



February 2019

Tidcombe Holdings LVA LLP

Verification Study, Agricultural Land Classification

at

Land at Tidcombe Hall, Tiverton

**Beechwood Court,
Long Toll, Woodcote,
RG8 0RR**

**01491 684 233
readingagricultural.co.uk**

1 Introduction

- 1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Tidcombe Holdings LVA LLP to assess the Agricultural Land Classification (ALC) of land at Tidcombe Hall, Tiverton, by means of a desk appraisal and verification study of soil and site characteristics.
- 1.2 Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land (1988)¹, and summarised in Natural England's Technical Information Note 049².
- 1.3 Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. The principal physical factors influencing grading are climate, site and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.
- 1.4 Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use, and Grade 5 is very poor quality land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile agricultural land.

2 Site and climatic conditions

General features, land form and drainage

- 2.1 The site occupies approximately 12ha, most of which is agricultural land in grass or arable use centred on Little Tidcombe. The site is largely confined by the Grand Western Canal to the north, Tidcombe Lane to the west and residential properties off Warnicombe Lane to the south, with other agricultural land also to the west and to the east. Non-agricultural land comprises Tidcombe Hall in the north-west of the site.

¹ **MAFF (1988).** *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land.* MAFF Publications.

² **Natural England (2012).** *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land,* Second Edition.

- 2.2 Topography across the site generally slopes downward from the south to north towards the Grand Western Canal, from approximately 120m above Ordnance Datum (AOD) to 93m AOD. A shallow valley system runs through the east of the site, draining water northward to the canal.

Agro-climatic conditions

- 2.3 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at a representative altitude of 104m AOD and are given in Table 1. Climate at the site is warm and very wet with moderate to moderately small moisture deficits. The number of Field Capacity Days is greater than is typical for lowland England and is unfavourable for providing opportunities for agricultural field work.

Table 1: Local agro-climatic conditions

Parameter	Value
Average Annual Rainfall	1051mm
Accumulated Temperatures >0°C	1,472 day°
Field Capacity Days	214 days
Average Moisture Deficit, wheat	83mm
Average Moisture Deficit, potatoes	70mm

Soil parent material and soil type

- 2.4 The principal underlying geology mapped by the British Geological Survey³ across the north and central parts of the site is the Tidcombe Sand Member comprising sandstone of fluvial origin. The south of the site is underlain by the Halberton Breccia Formation.
- 2.5 Superficial deposits of colluvium are mapped across much of the site and comprise mixed, unsorted material accumulated at footslopes.
- 2.6 The Soil Survey of England and Wales soil association mapping⁴ (1:250,000 scale) shows the Bromsgrove association across the site comprising reddish coarse loamy soils over sandstone. Profiles are permeable and commonly assessed as Wetness Class (WC) I or II⁵.

³ **British Geological Survey (2019).** *Geology of Britain viewer*, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

⁴ **Soil Survey of England and Wales (1984).** *Soils of South West England* (1:250,000), Sheet 5

⁵ **Findlay et al (1984).** *Soils and their Use in South West England*, Soil Survey of England and Wales, Bulletin No.14

3 Agricultural land quality

Existing data

- 3.1 Provisional ALC mapping shows the site as Grade 2 and undifferentiated Grade 3 land. However, Natural England's TIN049 explains that:

"These maps are not sufficiently accurate for use in assessment of individual fields or development sites, and should not be used other than as general guidance. They show only five grades: their preparation preceded the subdivision of Grade 3 and the refinement of criteria, which occurred after 1976. They have not been updated and are out of print. A 1:250 000 scale map series based on the same information is available. These are more appropriate for the strategic use originally intended ..."

- 3.2 A detailed ALC survey of the site was undertaken by MAFF in 1991⁶ as part of a much larger survey area covering 118.5ha across five locations east of Tiverton. The MAFF survey classified the land within the current site boundary as a mix of Grades 1 to Subgrade 3b, as shown in Table 2 below and on Figure RAC8226-1.
- 3.3 Grade 1 is described to have deep, well drained soils with minor stone content. Profiles comprise fine sandy silt loam topsoils over deep medium clay loam subsoils.
- 3.4 Land classified as Grade 2 is limited slightly by workability. These profiles are also well drained but have medium clay loam topsoil, which overlies medium or occasionally heavy clay loam subsoils.
- 3.5 Areas of Subgrade 3a are limited by wetness and workability. Profiles within these areas are noted to show 'clear evidence of gleying caused by shallow waterlogging for significant periods of the year'. Although profiles do not include a slowly permeable layer, the high number of Field Capacity Days results in the assessment as WC III. Combined with sandy loam or medium clay loam topsoils, the resulting limitation is to Subgrade 3a.
- 3.6 Three small areas have also been downgraded to Subgrade 3b. North of Little Tidcombe, the soil profiles include slowly permeable layers and are of WC IV, resulting in a moderate wetness and workability limitation with medium clay loam topsoil. West of Little Tidcombe, a small area is limited to Subgrade 3b by gradient, which would measure between 7° and 11°.

⁶ MAFF (1991). *Tiverton Local Plan, Agricultural Land Classification*. Ref. no. 26/91

December 2018 validation

- 3.7 RAC resurveyed the site in December 2018 to validate the MAFF ALC gradings within the current site boundary. The validation survey confirmed the areas of Grades 2, 3a and 3b to the north and west of Little Tidcombe. However, some discrepancies have been identified across the remainder of the site.
- 3.8 The north-east of the site is graded 3a by the MAFF survey on wetness. On revisiting the site, a further wetness limitation was identified downgrading the area to Subgrade 3b (see Appendix 1), which is more representative of the agricultural land quality. Profiles within this revised classification have topsoil of sandy silt loam to medium clay loam and are assessed as WC IV. These interactive factors limit the land in accordance with Table 6 of the ALC guidelines to Subgrade 3b.
- 3.9 The MAFF survey identified land of Grades 1 and 2 in the south-west of the site. The profile records note topsoil stone content to be 0-2% by volume in Grade 1 profiles. However the survey undertaken in 2018 found contrasting conditions in this area, as shown in photographs in Appendix 1. Topsoil stone content exceeds 15% by volume of stones larger than 2cm resulting in a limitation to Subgrade 3a.
- 3.10 The profile records also suggest that land to the west of the farmstead classified as Grade 2 has been mapped as such for the purposes of representing 'average' field conditions in that area: of two profiles observed, one is of Grade 1 quality and the other of Subgrade 3a. Whilst an acceptable approach, depending on the scale of survey, the grade boundaries become based on professional judgement and site boundaries rather than their inherent quality and are therefore fluid.
- 3.11 The MAFF survey of 1991 identified a small area of land west of Little Tidcombe limited to Subgrade 3b by gradient. This limitation has been confirmed by a detailed topographic survey. An additional area to the south-east of the site is also shown by the topographic survey to be limited by gradient to Subgrade 3b, with slopes of 7-8°, although this land was previously classified by MAFF as Grade 2.
- 3.12 Based on a combination of the MAFF survey data and the verification survey undertaken by RAC, the areas of each ALC grade present at the site are given in Table 2 and are shown in Figure RAC8226-2.

Table 2: Agricultural land classification

Grade	Description	MAFF 1991 Survey Ha (%)	RAC 2018 Validation Survey Ha (%)
1	Excellent quality	1.6 (16)	-
2	Very good quality	5.4 (54)	5.1 (51)
3a	Good quality	1.9 (19)	1.9 (19)
3b	Moderate quality	1.1 (11)	3.0 (30)
	Total Agricultural	10.0 (100)	10.0 (100)
	Non-Agricultural	1.6	1.6

Appendix 1: Site Photographs



Topsoil stone in south-west



Surface water in north-east

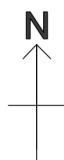



Surveyed by the Resource Planning Group July 1991. Map produced by the Cartographic Unit, Farm and Countryside Service, M.A.F.F. Bristol.
Ref.no. 26/91

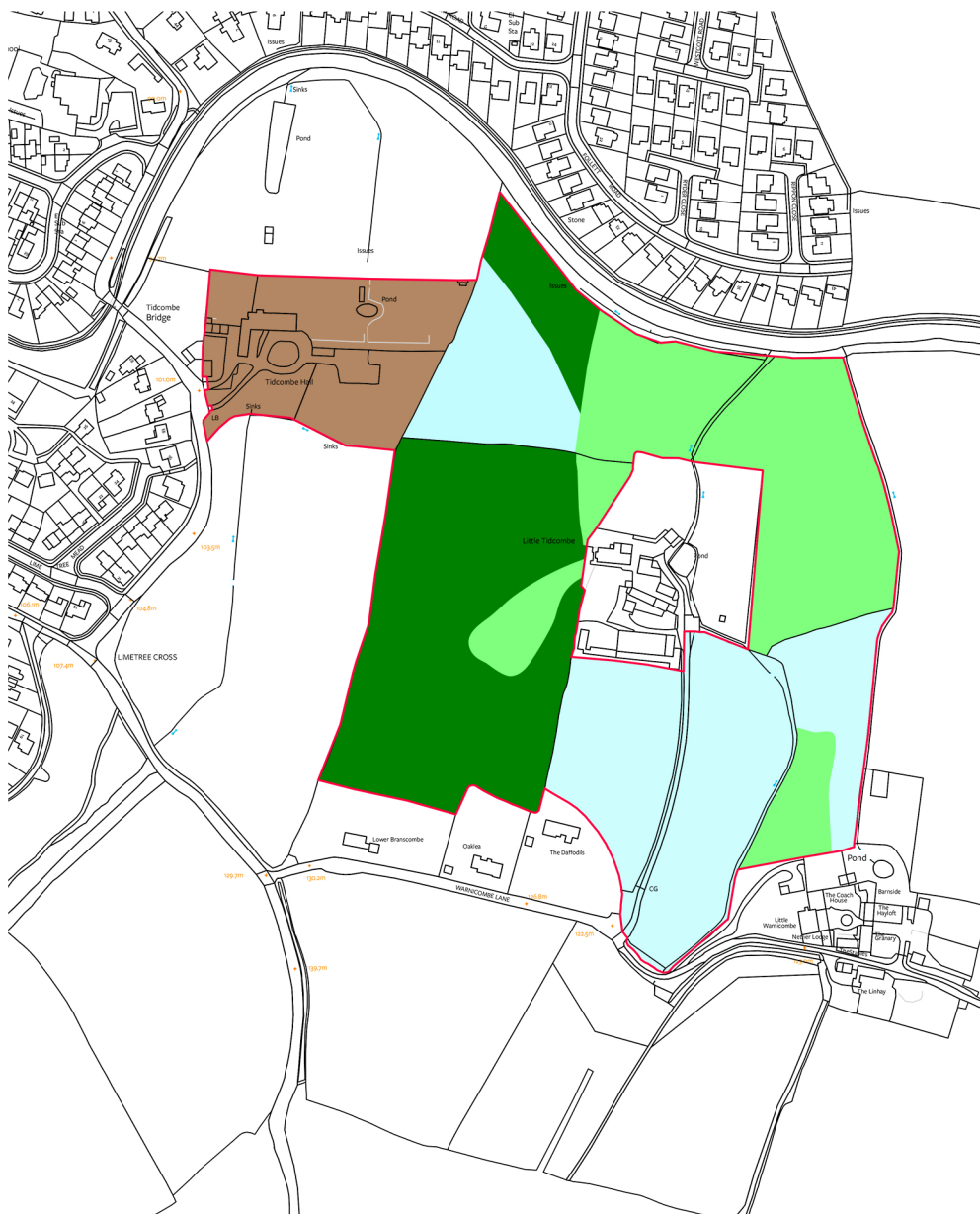
Based upon the 1971 Ordnance Survey 1 : 10 000 map with the permission of The Controller of Her Majesty's Stationery Office. Crown Copyright Reserved.

© Crown Copyright Reserved 1991.









Agricultural Land			
ALC grade		Agricultural land quality	Degree of limitation
Grade 1		Excellent	None or very minor
Grade 2		Very good	Minor
Grade 3a		Good	Moderate
Grade 3b		Moderate	Moderate to severe
Grade 4		Poor	Severe
Grade 5		Very poor	Very severe
Other Land Categories			
Urban		Agricultural buildings	
Non -agricultural		Open water	
Woodland		Not surveyed	
* Grade/Category not present within survey area			
Further details contained in revised Agricultural Land Classification. MAFF, 1988.			



Drawing title MAFF Agricultural Land Classification	Ref. RAC/8226/1	Rev.				Reading Agricultural Consultants Ltd Gate House Beechwood Court Long Toll Woodcote RG8 0RR 01491 684233 www.readingagricultural.co.uk  READING AGRICULTURAL CONSULTANTS
Contract Tidcombe Hall, Tiverton	Drawn by MAFF	Checked by N/A				
	Scales NOT TO SCALE	Date N/A				
			Rev.	Comment	Date	



Legend:

Grade 1	
Grade 2	
Grade 3a	
Grade 3b	
Grade 4	
Grade 5	
Non-agricultural	
Not present	



Plan reproduced from Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright Reserved.
Ordnance Survey Copyright Licence Number: 100005584

Drawing title Agricultural Land Classification	Ref. RAC/8226/2	Rev.				Reading Agricultural Consultants Ltd Gate House Beechwood Court Long Toll Woodcote RG8 0RR 01491 684233 www.readingagricultural.co.uk
Contract Tidcombe Hall, Tiverton	Drawn by AGM	Checked by AIF				
	Scales 1:5,000@A4	Date Feb 2019	Rev.	Comment	Date	

