acceptable, or capable of being made so, nevertheless, the renewable energy benefit of the proposal must be accorded substantial weight.

### **Other Matters**

37. The application was accompanied by a Landscape and Visual Appraisal which assessed the potential landscape and visual effects of the proposal, including the cumulative effects with other solar farms in the wider area. The Council concluded that the harmful impacts the proposal would create would be relatively localised and could be effectively mitigated. From the evidence before me and what I saw on my site visits, I see no reason to come to a different conclusion.
38. The proposal would include a variety of landscape and biodiversity measures including new and improved hedging, wildflower grass strips, areas of new woodland, and the provision of bird and bat boxes. In addition, ecological and wildlife corridors would be provided across the site, and the areas of woodland would still be accessible to wildlife. The biodiversity metric shows that the proposal would result in a substantial increase in biodiversity net gain in terms of habitat, hedgerow and river units. As such, the limited amount of existing hedging that would need to be removed for the accesses to the site would be more than adequately compensated for.
39. The site is a short distance from junction 51 of the A1M, and the route to the site from this junction is such that traffic to the site would pass a very small number of houses. Given this and the level of traffic generation predicted over the construction period, the impact on the local highway network or on the living conditions of residents would not be significant. Once operational traffic generation would be minimal.
40. Subject to a condition the Ministry of Defence have confirmed that they have no objection to the proposal and its potential effect on pilots using RAF Leeming. The Glint and Glare study also assessed the impact on road users, including the A684. From my own observations, I agree with the conclusion that due to the distance between the road and panels, their relative orientation and the existing and proposed vegetation there is unlikely to be an impact on drivers. Nonetheless, it is recommended that a site survey is undertaken once the proposed perimeter fencing is established to see if further mitigation is required. I consider that would be appropriate.
41. Leases Hall and its Ice House are both Grade II Listed Buildings. The appellants' Heritage Impact Assessment considered the changes to the setting of these as a result of the proposal. Due to the considerable intervening vegetation that already exists, it concluded that the proposal would not harm the setting of these heritage assets. From the evidence before me, and what I saw at my site visits, I agree that there would be no harm to the setting of these heritage assets.
42. There are a number of isolated dwellings in the vicinity, and to the east of the site lies the village of Scruton. The distance between these various properties and the closest panels, together with the existing and proposed intervening vegetation, means that the proposal would not unacceptably harm the living conditions of occupiers, in terms of noise and disturbance or glint and glare. Nor is there any compelling evidence to show that the noise during construction would be detrimental to any horses in the locality.
43. The appeal site is in Flood Zone 1 but due to its size a Flood Risk Assessment was produced. This considered all types of Flood Risk and concluded that there



was a negligible flood risk and no specific mitigation was required. Subject to a condition, the Lead Local Flood Authority had no objection to the proposal. In the absence of any substantive evidence to the contrary I see no reason to come to a different conclusion in this regard.

44. The Parish Council suggested that a Section 106 agreement should be provided to ensure the provision of a community fund for projects in Scruton, a new bridleway and a footpath from Scruton station to the bus stop on the A684. However, I am not persuaded that such contributions would meet the tests set out in the Framework and the CIL Regulations for planning obligations, as they would not be necessary to make the development acceptable in planning terms nor would they be directly related to the development.
45. I note that the Wensleydale Heritage Railway runs to the south of the site. Whilst tourism can rely considerably on the quality of the countryside, the effect on this has already been assessed above and found to be acceptable. I am not persuaded that the changes to the landscape in this case would lead to the loss of viability to the railway or any other existing tourism related business.

### **Planning Balance, Conclusion and Conditions**

46. The Framework sets out a presumption in favour of sustainable development, and renewable energy development is central to achieving a sustainable future. The appeal scheme would make a valuable contribution to this. In addition, significant biodiversity enhancements would be achieved. The proposal would however be a significant development in the countryside and policy requires that any impacts are, or can be made, acceptable. The only adverse impact identified is a limited localised harm to the landscape character and visual impact. This impact can be effectively mitigated.
47. Moreover, although I have concluded the land is not BMV agricultural land, even if it was, the proposal would not result in the loss of the agricultural land and there are no suitable alternative sites on lower grade land.
48. Consequently, I consider the proposal would not have an unacceptable impact on, or result in the loss of, agricultural land and so it would accord with Policies RM6 and S5 of the HLP. As such, there would be no conflict with the sustainable development principles set out in Policy S1 of the HLP.
49. For the reasons set out above I conclude the appeal should be allowed.
50. The Council and the appellant agreed a set of potential conditions, and these were discussed at the hearing. I have considered these in the light of paragraph 56 of the Framework and have revised a number of them following the discussion at the hearing.
51. In addition to the standard implementation condition (condition 1), to provide certainty it is necessary to define the plans with which the scheme should accord (condition 2). Conditions 3, 4 and 5 are reasonable and necessary to limit the period of the permission and to ensure the site is decommissioned either at the end of the permission or when energy generation ceases.
52. In the interest of the character and appearance of the area condition 6 is necessary. For the same reason and in the interest of biodiversity, conditions

14 and 15 are required. Also, for biodiversity reasons, conditions 17, 18 and 19 are necessary.

53. To protect soil quality and so enable the reinstatement of its agricultural land quality, conditions 7, 8 and 20 are required. Conditions 9 and 10 are necessary for reasons of highway safety. For this reason, as well as to protect the living conditions of local residents, condition 16 is required. In the interest of aviation safety condition 13 is necessary.
54. Condition 11 is necessary to ensure sufficient access for the maintenance of the water mains, whilst condition 12 is required to ensure the site is properly drained. To protect and record any potential archaeological remains on the site, condition 21 is necessary.
55. Conditions 7, 16 and 21 are all pre-commencement conditions and need to be so because they relate to how the construction phase is carried out. Conditions 9 and 13 are also pre-commencement conditions. The former because it is necessary to ensure a safe access is provided for construction traffic before construction work begins and the latter because the Glint and Glare Plan could affect the design of the proposal. In accordance with Section 100ZA of the Town and Country Planning Act 1990, the appellant has provided written agreement to the pre-commencement conditions.

*Alison Partington*

INSPECTOR

**APPEARANCES**

FOR THE APPELLANT:

Paul Burrell BSc(Hons) DipUP MRTPI	Planning Director, Pegasus
Tony Kernon BSc(Hons) MRICS FBIAC	Kernon Countryside Consultants Ltd
James Fulton	Amet Property
Thea Osmund-Smith	Counsel
Chris Sowerbutts	Lightrock Power

FOR THE LOCAL PLANNING AUTHORITY:

Ian Nesbit	Senior Planning Officer, North Yorkshire Council
Ruth Metcalfe	ADAS

INTERESTED PARTIES:

Maurice Daley	Scruton Parish Council
Harry Shepherd	Scruton Solar Action Farm Group
Tim Chapman	Local Farmer

**DOCUMENTS SUBMITTED AT THE HEARING**

1. Copies of various of the submitted plans at A3
2. Location Plan and EIA Screening Opinion Decision for a potential Solar Farm at Cobshaw Lane, Langthorne.
3. Schedule of suggested conditions with comments submitted by the appellant
4. Copy of email sent on 9 April 2023 in response to the appeal notification by Mr T Chapman
5. Sequential Testing and Alternatives legal opinion submitted by the appellant.

## **Annex A Conditions**

- 1) The development hereby permitted shall begin not later than three years from the date of this decision.
- 2) The development hereby permitted shall be carried out in accordance with the following approved plans: Site Location Plan Planning Drawing 1a 4004-REP-037; Land Under the Applicants Control Planning Drawing 1b 4004-REP-038; Indicative Site Layout 4004-SCT-DR-PRE-0002 REV G; Typical PV Panel Section Planning Drawing 4 4004\_SCT\_P\_0001; Inverter/Transformer Planning Drawing 5 4004\_SCT\_P\_0002; 53ft Battery Container (HVAC on ground) Planning Drawing 6 4004\_SCT\_P\_0003; 2MW Inverter Transformer skid (8m) Planning Drawing 7 4004\_SCT\_P\_0004; Security Fencing and CCTV Planning Drawing 8 4004\_SCT\_P\_0005; Security Gate Planning Drawing 9 4004\_SCT\_P\_0006; Access Track Cross Section Planning Drawing 10 4004\_SCT\_P\_0007; Container Storage Units Planning Drawing 11 4004\_SCT\_P\_0008; Indicative Temporary Construction Compound Planning Drawing 12 4004\_SCT\_P\_0009; Client Substation Planning Drawing 13 4004\_SCT\_P\_0010; DNO Substation Planning Drawing 14 4004\_SCT\_P\_00011; Landscape Mitigation Plan 4004-DR-LAN-101 REV D; Proposed Access Junction Visibility Splay Assessment 4004-DR-ALR-002a; and Fence Dike Lane Proposed Access Junction Visibility Splay Assessment 4004-DR-ALR-0003.
- 3) The permission hereby granted shall be limited to a period of 40 years from the date when electricity is first exported from the solar panels to the electricity network (the First Export Date). Written notification of the First Export Date shall be given to the local planning authority within 14 days of the event occurring.
- 4) Within 6 months of the cessation of the export of electrical power from the site, or within a period of 39 years and 6 months following the First Export Date, a Scheme for the decommissioning of the solar farm and its ancillary equipment, and how the land is to be restored, to include a programme for the completion of the decommissioning and restoration works, shall be submitted to the local planning authority for its written approval. The solar farm and its ancillary equipment shall be dismantled and removed from the site and the land restored in accordance with the approved scheme and timescales.
- 5) If the solar farm hereby permitted ceases to operate for a continuous period of 12 months, then a scheme for the decommissioning and removal of the solar farm and ancillary equipment, shall be submitted within 6 months of the end of the cessation period to the local planning authority for its written approval. The scheme shall make provision for the removal of the solar panels and associated above ground works approved under this permission. The scheme shall also include the management and timing of any works and a traffic management plan to address likely traffic impact issues during the decommissioning period, an environmental management plan to include details of measures to be taken during the decommissioning period to protect wildlife and habitats, and details of site restoration measures.

- 6) Prior to their erection on site details of the proposed materials and finish including colour of all solar panels, frames, ancillary buildings, equipment, and enclosures shall be submitted to, and approved in writing by, the local planning authority. Development shall be carried out in accordance with the approved details and be maintained as such for the lifetime of the development hereby permitted.
- 7) Prior to the commencement of each phase of development (Construction, Operational and Decommissioning), a Soil Management Plan shall be submitted to, and approved in writing by, the local planning authority. The plan shall include, but not be limited to details pertaining to careful soil management during each phase, including consideration of the appropriate time of year for soil handling, planting beneath the panels and return to the former land quality as indicated in the Agricultural Land Classification survey dated 8th December 2020 – Issue 2 carried out by Amet Property. The Management Plan shall adhere to the guidance set out in the following documents (or any subsequent replacement versions):
- Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (September 2009); and.
  - The British Society of Soil Science Working with Soil Guidance Note on Benefiting from Soil Management in Development and Construction.
- The Soil Management Plan as so approved shall be implemented, and adhered to, for each phase of the development.
- 8) To ensure against soil compaction and overland flow route disruption during construction, the soil should be chisel ploughed or similar and it should be restored to a pre-construction condition immediately post construction, the date of which should be notified in writing to the local planning authority within 14 days of it occurring. For the first three years after the completion of the construction phase, every six months, inspections of the planting and soil must be carried out by a qualified soil scientist, to ensure adequate growth of the planting and that any compaction or channelisation of the soil can be identified and addressed. Any remedial work identified in the inspection should take place within 6 months of the date of the inspection.
- 9) No development shall take place until the details on the accesses to be provided to Low Street and Fence Dike Land have been submitted to, and approved in writing by, the local planning authority. Prior to the commencement of the development the site access on Low Street shall be constructed and prior to the First Export Date the access on Fence Dike Lane shall be constructed. Both accesses shall be provided in accordance with: the approved details; with Standard Detail number E20 Rev A; and the following requirements:
- any gates or barriers must be erected a minimum distance of 13m back from the edge of the carriageway of the existing highway and must not be able to swing over the existing highway.
  - Provision to prevent surface water from the site discharging onto the existing highway have been constructed and maintained thereafter to prevent discharges.

The accesses shall be retained as such for the lifetime of the development hereby permitted.

- 10) Prior to the proposed accesses on Low Street or Fence Dike Lane being brought into use, the visibility splays shown on the following approved plans
- Proposed Access Junction Visibility Splay Assessment 4004-DR-ALR-002a and
  - Fence Dike Lane Proposed Access Junction Visibility Splay Assessment 4004-DR-ALR-0003

shall have been provided. Once constructed the visibility splays must be maintained clear of any obstruction and retained for that purpose at all times.

- 11) No building or other obstruction including landscape features and tree planting shall be located over or within five metres either side of the centre line of both public water mains that cross the site i.e. a protected strip width of ten metres. If the required stand-off distances are to be achieved via diversion or closure of the water main(s), the developer shall submit evidence in writing to the local planning authority that the diversion or closure has been agreed with the relevant statutory undertaker and that prior to construction in the affected area, the approved works have been undertaken.
- 12) The development hereby approved shall not be brought into use until the surface water drainage arrangements have been provided in full, in accordance with details which shall previously have been submitted to, and approved in writing by, the local planning authority. The approved measures shall be retained for the lifetime of the development.
- 13) No development shall take place until a Glint & Glare Management Plan (GGMP) has been submitted to, and approved in writing by, the local planning authority. The submitted GGMP shall contain, but not be limited to:
- detailed design, to include specifications of both solar panel (surface types, anti reflective coating), mounting systems, illustrated with sectional plans as appropriate to show the angle of elevation and angle of azimuth of each solar panel in the development.
  - a schedule to regularly check and maintain the alignment of the solar panels;
  - a protocol through which glint and glare complaints can be submitted, investigated, and any issues rectified/ addressed/ mitigated to include procedures to ensure that any mitigation needed is implemented following MOD consultation and agreement only;
  - procedures through which complaints, associated actions/outcomes will be recorded/communicated and made available to the MOD on request;
  - provision to urgently address any incidents of a major impact that may occur that restricts aviation operations at RAF Leeming to

apply interim measures that will stop the source of glint or glare until measures to provide an enduring mitigation can be implemented; and

- timescales for completing investigations, implementing remedial works and the provision of interim and, or enduring mitigations to address any impact.

The provisions set out in the GGMP and any modifications/mitigation, as agreed in writing with the local planning authority shall be maintained for the life of the development.

- 14) The development hereby approved shall be implemented in accordance with the management measures set out in the Landscape and Biodiversity Management Plan prepared by Arcus Consultancy Services dated April 2021.
- 15) Notwithstanding the previously submitted details, prior to the erection of the solar panels, a landscaping scheme shall be submitted to, and approved in writing by, the local planning authority. The submitted scheme shall include, but is not limited to:
- details of the species;
  - numbers and locations of planting;
  - timescales for implementation; and
  - a Management and Maintenance plan covering the life of the development.

The landscaping of the site shall take place in accordance with the approved details and implementation programme. The site shall be maintained in accordance with the approved Management and Maintenance Plan for the life of the development hereby approved, and any planting which within a period of five years of planting dies, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species.

- 16) No development shall commence until a Construction Management Plan has been submitted to, and approved in writing by, the local planning authority. The plan shall include but not be limited to:
- Details relating to traffic management including measures to enable vehicles to enter and leave the site in a forward gear;
  - Hours of operation and hours during which construction and delivery traffic will travel to and from the site; and
  - Measures that will be implemented to minimise the creation and impact of noise, vibration and dust resulting from the site preparation, groundwork and construction phases of the development.

The Construction Management Plan as so approved shall be adhered to throughout the construction period.

- 17) The development hereby approved shall be implemented in accordance with the recommendations contained within paragraph 5.3.1 of the Ecological Impact Assessment prepared by Arcus Consultancy Services dated April 2021.

- 18) No external lighting shall be installed other than in complete accordance with a scheme that has previously been submitted to, and approved in writing by, the local planning authority. Any external lighting so installed shall thereafter be maintained in accordance with the approved details for the lifetime of the development.
- 19) Prior to the First Export Date the Biodiversity enhancements shown on the Landscape Mitigation Plan 4004-DR-LAN-101 REV D, and the mitigation and enhancement measures detailed within section 5.4 of the Ecological Impact Assessment prepared by Arcus Consultancy Services dated April 2021 shall be implemented and retained as such for the lifetime of the development hereby approved.
- 20) Prior to the First Export Date details of the cleaning procedure for the panels shall be submitted to, and approved in writing by, the local planning authority. The details shall include but not be limited to the frequency of cleaning, volumes of water required, details of any detergents to be used and any required mitigation. The cleaning of the panels shall thereafter take place in accordance with the approved details.
- 21) No development shall take place until a written scheme of investigation (WSI) has been submitted to, and approved in writing by, the local planning authority. The WSI shall include:
  - the statement of significance and research objectives;
  - the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works; and
  - the programme (including timescales) for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material.

The written scheme of investigation will need to be prepared and implemented by a suitably qualified professionally accredited archaeological practice.

No development shall take place until the site investigations and post investigation assessment has been undertaken in accordance with the agreed programme and details.



**Appendix KCC7**  
**Cereal and Oilseed Production 2022**



[Home](#) > [Cereal and oilseed rape production](#)

[Department  
for Environment  
Food & Rural Affairs](#)

National statistics

# Cereal and oilseed production in the United Kingdom 2022

Updated 21 December 2022

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[Section 2 Methodology: Final estimates of 2022 UK cereal and oilseed production](#)

[Section 3: What you need to know about this release](#)



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This publication is available at <https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production/cereal-and-oilseed-production-in-the-united-kingdom-2022>

This release contains the final estimate of UK 2022 cereal and oilseed harvest.

Northern Ireland have delayed the release of their 2022 June survey results until January 2023, so data in this release has been carried forward from 2021.

For detailed area, yield and production results by country and regions in England go to the [accompanying data set](https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production) (<https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production>).

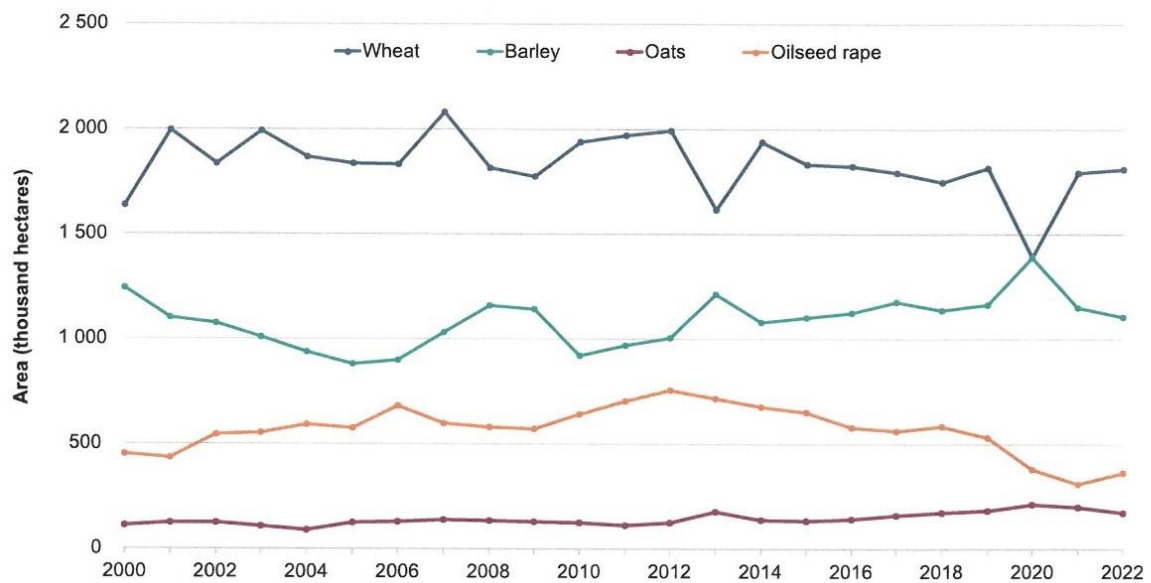
## Key points

- Total cereal production in the UK increased by 8.5% to just over 24 million tonnes in 2022. Higher yields across all the main cereal crops in 2022 compared to 2021, more than offset a small decrease in the total cereal area. Overall, the prolonged dry conditions through summer led to an exceptionally early harvest and lower than normal moisture content in the harvested crops.
- The final estimate of the 2022 UK wheat harvest is 15.5 million tonnes, an increase of 11% on 2021. This is due to increases in both yield (9.9% increase to 8.6 tonnes per hectare) and area (1.0% to 1.8 million hectares).
- The final estimate of the 2022 UK barley harvest is 7.4 million tonnes, an increase of 6.1% on 2021. This comprises a 1.1% fall in spring barley production more than offset by a 17% increase in winter barley.
- In 2022 oat production fell by 10% to 1.0 million tonnes, caused by a 13% decrease in area, but partially offset by a 2.9% increase in yield.
- Oilseed rape production has increased by 39% to 1.4 million tonnes in 2022. This was driven by an 18% increase in area and a 17% increase in yield.
- In 2022, the moisture content for many crops was below the standard 14.5% for cereals and 9% for oilseed rape. In England the average for wheat was 13.6%, spring barley averaged 13.4%, winter barley 13.6% and oats 13.2%. The average moisture content for winter oilseed rape was 7.6%. Data for other countries is not available.

## Section 1: Area, yield and production

### Areas

#### Figure 1: United Kingdom crop areas



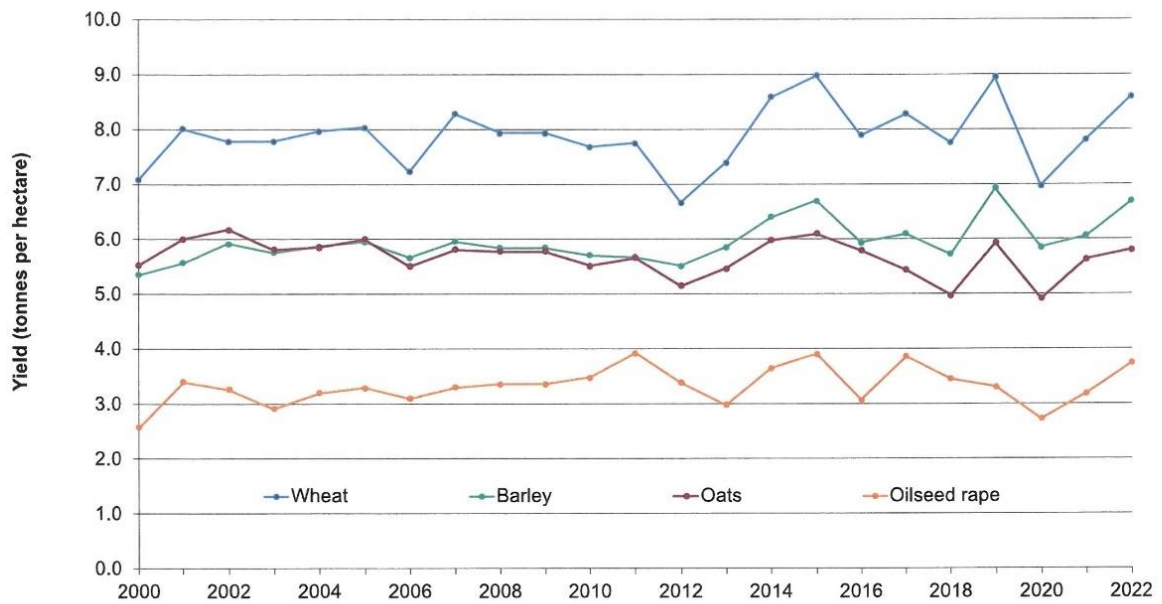
Wheat and barley areas have returned to a more typical pattern following the wet weather disruptions in 2020.

Whilst the area of oats fell by 13%, oilseed rape areas have partly recovered in 2022 with an 18% increase but still remain at a level comparable with 20 years ago. (see Figure 1).

[Download the full dataset \(https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production\)](https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production)

## Yields

### Figure 2: United Kingdom crop yields

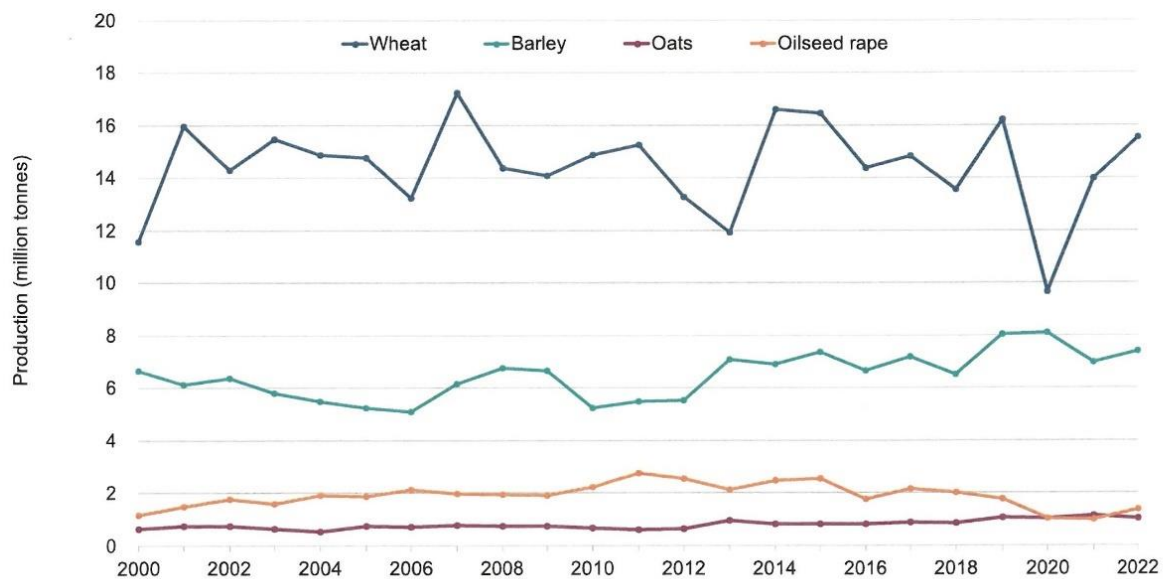


UK wheat, barley and oilseed rape yields all showed strong increases in 2022 and are now only slightly lower than the highest yields achieved over the past 20 years.

[Download the full dataset \(https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production\)](https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production)

## Production

Figure 3: United Kingdom crop production



Increased yields and areas have led to strong UK crop production in 2022. Wheat is still the predominant crop with production of 15.5 million tonnes (an increase of 11% on 2021). This is a result of an increase in both yield (9.9% increase to 8.6 thousand tonnes per hectare) and area (1.0% increase to 1.8 million hectares).

The 2022 UK barley harvest is 7.4 million tonnes, an increase of 6.1% on 2021. This comprises a 17% increase in winter barley production and a 1% fall in spring barley. Yields for both winter and spring barley were above the 5 year average at 7.4 thousand tonnes per hectare and 6.2 thousand tonnes per hectare respectively.

Oat production fell by 10%, driven by a 13% decrease in area, but partially offset by a 2.9% increase in yield.

Oilseed rape production has greatly increased by 39% to 1.4 million tonnes in 2022, driven by increases in both area (+18%) and yield (+17%).

[Download the full dataset \(https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production\)](https://www.gov.uk/government/statistics/cereal-and-oilseed-rape-production)

## Section 2 Methodology: Final estimates of 2022 UK cereal and oilseed production

### 2.1 England

Results are based on final results from the Cereal and Oilseed Rape Production Survey, a representative sample of cereal and oilseed rape growers across English regions and farm sizes and are based on the valid responses from 2,765 (55% response rate).

The Cereal and Oilseed Rape Production Survey gathers data on production tonnages and moisture content for the various cereal and oilseed rape crops and seeks confirmation of the planted areas for these crops gathered from the June Census of Agriculture and Horticulture.

#### Moisture content adjustment

Production is typically standardised to 14.5% moisture content for cereals and 9.0% for oilseed rape but the prolonged hot and dry conditions this year have led to lower average moisture contents in the harvested crops. Following discussions with stakeholders we have agreed that the 2022 production data will only be adjusted for farms which have reported moisture content above 14.5% for cereals and 9.0% for oilseed rape. Any production data which has been reported with lower moisture contents has not been adjusted. In an average year this would make little difference to the production total, e.g. in 2021, this new approach would have reduced wheat production by only 0.1%.

We plan to retain this new methodology every year from now on to give a more representative estimate of the volume of actual crop available for use in the industry.

## 2.2 Wales

No yield data were collected for Wales. The Welsh production figures have been estimated on a regional basis within Wales using the final regional results of the June 2021 Survey, extrapolated to match the June 2022 final results, along with the yields for the English regions bordering Wales. Final results for Wales were published on 16 November by the Welsh Government on their [website \(https://gov.wales/survey-agriculture-and-horticulture-june-2022\)](https://gov.wales/survey-agriculture-and-horticulture-june-2022).

For further details contact Agricultural & Rural Affairs Statistics, Welsh Government, Cathays Park, Cardiff, CF10 3NQ (telephone: Cardiff 03000 255049). E-mail: [stats.agric@gov.wales](mailto:stats.agric@gov.wales)

## 2.3 Scotland

The 2022 final estimates of yield and production are based on land use areas estimated from Single Application Form (SAF) data returns. A panel of experts from the Scottish cereal industry also provide their final estimates of harvest yields and these are applied to final figures for areas sown. For further details contact Scottish Government: RESAS Statistics (Agriculture). Email: [agric.stats@gov.scot](mailto:agric.stats@gov.scot)

## 2.4 Northern Ireland

No final data has been produced in Northern Ireland this year. Therefore, the 2021 Northern Irish production figures have been carried forward to compile the UK final results for 2022. If you have any queries, please contact [DAERAsurveys@daera-ni.gov.uk](mailto:DAERAsurveys@daera-ni.gov.uk)

## 2.5 Data notes

The cereal production (tonnage) figures include tail corn, cereals still to be harvested for grain, grain to be crimped and cereals intended for seed production. The figures exclude crops which have become unfit for harvesting, carryover stocks from the 2021 harvest, bought in grain and crops harvested as wholecrop for silage.

## 2.6 Provisional 2023 harvest statistics

Provisional England results are expected to be published in October 2023, with UK estimates published in December 2023. The definitive publication date will be announced on the [research and statistics \(https://www.gov.uk/search/research-and-statistics\)](https://www.gov.uk/search/research-and-statistics) webpage on gov.uk.

## 2.7 Feedback

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



## Section 3: What you need to know about this release

### 3.1 Contact details

Responsible statistician: Helen Mason

Team: Farming Statistics - Department for Environment, Food and Rural Affairs

Email: [farming-statistics@defra.gov.uk](mailto:farming-statistics@defra.gov.uk)

Tel: 0300 060 0170

### 3.2 National statistics status

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

The continued designation of these statistics as National Statistics was confirmed in 2014 following a [full assessment](#) (<https://www.statisticsauthority.gov.uk/publication/statistics-on-agriculture/>) by the UK Statistics Authority against the [Code of Practice for Statistics](#) (<https://www.statisticsauthority.gov.uk/code-of-practice/>).

Since the last review of these statistics in 2014, we have continued to comply with the Code of Practice for Statistics, and have made improvements including:

- 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

For general enquiries about National Statistics, contact the National Statistics Public Enquiry Service:

Tel: 0845 601 3034

Email: [info@statistics.gov.uk](mailto:info@statistics.gov.uk).

You can find National Statistics on the internet [on the Gov.uk website](#). (<http://www.statistics.gov.uk/>)

[↑ Back to top](#)

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**Appendix KCC8**  
**Analysis of UK Food Security**



**DRAFT**

**BRIEFING NOTE**  
**SELF-SUFFICIENCY OF UK AGRICULTURE**

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**April 2023**

**Purpose of this Briefing Note**

- 1 This paper examines the current position in respect of food security and self-sufficiency in the UK.
- 2 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"**<sup>i</sup>. (Defra Press Release 6th December 2022).
- 3 This paper sets out some of the available statistics and related commentary, to examine the production and food security claims.
- 4 This paper:
  - sets out the key industry resource statistics;
  - sets out the key statistics by farming sector;
  - sets out related commentary;
  - and ends with a summary.
- 5 The paper focusses primarily on England, but some statistics are only available on a UK-wide basis. Therefore there is a degree of mixing embedded in this paper.

**Structure of the Industry's Assets**

- 6 The latest Government information<sup>ii</sup> is that England has a land area of 13,046,000 hectares (32.2 million acres).

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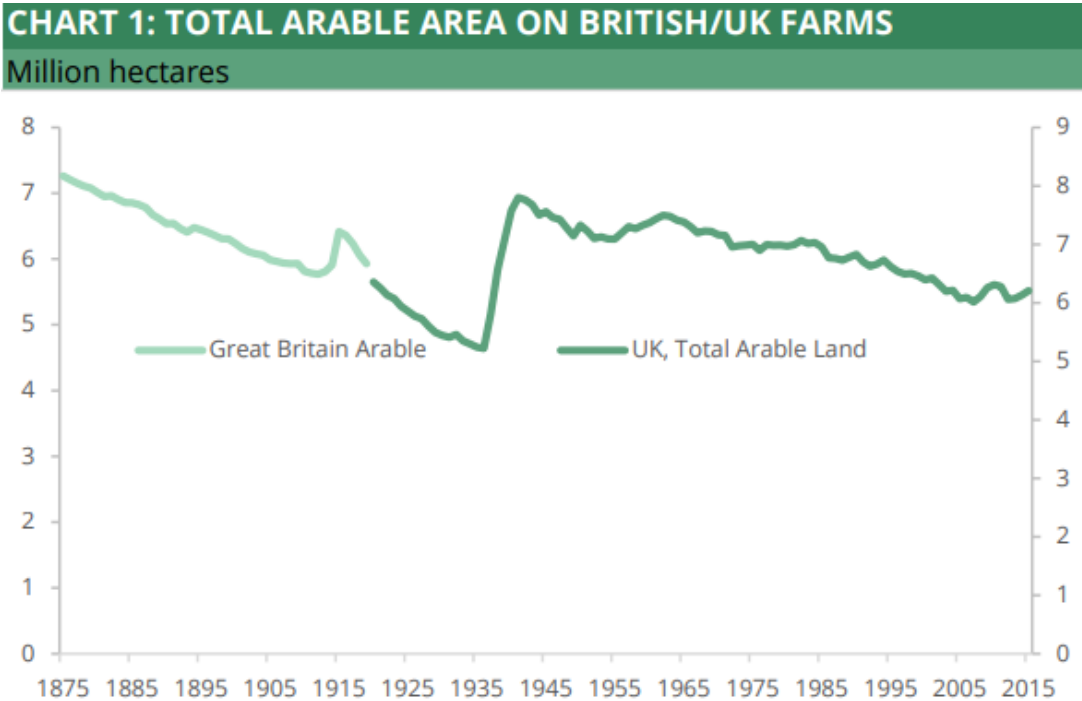
*Greenacres Barn, Stoke Common Lane, Purton Stoke, Swindon SN5 4LL*  
*T: 01793 771333 Email: [info@kernon.co.uk](mailto:info@kernon.co.uk) Website: [www.kernon.co.uk](http://www.kernon.co.uk)*

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*Directors - **Tony Kernon** BSc(Hons), MRAC, MRICS, FBIAC **Sarah Kernon***  
*Consultants - **Ellie Chew** BSc(Hons) **Amy Curtis** BSc(Hons)*

- 7 Defra estimate that the Utilised Agricultural Area (UAA) in England at 1st June 2022 was 8.9 million hectares<sup>iii</sup>.
- 8 Natural England estimate that 42% of agricultural land is best and most versatile (ALC Grades 1, 2 and 3a)<sup>iv</sup>. That would equate to 3.74 million ha (9.24 million acres).
- 9 UK soils currently store about 10 billion tonnes of carbon, equal to about 80 years of annual greenhouse gas emissions<sup>v</sup>.
- 10 The Environment Agency<sup>vi</sup> concludes that soil biodiversity and the many biological processes and soil functions that it supports "**are thought to be under threat**". The statistics presented conclude that:
  - almost 4 million hectares of soil are at risk of compaction;
  - over 2 million hectares are at risk of erosion;
  - as a result of intensive agriculture use arable soils have lost 40% to 60% of their organic matter.
- 11 The total arable area on UK farms has been declining since 1875, with a reversed trend in the 1935-1945 period, as shown below.

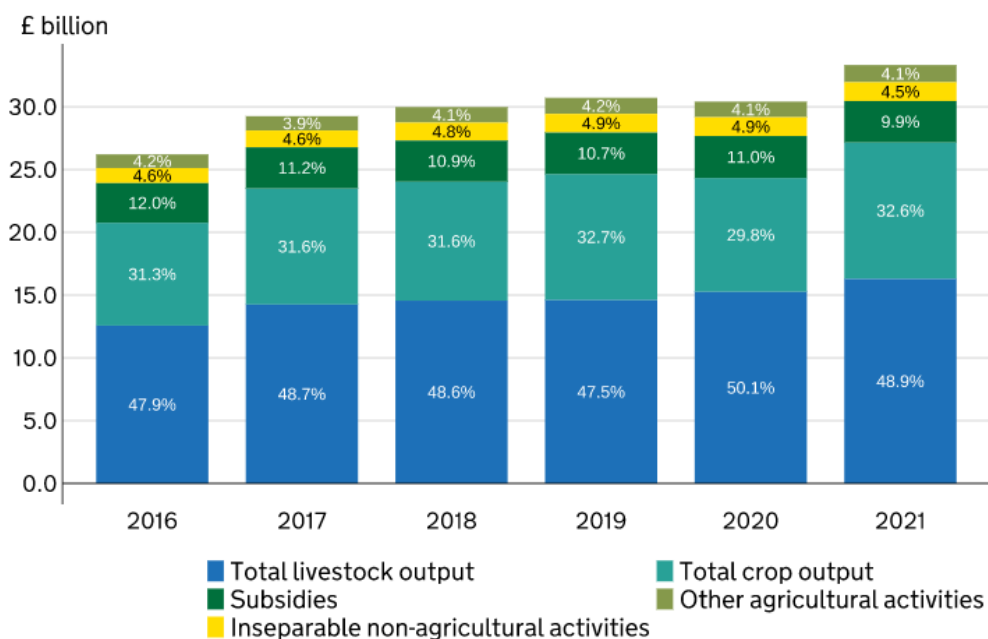
*Insert 1: Arable Area on UK Farms<sup>vii</sup>*



12 Agriculture and fishing contribute £11.5 billion to the agri-food sector, which is about 10% of the £116.2 billion the sector contributes to the national Gross Value Added<sup>viii</sup>.

13 In 2021 subsidies still provided almost 10% of income to the agricultural sector, as shown below. The subsidy regime has since been changed and this proportion is expected to decline in future years.

*Insert 2: Summary of Outputs and Subsidies*

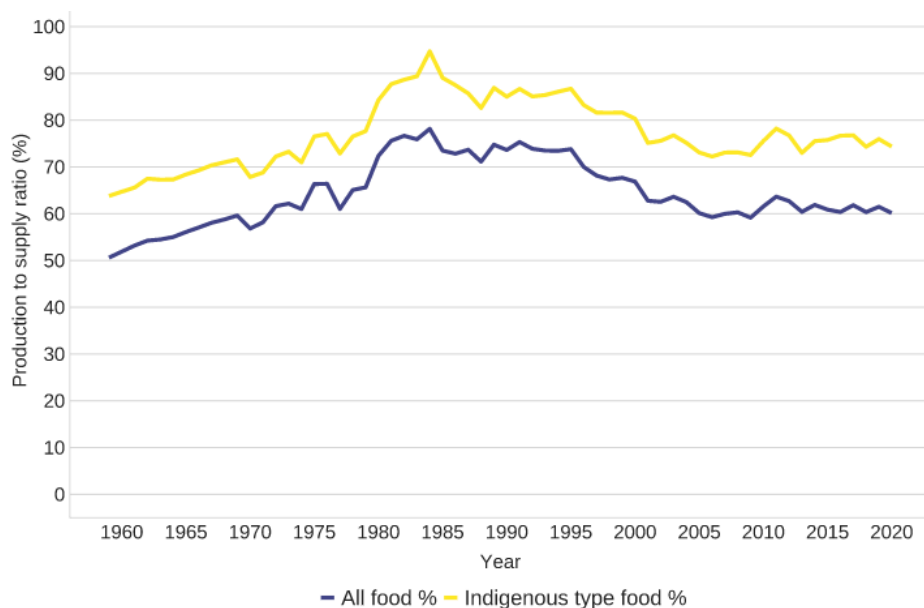


Source: Defra © Crown copyright

**Production Statistics**

14 The UK Food Security Report 2021<sup>ix</sup> identifies that the UK produces about 60% by value of the food we eat, but that rises to 74% of the food we can grow or rear in the UK.

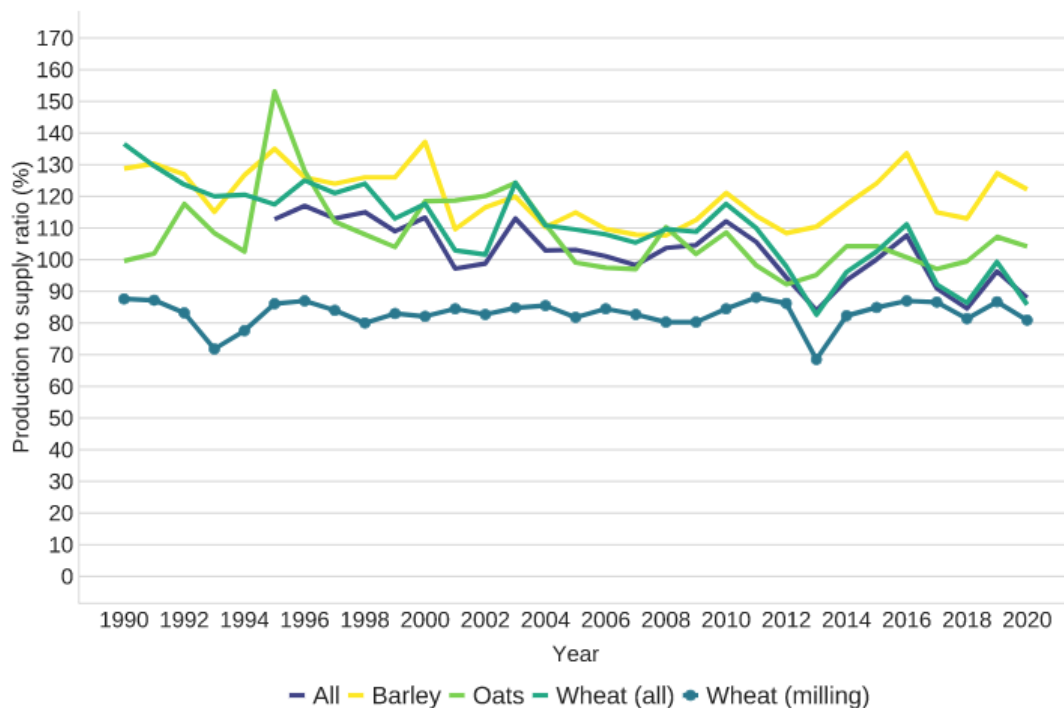
*Insert 3: UK Food Production and Supply*



15 **Cereals.** Wheat plays a vital part in the UK's diet, environment and economy. The Food Security Report records that over the 1961 to 2011 period wheat accounted for about 30% of daily food energy intake per person. Wheat is consumed in bread, bakery products, breakfast cereals, pasta, in meat from animals fed on wheat, and in some alcoholic drinks.

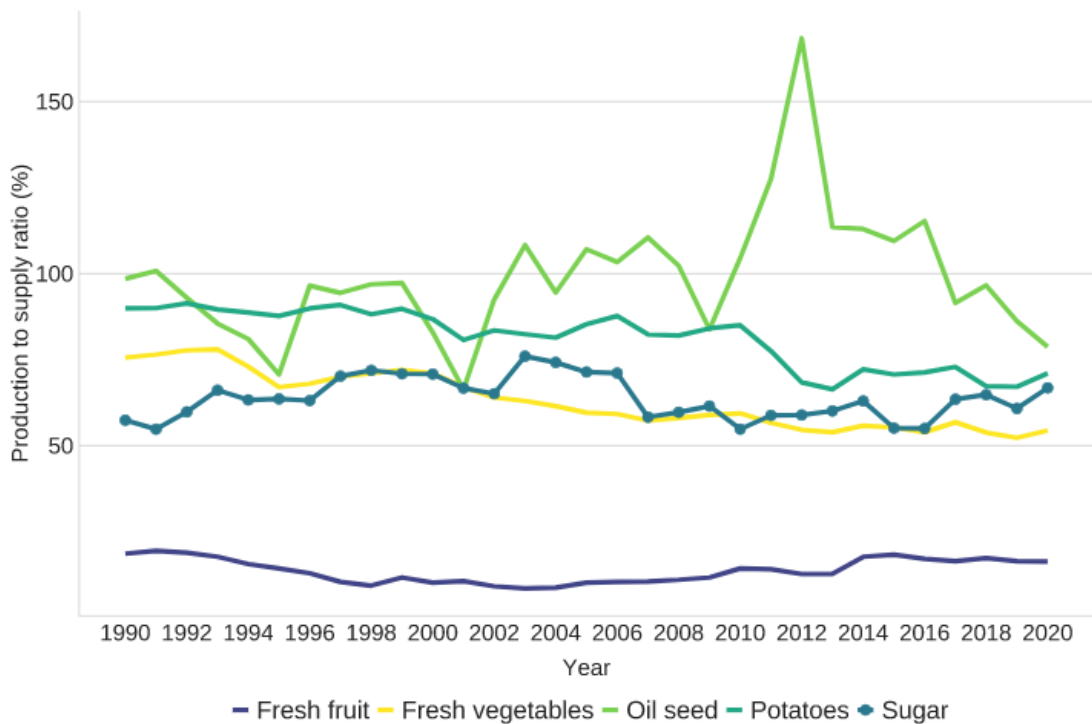
16 In terms of grains the UK is able to grow more cereals than we consume. Only in milling wheat are we producing less than we consume, but the shortfall is largely made up of hard wheats not suited to the UK's climate and soils. We export cereals and import cereals of a different type or grade, due to climatic limitations.

*Insert 4: Domestic UK Grain Production as Percentage of Consumption*



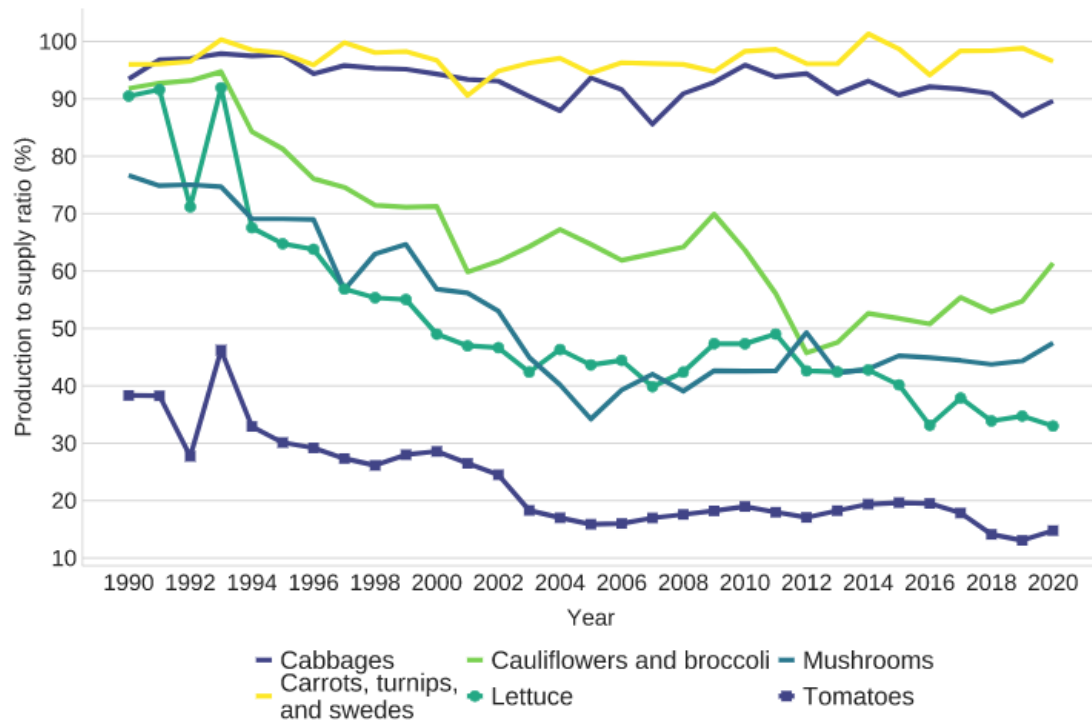
17 **Other Crops.** Self-sufficiency in other products is generally below 100% except for oilseed. Oilseed production has recently dipped significantly due to controls over the chemical applications permitted to control stem flea beetle.

Insert 5: Domestic UK Production of Other Crops as a Percentage of Consumption



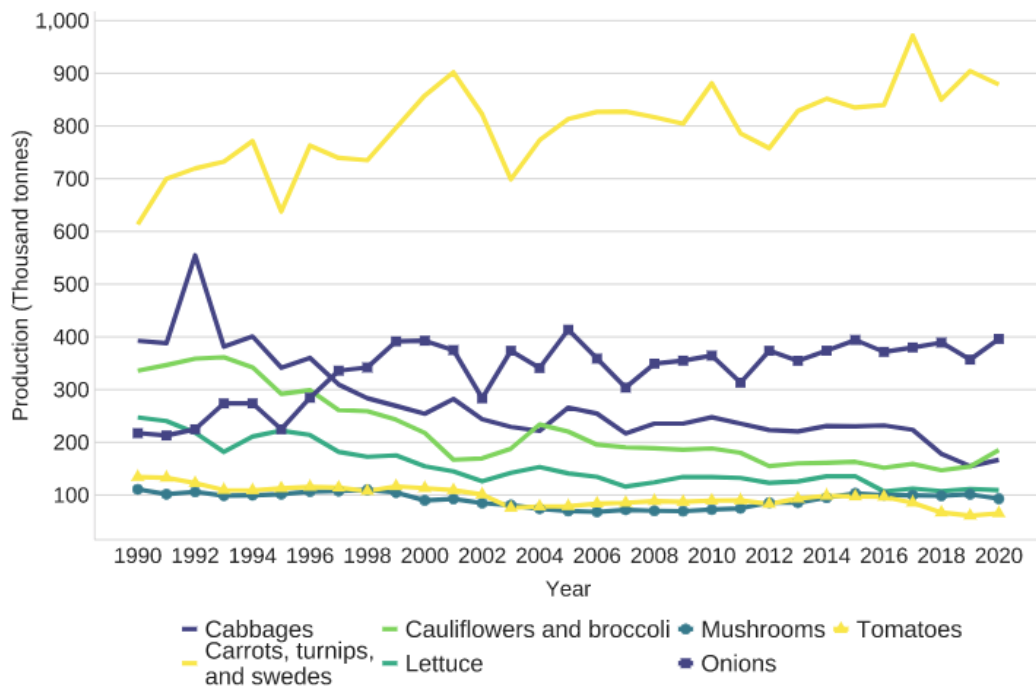
18 The trends for field vegetables show a generally-downward trend. Self-sufficiency exists in cabbages, swedes, turnips and carrots, but there have been falls in other vegetables, where domestic production has declined significantly.

Insert 6: Domestic UK Production of Fresh Vegetables as Percentage of Consumption



- 19 The production figures illustrate the caution that should be applied to self-sufficiency figures above. It will have been seen in Insert 6 that self-sufficiency in cauliflowers and broccoli is less than in 1990, although improving. In terms of production, cauliflower production has fallen to a third yet broccoli production has tripled. Onion production and carrot production are up (80% and 60% respectively) whilst swedes and turnips are no longer as much in favour.

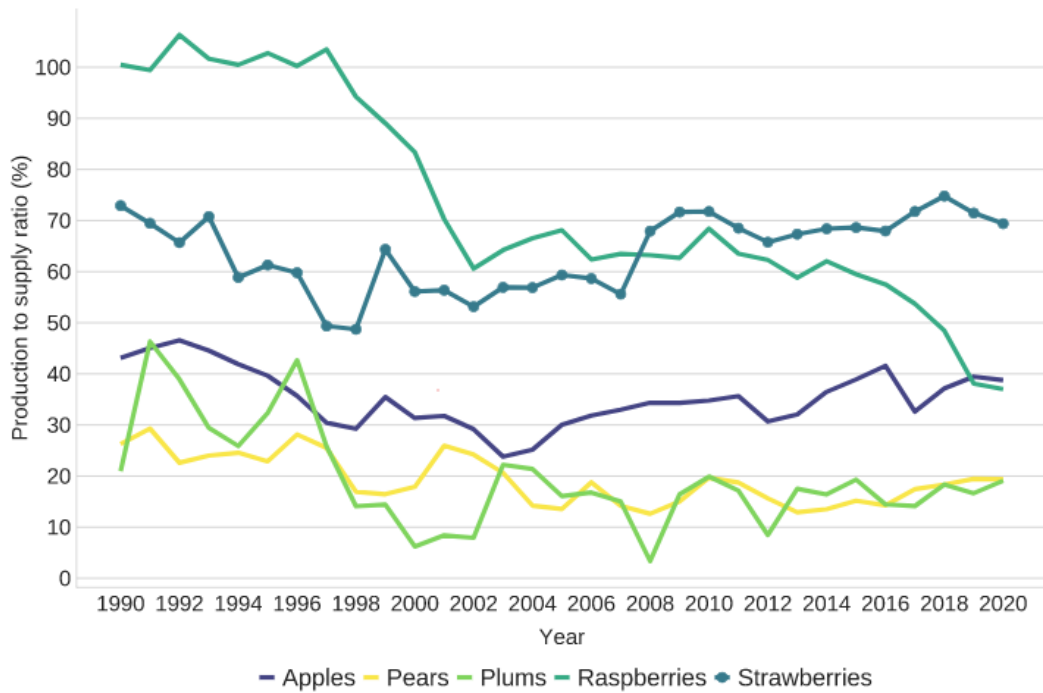
*Insert 7: Domestic UK Production of Fresh Vegetables*



- 20 **Top and Soft Fruit.** UK production fell sharply in the 1990s, but has been steadily increasing since 2000. Domestic production of apples, for example has fallen from over 350,000 tonnes in 1992 to around 200,000 tonnes in 2020. The area of orchards has fallen from over 100,000 ha in the 1940s to around 20,000 ha today<sup>x</sup>.



*Insert 8: Domestic Fruit Production as a Percentage of Consumption*

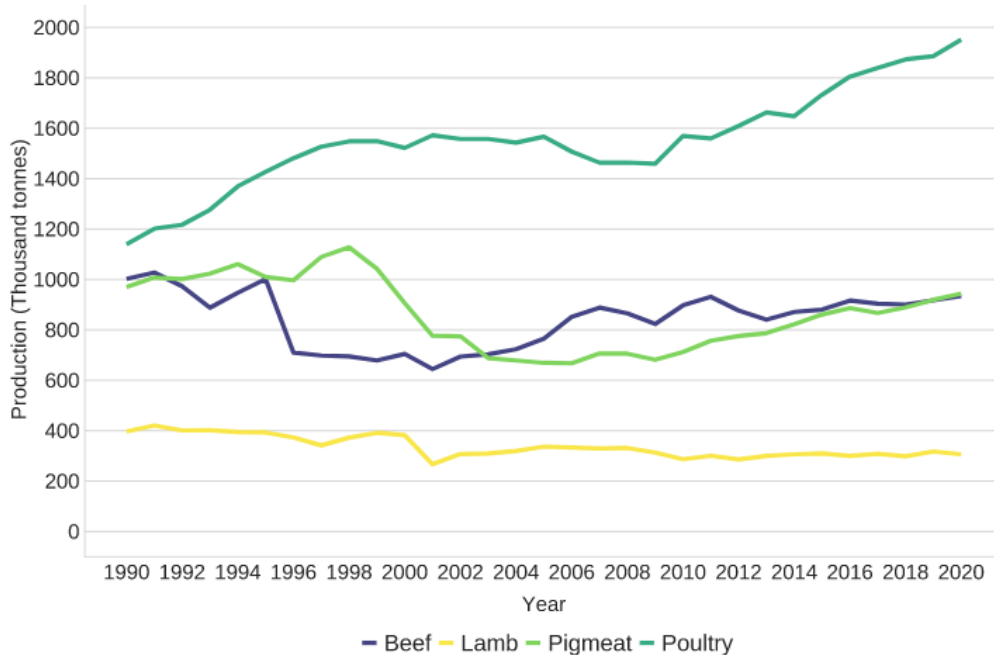


21 **Livestock.** Self-sufficiency is high. In 2020 production per person equated to:

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

22 **Meat.** Production, especially of poultry meat, has been gradually increasing, as shown below.

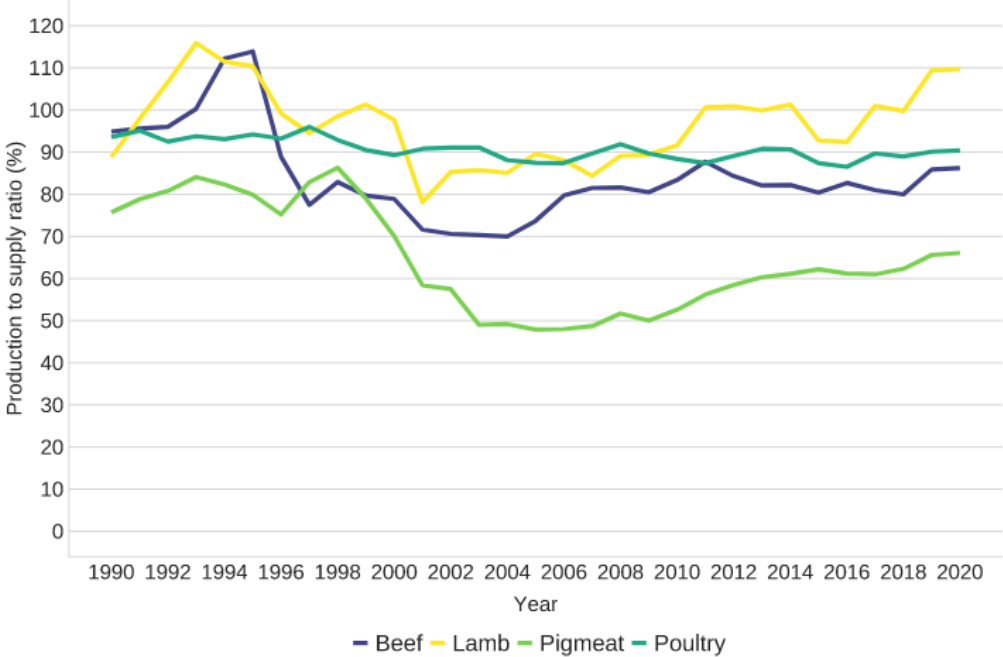
*Insert 8: Domestic Meat Production*



23 Due to consumer preferences, the UK exports lower-value products and imports higher-value products, but overall we are largely self-sufficient in terms of production.

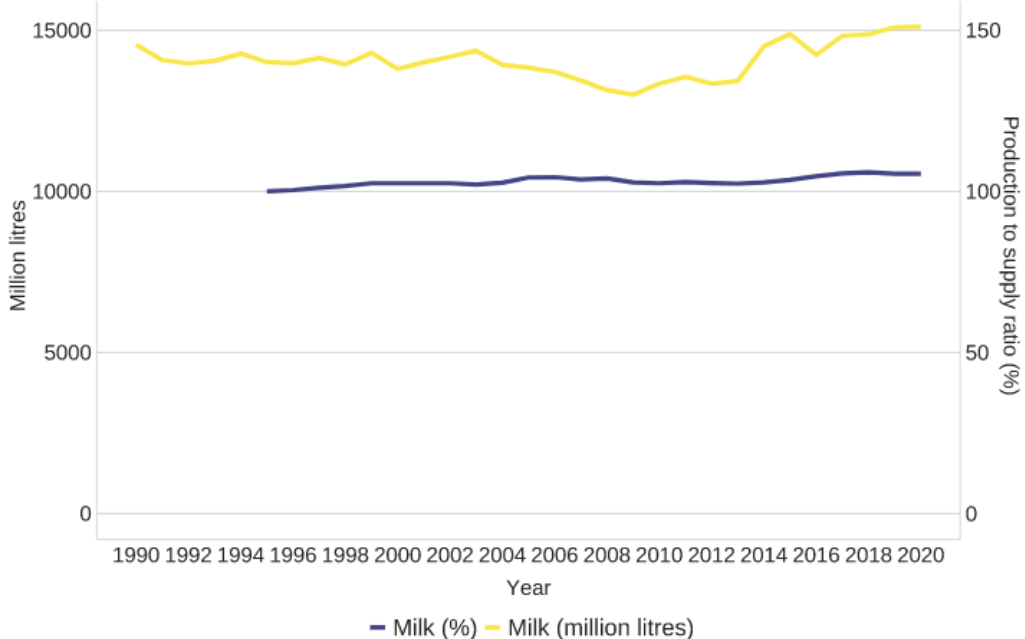
24 Pigmeat production has fallen sharply, with a recent recovery, but that reflects industry economic performance rather than an inability to produce the product.

*Insert 9: Domestic UK Meat Production as a Proportion of Consumption*



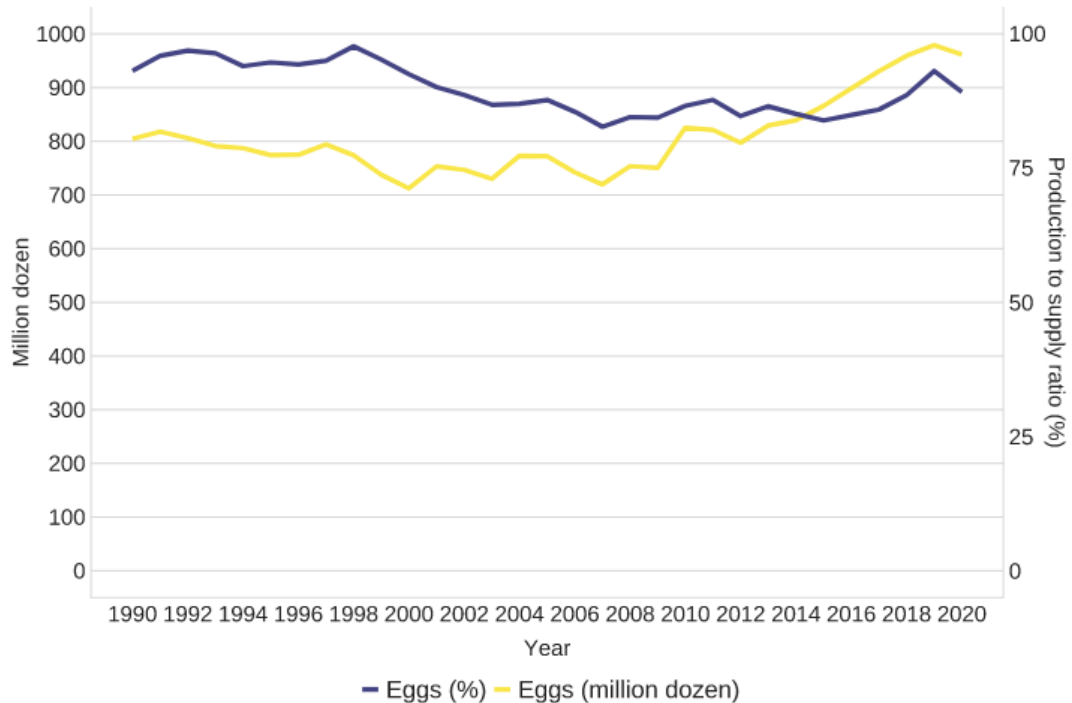
25 **Milk.** Milk production has held steady over the last 30 years, despite the herd size decreasing (down to 1.9 million cows from 3.5 million in 1973). Production exceeds consumption.

*Insert 10: UK Raw Milk Production and Consumption*



26 **Eggs.** Over the last 30 years egg production has met between 89% and 98% of domestic consumption. The laying flock decreased from 53 million in 1984 to 40 million in 2020, mostly declining in the 1980s and 1990s with a move from caged to free-range systems.

*Insert 11: Domestic UK Egg Production and Consumption*



**Commentary**

27 The statistics show self-sufficiency or near self-sufficiency in many of the staples of the UK diet:

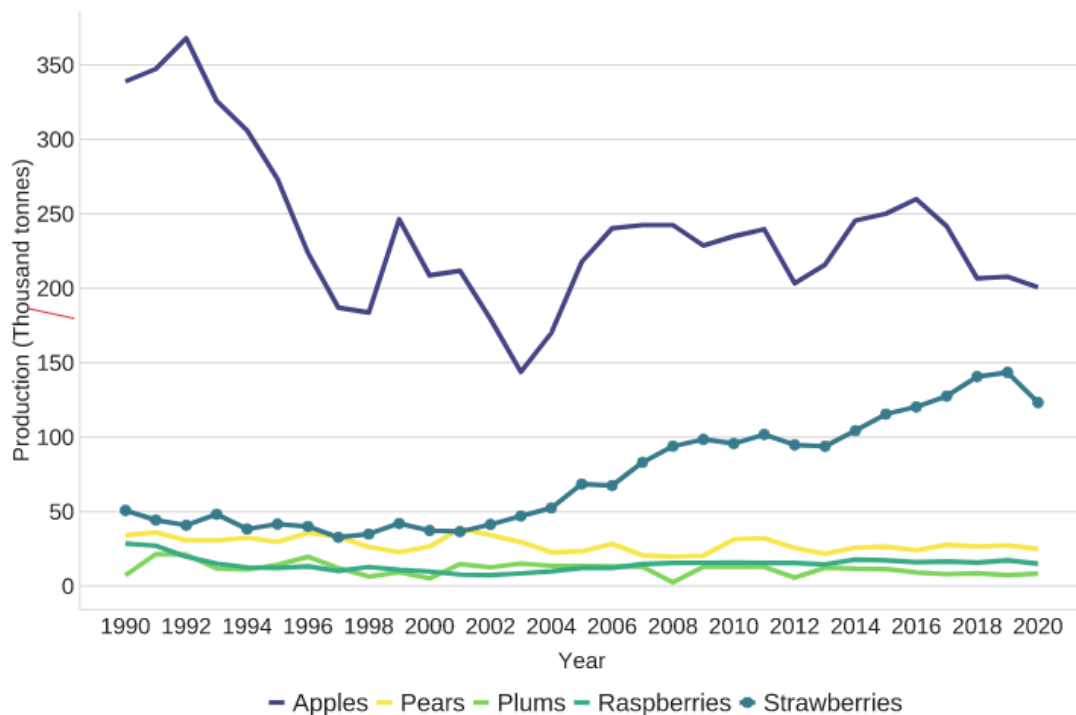
- cereals;
- carrots, turnips, swedes, cabbages;
- beef, lamb, poultry meat;
- milk;
- eggs.

28 We are less than self-sufficient in fresh vegetables, potatoes, sugar, mushrooms, top fruit and soft fruit and pig meat.

29 This does not necessarily reflect a production limitation, however. For example, apple production has fallen not because we cannot grow apples, but due to the economics of production and the ability to import more cheaply from abroad. As noted earlier, orchard areas have fallen from 100,000 to 20,000 ha. The production statistics below for fruit show a near tripling of production in strawberries since 2000, yet self-sufficiency (see Insert 7 above) remains at about 70%. This reflects changes in consumption trends, not a

production inability. Consumers now purchase berry fruits in winter when the UK cannot produce them.

*Insert 12: UK Domestic Fruit Production*



- 30 Therefore where the trends show declining self-sufficiency (potatoes, cauliflowers and broccoli, lettuce, tomatoes, pigmeat) it would be wrong to conclude that we cannot produce these products anymore. There are many other factors, with the two most significant being cheaper products being imported resulting in declining UK production, and changing consumer trends such that seasonal products are now mostly forgotten. We purchase lettuce, tomatoes, soft fruit etc all year round, and to meet that consumer demand we must import out of season produce. This shows in the statistics as declining self-sufficiency.
- 31 This is not a concern shared by Government. The UK Food Security Report identified high levels of self-sufficiency in UK production.
- 32 In the Government Food Strategy (2022)<sup>xi</sup> the largely self-sufficiency in wheat, most meats, eggs and some sectors of vegetables was noted, and that this had been broadly stable for 20 years. The strategy set out objectives **"to broadly maintain the current level of food we produce domestically"**.
- 33 We do not have a self-sufficiency concern in respect of calorie production. The complexities of import and export relate to our varied, and changing, diets rather than to any embedded production problems.

- 34 In the UK Food Security Report (2021) it 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 (and barley slightly more at 3520 calories), making 0.8 kilos of grain over 2,600 calories, compared to recommended calorie intake of 2 to 2500 for adults. From these figures it is easy to demonstrate that, even without accounting for other domestic products like potatoes, vegetables, grass-fed meat and dairy, and fisheries, current UK grain production alone could meet domestic calorie requirements if it was consumed directly by humans in a limited choice scenario”.**
- 35 The report went on to note 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”.**
- 36 The EA State of the Environment: soil report also notes that **“severe compaction and poor soil condition is also an issue for around 10% to 15% of grassland fields, as a result of overgrazing”.**
- 37 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<sup>xii</sup>.
- 38 Management of arable fields, including shelter belts, changes to tillage practice (ie practicing minimal soil disturbance), and good tramline practices reduce erosion.
- 39 **“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.

- 40 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<sup>xiii</sup>. The British Society of Soil Science record 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.
- 41 Biodiversity is also in decline. The 2019 State of Nature Report<sup>xiv</sup> 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.
- 42 The House of Commons Environmental Audit Committee<sup>xv</sup> recorded this in stark terms. The Summary started as follows: **“the world is witnessing a colossal decline in global biodiversity”**.

### **Conclusions**

- 43 Importation and export of foodstuffs has long been part of the UK food supply chain, and changes in diet and consumer demand coupled with economic factors have changed UK production.
- 44 Levels of self-sufficiency in most staples remains high.
- 45 Self-sufficiency in calories can be achieved from wheat production alone.
- 46 Government and its agencies highlight declining soil health and quality and biodiversity as a more pressing concern. Food security is not a concern.

<sup>i</sup> Food Supply and Food Security, Defra (6th December 2022)

<sup>ii</sup> Land Use Statistics: England 2022, [DLUHC](#) (27 October 2022)

<sup>iii</sup> National Statistics: agricultural land use in England [at](#) 1 June 2022, Defra (29 September 2022)

<sup>iv</sup> TIN 049 Agricultural Land Classification: protecting best and most versatile agricultural land, Natural England (December 2022)

<sup>v</sup> Summary of the State of the Environment: Soils, Environment Agency (26 January 2023)

<sup>vi</sup> State of the Environment: Soils, Environmental Agency (2019)

<sup>vii</sup> Agriculture: historical statistics, House of Commons library (25th June 2019)

<sup>viii</sup> Total Income from Farming in the UK 2021, Defra (12 May 2022)

<sup>ix</sup> United Kingdom Food Security Report 2021: Theme 2, UK Food Supply Services, Defra (22 December 2022)

<sup>x</sup> Agriculture: historical statistics, House of Commons library (25th June 2019).

<sup>xi</sup> Policy Paper: Government Food Strategy, Defra (13th June 2022)

<sup>xii</sup> EA, *ibid*, page 8.

<sup>xiii</sup> Science Note: Soil Carbon, BSSS (2021).

<sup>xiv</sup> The State of Nature 2019, The State of Nature Partnership (2019).

<sup>xv</sup> House of Commons Environmental Audit Committee: Biodiversity in the UK, [bloom](#) or bust? First report of session 2021-22 (23 June 2021).]

**Appendix KCC9**

**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.

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**Tags:** [direct payments](#), [farming](#), [food security](#), [food supply](#), [gas prices](#)

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A stylized illustration of a landscape. In the foreground, a dark green field is bisected by a light-colored path that curves from the bottom left towards the center. A large, dark green tree with a rounded canopy stands prominently on the left side of the path. To the right of the tree, a bright green, sloping hill rises towards the top right corner. The background is a plain, light greyish-white color.

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