12 January 2009

Icknield Way, Tring, Hertfordshire

ALC Survey Report

A3224_02

Quality Assurance – Approval Status

This document has been Prepared and checked in accordance with
Waterman CPM's IMS (BS EN ISO 9001: 2000 and BS EN ISO 14001: 2004)

Author	Date
Approved	
QA Checked	
CCFF Sent ☐	

Contents

APPENDICES

PLAN

Section 1 Introduction

1.1 This report has been prepared by Waterman Energy, Environment and Design (Waterman), on behalf of Waterside Way Sustainable Planning Ltd, to provide an assessment of agricultural land quality within an area of land at to the north west of Tring, Hertfordshire.

1.2 This assessment is consistent with the approach set out in Planning Policy Statement 7 (PPS7) *"Sustainable Development in Rural Areas"* (DEFRA 2004), which replaced Planning Policy Guidance Note 7 (PPG7), "*The Countryside – Environmental Quality and Economic and Social Development*" (DoE 1997), in 2004. This policy requires that local government seek to direct development away from areas of superior agricultural land (i.e. Agricultural Land Classification Grades 1, 2 and 3a), and towards land at poorer Grades (3b, 4 and 5), except where this would be inconsistent with other sustainability considerations. Land in Grades 1, 2 and Subgrade 3a is defined as Best and Most Versatile land.

1.3 With regard to regional policy, under the Planning and Compulsory Purchase Act (2004) the Hertfordshire County Structure Plan 1991 – 2011 has been largely superseded by the East of England Plan, the Revision to the Regional Spatial Strategy for the East of England, which was published in May 2008. Policy 40 of the Structure Plan, which relates to agricultural land, is not among the policies which have been saved by virtue of Paragraph 1(3) of Schedule 8 of the Act.

1.4 The East of England Plan sets out the scale, broad location and timing of future development across the region. Policy ENV4; Agriculture, Land and Soils, states that:

"In their plans, policies, programmes and proposals planning authorities and other agencies should:...

- encourage the sustainable use of soil resources..."

1.5 The relevant policy contained within the Dacorum Borough Local Plan 1991-2011, which was adopted in April 2004, has been saved, and will remain so until it is replaced by the upcoming Local Development Framework. Policy 108 of the Local Plan concerns High Quality Agricultural Land and states that:

"Development which would result in the permanent loss of the best and most versatile agricultural land (classified by the Department for Environment, Food and Rural Affairs as being of Grades 1, 2 and 3a) will be refused, unless it can be demonstrated that there is an overriding need for the development and there is no alternative land of a lower quality which could reasonably be used. Where development is permitted on the best and most versatile land, it should use the lowest grade of land suitable for development except where the sustainable development objectives of the Plan would be better met by using land of a higher grade."

1.6 The above policies are set out in full in Appendix 2.

1.7 This desk based assessment has utilised published information on climate, geology and soils and the results of field survey, along with existing land quality assessments, to confirm the Agricultural Land Classification for the study area.

1.8 In June 2001, the Department for Environment, Food and Rural Affairs took over all of the responsibilities of the former Ministry of Agriculture, Fisheries and Food (MAFF). This report continues to refer to MAFF in relation to the relevant policy documents and publications that pre-date its dissolution.

Section 2 Agricultural Land Quality Methodology

2.1 The Ministry of Agriculture, Fisheries and Food (MAFF) Agricultural Land Classification (ALC) system of measuring land quality for land use planning purposes divides farmland into five grades according to the limitations imposed upon the use of that land by the inherent physical characteristics of climate, site and soils. Grade 1 land is of an excellent quality, whilst Grade 5 is very severely limited for agricultural use.

2.2 The 1988 MAFF revised guidelines and criteria for ALC require that the following factors be investigated:

- **Site:** Topographic factors such as slope and flood risk;
- **Climate:** Rainfall and temperature through the growing season;
- **Soils:** Soil limitations such as depth, stone content or chemical toxicity; and
- **Interactive Factors:** Soil wetness, soil droughtiness and liability to erosion.

Survey Methods

2.3 The survey was undertaken on 16th December 2008. Soil profiles were examined using a hand auger and/or spade to a depth of 120cm where possible. The fieldwork was conducted at a detailed level of one auger boring per hectare based on a 100m grid. Soil pits were dug in representative soil types to assess subsoil structure and allow the preparation of a statement of soil physical characteristics.

2.4 In line with the MAFF (1988) guidelines outlined above, Sections 3 and 4 of this report describe the study area and the prevailing climatic conditions, whilst Section 5 describes the soils present in the site through the results of the field survey. Section 6 and 7 present an assessment of the ALC for the site and describe its implications with regard to development at the site.

Section 3 The Survey Area

3.1 The site is located to the north of Tring, Hertfordshire. It is centred on National Grid Reference (NGR) SP 922 127 and covers approximately 10ha.

3.2 The site lies to the north-west of Icknield Way (the B488) and comprises a single agricultural field and a football ground. The site is bordered on its north-eastern side by housing, to the north by the Grand Union Canal and on its remaining sides by fences separating it from other agricultural fields.

Land Use

3.3 At the time of the survey the large field comprising the majority of the site was under rough grassland. The smaller field to the south-west accommodates a football pitch and its associated buildings.

Topography

3.4 The site reaches a maximum altitude of approximately 135m Above Ordnance Datum (AOD) in the south from where the ground slopes moderately to the north, down to approximately 120m AOD. No slope within the survey area exceeds 4° and therefore gradient does not constitute a limitation to the agricultural quality of land within the site.

Section 4 Climate

4.1 Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics. For example, climate can have an important influence on the interactive limitations of soil wetness and soil droughtiness. The Meteorological Office, in collaboration with the Soil Survey and Land Research Centre and Ministry of Agriculture, Fisheries and Food, have produced Climatological Data for Agricultural Land Classification (ALC) at 5km intersections on the National Grid.

4.2 The climatic criteria are considered first when classifying land as climate can be an overriding constraint irrespective of favourable site or soil conditions. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature above 0°C, as a measure of the general warmth of the study area during the growing season between January and June.

4.3 The key climatic variables used for grading this study area are given in Table 1 and were obtained from the published 5km grid dataset using the standard interpolation procedures (Meteorological Office, 1989) (see Table 1).

Table 1: Climatic and Altitude Data

Grid reference	SP 922 127
Altitude (mAOD)	127
Accumulated temperature (day˚C Jan - June)	1356
Average annual rainfall (mm)	710
Field capacity days	155
Moisture deficit, wheat (mm)	99
Moisture deficit, potatoes (mm)	89
Overall climatic grade	1

4.4 The combination of rainfall and temperature results in no limitation on ALC grade for the study area.

Section 5 Soils and Interactive Factors

5.1 Published information, in combination with field survey, has been utilised to characterise the soils within the site. An accompanying description of the interactive factors enables an assessment of agricultural land quality in Section 6.

Published Soils Information

5.2 The 1:250 000 scale reconnaissance soil map of the Soil Survey of England and Wales (1983) shows the study area to exhibit soils of the Andover Association which are briefly described by the Soil Survey as shallow, well drained, calcareous silty soils over chalk on slopes and crests. Deep calcareous and non-calcareous fine silty soils in valley bottoms. Striped soil patterns locally.

5.3 The western *circa* half of the site is mapped as Grade 2 quality agricultural land on the Provisional Agricultural Land Classification maps issued by the Ministry of Agriculture, Fisheries and Food (MAFF 1968, see Appendix 1), whilst the eastern part of the site is mapped as Grade 3 quality land. However, these provisional maps were produced prior to the issuing of revised guidelines for the grading of agricultural land in 1988 and before the sub-division of Grade 3 land. These maps were not intended for site specific grading and should only be treated as indicative of the agricultural land quality of large areas.

Soil Characteristics

5.4 The survey showed the presence of a single soil type, occurring as two variants across the site.

Soil Type I - Variant A

5.5 This variant of the main soil type was seen to generally comprise a very calcareous, slightly stony, medium silty clay loam textured topsoil overlying a slightly stony, very calcareous, heavy silty clay loam textured upper subsoil horizon. This upper subsoil in turn overlies soft weathered chalk which graduates into hard impenetrable chalk. Stones in the topsoil mostly comprise angular flints with occasional chalk fragments whilst stones in the subsoil horizons comprise chalk fragments. This soil type was found to be well drained with no evidence of mottling or gleying, hence profiles were assessed as Wetness Class I. No root penetration into the hard chalk was found, therefore, due to the shallow nature of the soil profiles over the underlying chalk, this soil type does not provide sufficient moisture for unrestricted crop growth within the climatic conditions of the area.

Soil Type I - Variant B

5.6 This variant of the main soil type has been differentiated from Variant A because no upper subsoil horizon was seen to be present. Therefore the very calcareous,

slightly stony, medium silty clay loam textured topsoil directly overlies the weathered chalk. This soft weathered chalk also graduates into hard chalk as in Variant A. This variant of the soil type was also found to be well drained with no evidence of mottling or gleying, hence profiles were assessed as Wetness Class I. Again, however, due to the shallow nature of the soil profiles over the underlying chalk, such profiles do not provide sufficient moisture for unrestricted crop growth within the climatic conditions of the area.

Section 6 Agricultural Land Classification (ALC)

6.1 The quality of the agricultural land within the study area was assessed using the revised guidelines and criteria for grading the quality of agricultural land issued by the Ministry of Agriculture, Fisheries and Food (MAFF 1988). The Agricultural Land Classification (ALC) for the study area is shown on Plan 3224/03.

Subgrade 3a (Good quality agricultural land)

6.2 Subgrade 3a quality land (Map 3) is associated with slightly deeper soils over the hard chalk, these being the soil profiles of Soil Type I, Variant A, which feature the upper subsoil. Where the soil is relatively deep more moisture is available for crop growth and hence such profiles have only a moderate droughtiness limitation which restricts the land to Subgrade 3a quality.

Subgrade 3b (Moderate quality agricultural land)

6.3 The remainder of the land within the survey area has been assessed as Subgrade 3b quality. Land in this subgrade is associated with areas of Soil Type I, Variant B where the weathered chalk horizon over the hard chalk rock is relatively thin. This limits the volume of soil in which plants may exploit the moisture reserves, and this lack of available soil moisture for crop growth results in a significant droughtiness limitation which restricts such land to Subgrade 3b quality.

Non-agricultural Land

6.4 The football field and associated buildings in the south of the survey area have been mapped as non-agricultural land.

6.5 Table 2 below summarises the results of the semi-detailed ALC survey.

Table 2: ALC within the Site

ALC Grade	Area (Total 9.6ha)	Percentage of Study area
1	None present	None present
2	None present	None present
3a	2.7ha.	28.1
3b	6.0ha.	62.5
4	None present	None present
5	None present	None present
Non-Agricultural	0.9ha.	9.4

Section 7 Summary and Conclusions

7.1 This assessment finds that the agricultural land within the study area is predominantly Agricultural Land Classification (ALC) sub-grade 3b (moderate quality agricultural land). Only some 28% of the study area was identified as Subgrade 3a, and the site as a whole would therefore not be considered to represent 'best and most versatile land'.

7.2 The above findings contradict the Ministry of Agriculture, Fisheries and Food (MAFF) Provisional ALC sheet for the study area and wider area (Appendix 1) which shows approximately half of the site within an area of Grade 2 land. As stated, this series of plans is based upon a superseded land quality methodology and large scale (low detail) survey work, and these plans are therefore unsuited to a site specific assessment.

7.3 It is therefore the conclusion of this assessment that ALC should not present a restriction to development within the study area.

Section 8 References

Department of the Environment (DoE) 1997 *Planning Policy Guidance Note 7: The Countryside - Environmental Quality and Economic and Social Development* London

Department for the Environment, Food and Rural Affairs 2004 *Planning Policy Statement 7*: *Sustainable Development in Rural Areas* London

Dacorum Borough Council 2004 *Dacorum Borough Local Plan (1991 - 2011)* Hemel Hempstead

Government Office for the East of England 2008 *The East of England Plan: The Revision to the Regional Spatial Strategy for the East of England* Cambridge

Hertfordshire County Council 1998 *Hertfordshire Structure Plan Review 1991 – 2011* Hertford

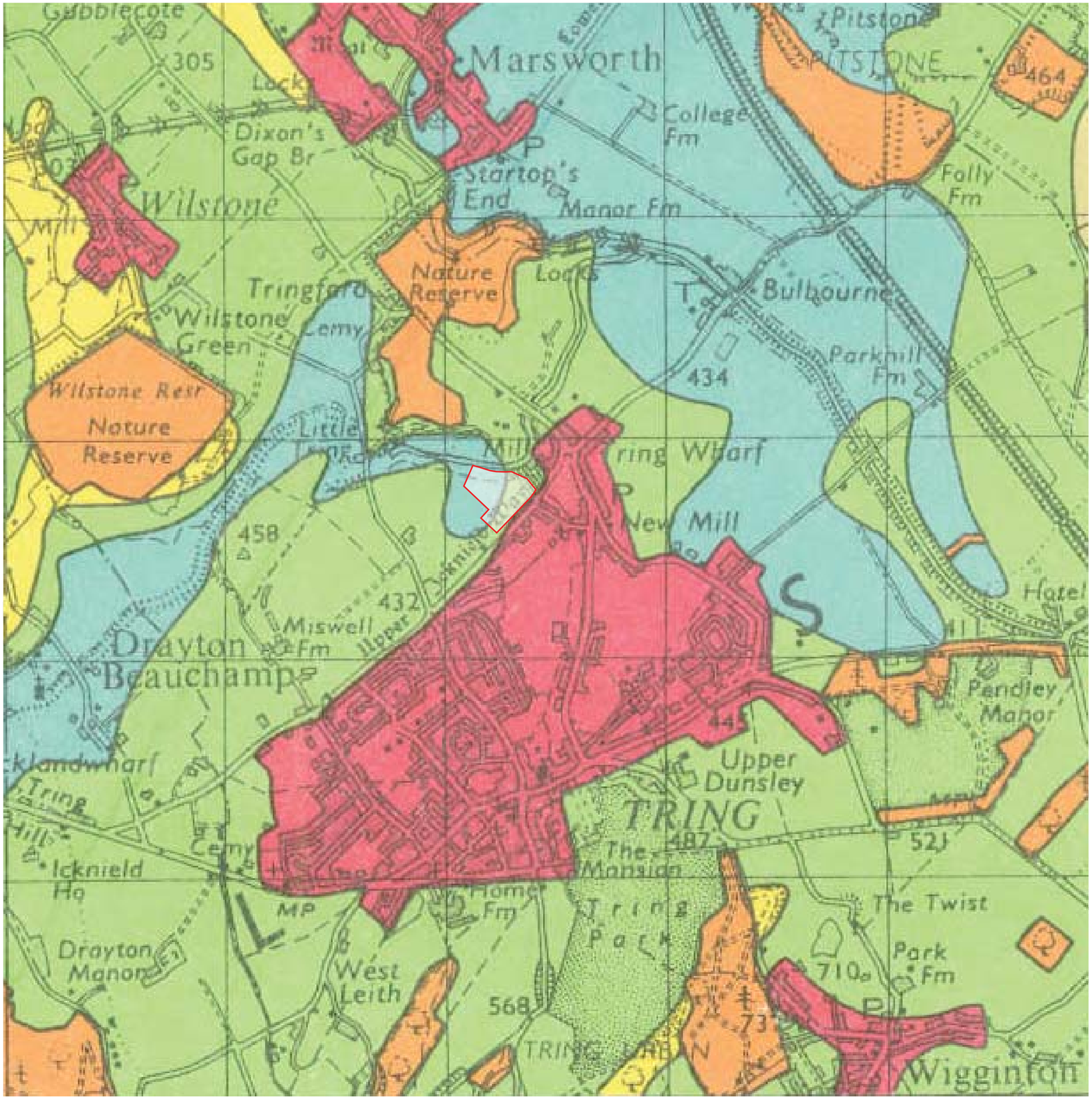
Meteorological Office 1989 *Climatological Data for Agricultural Land Classification* Bracknell

Ministry of Agriculture, Fisheries and Food (MAFF) 1974 *Agricultural Land Classification Map (Provisional) Sheet 146* London

Ministry of Agriculture, Fisheries and Food (MAFF) 1988 *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* London

Soil Survey of England and Wales (SSEW) 1983 *Soils of England and Wales: Sheet 4, Soils of Eastern England* Southampton

Appendix 1 Provisional Agricultural Land Classification Map
(MAFF 1968 & 1974 Sheet 146)
(3224/04 01/09 IT/TB)



Site boundary

Agricultural Land

- Grade 2
- Grade 3
- Grade 4
- Grade 5

Non-Agricultural Land

- Land predominantly in urban use
- Other land primarily in non-agricultural use

N

Drawing Title	**Appendix: Provisional Agricultural Land Classification Map (MAFF 1968 & 1974 Sheet 146)**
Client	Waterside Way Sustainable Planning Ltd
Project	Icknield Way, Tring, Herts
Scale	Not shown
Drawing No	3224/04
Date	01/09 IT/TB
Checked	

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Appendix 2 Relevant Policy and Guidance

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Planning Policy Statement 7 (PPS7) - Sustainable Development in Rural Areas (2004)

A2.1 Best and Most Versatile Agricultural Land

"The presence of best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification), should be taken into account alongside other sustainability considerations (e.g. biodiversity; the quality and character of the landscape; its amenity value or heritage interest; accessibility to infrastructure, workforce and markets; maintaining viable communities; and the protection of natural resources, including soil quality) when determining planning applications.

Where significant development of agricultural land is unavoidable, local planning authorities should seek to use areas of poorer quality land (grades 3b, 4 and 5) in preference to that of a higher quality, except where this would be inconsistent with other sustainability considerations. Little weight in agricultural terms should be given to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute in some special way to the quality and character of the environment or the local economy. If any undeveloped agricultural land needs to be developed, any adverse effects on the environment should be minimised."

The East of England Plan (Published 2008)

A2.2 Policy ENV4; Agriculture, Land and Soils

"In their plans, policies, programmes and proposals planning authorities and other agencies should:

- promote and encourage the expansion of agri-environment schemes to:
  - increase the landscape, historic and wildlife value of farmland in accordance with regional priorities set out in other policies of this RSS;
  - maintain and enhance the resilience and quality of soils;
  - increase public access; and
  - reduce diffuse pollution.

- include policies that respond to the changes taking place in agriculture to address issues such as climate change and consumer demands for higher standards of animal welfare and food safety and the implications of resultant development in the countryside;

- encourage the sustainable use of soil resources and, where soil and land have been degraded, maximise opportunities for restoration to beneficial after-uses including agriculture, woodland, amenity and habitat creation schemes in accordance with regional priorities set out in other policies of this RSS; and

- encourage more sustainable use of water resources through winter storage schemes and new wetland creation."

Dacorum Borough Local Plan (1991 - 2011) (Adopted 2004)

A2.3 Policy 108: High Quality Agricultural Land

"Development which would result in the permanent loss of the best and most versatile agricultural land (classified by the Department for Environment, Food and Rural Affairs as being of Grades 1, 2 and 3a) will be refused, unless it can be demonstrated that there is an overriding need for the development and there is no alternative land of a lower quality which could reasonably be used. Where development is permitted on the best and most versatile land, it should use the lowest grade of land suitable for development except where the sustainable development objectives of the Plan would be better met by using land of a higher grade.

In addition the effect of high quality agricultural land loss on farm economics and management will be considered. Planning permission will not be granted for development which would fragment farm holdings unless mitigation is possible e.g. the land can be incorporated into surrounding holdings and there is no severance of buildings from the land."

Plan

Plan	Agricultural Land Classification (3224/03 01/09 IT/TB)

Subgrade 3a

Subgrade 3b

Non-agricultural

Survey boundary

0 100m

Drawing Title	**Plan: Agricultural Land Classification**
Client	Waterside Way Sustainable Planning Ltd
Project	Icknield Way, Tring, Herts
Scale	As shown (Approximate)
Drawing No	3224/03
Date	01/09 IT/TB
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