

Agricultural Land Classification

Frequently Asked Questions

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General Background Questions

What is the ALC system?

The Agricultural Land Classification (ALC) system provides a method for assessing the quality of farmland in England and Wales. The ALC system classifies land into five grades, with 1 being the best and 5 being the worst and Grade 3 subdivided into Subgrades 3a and 3b. The current grading methodology is described in [The Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land \(MAFF 1988\)](#) sometimes referred to as 'The Blue Book'.

What is agricultural land?

Agricultural land is land which is capable of being used for agricultural purposes (e.g. cropping). The current use of the land does not affect the grade or agricultural potential of the land. Where the potential for agriculture has been irreversibly lost (e.g. through housing development) the land should no longer be classed as agricultural. For planning purposes, it is recommended that the Local Planning Authority is contacted to confirm the status of the land. Also see: [Can land be high grade if it is not cropped or is used for grazing?](#)

What is ALC used for?

The ALC is used to grade the quality of agricultural land so that informed decisions can be made over its future use within the planning system. The planning systems in England and Wales seek to conserve the 'Best and Most Versatile (BMV) agricultural land. Government policies in **Wales** with regard to BMV land can be found on the Welsh Government ALC webpages at: [Welsh Government Web Topic - Agricultural Land Classification](#) BMV policies in **England** are set out in the National Planning Policy Framework.

What is Best and Most Versatile agricultural land?

National planning policy defines the Best and Most Versatile agricultural land as land within grades 1, 2 and 3a. This is good to excellent quality land which can best deliver the food and non-food crops for the future.

How does the Agricultural Land Classification system grade land?

The criteria for grading are based on the long term physical limitations of land for agricultural use, such as **climate** (temperature, rainfall, aspect, exposure and frost risk), **site** (gradient, micro-relief and flood risk) **and soil** (texture, structure, depth and stoniness, and also chemical properties which cannot be corrected), and interactions between these factors such as soil wetness, droughtiness and erosion. Field survey to obtain site and soil data is required. The current grading methodology is described in: [The Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land \(MAFF 1988\)](#)

What do the different grades mean?

Generalised Description of the Agricultural Land Classification Grades

Grade & standard colour notations	Description of agricultural land	Detail
1	Excellent quality	No or very minor limitations on agricultural use. Wide range of agricultural and horticultural crops can be grown. High yielding and consistent.
2	Very good	Minor Limitations on crop yield, cultivations or harvesting. Wide range of crops but limitations on demanding crops (e.g. winter harvested veg). Yield high but lower than Grade 1.
3 (subdivided)	Good to moderate	Moderate limitations on crop choice, timing and type of cultivation, harvesting or level of yield. Yields lower and more variable than Grade 2.
3a	Good	Moderate to high yields of narrow range of arable crops (e.g. cereals), or moderate yields of grass, oilseed rape, potatoes, sugar beet and less demanding horticultural crops.
3b	Moderate	Moderate yields of cereals, grass and lower yields other crops. High yields of grass for grazing/ harvesting.
4	Poor	Severe limitations which restrict range and/or level of yields. Mostly grass and occasional arable (cereals and forage), but highly variable yields. Very droughty arable land included.
5	Very poor	Severe limitations which restrict use to permanent pasture or rough grazing except for pioneering forage crops.

A full description of the grades can be found in [Appendix 1](#).

Can land be high grade if it is not cropped or is used for grazing?

The current land use does not affect the grade or longer term agricultural potential of the land. Land use is an economic and management choice of the land manager. The ALC grade describes what the land is potentially capable of, not what it is currently used for.

Can the ALC grading be changed by farming practices?

Normal agricultural land management will rarely, if ever, affect the ALC grading of land. The grading is based on the long term physical and chemical limitations of land for agricultural use. The current or historic agricultural management, or intensity of use, does not affect the ALC grade. ALC grading could potentially only be improved by very major and expensive interventions, well beyond the scope of normal agricultural works. Examples could include major new drainage schemes, new flood defence systems or infilling / levelling of highly uneven land. It is extremely unlikely that an ALC grading would drop because of neglect or poor agricultural management.

Will fertilizer improve the grade?

Applications of fertiliser or lime are part of the normal management of agricultural land and do not affect the grade. Normal fertiliser levels in the soil have no bearing on ALC grade. Chemical limitations in ALC relate to major long term problems that cannot easily be remediated. These can include extreme acidity, saline environments and presence of toxic elements.

What can I grow on my land? (Crop suitability)

The suitability of land for certain crops is determined by a variety of factors. The ALC Grade of the land doesn't determine what can be grown, but indicates the type of crops that are generally suited to land of that quality and versatility. Typical crops are given in Appendix 1.

Are land values determined by ALC grade?

The ALC system was developed to inform land use planning decisions. The use of the ALC system for land valuation has never been intended and should not be used for this purpose.

Grade and Map Questions

What is the grade of my land?

The only way to accurately determine the agricultural grade of land is by way of a detailed field survey in accordance with the current ALC 1988 guidelines. [What does a detailed field survey involve?](#)

In **Wales**, the [Welsh Government holds detailed field survey information for selected areas and a predictive map which can be found at <http://lle.gov.wales/map/alc2>](#). For further information please contact LQAS@gov.wales.

The most up-to-date information on [ALC grades in England can be found on \[www.magic.gov.uk\]\(http://www.magic.gov.uk\)](#) (Landscape tab). Detailed field surveys (Post 1988 ALC layer on the Magic website) are available for selected areas. Also see: What about strategic maps showing the likely occurrence of best and most versatile land mentioned in [TIN049](#)?

Why do different maps show different grades for the same area?

ALC assessments became more field based and site specific from 1976, partly due to limitations of the Provisional mapping. On 1 January 1989, the current system of ALC grading was introduced: (*The Revised guidelines and criteria for grading the quality of agricultural land*: MAFF 1988). The guidelines provide the most definitive ALC grading and normally supersede any earlier surveys. In some areas there will be several different levels of detail of ALC data. Soils are variable and the grade of the land can vary over small distances. The ability to map this variation depends on the scale of the survey and the associated scale of mapping. The most detailed survey will usually represent the most definitive grading.

What are the 'Revised Guidelines'?

The ALC was devised and introduced in the 1960s and Technical Report 11 (MAFF, 1966: Technical Report 11, Agricultural Land Classification of England and Wales) outlined the national system. Following a review of the system, criteria for the sub-division of Grade 3 (3a, 3b & 3c) were published in 1976 and Technical Report 11/1 (MAFF, 1976: Technical Report 11/1, Agricultural Land Classification of England and Wales). The definition and identification of Sub-grades within Grade 3) outlined the updated.

The new and most up-to-date guidance was issued in 1988 "*The Revised guidelines and criteria for grading the quality of agricultural land*". This was implemented from 1 January 1989. The 1988 Revised guidelines were developed and tested with the aim of updating the system without changing the original concepts. This recognises two subgrades within in Grade 3: Subgrade 3a and Subgrade 3b, the latter being a combination of the previous Subgrades 3b and 3c. Consequently, modern ALC surveys are sometimes referred to as 'post 1988' or post revision. Any surveys carried out using the old guidelines (sometimes referred to as pre 1988 surveys or pre revision) would need to be reassessed under the current criteria.

Survey Related Questions

There is no detailed survey of my land, is a field survey required?

It depends why you want to know the grade of your land. For a planning purpose you should contact your local planning authority for advice.

What does a detailed field survey involve?

ALC surveys are undertaken, according to the published [Guidelines](#) by field surveyors using hand held augers to examine soils to a depth of 1.2 metres. This usually consists of one boring per hectare, supplemented by digging occasional small pits (usually by hand) to inspect the soil profile at representative locations to provide more detailed information about soil conditions to depths up to 1.2 metres. Information obtained by these methods is combined with climatic and other data to produce an ALC map and report, which will normally include individual soil profile and pit descriptions, and written explanations to support the grading applied. 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. It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions.

Can you recommend an ALC surveyor?

[The Institute of Professional Soil Scientists \(the professional body of the British Society of Soil Science\)](#) maintains a register of competent soil surveyors who have experience of carrying out ALC surveys. Other professional bodies may also maintain lists of their members who undertake ALC work. It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions.

Is urban land subject to ALC surveys?

Urban land may be shown on ALC survey maps. It will normally not be surveyed because the land has relatively little potential for return to agricultural use. The full definition of urban and other non-agricultural categories in the ALC system can be found in Appendix 1. You should contact your local planning authority for advice on whether an ALC survey is required to support a planning application.

Does the Welsh Government carry out ALC (detailed field) surveys?

Yes. The Welsh Government does carry out detailed Agricultural Land Classification (detailed field) surveys. These surveys are undertaken largely in response to requests from Local Planning Authorities for individual sites or areas at the urban edge which are being considered for development. The Welsh Government also holds copies of detailed individual Agricultural Land Classification (ALC) surveys carried out by them, as well as the former Welsh Office or Welsh Assembly Government. In addition the Welsh Government also provides a site survey validation service for Local Planning Authorities providing a technical assessment of submitted reports and enables them to fully consider land quality in the decision making process.

Does Natural England carry out ALC surveys?

Natural England provides advice to Local Planning Authorities on ALC matters, but does not carry out ALC field surveys. Natural England holds copies of detailed individual Agricultural Land Classification (ALC) surveys carried out by the former Ministry of Agriculture, Fisheries and Food until the late 1990s. These surveys were undertaken largely in response to requests from Local Planning Authorities for individual sites or areas at the urban edge which were to be considered for development; not all agricultural land was surveyed at the time. There is no longer a national programme to survey all areas in detail and since the late the 1990's, the Government no longer undertakes detailed field surveys itself. Specialist consultants are engaged by developers, Local Planning Authorities, landowners and others to carry out detailed Agricultural land Classification surveys for local plans and other development proposals.

What sampling density should I use in my ALC field survey?

There is no prescribed guidance on the sample density of field surveys; however, most experienced ALC surveyors use an average density of 1 sample point per hectare (carried out on the Ordnance Survey 100m grid). Soil pits are also useful to obtain further information about soil structure, porosity and stone content, rock layers etc. to enable confirmation of the grading found on site. The number of soil pits is difficult to specify in advance of starting field survey work. In general, one soil pit is dug for each of the main grades or soil types on the site, though not necessarily for each map unit, but it should be left to the professional judgement of the surveyor as to the appropriate minimum number required.

Surveys at this detailed level can also enable an assessment of the soil resources in line with the [Defra Code of Practice for the Sustainable Use of Soils on Construction Sites](#) and will allow users to present the land quality case to public inquiry level if required.

Depending upon the type of development, location, scale, purpose of the survey, availability of existing ALC data etc., less detailed surveys (or sometimes more detailed) surveys may be undertaken, but expert advice must be sought from a soil scientist or other practitioner experienced in undertaking ALC survey work. All data captured in ALC surveys is done to the same standard (i.e. standard recording of soil colour, texture etc. plus pits). The only difference in a less detailed survey is the grid spacing, not the quality or detail of data capture at the points examined.

It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions. The British Society of Soil Scientists run training courses and has a competency scheme, **Working with Soil**, covering aspects of soil survey and the ALC system.

What climate data is used for ALC?

The definitive climatic data used for assessing the overall climatic limitation (and for the wetness and droughtiness limitations) are obtained from a series of grid point datasets compiled specifically for ALC (Meteorological Office 1989: Climatological Data for Agricultural Land Classification). They provide long term average values of the required variables on a 5km grid covering the whole of England and Wales. These variables are interpolated for the location (grid reference) and altitude for intermediate sites.

I am a consultant/soil scientist undertaking a detailed ALC site survey and the land benefits from irrigation. Should I be taking this into account in my grading assessment?

No. The advice that irrigation should be removed from the ALC assessment was expressed in a consultation on the ALC system in 1996.

APPENDIX 1: AGRICULTURAL LAND CLASSIFICATION (ALC)

Descriptions of the Grades and Subgrades

The ALC grades and subgrades are described below in terms of the types of limitation which can occur, typical cropping range and the expected level and consistency of yield. In practice, the grades are defined by reference to physical characteristics. The grading guidance and cut-offs for limitation factors in the MAFF (1988) Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land enable land to be ranked in accordance with these general descriptions.

Descriptions are also given of other land categories which may be used on ALC maps.

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Descriptions of other land categories used on ALC maps

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: housing, industry, commerce, education, transport, religious buildings, cemeteries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including: golf courses, private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports/ airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Woodland

Includes commercial and non-commercial woodland. A distinction may be made as necessary between farm and non-farm woodland. Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (e.g. polythene tunnels erected for lambing) may be ignored.

Open water

Includes lakes, ponds and rivers as map scale permits.

Land not surveyed

Agricultural land which has not been surveyed. Where the land use includes more than one of the above land cover types, e.g. buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will usually be shown.

Source: Section 2: [MAFF \(1988\) Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.](#)