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# **Agricultural Land Classification, Soil Resources and Agricultural Considerations**

**Land at Sunnyside Nurseries, Yapton Road, Barnham, PO22 0AZ**

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## Table of Contents

|          |                                                                         |           |
|----------|-------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION</b>                                                     | <b>1</b>  |
| <b>2</b> | <b>SITE AND CLIMATIC CONDITIONS</b>                                     | <b>2</b>  |
| <b>3</b> | <b>AGRICULTURAL LAND QUALITY</b>                                        | <b>4</b>  |
| <b>4</b> | <b>AGRICULTURAL ASSESSMENT</b>                                          | <b>6</b>  |
|          | <b>APPENDIX 1: LABORATORY DATA</b>                                      | <b>8</b>  |
|          | <b>APPENDIX 2: SOIL PROFILE SUMMARIES AND DROUGHTINESS CALCULATIONS</b> | <b>10</b> |
|          | <b>APPENDIX 3: SOIL PROFILE PHOTOGRAPHS</b>                             | <b>12</b> |
|          | <b>FIGURE RAC/10894/1: OBSERVATIONS</b>                                 | <b>13</b> |
|          | <b>FIGURE RAC/10894/2: AGRICULTURAL LAND CLASSIFICATION</b>             | <b>14</b> |

# 1 Introduction

- 1.1 Reading Agricultural Consultants Ltd (RAC) is instructed to investigate the Agricultural Land Classification (ALC) and soil resources of land at Sunnyside Nurseries, Yapton Road, Barnham by means of a detailed survey 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<sup>1</sup>, and summarised in Natural England's Technical Information Note (TIN) 049<sup>2</sup>.
- 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 conditions 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. Grade 2 is very good quality agricultural land, with minor limitations which affect crop yield, cultivations or harvesting. Grade 3 land has moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield, and is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Grade 4 land is poor quality agricultural land with severe limitations which significantly restrict the range of crops and/or level of yields. Grade 5 is very poor quality land, with very severe limitations which restrict use to permanent pasture or rough grazing.
- 1.5 Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile (BMV) agricultural land.
- 1.6 As explained in Natural England's TIN049, the whole of England and Wales was mapped from reconnaissance field surveys in the late 1960s and early 1970s, to provide general strategic guidance on agricultural land quality for planners. This Provisional Series of maps was published

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

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

on an Ordnance Survey base at a scale of One Inch to One Mile (1:63,360). The Provisional ALC map shows the site as very good quality Grade 2 land. However, 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 ..."*

- 1.7 TIN049 goes on to explain that a definitive ALC grading should be obtained by undertaking a detailed survey according to the published guidelines, at an observation density of one boring per hectare. This survey follows the methodology set out in the ALC guidelines.

## **2 Site and climatic conditions**

### **General features, land form and drainage**

- 2.1 The site extends to approximately 8.16 hectares (ha) of land to the north of Yapton Road, immediately east of Barnham. Approximately 6.9 ha is agricultural land in two fields, which had been cropped with maize. The remainder of the site in the west and south-west comprises various buildings associated with the former nursery and part of a camp site.
- 2.2 The northern boundary is formed by a railway line, the eastern by a treed hedge line with open land beyond, the southern boundary a pasture field with Yapton Road beyond and the western boundary by housing along Blossom Way.
- 2.3 The site is flat at 9 m – 10 m above Ordnance Datum (AOD). Drainage of the site is through the soil profile.

### **Agro-climatic conditions**

- 2.4 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5 km grid point data set at a representative altitude of 9 m AOD, and are given in Table 1. The climate at the site is warm and moist, and moisture deficits are large. The number of Field Capacity Days is slightly higher than average for lowland England (150) but is favourable for providing opportunities for agricultural field work. There is no overriding climatic limitation to the agricultural land quality.

**Table 1:** Local agro-climatic conditions

| Parameter                          | Value          |
|------------------------------------|----------------|
| National Grid Reference            | SU 96648 04205 |
| Average Annual Rainfall            | 763 mm         |
| Accumulated Temperatures >0°C      | 1,540 day°     |
| Field Capacity Days                | 156 days       |
| Average Moisture Deficit, wheat    | 118 mm         |
| Average Moisture Deficit, potatoes | 115 mm         |

### Soil parent material and soil type

- 2.5 The bedrock geology mapped by the British Geological Survey<sup>3</sup> is the London Clay Formation which is a sedimentary bedrock comprising clay, silt and sand. It mainly comprises bioturbated or poorly laminated, blue-grey or grey-brown, slightly calcareous, silty to very silty clay, clayey silt and sometimes silt, with some layers of sandy clay.
- 2.6 The London Clay is overlain across the whole site by superficial River Terrace Deposits which are sedimentary deposits comprising sand, silt and clay.
- 2.7 The Soil Survey of England and Wales soil association map<sup>4</sup> (1:250,000 scale) shows the Park Gate association at the site. This association comprises deep, stoneless, silty soils that are variously affected by groundwater, over aeolian silty drift. The soils are moderately permeable but affected by high winter water-tables, and are generally within Wetness Classes (WC) III or IV although WC can be improved to WC I or II where there are satisfactory drainage outfalls<sup>5</sup>.

<sup>3</sup> British Geological Survey (2025). *BGS Geology Viewer*, <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>

<sup>4</sup> Soil Survey of England and Wales (1984). *Soils of South East England* (1:250,000), Sheet 6

<sup>5</sup> LandIS (2025). *Soil associations in England and Wales*, <https://www.landis.org.uk/soilsguide/>

### **3 Agricultural land quality**

#### **Soil survey methods**

- 3.1 Seven soil profiles were examined using an Edelman (Dutch) auger at an observation density of approximately one per hectare which is in accordance with the established recommendations for ALC surveys<sup>2</sup>. The locations of observations are indicated on Figure RAC/10894/1.
- 3.2 At each observation point the following characteristics were assessed for each soil horizon up to a maximum of 120 cm or any impenetrable layer:
- soil texture;
  - stone content;
  - colour (including localised mottling);
  - consistency;
  - structural condition;
  - free carbonate; and
  - depth.
- 3.3 One topsoil sample was submitted for laboratory determination of particle size distribution, pH, organic matter content and nutrient contents (P, K, Mg). Results are presented in Appendix 1.
- 3.4 Soil WC is determined from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling, and slowly permeable subsoil layers at least 15 cm thick, in relation to the number of Field Capacity Days at the location.
- 3.5 Soil droughtiness is investigated by the calculation of moisture balance equations (given in Appendix 2). Crop-adjusted Available Profile Water (AP) is estimated from texture, stoniness and depth, and then compared to a calculated moisture deficit (MD) for the standard crops wheat and potatoes. The MD is a function of potential evapotranspiration and rainfall. Grading of the land can be affected if the AP is insufficient to balance the MD and droughtiness occurs.

## **Agricultural land classification and site limitations**

- 3.6 Assessment of agricultural land quality has been carried out according to the revised ALC guidelines<sup>1</sup>. Soil profiles have been described according to Hodgson<sup>6</sup> which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.
- 3.7 There is one main soil type present at the site, comprising a silty loam or medium silty clay loam topsoil over a heavy silty clay loam and silty clay subsoil. Soil profiles are shown in the photographs in Appendix 3.
- 3.8 The topsoil comprises brown or dark yellowish brown (10YR4/3 or 10YR3/4 in the Munsell soil colour charts<sup>7</sup>), medium silty clay loam or silty loam topsoil with an average depth of 27 cm (within a range of 22 cm to 35 cm). The topsoil is very slightly stony, with 2% hard stones, non-calcareous, with a weakly developed, granular structure, and a friable consistency.
- 3.9 The topsoil lies over a (light) yellowish brown (10YR5/4 and 10YR6/4), brown (10YR5/3, 10YR4/3) or dark greyish brown (10YR4/2), stoneless, heavy silty clay loam upper subsoil. The upper subsoil has a medium subangular blocky structure and a friable to firm consistency. All upper subsoils are permeable.
- 3.10 The lower subsoil is silty clay or heavy silty clay loam, which is mostly pale brown (10YR6/3) and light yellowish brown (10YR6/4), but also including light grey (10YR7/2), light brownish grey (10YR6/2) and yellowish brown (10YR5/6). The lower subsoil has a coarse angular blocky structure and a generally firm (occasionally friable) consistency.
- 3.11 The lower subsoils are gleyed and slowly permeable, with the depth to the slowly permeable layer determining the WC, which varies from WC I to WC III. Where the slowly permeable layer is deeper in the profiles, they are WC II and classified as Grade 2 by soil wetness in accordance with Table 6 of the ALC guidelines (with three profiles limited to the same extent by droughtiness). Where the slowly permeable layer is shallower, the profiles are WC III and Subgrade 3a. One profile in the south where the soil is better structured is limited by soil droughtiness only to Grade 2, with no wetness limitation.
- 3.12 The ALC distribution within the site is shown in Figure RAC/10894/2 and the areas of each grade are given in Table 2 below.

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<sup>6</sup> **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook*. Soil Survey Technical Monograph No. 5, Silsoe.

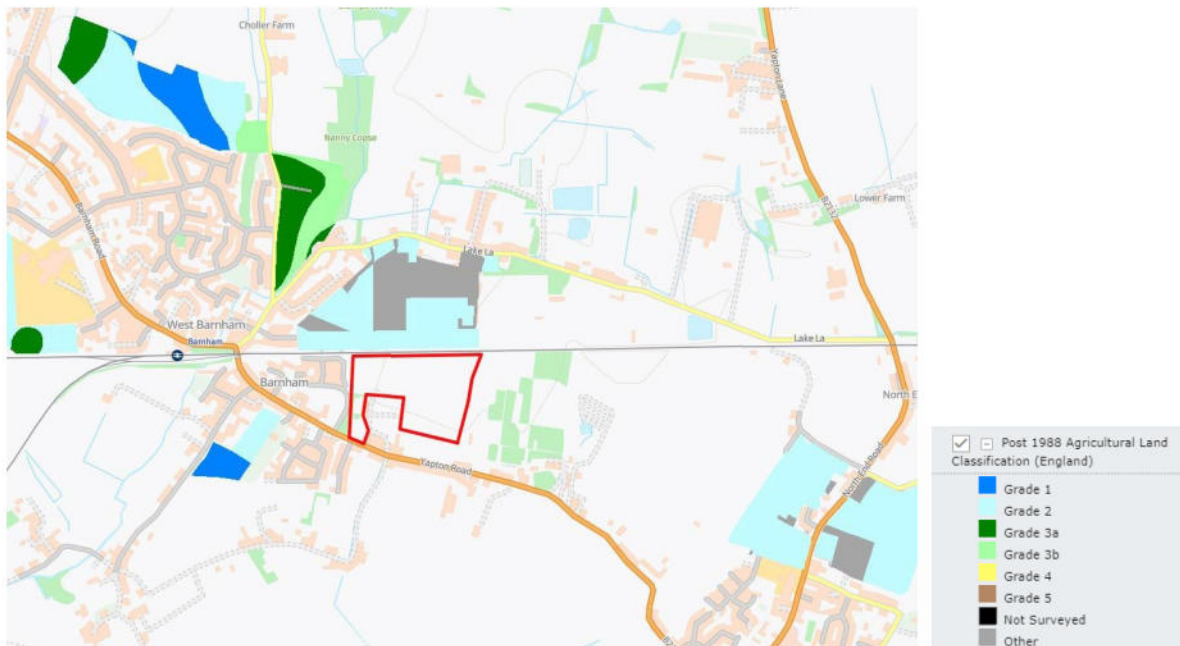
<sup>7</sup> **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

**Table 2: Agricultural Land Classification**

| Grade            | Description       | Area (ha) | %   |
|------------------|-------------------|-----------|-----|
| Grade 2          | Very good quality | 5.5       | 67  |
| Subgrade 3a      | Good quality      | 1.4       | 17  |
| Non-agricultural |                   | 1.3       | 16  |
| Total            |                   | 8.2       | 100 |

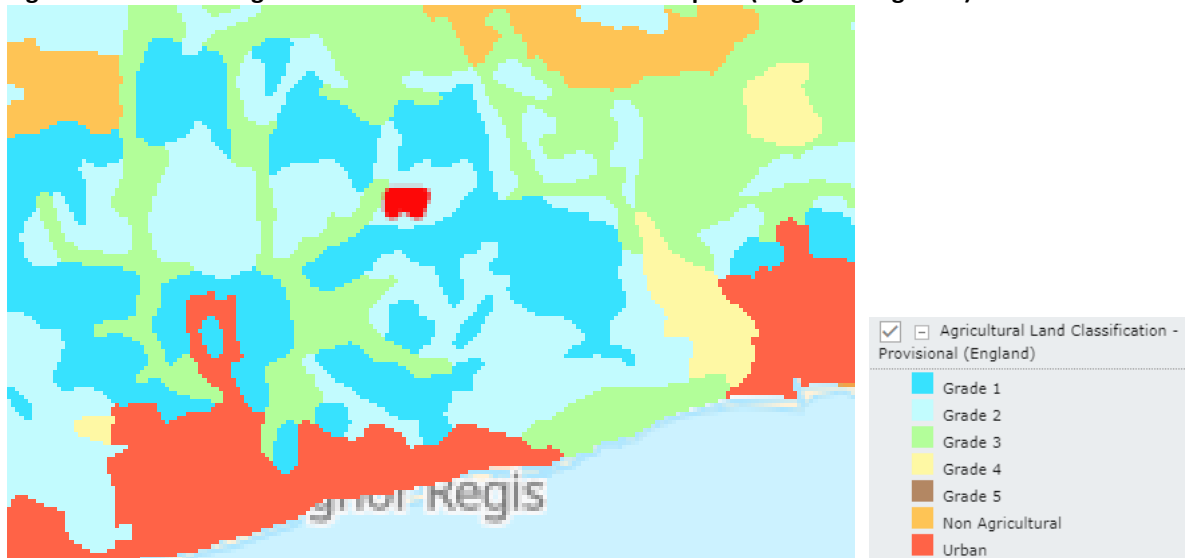
## 4 Agricultural assessment

- 4.1 The classification of the site as Grades 2 and 3a is typical of agricultural land quality in the vicinity, as can be seen from the results of detailed ALC surveys undertaken by the former MAFF and shown on [defra.magic.gov.uk](http://defra.magic.gov.uk) in Figure 1. There are substantial areas of Grade 2 land in the vicinity, such as shown on land immediately to the north of the site which has since been developed for housing and a glasshouse. The only lower quality Subgrade 3b land is associated with the floodplain and not suitable for development.

**Figure 1: Detailed Agricultural Land Classification around Barnham ([magic.defra.gov.uk](http://magic.defra.gov.uk))**

- 4.2 As can be seen from the Provisional ALC plan (Figure 2), Barnham sits within an area of very high quality land in the coastal plain, and it is evident from the wider Provisional ALC and the detailed surveys that have been undertaken, that any necessary development around the village will involve the loss of BMV land, predominantly in Grade 2 but also with Grade 1 being present.

**Figure 2: Provisional Agricultural Land Classification around Yapton (magic.defra.gov.uk)**



- 4.3 This site is a small and isolated area of agricultural land that cannot be amalgamated and farmed with neighbouring land. It is surrounded by a railway line to the north, by housing to the west and south, and by non-agricultural land to the east. Moreover, the land is fragmented in ownership into two parcels (with a third separate parcel between the site and Yapton Road) which does not encourage efficiencies or economies of scale.
- 4.4 The land has historically been in pasture, with a hay crop taken. Successive Google Earth images from 2001 all show the land as grassland, with a number also showing its use as a caravan site. This use can be carried out on land of any grade and does not make use of the inherent quality of the land. It does not conform with the expectation from Grade 2 land that *“a wide range of agricultural and horticultural crops can be grown”* and that *“the level of yield is generally high”*.
- 4.5 The land was contract farmed last year with maize but yields were poor due to an infestation of wireworm. As these can live in the soil for several years, and require a combination of management measures to prevent and control which are not available on this site (such as for example crop rotation), the land will return to pasture and will not be used to grow crops. As such, the land is not achieving its inherent quality and status.
- 4.6 The site is therefore inherently of a similar quality to other land around Barnham but suffers from limitations of size, fragmentation and isolation that in practical terms reduce its potential for arable use, and thus its potential to meet its Grade 2 and 3a quality. When arable uses have been attempted, other factors in the form of pests have damaged the crop and reduced yields and productivity.

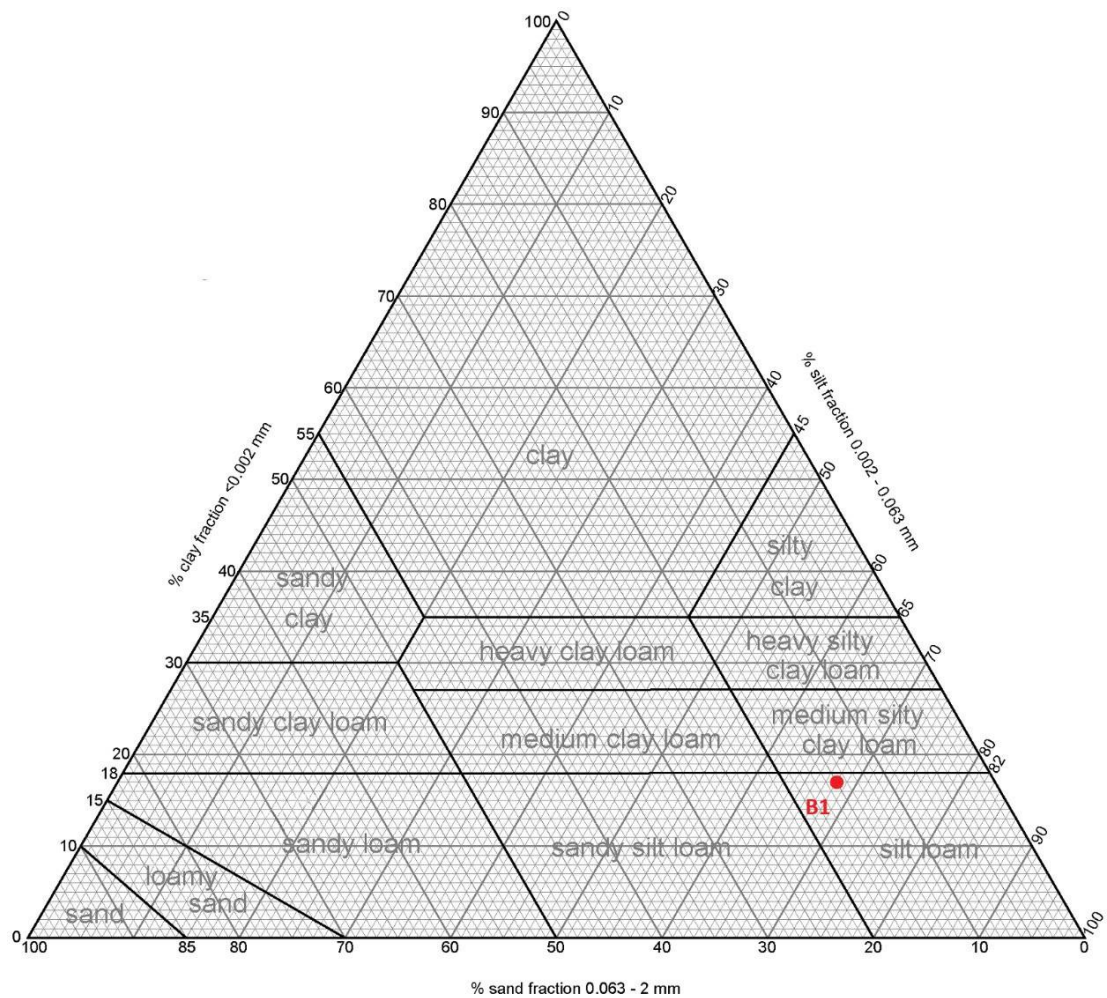
## Appendix 1:        Laboratory Data

| Determinand         | B1 Topsoil | Units |
|---------------------|------------|-------|
| Sand 2.00-0.063 mm  | 15         | % w/w |
| Silt 0.063-0.002 mm | 68         | % w/w |
| Clay <0.002 mm      | 17         | % w/w |
| Organic Matter      | 3.5        | % w/w |
| Texture             | Silt loam  |       |

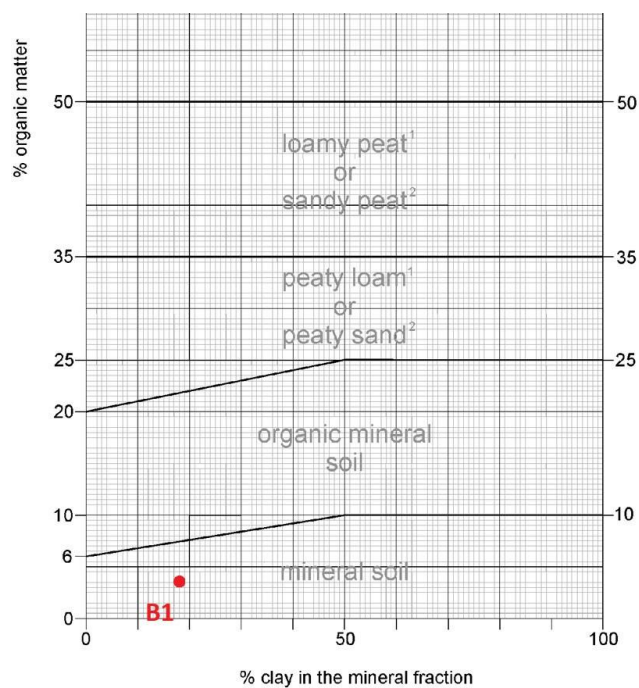
| Determinand    | B1 Topsoil | Units     |
|----------------|------------|-----------|
| Soil pH        | 6.0        |           |
| Phosphorus (P) | 31.0       | mg/l (av) |
| Potassium (K)  | 77.0       | mg/l (av) |
| Magnesium (Mg) | 84.3       | mg/l (av) |

| Determinand    | B1 Topsoil | Units      |
|----------------|------------|------------|
| Phosphorus (P) | 3          | ADAS Index |
| Potassium (K)  | 1          | ADAS Index |
| Magnesium (Mg) | 2          | ADAS Index |

## Soil Texture by Particle Size Analysis



## Topsoil Organic Matter



## Appendix 2: Soil Profile Summaries and Droughtiness Calculations

Wetness / workability limitations are determined according to the methodology given in Appendix 3 of the ALC guidelines, MAFF 1988

Droughtiness calculations are made according to the methodology given in Appendix 4 of the ALC guidelines, MAFF 1988.

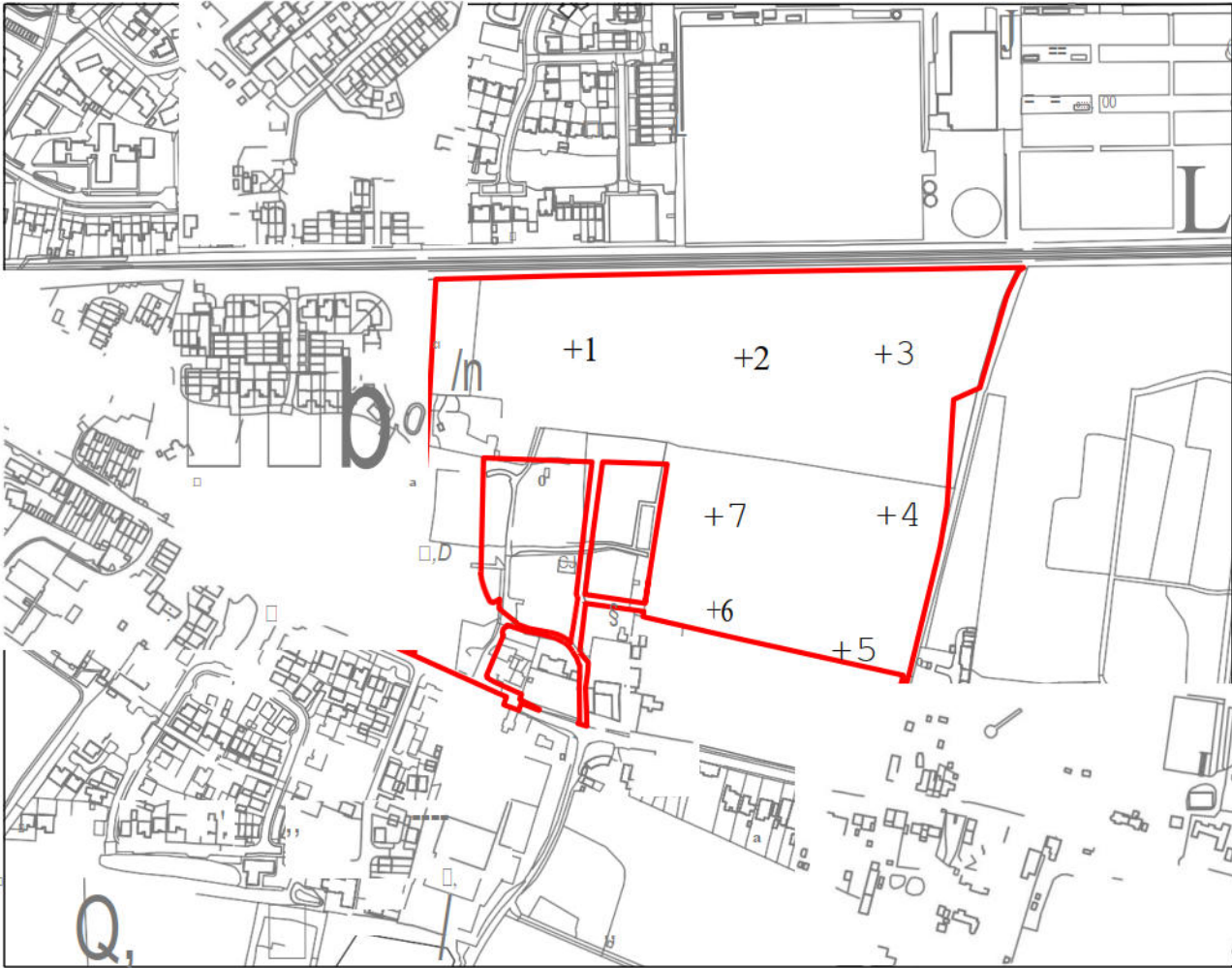
Grades are shown for drought, wetness and any other soil or site factors which are relevant. The overall Grade is set by the most limiting factor and shown on the right.

| Stone types |          |                |         |                   |                                                         | Climate Data  |           |                                      | Wetness Class Guidelines |                                     |            |              |                | II      | III   | IV               | V           |                    |
|-------------|----------|----------------|---------|-------------------|---------------------------------------------------------|---------------|-----------|--------------------------------------|--------------------------|-------------------------------------|------------|--------------|----------------|---------|-------|------------------|-------------|--------------------|
| %TAv        |          | EAv            |         |                   | MDwheat                                                 | 118           |           | SPL within 80cm, gleying within 40cm |                          |                                     |            |              | >70cm          | 42-70cm |       | <42cm            |             |                    |
| hard        |          | 1              |         | 0.5               |                                                         |               | MDpotato  | 115                                  |                          | SPL within 80cm, gleying at 40-70cm |            |              |                |         | >54cm | <54cm            |             |                    |
|             |          |                |         |                   | FCD                                                     | 156           |           | No SPL but gleying within 40cm       |                          |                                     |            |              | coarse subsoil |         | I     | other cases      |             | II                 |
| hard        |          | flint & pebble |         |                   | Maximum depth of auger penetration is <u>underlined</u> |               |           |                                      |                          |                                     |            |              |                |         |       |                  |             |                    |
| Site No.    | Depth cm |                | Texture | CaCO <sub>3</sub> | Colour                                                  | Mottle colour | abundance | stone% hard                          | stone% N/A               | Structure                           | APwheat mm | AP potato mm | Gley           | SPL     | WC    | Wetness grade WE | Final Grade | Limiting Factor(s) |
| 1           | T        | 0              | 24      | ZL                | n                                                       | 10YR 3/4      |           | 2                                    |                          |                                     | 54         | 54           | n              | n       | II    | 2                | 2           | WE                 |
|             |          | 24             | 40      | mZCL              | n                                                       | 10YR 4/3      |           | 0                                    |                          |                                     | 27         | 27           | n              | n       |       |                  |             |                    |
|             |          | 40             | 60      | mZCL              | n                                                       | 10YR 5/4      | Fe Mn     | few                                  | 0                        |                                     | 27         | 34           | n              | n       |       |                  |             |                    |
|             |          | 60             | 85      | hZCL              | n                                                       | 10YR 7/2      | Fe Mn     | com                                  | 0                        | poor                                | 15         | 12           | y              | (y)     |       |                  |             |                    |
|             |          | 85             | 120     | ZC                | n                                                       | 10YR 6/3      | Fe Mn     | many                                 | 0                        | ...poor.....                        | 25.....    | 0.....       | y              | y       |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      |                          | Total                               | 148        | 127          |                |         |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      | MD                       | 30                                  | 12         |              |                |         |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      | Droughtiness grade (DR)  |                                     | 1          | 1            |                |         |       |                  |             |                    |
| 2           | T        | 0              | 25      | mZCL              | n                                                       | 10YR 4/3      |           | 2                                    |                          |                                     | 47         | 47           | n              | n       | III   | 3a               | 3a          | WE                 |
|             |          | 25             | 38      | hZCL              | n                                                       | 10YR 5/4      | Fe Mn     | com                                  | 0                        |                                     | 22         | 22           | n              | n       |       |                  |             |                    |
|             |          | 38             | 60      | ZC                | n                                                       | 10YR 6/4      | Fe Mn     | com                                  | 0                        |                                     | 26         | 33           | y              | n       |       |                  |             |                    |
|             |          | 60             | 120     | ZC                | n                                                       | 10YR 6/3      | Fe Mn     | com                                  | 0                        | ...poor.....                        | 42.....    | 12.....      | y              | y       |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      |                          | Total                               | 137        | 114          |                |         |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      | MD                       | 19                                  | -1         |              |                |         |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      | Droughtiness grade (DR)  |                                     | 2          | 2            |                |         |       |                  |             |                    |
| 3           | T        | 0              | 25      | mZCL              | n                                                       | 10YR 4/3      |           | 2                                    |                          |                                     | 47         | 47           | n              | n       | II    | 2                | 2           | WE DR              |
|             |          | 25             | 64      | hZCL              | n                                                       | 10YR 5/4      | Mn        | few                                  | 0                        |                                     | 57         | 66           | n              | n       |       |                  |             |                    |
|             |          | 64             | 100     | ZC                | n                                                       | 10YR 5/3      | Fe Mn     | com                                  | 0                        | poor                                | 25         | 7            | y              | y       |       |                  |             |                    |
|             |          | 100            | 120     | ZC                | n                                                       | 10YR 6/3      | Fe        | many                                 | 0                        | ...poor.....                        | 14.....    | 0.....       | y              | y       |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      |                          | Total                               | 142        | 120          |                |         |       |                  |             |                    |
|             |          |                |         |                   |                                                         |               |           |                                      | MD                       | 24                                  | 5          |              |                |         |       |                  |             |                    |

|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  |       |     |     |     |     |    |    |       |  |  |
|---|---|-----|-----|------|---|----------------|-------|------|---|--|------|--|--|--|-------------------------|--|-------|-----|-----|-----|-----|----|----|-------|--|--|
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Droughtiness grade (DR) |  | 2     | 2   |     |     |     |    |    |       |  |  |
| 4 | T | 0   | 22  | ZL   | n | 10YR 4/3       |       |      | 2 |  |      |  |  |  |                         |  | 50    | 50  | n   | n   | //  | 2  | 2  | WE DR |  |  |
|   |   | 22  | 36  | hZCL | n | 10YR 4/2       | Fe    | few  | 0 |  |      |  |  |  |                         |  | 24    | 24  | n   | n   |     |    |    |       |  |  |
|   |   | 36  | 50  | hCL  | n | 10YR 5/3       | Fe    | com  | 0 |  |      |  |  |  |                         |  | 22    | 22  | y   | n   |     |    |    |       |  |  |
|   |   | 50  | 80  | hZCL | n | 10YR 6/4       | Fe    | many | 0 |  | poor |  |  |  |                         |  | 18    | 24  | y   | y   |     |    |    |       |  |  |
|   |   | 80  | 120 | ZC   | n | 10YR 6/3       | Fe Mn | many | 0 |  | poor |  |  |  |                         |  | 28    | 0   | y   | y   |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  |       |     |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Total                   |  | 142   | 120 |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | MD                      |  | 24    | 5   |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Droughtiness grade (DR) |  | 2     | 2   |     |     |     |    |    |       |  |  |
| 5 | T | 0   | 30  | mZCL | n | 10YR 4/3       |       |      | 2 |  |      |  |  |  |                         |  | 56    | 56  | n   | n   | /// | 3a | 3a | WE    |  |  |
|   |   | 30  | 48  | hZCL | n | 10YR 6/4       | Fe Mn | com  | 0 |  |      |  |  |  |                         |  | 31    | 31  | y   | n   |     |    |    |       |  |  |
|   |   | 48  | 110 | ZC   | n | 10YR 5/4 & 6/4 | Fe Mn | many | 0 |  | poor |  |  |  |                         |  | 44    | 26  | y   | y   |     |    |    |       |  |  |
|   |   | 110 | 120 | ZC   | n | 10YR 6/3       | Fe Mn | many | 0 |  | poor |  |  |  |                         |  | 7     | 0   | y   | y   |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  |       |     |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  | Total |     | 138 | 113 |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | MD                      |  | 20    | -2  |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Droughtiness grade (DR) |  | 2     | 2   |     |     |     |    |    |       |  |  |
| 6 | T | 0   | 35  | mZCL | n | 10YR 4/3       |       |      | 2 |  |      |  |  |  |                         |  | 65    | 65  | n   | n   | /   | 1  | 2  | DR    |  |  |
|   |   | 35  | 62  | hZCL | n | 10YR 5/4       | Mn    | few  | 0 |  |      |  |  |  |                         |  | 38    | 46  | n   | n   |     |    |    |       |  |  |
|   |   | 62  | 100 | ZC   | n | 10YR 5/6       | Fe    | com  | 0 |  |      |  |  |  |                         |  | 30    | 12  | n   | n   |     |    |    |       |  |  |
|   |   | 100 | 120 | ZC   | n | 10YR 6/3       | Fe    | com  | 0 |  | poor |  |  |  |                         |  | 14    | 0   | y   | y   |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  |       |     |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  | Total |     | 147 | 123 |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | MD                      |  | 29    | 8   |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Droughtiness grade (DR) |  | 2     | 2   |     |     |     |    |    |       |  |  |
| 7 | T | 0   | 32  | mZCL | n | 10YR 4/3       |       |      | 2 |  |      |  |  |  |                         |  | 60    | 60  | n   | n   | //  | 2  | 2  | WE DR |  |  |
|   |   | 32  | 55  | hZCL | n | 10YR 5/3       |       |      | 0 |  |      |  |  |  |                         |  | 36    | 39  | n   | n   |     |    |    |       |  |  |
|   |   | 55  | 95  | ZC   | n | 10YR 6/2       | Fe    | many | 0 |  | poor |  |  |  |                         |  | 28    | 18  | y   | y   |     |    |    |       |  |  |
|   |   | 95  | 120 | ZC   | n | 10YR 6/3       | Fe    | many | 0 |  | poor |  |  |  |                         |  | 18    | 0   | y   | y   |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  |       |     |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  |                         |  | Total |     | 141 | 117 |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | MD                      |  | 23    | 2   |     |     |     |    |    |       |  |  |
|   |   |     |     |      |   |                |       |      |   |  |      |  |  |  | Droughtiness grade (DR) |  | 2     | 2   |     |     |     |    |    |       |  |  |

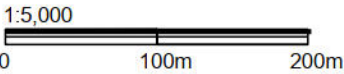
**Appendix 3:            Soil Profile Photographs**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Profile 1 – Silt loam topsoil over medium silty clay loam upper subsoil and heavy silty clay loam and silty clay subsoil – WC II and Grade 2 on wetness</p>  A vertical photograph of a soil profile sample. The soil is brown and crumbly, with some larger clumps. A yellow measuring tape is placed vertically to the right of the sample for scale.                  | <p>Profile 3 – Medium silty clay loam topsoil over heavy silty clay loam upper subsoil and silty clay lower subsoil – WC II and Grade 2 on wetness (also Grade 2 on droughtiness)</p>  A vertical photograph of a soil profile sample. The soil is brown and crumbly, with some larger clumps. A yellow measuring tape is placed vertically to the right of the sample for scale.                     |
| <p>Profile 5 - Medium silty clay loam topsoil over heavy silty clay loam upper subsoil and silty clay lower subsoil at shallower depth – WC III and Subgrade 3a on wetness</p>  A vertical photograph of a soil profile sample. The soil is brown and crumbly, with some larger clumps. A yellow measuring tape is placed vertically to the right of the sample for scale. | <p>Profile 6 – Medium silty clay loam topsoil over heavy silty clay loam upper subsoil and silty clay lower subsoil – permeable to 100 cm depth so no wetness limitation but Grade 2 on droughtiness</p>  A vertical photograph of a soil profile sample. The soil is brown and crumbly, with some larger clumps. A yellow measuring tape is placed vertically to the right of the sample for scale. |

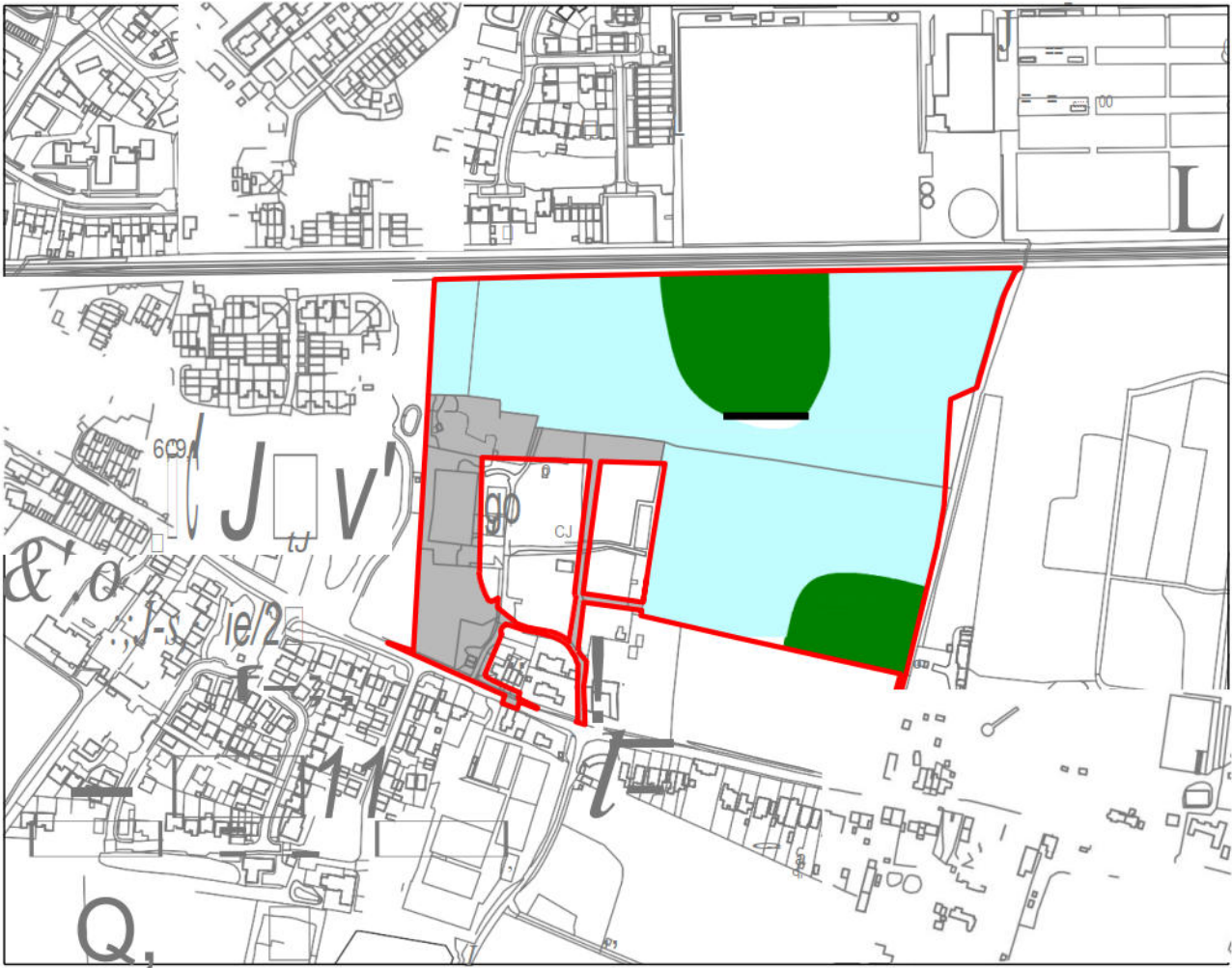


| KEY      |                 |
|----------|-----------------|
| <b>D</b> | Survey boundary |
| +1       | Observations    |

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|                                                                               |                      |                   |      |         |                                                                                                                                 |
|-------------------------------------------------------------------------------|----------------------|-------------------|------|---------|---------------------------------------------------------------------------------------------------------------------------------|
| Drawing title<br>OBSERVATION MAPPING                                          | RAC/10891/1          |                   |      |         | Reading Agriculture Consultants Ltd<br>Beechwood Court<br>Longwood<br>Woodcote<br>RGS ORR<br>01491 684233<br>www.reading-ag.com |
| Contract<br>Land at Sunnyside Nurseries<br>Yapton Road<br>Barnham<br>PO22 0AZ | Drawn by<br>LDSB     | Checked by<br>AIF |      |         |                                                                                                                                 |
|                                                                               | Scales<br>1:5,000@A4 | Date<br>11/2025   | Rev. | Comment | Date                                                                                                                            |



### KEY

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

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1:5,000



|                                                                               |                      |                   |      |         |      |                                                                                                                                                 |
|-------------------------------------------------------------------------------|----------------------|-------------------|------|---------|------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Drawing title<br>AGRICULTURAL LAND<br>CLASSIFICATION                          | Ref.<br>RAC/10891/2  | Rev.              |      |         |      | Reading Agricultural Consultants Ltd<br>Gate House<br>Beechwood Court<br>Long Toll<br>Woodcote<br>RGS ORR<br>01491 684233<br>www.reading-ag.com |
| Contract<br>Land at Sunnyside Nurseries<br>Yapton Road<br>Barnham<br>P022 OAZ | Drawn by<br>LDSB     | Checked by<br>AIF |      |         |      |  <b>READING<br/>AGRICULTURAL<br/>CONSULTANTS</b>           |
|                                                                               | Scales<br>1:5,000@A4 | Date<br>11/2025   | Rev. | Comment | Date |                                                                                                                                                 |