

Agricultural Land Classification (ALC): What is required in a good ALC report?

All ALC reports *must* follow the MAFF (1988) *Revised guidelines and criteria for grading the quality of agricultural land*. This is the *only* approved system for grading land quality in England and Wales.

<http://publications.naturalengland.org.uk/publication/6172638548328448?category=5954148537204736>

All ALC surveys *must* be field surveyed and this must be evidenced with the full record of auger and pit profiles. A sample density of 1 sample per 100m aligned to the OS grid is best practice. For smaller sites where this density cannot be achieved, a minimum of 3 auger borings and 1 pit is required.

Laboratory particle size density samples are expected to confirm hand texturing.

All reports should reference the Predictive ALC Map on the Welsh Government's geo-portal, Lle, <http://lle.gov.wales/map/alc>

Surveyors must not use or reference the Provisional 1:250,000 ALC Map (withdrawn November 2017).

A good report format will follow the structure below:

1. Location, background and methodology
2. Site factors
3. Description of soils and reasons for grading
4. Areas of grades and coloured ALC map
5. Auger boring schedule, pit schedule, lab samples and map
6. References

Details of ALC report content:

1. Location, Background and Methodology

- Date of survey, why the survey was commissioned and surveyor details, accreditation / experience.
- Survey methodology (expect mention of 1988 MAFF Guidelines, Munsell soil colour charts, auger boring density, number of soil pits and PSD lab samples).
- Detail of underlying geology & soils, previous ALC surveys nearby, Predictive ALC Map for Wales information <http://lle.gov.wales/map/alc>
- Detail of climatic information used – must include overall grade on climate, Field Capacity Days (FCD), moisture deficits (MD) for wheat and potatoes.
- Land use

2. Site factors:

- Details of gradient limitation
- Details of micro-relief limitation
- Details of flooding limitation

It is best practice to fully consider and evidence all site factors, **even if not limiting to the site**. This demonstrates that all limitations in the 1988 ALC Guidelines and Criteria have been considered in full as part of the assessment.

3. Soil descriptions and reasons for grading:

- Description of *standalone* factors (e.g. soil depth, stoniness)
- Description of *interactive* limitations (soil wetness & workability, soil droughtiness). This section should contain details of Field Capacity Days (FCD), gleyed / gleying, Slowly Permeable Layer (SPL) & Soil Wetness Class (SWC). All are important in soil wetness assessment and should be mentioned in all reports.
- For identified droughty soils Moisture Deficit (MD) and droughtiness (including calculations) should be included.
- A description of broad soil types identified on site. This section should contain details of texture, stoniness, wetness, structure, colour and porosity.
- A summary linking the soil / climate properties to ALC Grade.
- Some companies use tables to illustrate soil properties and reasons for grading.

4. Areas of grades and coloured ALC map:

This section is normally short. It should summarise survey findings into:

- A list of ALC grades present
- A very brief description of why the grade was allocated (e.g. stoniness / soil wetness and workability)
- Areas of Grade for each Grade identified in hectares (plus non-agricultural, urban and un-surveyed land if present)
- Percentages of each Grade identified.
- A coloured ALC map, clearly showing the distribution of Grades at the site. Some maps also contain areas of Grades.

5. Auger boring schedule, pit schedule, lab samples and map:

- Auger boring, soil pit and PSD sample point map
- A detailed listing of each individual sample point (auger boring) with associated soil properties.
- A detailed listing of any soil pits examined. These must include details on soil structure and porosity.
- The full results should be included for laboratory samples (PSD) to confirm hand textures.
- Eastings and northings for each sample point
- Many companies use table form for displaying auger boring and soil pit information.

References:

As standard, the following should be expected:

- MAFF (1988) *Revised guidelines and criteria for grading the quality of agricultural land*.
- Munsell soil colour book (2009)
- Hodgson J.M. (ed.) (1997) *Soil Survey Field Handbook*.
- Soil Survey of England and Wales (1984) Sheet 2 *Soils and their Use in Wales* (Map and memoir)
- Climatological Data for Agricultural Land Classification (Met Office 1989).
- Predictive ALC Map for Wales (2017) <http://lle.gov.wales/map/alc>