LICHFIELDS

Appendix 4: HELAA Technical Appraisal Reports, including:-

i Flood Risk Technical Appraisal Report, prepared by MJM Consulting Engineers

ii Landscape and Townscape Technical Appraisal Report, prepared by FPCR

iii Biodiversity and Geodiversity Technical Appraisal Report, prepared by FPCR

iv Historic Built Environment Technical Appraisal Report, prepared by RPS

v Archaeology Technical Appraisal Report, prepared by RPS

vi Accessibility to Services and Facilities Technical Appraisal Report, prepared by Vectos

vii Site Access Technical Appraisal Report, prepared by Vectos

viii Transport and Roads Technical Appraisal Report, prepared by Vectos

ix Noise, Vibration, Odour and Light Pollution Technical Appraisal Report, prepared by Sharps Redmore

x Air Quality Technical Appraisal Report, prepared by Redmore Environmental

xi Contamination and Ground Stability Technical Appraisal Report, prepared by MJM Consulting Engineers

xii Strategic Highways Impact Technical Appraisal Report, prepared by Vectos

xiii Agricultural Land Survey and Map, prepared by Ministry of Agriculture, Fisheries and Food

Date: 01/11/2021

Ref: 7437/CRS

Proposed Development at Slate Hall Farm,Barhill,Cambridge

Flood Risk

The assessment from Greater Cambridge assesses the site as Amber risk with regards to Flood Risk.
The site plan included in the assessment includes Slate Hall Farm in the centre of the site but it should be noted that the proposed development site does not include Slate Hall Farm

The assessment also states that the site area is 107.48 ha when in fact it is 100ha. Presumably the 107.48 ha includes Slate Hall Farm

In order to assess the flood risk MJM have prepared the attached drawings .

Drawing no 7437-MJM-00-00-DR-C-5260-S2-P01
This drawing shows the site boundary in red with Slate Hall farm excluded and shows the outlines of Flood Zone 3 (1:1000 year AEP risk) in dark blue with additional areas of Flood Zone 2 (1:100 year AEP risk) in lighter blue.
These outlines have been taken from the EA Flood Map for Planning.

The assessment from Greater Cambridge states that 16% of the site is in Flood Zone 3 whereas our calculations show that the area is less at 13.3%,presumably due to Slate Hall Farm not being included
The assessment also states that 19% of the site is in Flood Zone 2 whereas our calculations show that the area is again less at 16.8%.

Drawing no 7437-MJM-00-00-DR-C-5262-S2-P01
This drawing is similar to the above but this time shows areas of Flood Zones 2 and 3 based on detailed hydraulic modelling of the site by the specialist engineering and environmental consultancy RSK

This shows that the area of site in Flood Zone 3 is only 0.44% and in Flood Zone 2 is only 2.72%.
Both of these areas are very much less than the areas taken from the EA flood maps which by their nature are more general and non site specific.

It should also be noted that the only areas at risk of flooding are adjoining Oakington Brook.
These areas are not proposed for development and will be set aside for areas of bio-diversity net gain and so will not present any risk to the areas proposed for development

Drawing no 7437-MJM-00-00-DR-C-5261-S2-P01
This drawing is again similar to those above but this time shows areas of the site at risk from surface water flooding taken from the EA maps for a 1:30 year risk in dark blue; a 1:100 year risk in turquoise and 1:1000 year risk in light blue

The assessment from Greater Cambridge states that 2% of the site lies in a 1:30 year event which our calculations agree with at 2.08%
The assessment also states that 6.0% of the site lies in the 1:100 year event which is close to our assessment of 5.49%
Lastly the assessment states that 21% of the site lies in the 1:1000 year event whereas our calculations indicate 18.3%

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The two assessments of the areas of the site at risk from surface water flooding are therefore in reasonable agreement .
However again it is only the areas immediately adjacent to Oakington Brook that are at risk.
The other areas indicated remote from the Brook actually represent local natural topographic features such as shallow depressions and do not represent existing watercourses or ponds that may flood
The existing levels in these areas would all be altered by the proposed development so any risk from surface water would therefore be removed or taken into account in the new drainage systems.

Therefore the actual areas of the site at any risk from surface water flooding are very much less than the areas from the EA maps and are confined to areas adjacent to Oakington Brook which as stated above will not be developed .

Therefore it is our firm view that these site specific flood risk assessments provide clear evidence that the site should be assessed as Green rather than Amber with regards to Flood Risk

C R Short
BSc(Hons 1) CEng MICE MIStructE
Director
MJM Consulting Engineers

Lolworth Developments Limited

J25 Bar Hill

LANDSCAPE AND VISUAL APPRAISAL NOTE

December 2021

FPCR Environment and Design Ltd
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Rev	Issue Status	Prepared/Date	Approved/Date
-	Draft	TJ/ 23 11 21	TJ/ 23 11 21
A	Final	TJ/ 01 12 21	TJ/ 01 12 21

CONTENTS

FIGURES

1.0 INTRODUCTION

1.1 This Landscape and Visual Appraisal (LVA) Note has been carried out for the site at J25 Bar Hill. It has been undertaken by FPCR Environment and Design Ltd (FPCR). The purpose of this LVA Note is to provide a preliminary landscape and visual review and appraisal of the site for potential future development and to consider and appraise the site suitability assessment undertaken by Greater Cambridge, as detailed in the Greater Cambridge (GC) Housing and Economic Land Availability Assessment (HELAA).

1.2 FPCR is a multi-disciplinary environmental and design consultancy established over 60 years, with expertise in architecture, landscape, ecology, arboriculture, urban design, masterplanning and environmental impact assessment. The practice is a member of the Landscape Institute and Institute of Environmental Management and Assessment and is frequently called upon to provide expert evidence on landscape and visual issues at Public and Local Plan Inquiries.

1.3 Figures 1 and 2 show the location and general context of the Site.

2.0 METHODOLOGY

2.1 For the purposes of this LVA review and appraisal the approach adopted is based upon the *Guidelines for Landscape and Visual Impact Assessment*, third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013. This has entailed desk based and field survey and analysis to provide a suitably robust understanding of the existing landscape character and visual amenity of the site and its context.

2.2 In terms of baseline studies, the assessment provides an understanding of the landscape that may be affected, its constituent elements, character, condition and value. For the visual baseline, this includes an understanding of the area in which the site and potential future development within it may be visible, the people who may experience views, and the nature of those views.

3.0 BASELINE CONDITIONS

Greater Cambridge Landscape Character Assessment (GCLCA) (February 2021)

3.1 Within this recently published study the Site lies at the southern extent of Landscape Character Area (LCA) 2A: *Longstanton Fen Edge Claylands.* Figure 3 details the Greater Cambridge LCAs in relation to the Site and its context.

3.2 LCA 2A: *Longstanton Fen Edge Claylands* is described within the study as a gently undulating, open and settled landscape. The description for this LCA also states;

'….Vegetation is sparse, but scatterings of tree clumps, shelterbelts around isolated farms and occasional hedgerows sometimes merge together to give the sense of a more densely treed horizon, notably on the edge of villages and farms where they provide localised visual enclosure.….

….The largely flat landscape and sparse vegetation combine to offer long, open views between settlements, in which large, dramatic skies are a prominent feature. Occasional vertical features stand out on the skyline, including masts and poles related to the communications network, church spires and lines of willow trees. The straight A14 dual carriageway, which forms the southwestern boundary to the LCA, detracts locally from the tranquillity experienced elsewhere.'

3.3 Under '*Evaluation*' the following single sensitivity specific to this LCA is identified as;

- *Long, open views from villages across open, arable fields.*

3.4 The study also identifies a single landscape guideline specific to this LCA, as;

- *Ensure new development is integrated into the landscape sympathetically and does not affect long, open views.*

3.5 This study evaluates the Condition and the Strength of Character of the Landscape Character Types across the Greater Cambridge area (See GCLCA; Figures 4.2 and 4.3; page 31). For the Fen Edge Claylands LCT, within which the Site is located, the study assesses both the Condition and Strength of Character to be *Moderate*.

3.6 In relative and comparative terms, it should be noted that of the 9 LCT`s across the GC area, 5 LCT's are assessed to be in *Moderate* Condition and 4 LCT's are assessed to be in *Good* Condition. Within the study *Good* is considered to be better than *Moderate* in terms of the assessment of Condition. Similarly, for the assessment of the Strength of Character, 4 LCT's are assessed to be Moderate and 5 LCT's are assessed to be Strong. Again, within the study *Strong* is considered to be better than *Moderate* in terms of the assessment of Strength of Character.

3.7 In broad terms, the study identifies that around half of the GC landscape is of better condition and stronger in character than the other half. The Site lies within the landscape of relatively poorer condition and weaker character.

3.8 It is however acknowledged that this is not a site specific evaluation and that both Condition and Strength of Character will vary across these LCT's and also across the LCA's.

Landscape of the Site and its Context

3.9 The Site comprises predominantly flat arable fields subdivided principally by a limited number of lines of mature trees, a small watercourse (with associated planting) and a small number of semi mature tree belts to a field parcel in the north of the Site. Figure 5 details the topography of the Site and its context. The fields are generally medium in size and arranged in a fairly regular pattern with the lines of individual trees generally arranged in straight lines across the site. The exception to this is the small watercourse and associated trees and habitats that follows a more irregular line across the southern part of the Site.

3.10 An existing commercial area with workshop type buildings and areas of hard standing occupies a position within and effectively surrounded by the Site. This area sits directly north of an area of plantation woodland that also sits along the northern side of the small watercourse. It is accessed via a small road from Dry Drayton Road on the southern edge of the Site. A further small commercial area lies on the north western edge of the site within a strip of land lying alongside the southern side of the B1050.

3.11 The Site is well contained to the north west, south west and south east by surrounding roads which have recently undergone major construction works. The A14 and A1307 stretch across the south western side of the site and impart a strong active influence. Major junctions and road crossings also lie immediately to the south and west of the Site and are also constitute notable infrastructure features. A recently completed cycleway/ bridleway bridge crossing of the A14 close to the A14 Bar Hill junction adds to the major transport infrastructure. This cable stayed bridge includes uprights believed to be approximately 30 metres high.

3.12 The north eastern Site boundary is defined by a combination of field boundary hedgerows and ditches. Further new road infrastructure in the form of a link road to the new settlement of Northstowe does however lie close to the north of this site boundary.

3.13 This arrangement of largely major and new roads and transport infrastructure surround and physically contain the majority of the Site and have a notable influence on its character and appearance.

3.14 To the south west of the Site beyond the A14 lies the settlement of Bar Hill. This planned settlement comprises dwellings of generally an even age arranged in a series of cul de sacs off a series of spine roads extending from an outer loop road. Employment uses are sited in the north of the settlement close to and alongside the A14 and Bar Hill junction. The settlement occupies rising ground and includes a golf course on its north eastern side. Mature trees and planting extend throughout the course and in combination with other mature wooded areas and trees within and around the Bar Hill settlement area, it provides visual separation to the A14, the Site and the landscape to the north. Thus, Bar Hill and its mature wooded setting reinforces the strong landscape boundary to the south west, where this landscape beyond the A14 acts as a backdrop and limits views.

3.15 Other settlements at Oakington and Longstanton lie respectively to the east and north of the Site yet have minimal or no discernible intervisibility with the Site.

Landscape Designations and Value

3.16 The Site and its immediate context includes no designated landscapes or features and no landscapes recognised of being of any particular higher value or sensitivity. Figure 4 details Environmental Designations and Policies within the context of the Site.

3.17 Whilst a detailed appraisal of the Landscape Value of the Site and its immediate context has not been undertaken at this stage, a preliminary assessment indicates that this is likely to be Low/ Medium, yet with the existing mature trees and planting associated with the watercourse representing features of relatively higher value in localised landscape terms.

4.0 ANALYSIS OF THE GC HELAA ASSESSMENT OF SITE 40248 (LAND AT SLATE HALL FARM, BAR HILL, CB23 8HB)

Introduction

4.1 The Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) (Sept 2021) appraises the Site (as Site 40248 (Land at Slate Hall Farm, Bar Hill, CB23 8HB)). Annex 1 of the HELAA details the methodology adopted in terms of appraising the suitability of sites. A 'traffic light' scoring approach is adopted that is defined as follows for '*Landscape and Townscape*' suitability;

Score	Assessment Criteria
Red	Development of the site would have a significant negative impact which cannot be mitigated.
Amber	Development of the site would have a detrimental impact which could be satisfactorily mitigated.
Green	Development of the site would have either a neutral or positive impact.

4.2 The notes accompanying the above table provide some brief supporting detail on the approach adopted yet this principally appears to be by reference to the presence of mapped constraints and designations (excluding Green Belt) and to the GCLCA and other studies. It does not detail how the potential impacts or the potential for mitigation and acceptability of a development were assessed.

Approach

4.3 Drawing upon the methodology detailed in GLVIA3, an appraisal of the Site has been undertaken to appraise the suitability of the Site in 'Landscape and Townscape' terms for future development. At this stage, this is not a detailed and scheme specific assessment. It has appraised the potential and capacity of the site to be able to accommodate future employment development. This appraisal has entailed desk based and site based assessments and has considered the landscape character and features of the site and its context. This preliminary assessment has also considered the Landscape Value, Susceptibility to Change and Landscape Sensitivity of the site and its immediate context.

Appraisal

4.4 The site occupies a relatively well defined and contained position on the southern edge of LCA 2A *Longstanton Fen Edge Claylands*. The majority of the site is strongly influenced by the adjacent active A14 and associated infrastructure and the A1307 on its south western side. Other roads and road junctions extend close to the north west and south east site boundaries and reinforce its containment in landscape terms. As recognised in the GCLCA, the A14 detracts locally from the landscape.

4.5 At a localised level, the site is relatively visually removed and separated from the majority of LCA 2A, that stretches across a more expansive and open landscape area to the north of the site. In this regard the site does not readily contribute to or form part of the longer open views. The single specific landscape sensitivity identified for LCA 2A is the '*long, open views from villages across open, arable fields'.* The site and potential development within it, is unlikely to result in any notable effects upon the long open views from villages. Where any potential views from villages towards future development on the site may be possible these are likely to be very limited and restricted. Any available glimpsed or partial views are also likely to perceive development on the site at distance and set back against the A14 road corridor and the mature trees and planted surrounds to Bar Hill. Potential future development on the site is unlikely to obstruct or curtail any long open views from villages across open arable fields to any more than a limited and localised extent.

4.6 The most positive and notable landscape features within the site comprise the small watercourse and the mature trees that exist both along the watercourse and lining some of the field boundaries. These are localised landscape features that can be successfully conserved and enhanced where appropriate, as part of a suitable future development solution. The location and alignment of the watercourse and existing trees (many in a limited number of straight lines) can also help to form the basis of a strong landscape framework for a future development scheme. These features in conjunction with other new native planting and habitats would also assist in enhancing the overall biodiversity value of the site.

4.7 The preliminary assessment of the Landscape Value, Susceptibility to Change and Landscape Sensitivity of the site and its immediate context, indicates that these are all likely to be Low/ Medium

and no more than Medium. A full and detailed assessment of these landscape considerations would be undertaken in due course as part of progressing a suitable development and landscape scheme for the site.

4.8 In landscape and townscape terms, the site clearly has the potential to successfully assimilate future development as part of a comprehensive design solution, encompassing conserved and new landscape and habitat proposals and appropriate development parameters.

Consideration of the GC HELAA Assessment of Site 40248 (Land at Slate Hall Farm, Bar Hill, CB23 8HB)

4.9 The Council's assessment of the site has been appraised as part of this preliminary landscape and visual review. It has been assessed by the Council as Site 40248 (Land at Slate Hall Farm, Bar Hill, CB23 8HB). For ease of reference, the Council's Site Assessment on '*Landscape and Townscape"* states in full the following;

"NCA 88 Bedfordshire and Cambridgeshire Claylands

District Character Area: Fen Edge

The Site is generally typical of this characteristic, though recently damaged/altered due to highways improvements to A14

Landscape Character Assessment (2021) Landscape Character Area - 2A: Longstanton Fen Edge Claylands

The site has experience considerable change due to the nearby A14 upgrade works. The landscape character of this area has undergone disruption and is degraded due to the intrusion of a major transport route. Development of this site would further degrade the landscape character of the area. Limited low-level development could be achieved if focused near the existing developed area and well buffered."

4.10 The outcome of Council`s Landscape and Townscape Assessment is a judgement/ score of Red. ie '*Development of the site would have a significant negative impact which cannot be mitigated.*'

4.11 The Council's analysis is very brief and whilst it indicates that the site is generally typical of the District Character Area, it principally highlights the disruption, damage and degrading effects of the highway improvements to the A14. Rather than drawing upon these major highway changes in appraising the existing character, value and sensitivity of the site, the Council's assessment simply advises that development on the site would further degrade the landscape character of the area. This is not how potential future development on the site should be appraised and this premise is wholly unjustified.

4.12 It is evident that the A14 does impart a notable and active influence over the site and this should properly be considered as part of the baseline situation. It does inform the existing character, value and sensitivity of the landscape and should not be taken as a bar to any future development.

4.13 The Council`s analysis does however indicate that '*limited low-level development could be achieved if focussed near the existing developed area and well buffered'* yet it offers no reasoning to support this judgement.

4.14 Contrary to the Council`s very brief analysis, this preliminary landscape and visual appraisal confirms that the site could successfully accommodate future development on the site. This would

be founded upon and shaped by the existing landscape character and features and would include a strong landscape framework.

4.15 In the context of considering the Council's assessment of the site, it also relevant to note their '*Landscape and Townscape'* assessment of an adjoining site, immediately to the north west. This adjoining site is referred to in the HELAA as, '*Land at Hazlewell Farm, Lolworth, CB23 8DS; Site Reference: 52680'*

4.16 Under the *Landscape and Townscape* Assessment for Site 52680, the HELAA confirms that this site is generally typical of the District Character Area. This is the same District Character area and comment, as from Site 40248. The comments for Site 52680 does then state; '*Employment development upon this site would have a limited impact to the landscape subject to landscape mitigation measures and accord with Buckingway Business Park landscape principles. Typical landscape measures would include the following: a significant landscape buffer of approx. 15m wide to be provided around the site to reduce the visual harm, building scale and mass to reflect existing local commercial build and existing linear drainage ditches to be protected and retained.'*

4.17 This indicates that employment development on this site would have limited impact to the landscape subject to landscape mitigation measures, including a 'significant' landscape buffer of 15m wide. It makes no reference to the considerable change from the nearby A14 and junction works and by contrast with Site 40248 it assesses this site as Green ie '*Development of the site would have either a neutral or positive impact.'*

4.18 Whilst it is recognised that Site 52680 is smaller than Site 40248, it does nevertheless occupy not only the same District wide landscape character area but also the same localised landscape context. There is no apparent reasoning or justification why Site 52680 should score '*Green*' and the adjoining Site 40248 should score '*Red'*. This places the adjoining Sites at the opposite ends of the assessment scale, which does appear to belie both the GCLCA study and a more detailed site based assessment of this particular local landscape.

HELAA Site Review Conclusions

4.19 Based upon the Council's simple 'scoring' assessment, the Site (40248) should have been scored/ assessed as either '*Green'* or '*Amber*' in Landscape and Townscape terms.

4.20 Based upon the Council's '*Green*' assessment of the adjoining site (52680); the existing A14 and other influences and its landscape sensitivity; and the fact that the existing positive features (eg mature trees and watercourse) could be substantially conserved and enhanced with significant landscape buffers provided, then the Site (40248) could justifiably be scored/ assessed as 'Green'.

4.21 Whilst potential future development on the site is likely to result in some generally localised landscape adverse effects, it is clear from a sufficiently detailed assessment (including a site based appraisal) that these effects can be mitigated and minimised. It is also clear that existing landscape features within the site can be conserved and extended as the basis for a robust landscape framework and setting to future development.

5.0 CONCLUSION

5.1 The GCLCA identifies that around half of the GC landscape is of better condition and stronger in character than the other half. The Site lies within the landscape of relatively poorer condition and weaker character.

5.2 The Site is well contained to the north west, south west and south east by surrounding roads which have recently undergone major construction works; the A14 works detracting locally from the landscape. Further containment is provided by existing trees, hedgerows and other planting surrounding the Site and by the rising landform and further trees and planting around Bar Hill to the south west of the A14. There is minimal or no discernible intervisibility between nearby settlements and the Site.

5.3 The preliminary assessment of the Landscape Value, Susceptibility to Change and Landscape Sensitivity of the site and its immediate context, indicates that these are all likely to be Low/ Medium and no more than Medium.

5.4 Whilst potential future development on the Site is likely to result in some generally localised adverse landscape effects, these effects are capable of being mitigated and minimised as part of a comprehensive development solution. The existing features of relatively greater landscape value (eg mature trees and watercourse) within the Site are capable of being conserved and extended as the basis for a robust landscape framework and setting to future development.

5.5 In landscape and townscape terms, the site has the potential to successfully assimilate future development as part of a comprehensive design solution, encompassing conserved and new landscape and habitat proposals and appropriate development parameters.

Site Boundary

client
Lolworth Developments Ltd

project
J25 Bar Hill,
Cambridge

drawing title
SITE LOCATION & CONTEXT

N

scale
1:50,000 @ A3

drawn
DB / TRJ

issue date
07 October 2021

drawing / figure number
Figure 1

rev
-

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

K:\9500\9531\LANDS\LVIA\9531 Fig 1 Site Location.indd

Site Boundary

N

client
Lolworth Developments Ltd

project
J25 Bar Hill,
Cambridge

drawing title
AERIAL PHOTOGRAPH

scale
NTS @ A3

drawn
DB / TRJ

issue date
07 October 2021

drawing / figure number
Figure 2

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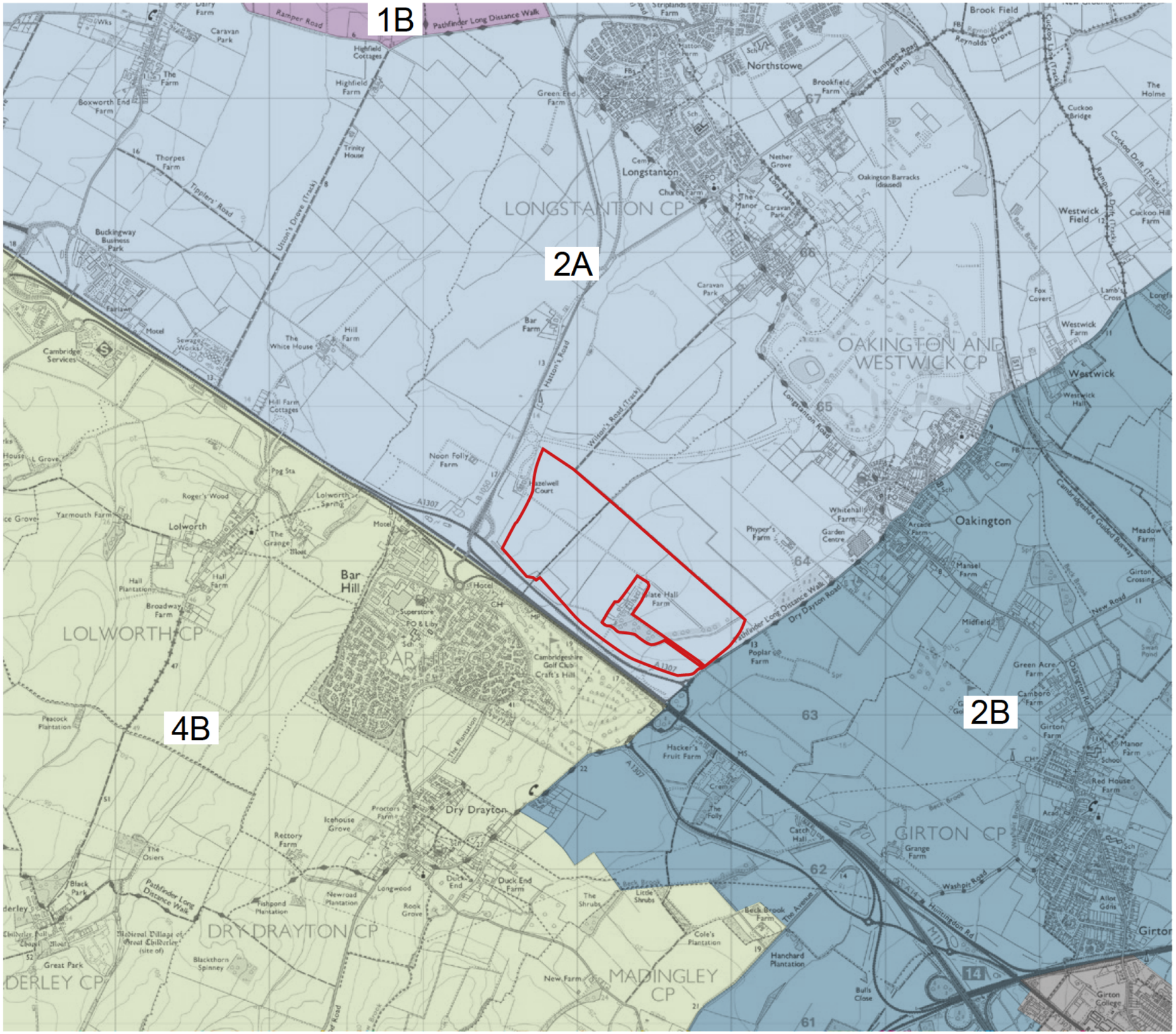
masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture



Site Boundary

Greater Cambridge Landscape Character Assessment (2021)

Cambridge Urban Area

The Fens

1B: Cow Fen

Fen Edge Claylands

2A: Longstanton Fen Edge Claylands

2B: Cottenham Fen Edge Claylands

Wooded Claylands

4B: Lolworth to Longstowe Wooded Claylands

Note:
Study area sits wholly within NCA 88: Bedforshire and Cambridgeshire Claylands.

client
Lolworth Developments Ltd

project
J25 Bar Hill, Cambridge

drawing title
LANDSCAPE CHARACTER

N

scale
1:25,000 @ A3

drawn
DB / TRJ

issue date
07 October 2021

drawing / figure number
Figure 3

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

K:\9500\9531\LANDS\LVIA\9531 Fig 3 Landscape Character.indd

Site Boundary

Grade I Listed Building

Grade II Listed Building

Grade II* Listed Building

South Cambridgeshire Adopted Policies Map February 2019

Green Belt (Policy S/4)

Historic Parks and Gardens (Policy NH/14)

Conservation Area (Policy NH/14)

Proposed Northstowe Development (Policies NS/3 & SS/5)

client
Lolworth Developments Ltd

project
J25 Bar Hill, Cambridge

drawing title
ENVIRONMENTAL DESIGNATIONS AND POLICIES

scale
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issue date
07 October 2021

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Figure 4

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- Site Boundary
- 60m - 65m AOD
- 55m - 60m AOD
- 50m - 55m AOD
- 45m - 50m AOD
- 40m - 45m AOD
- 35m - 40m AOD
- 30m - 35m AOD
- 25m - 30m AOD
- 20m - 25m AOD
- 15m - 20m AOD
- 10m - 15m AOD
- 5m - 10m AOD
- 0m - 5m AOD

client
Lolworth Developments Ltd

project
J25 Bar Hill,
Cambridge

drawing title
TOPOGRAPHY

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scale
1:25,000 @ A3

drawn
DB / TRJ

issue date
07 October 2021

drawing / figure number
Figure 5

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

K:\9500\9531\LANDS\LVIA\9531 Fig 5 Topography.indd

Ecology Summary

Project: **Land at Slate Hall Farm, Bar Hill, Cambridgeshire**

Client: **Lolworth Developments Ltd**

FPCR undertook an extended Phase 1 habitat survey, desktop survey and protected species surveys (wintering birds, ground tree assessment for bats, badger survey) in 2020 and 2021 to provide an initial ecological baseline for the site and to understand its ecological importance.

No statutory or non-statutory sites of nature conservation importance lie within 5km, 2km or 1km of the site, respectively. A number of protected/notable species records fall within the site boundary and within the wider 1km search area. Species records which fall inside the site boundary include badger *Meles meles*, otter *Lutra lutra*, water vole *Arvicola amphibius,* common lizard *Zootoca vivipara* and barbastelle bat *Barbastella barbastellus*, among others.

The site was dominated by habitats of limited ecological value, namely arable field compartments and associated species-poor grassland field margins. Habitats of greater ecological value comprised plantation woodland, mature tree lines and a stream (Habitat of Principal Importance (NERC Act 2006), each of which were dominated by native species. None of the on-site habitats are listed as a Priority Habitat by The Cambridgeshire and Peterborough Biodiversity Action Group.

The initial protected species surveys highlighted twenty-seven trees with features with the potential to support crevice roosting bats. Eight badger setts were recorded on-site, of which two setts were indicative of main sett status, with the remainder forming secondary setts. A total of 47 wintering bird species were recorded on-site, 19 of which are classified as protected or notable. During site visits, incidental evidence of water vole *Arvicola amphibius* and otter *Lutra lutra* was recorded along the on-site stream and review of aerial imagery identified several ponds located within 500m of the site, that may provide breeding habitat for great crested newt *Triturus cristatus*. The habitat assessments undertaken during the extended Phase 1 habitat survey found that the site provided some degree of suitable habitat for a range of protected/notable species including reptiles, foraging and transiting bats, great crested newts, nesting birds, terrestrial invertebrates, brown hare and hedgehog.

The proposals would achieve a circa 12% biodiversity gain on site (using DEFRA 3.0), retaining the majority of existing habitats of greater ecological value, with a significant area (30ha) of new habitats such as species-rich grassland, native scrub, native woodland, reedbed, SuDs and ponds, of which the latter will be specifically designed for water vole and otter. Further work is being completed to identify the best method to deliver an addition 8% increase to deliver a 20% net gain. This may take the form of additional habitat creation or funding the creation of habitats off-site in accordance with the strategic aims of the Greater Cambridge Green Infrastructure Network Strategic Initiative.

Further survey for the following is recommended to fully understand the ecological considerations associated with the proposals: bats (activity transect surveys, static detector surveys, nocturnal emergence survey and/or aerial inspections of trees with features suitable for roosting bats); GCN (aquatic pond surveys and/or entry to Natural England District Level Licensing Scheme); birds (breeding bird survey); reptiles; water vole and otter and terrestrial invertebrates.

Conclusion

In terms of ecology, whilst the assessment has confirmed that the development would not have a detrimental impact on any statutory or non-statutory designated sites and that the majority of on-site habitats proposed to be lost are of lower ecological value, the site has potential to support a number of protected/notable species and further assessment will be required to determine the extent of any impacts on these groups. The site assessment score should therefore be Amber.

LAND AT SLATE HALL FARM, BAR HILL CB23 8HB

Site Reference 40248

TECHNICAL APPRAISAL REPORT – Historic Environment

1. For the purposes of these Representations, the 'Historic Environment' issue has been taken to refer to the historic built environment (i.e. listed buildings, conservation areas, other non-designated historic buildings…) to distinguish it from archaeological aspects of the historic environment, which are addressed in the separate 'Archaeology' Technical Appraisal Report.

HELAA Site Assessment

2. The HELAA Site Assessment scores the Site as "Amber" with regard to the 'Historic Environment' issue.
3. This scoring is defined in the HELAA[1] as follows: "*Development of the site could have a detrimental impact on a designated or non-designated heritage asset or the setting of a designated or non-designated heritage asset, but the impact could be reasonably mitigated*".
4. The Site Assessment does not include any site-specific details of heritage assets that are considered at risk of detrimental impacts through development within the proposal site, and the assessment simply repeats the HELAA definition of the Amber scoring.

Baseline Assessment of Proposal Site

5. Information on built heritage assets within the site and surrounding area is collated and reviewed in an archaeological and heritage Statement prepared for the site promoters by RPS in August 2021[2].
6. In this Statement Information regarding designated heritage assets was obtained from Historic England's *National Heritage List for England* (Scheduled Monuments, Listed Buildings, Registered Parks/Gardens, Registered Battlefields), and from South Cambridgeshire District Council (Conservation Areas); information on non-designated heritage assets was obtained from the Cambridgeshire Historic Environment Record.
7. The Statement confirms that the proposal site does not contain any designated built heritage assets.

8. There is only one designated built heritage asset within a 1km search area around the proposal site: "Milestone about 100 yards south east of turn to Bar Hill" – a 19th century cast iron triangular milestone, designated as a Grade II listed structure (NHLE Entry number 1127302). The recorded location of this milestone is a short distance southwest of the proposal site on the north side of the former A14 (a location now within the modern dual carriageway). Its current status is unconfirmed following recent road improvement and widening works on the A14.
9. The heritage significance of this Listed milestone relates to its historic interest as an example of a 19th century milestone and its close functional association with the earlier road from Cambridge to Godmanchester, the pre-cursor to the modern A14. Notwithstanding the current uncertainty over its condition following the recent A14 Improvement works, the significance of this asset does not rely on the proposal site, and the Statement determined that the asset is not sensitive to effects from future development within the proposal site.

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[1] Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) – Annex 1: Site Assessment Methodology pp36-37

[2] Land at Bar Hill, Cambridge: Archaeological Statement. RPS ref JAC26932 August 2021

10. Within a wider buffer zone extending from 1km to 2km from the proposal site, the Statement identified thirty-three further Designated Assets: thirty-one Listed Buildings - generally located within the historic village cores of Lolworth, Dry Drayton, Oakington & Longstanton, and two Conservation Areas - in Oakington and Longstanton.

11. Whilst development within the proposal site may be distantly visible (more than 1.5km away) from the southeast part of Longstanton Conservation Area or from some of the Listed Buildings, this is not assessed as causing any harm to their heritage significance or to the contribution setting makes to this significance.

12. Any potential impact on the wider setting of these heritage assets can be mitigated by landscaping and design measures.

Conclusion

13. The Amber HELAA rating accepts that any impact on heritage assets can be reasonably mitigated, and the evidence provided confirms that mitigation of any impact in relation to development at the proposal site could be achieved.

14. Moreover, after taking into account the baseline assessment provided in the archaeological and heritage Statement, and the absence of harm to any heritage assets or their settings resulting from any development of the proposal site, it can be concluded that a 'Green' site assessment rating for the 'Historic Environment' issue would be appropriate.

15. In terms of the 'Historic Environment' issue, the summary outcome is that the site is available, achievable and suitable.

LAND AT SLATE HALL FARM, BAR HILL CB23 8HB

Site Reference 40248

TECHNICAL APPRAISAL REPORT - Archaeology

1. For the purposes of these Representations, the 'Archaeology' issue has been taken to refer to known archaeological assets within the site and surrounding area, and the site's potential for the presence of other, as-yet undiscovered, archaeological assets.
2. The historic built environment (i.e. listed buildings, conservation areas, other non-designated historic buildings…) is addressed in the separate 'Historic Environment' issue.

HELAA Site Assessment

3. The HELAA Site Assessment scores the Site as "Amber" with regard to the 'Archaeology' issue.
4. This scoring is defined in the HELAA[1] as follows: "*Development of the site could have a detrimental impact to archaeology. Further information regarding the extent and significance of archaeology would be required. Archaeological works could be secured by condition of planning permission*".
5. The Site Assessment explains the scoring further by reference to extensive settlement of Iron Age and Roman date known in the area.

Baseline Assessment of Proposal Site

6. Information on archaeological heritage assets within the site and the site's archaeological potential is collated and reviewed in the Statement prepared for the site promoters by RPS in August 2021[2].
7. There have been a considerable number and range of archaeological surveys and trial investigation works carried out within the site and the surrounding area; these included field survey in 1989 covering the entirety of the proposal site, and programmes of trial trenching and localised geophysical survey assessing parts of the proposal site and extensive surrounding land undertaken for adjacent large-scale development proposals. This range and extent of previous archaeological investigations provide a more robust evidence base than is frequently available to inform assessment.
8. The Statement identified a number of known non-designated heritage assets within the site: important Mesolithic and Roman period remains – located in the eastern third of the site (HER monument refs 07796, MCB20050; and MCB23141, MCB16858, MCB16859, MCB24991). The heritage significance of each of these relates principally to its archaeological interest and the potential of currently-surviving below-ground remains & finds to provide further information in the context of regionally and nationally defined research frameworks.
9. Through modelling of information for the site and surrounding area, the Statement concluded that the proposal site has a Moderate to High potential for the presence of further Mesolithic & Neolithic archaeological remains; a Low potential for major Bronze Age remains; a High potential for Iron Age and/or Roman rural remains; a Low potential for Saxon period archaeology; and a Low potential for Medieval and later evidence other than cultivation remains.
10. None of the identified assets would preclude allocation of the proposal site, or would prevent its future development.

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[1] Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) – Annex 1: Site Assessment Methodology p37

[2] Land at Bar Hill, Cambridge: Archaeological Statement. RPS ref JAC26932 August 2021

11. It is however anticipated that additional archaeological trial works will be required to further assess the known archaeological assets and to clarify the potential for other areas of below-ground archaeological remains, and inform decision-making on any future planning application in order to ensure that development proposals are compatible with published policy at National level and the emerging Greater Cambridge Local Plan.

12. Subject to the trial works' results, appropriate mitigation of potential archaeological impacts can be achieved through a combination of a) design measures and b) programmes of post-consent archaeological investigation and recording undertaken prior to construction groundworks, and dissemination of the information obtained through the archaeological investigation programmes.

Conclusion

13. The Amber HELAA rating anticipates that further archaeological information will be required to evaluate the site's archaeology more fully and inform any planning application, but there is an expectation that the archaeological impacts will be capable of being successfully mitigated through further works under a condition attached to planning permission.

14. The evidence considered in the Statement and presented in these Representations supports this conclusion in relation to the proposal site, and confirms that an 'Amber' rating is appropriate.

15. In terms of Archaeology/ Historic Environment' issue, taking into account the mitigation measures available, the site assessment summary outcome is that the site is available, achievable and suitable.

Bar Hill, Junction 25
Local Plan evidence base HELAA review - Accessibility to Local Services and Facilities

184265/N10

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1. The Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) forms part of the evidence base for the emerging Greater Cambridge Local Plan.

2. Sites have been assessed using a methodology that incorporated a 'Red, Amber, Green' (RAG) scoring system. The assessment largely seems to have been carried out using judgement although specialist consultees were used. As part of the suitability criteria, a number of elements associated with transport matters were considered.

3. The site is referenced as number 40248 in the HELAA document referred to as Land at Slate Hall Farm, Bar Hill.

HELAA transport assessment criteria

4. In this context the accessibility of the site was considered by non-car travel. A range of categories were considered which are generally more applicable to housing sites. It is considered that a different set of metrics would be appropriate for employment sites.

5. Categories such as proximity to health, primary and secondary schools are perhaps less applicable to an employment site than the consideration of proximity to public transport and cycle networks. Proximity to local, city or district centre were also considered along with proximity to major employment sites. The relevance of these services to employment sites is somewhat debatable.

6. It is considered that a different set of metrics would be appropriate for employment sites. It is difficult to see how under this assessment any employment site could achieve a green score. Even where a site does achieve this, the relevance of the score which may be due to proximity to schools at least in part is debatable.

7. It is considered that proximity to existing and emerging populations would be a useful consideration in this context, providing opportunity for travel to work by active modes of travel.

Site assessment

8. An Amber score was provided for this suitability assessment criteria.

9. Based on the assessment criteria used, an Amber score is considered to be correct. Generally, we would agree with the scoring against the distances to the services identified.

10. There are two areas where we disagree with the scoring; distance to the cycle network and public transport.

11. In terms of cycling, there is a cycle route running along the southern boundary of the site on the A1307, towards Northstowe and Bar Hill and through the site along the Bridleway. As such a **Green** score would be applicable with distances less than 800m. The HELAA scores this as Red at greater than 1,600m.

12. Public transport is scored as Amber suggesting distances of between 450m and 1,000m. However, it is understood that bus services travel along the A1307. Introducing a bus stop here would ensure the site falls within 450m of a bus stop and public transport, allowing a **Green** score to be provided.

13. It is recognised that addressing these points will not increase the overall score from Amber to Green. However, addressing these points will help confirm the overall accessibility of the site.

14. In addition, comments are made in this section relating to facilities. It is stated that the site has '*Adequate accessibility to key local services, transport, and employment opportunities*'. We would agree with these statements in the context of an employment site.

15. The additional comments are somewhat confusing. Again these seem to apply more to housing sites and confirms that a different assessment criteria for employment sites should be used.

16. It is stated that the '*Proposed development would require accompanying local centre / employment provision, primary school and community centre*'. Clearly, such facilities are not required for the intended employment use.

Summary

17. The assessment criteria is not necessarily suited to employment sites. The relevance of achieving a **Green** score by virtue of being close to schools is clearly debatable.

18. The site should be scored higher in the context of proximity to cycle and public transport networks. The assessment is incorrect in this regard.

19. With proper consideration of criteria that are relevant to employment sites, such as proximity to cycle and public transport routes and location in the context of existing and new communities (Northstowe in this context), the site would achieve a higher score.

Bar Hill, Junction 25
Local Plan evidence base HELAA review – Site Access

184265/N11

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1. The Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) forms part of the evidence base for the emerging Greater Cambridge Local Plan.

2. Sites have been assessed using a methodology that incorporated a 'Red, Amber, Green' (RAG) scoring system. The assessment largely seems to have been carried out using judgement although specialist consultees were used.

3. The site is referenced as number 40248 in the HELAA document referred to as Land at Slate Hall Farm, Bar Hill.

HELAA transport assessment criteria

4. Cambridgeshire County Council (CCC) were consulted to inform this assessment. The potential to provide a suitable and safe access for both construction and occupation phases of a development were assessed.

5. A Green score means access is possible, Amber that there are constraints that can be overcome and Red that there is no possibility of providing access.

6. It is assumed a judgement on this basis was made by individuals within CCC.

Site Assessment

7. The site was provided an Amber score meaning there are potential access constraints, but these could be overcome through the development of the scheme.

8. It is not clear what constraints may have been identified or what, for this or any site, would enable a Green score.

9. It is assumed that full agreement of the access proposals from the highway authority would be required to enable a Green score to be provided. This would mean a preliminary design to be agreed and passed through a Stage 1 Road Safety Audit. It would also require a Transport Assessment to ensure capacity is suitable.

10. Without the full agreement, the only way a Green score might be achieved is where a site is existing, will not be intensified in terms of its use and access is suitable. Clearly for site promoted through the Local Plan this is entirely unlikely.

11. The further commentary for the site states that '*The proposed site is acceptable in principle subject to detailed design*'. We agree with this statement.

12. The further comment that '*The Local Planning Authority will need to consult with the Highway Agency, as National Highway Authority, in respect to the proposed site*' is confusing.

13. We consider this statement is not relevant and should be removed. National Highways will not be concerned with the access arrangement in detail as it will be a local highway authority matter.

14. We also note that adjacent sites such as Land to the south of the A14 Services, Boxworth does not have such statements attributed to its assessment despite relying almost entirely of vehicle movements taking place via the Strategic Road Network.

Summary

15. We agree with the assertion that access is suitable in principle and that some refinement of the proposals will be required through the detailed design process.

16. Without a clear understanding of how sites might achieve a Green score, we consider the Amber score to be appropriate.

17. Wider comments associated with National Highways and the Strategic Road Network should be removed where they are not relevant to the nature of the immediate site access.

Bar Hill, Junction 25
Local Plan evidence base HELAA review – Site Access

184265/N11

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1. The Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) forms part of the evidence base for the emerging Greater Cambridge Local Plan.

2. Sites have been assessed using a methodology that incorporated a 'Red, Amber, Green' (RAG) scoring system. The assessment largely seems to have been carried out using judgement although specialist consultees were used. As part of the suitability criteria, a number of elements associated with transport matters were considered.

3. The site is referenced as number 40248 in the HELAA document referred to as Land at Slate Hall Farm, Bar Hill.

HELAA transport assessment criteria

4. The document suggests that CCC undertook transport assessments of each site, considering the potential impact of each on the local transport network, trunk routes, and local roads. Internal workshops were run to review and moderate the individual site assessments.

5. Key considerations such as current and future potential for site accessibility / connectivity the current and future level of sustainable transport provision and highway safety were all considered.

6. The Transport Assessments for each site are not provided. It is also unclear how some of the assessment criteria may have been applied. For example, a site may have scored Red if located in an area with ongoing transport improvements. However, it might be considered that the opposite of such a location is true in that a site near improvements can benefit from those improved links through improved accessibility.

7. Equally, a large, committed development might provide benefits if mutually beneficial i.e. a site promoting employment near to a committed development of housing will be beneficial in terms of locating new jobs close to new homes. However, this appears to be considered as a negative and reason to attract a Red score.

8. A Red score would result in an unacceptable impact. An Amber score is where any impacts can be reasonably mitigated. A green score can only be provided if there is no determinantal impact, presumably without mitigation. The criteria is therefore such that only sites that are already accessible or located on parts of the network with capacity or sites that are small in scale so as to not give rise to significant trips, may attract a Green score.

Site assessment

9. The site was provided a Red score meaning that the conclusion for this criteria was that the '*Development of the site would have an unacceptable impact on the functioning of trunk roads and/or local roads that cannot be reasonably mitigated*'.

10. There is little detail provided to determine how the conclusion was reached. The comments provided state that the site is '*Remote from any adjacent settlement, sustainability issues (currently proposed for B2/B8) which is possibly more acceptable*'.

11. The above statement is clearly incorrect. The existing Bar Hill settlement is within 1km of the site (measured from centre to centre, note the closest boarders are within 350 metres) and the emerging community at Northstowe with 10,000 homes will be largely within 1 to 2km of the site. Given such distances, we completely disagree with the statement that the site is remote from settlement, rather it is accessible to existing and future communities.

12. The comments also state that a Transport Assessment and Travel Plan is required which if the reference relates to a future planning application is agreed but also applicable to all promotion sites.

13. With reference to the Red score criteria identified in the assessment, **Table 1** provides some commentary against each.

Table 1: Assessment Red score criteria

Assessment criteria	Comments	Reason to attract a Red score?
there were any large committed developments close to the site	The commentary in this section of the HELAA states that the site is considered remote. Therefore, this could not have attracted a Red score. In addition, we would question whether a prospective employment site being located next to a large committed residential development (i.e. Northstowe), is a negative outcome.	No. Conclusion in the HELAA is clear and regardless, proximity to large, committed developments should not be considered a negative.
the site was located in a congested corridor	The SRN conclusion is Amber suggesting capacity is available. This criteria could not have attracted a Red score. The surrounding highway network has also been recently upgraded.	No. Assessments elsewhere suggest this is not the case and the network is recently improved.

Assessment criteria	Comments	Reason to attract a Red score?
the site was located near a problem junction	The SRN conclusion is Amber suggesting capacity is available. This criteria could not have attracted a Red score. The surrounding highway network has also been recently upgraded.	No. Assessments elsewhere suggest this is not the case and the network is recently improved.
the site was not sustainable	In terms of transport the key criteria is the relative accessibility of the site by a range of modes. The HELAA scores accessibility as Amber.	No. Accessibility score in the wider HELAA is Amber.
the site needed major transport infrastructure to be delivered	No evidence to suggest this is the case. Cycle routes, public transport links in place and the highway infrastructure recently improved.	No. Recent infrastructure makes the site accessible.
the site was located in an area with ongoing transport improvements	It is not clear how, if a site is located near a scheme improving access this can be a negative outcome.	No. Criteria seems inappropriate.
the site was located by a major accident cluster	There is no evidence of this and the network is recently approved and as such undergone safety reviews and built to contemporary design standards.	No. There is no evidence to support this.
the site was located by a major TIP Scheme- indicate contributions may be required.	The Transport Investment Plan identifies a range of schemes across the region. The majority of sites would fall near to a scheme. It is unclear why, a potential improvement scheme which would be supported through development funding is seen as a negative.	No. Criteria is inappropriate given a recognised scheme could be delivered to benefit development and existing movements.

14. Whilst the wider Transport Assessment conclusions are not understood, there seems to be no criteria under the identified Red score considerations where the site would attract a Red score.

15. Given the identified capacity on the local road network which has been recently improved and the accessibility of the site, both of which the HELAA assesses positively elsewhere, it cannot be reasonably concluded that the site *'would have an unacceptable impact on the functioning of trunk roads and/or local roads that cannot be reasonably mitigated'*.

16. Further evidence of this can be drawn by making a comparison against the scoring for the site at Land to the south of the A14 Services, Boxworth. Unlike Bar Hill, Junction 25, the site is scored as Amber and 'No comment' is set out in the wider commentary. The reason for the distinction between the two sites is entirely unclear.

17. For Bar Hill, Junction 25, reference was made to the remoteness of the site and sustainability issues. Quite simply, this should apply to the Swavesey site as it is especially remote from any existing or planned settlement and sustainable transport links are incredibly limited. How this same comment is not attributed to a site that is distant from settlement cannot be rationalised.

18. It seems clear that there are inconsistencies over how individual sites have been scored to the detriment of Junction 25, Bar Hill.

Summary

19. The HELAA references a Transport Assessment for the site which has not been made visible as part of the evidence base.

20. The assessment criteria identify how sites might be scored Red. For many of these criteria the HELAA concludes elsewhere that the site is suitable. Other criteria there is no evidence to suggest a negative outcome.

21. With reference to another employment site, clear inconsistencies of scoring are apparent.

22. The proximity of the site to emerging communities such as Northstowe, which is a positive in a sustainable transport sense, combined with the conclusions elsewhere that capacity on the newly improved local highway network is available, suggests that the site should receive at least an **Amber** score. There are no identifiable reasons for scoring the site Red.

Technical Appraisal Report

Re: Land at Slate Hall Farm, Bar Hill, Cambridge – Noise and Vibration

Introduction

This noise screening report has been prepared in response to the site suitability section of the Greater Cambridgeshire (GC) HELAA. Noise and Vibration is considered in combination with odour and light pollution and has been assessed as Amber. It is advised that '*The site is capable of being developed to provide health internal and external environments in regard to noise/vibration/odour/light pollution are careful site layout, design and mitigation.'* The purpose of this note is to provide details of the mitigation measures that will be included to control noise and vibration.

Key Issues and Impacts

The site is located away from any built-up areas and the nearest noise sensitive receptors (NSR) are individual residential properties located on Dry Drayton Road to the south east and on the B1050 to the north west of the site. The location of the NSR are shown in Figure 1 below. The nearest built up areas to the site is the village of Oakington to the north east and Bar Hill to the south.

FIGURE 1: Location of Noise Sensitive Receptors

NSR1 – Orchard Cottage

NSR 2 – Hazelwell Cottages

NSR 3 – Poplar Villas

NSR 4 – Oakington

NSR 5 – Bar Hill

Baseline Conditions

To determine baseline conditions a noise survey has been carried out to determine existing ambient (L_{AeqT}) and background ($L_{A90,T}$) against which the development will be assessed. Measurements were carried out at multiple locations on and around the site at locations representative of the nearest noise sensitive receptors (NSR) to the site.

TABLE 1: Survey Results

Location	Day time (0700 – 2300 hrs)		Night time (2300 – 0700 hrs)	
	L_{AeqT}	$L_{A90,T}$	L_{AeqT}	L_{A90T}
NSR1	66 – 68 dB	53 – 58 dB	56 dB	41 dB
NSR2	50 – 56 dB	48 – 55 dB	46 – 55 dB	42 – 54 dB
NSR3	57 – 71 dB	49 – 58 dB	47 – 66 dB	44 – 56 dB
NSR4	46 – 47 dB	41 – 46 dB	41 – 42 dB	39 – 40 dB
NSR5	54 – 69 dB	50 – 58 dB	51 – 60 dB	44 – 57 dB

Existing baseline noise levels, which is dominated during the day by road traffic noise on the A14 and localised roads and during the night by A14. The proposed employment use will result in an increase in vehicle movements on and around the site, however this will not be out of character with the existing noise climate. Therefore, subject to the mitigation measures discussed below the site is considered suitable for employment use.

Full details of the survey are included in Appendix A to the note, and summarised in Table 1 below.

Assessment Methodology

Noise from construction and operational activity will be assessed having regard to relevant noise guidance including BS 5288: 2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites, and BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound, and existing noise levels.

During the construction phase there is a potential for noise to cause short-term impacts when work is taking place in close proximity to the noise sensitive receptors identified. An assessment of the impact of construction activity will be carried out determine the level of impacts and mitigation measures required.

Operational noise will include the impact of noise from servicing activity, mechanical services plant serving the development and noise break-out from the units. It is not considered that vibration during the operational phase will be an issue. Operational noise will be assessed using SoundPLAN computer modelling software which predicts the noise level, L_{Aeq} and L_{Amax} from operational activity.

Mitigation Measures

As part of the design process operational noise will be taken into account to reduce noise at source. The principles of noise control would be embedded in the design of the layout of the site and the buildings, which would minimise the need for operational mitigation measures. Details of the mitigation measures which would be included are shown in the Table below:

Possible Mitigation Measures

Activity	Mitigation Measures
Noise and Vibration from Construction Phase	All work will be carried out in accordance with a construction environmental management plan (CEMP) which will include measures on how to control noise and vibration.
Operational Noise	
Fixed Mechanical Services Plant	Selection of quieter plant; Plant sited maximum distance from receptors; Use of noise attenuation measures such as silencers, acoustic enclosures and localised screening
Delivery Activity	Layout design to use buildings to screen service yard areas; Acoustic screens around service yard areas; Use of delivery management plans to control how deliveries received; Restrictions of delivery times
Break-out from Units	Design of units to minimise doors facing residential receptors; Construction of walls and roof of units; Restrictions on operating hours

The above measures are not exhaustive but show that operational noise can be mitigated through the design of the site. It is considered that following a detailed assessment and identification of mitigation measures, that all impacts can be resolved to prevent impact in line with the policy aims of the National Planning Policy Framework (NPPF), local policy aims and relevant guidance. In terms of noise, taking into account the mitigation measures, the site assessment summary outcome is that the site is available, achievable and suitable should therefore be assessed as Green

Gary King MIOA MCIEH

Director

[redacted]

8 December 2021

Appendix A: Noise Survey Results

Appendix A: Survey Details

Survey Locations

NSR1 – Orchard Cottage

NSR 2 – Hazelwell Cottages

NSR 3 – Poplar Villas

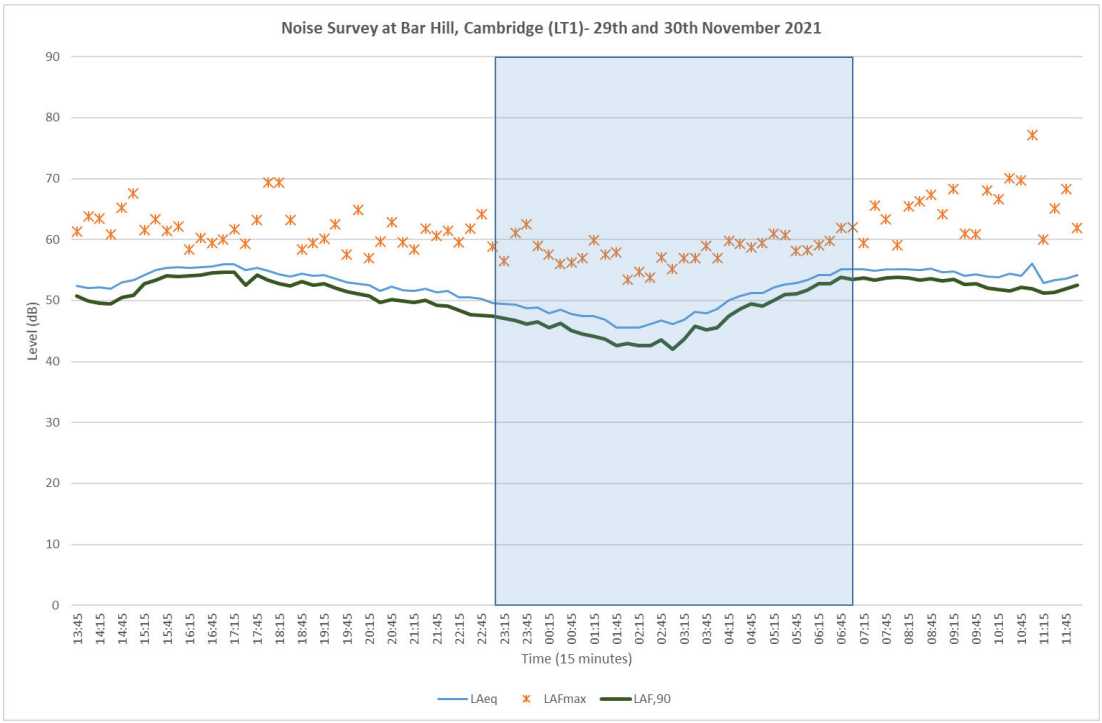
NSR 4 – Oakington

NSR 5 – Bar Hill

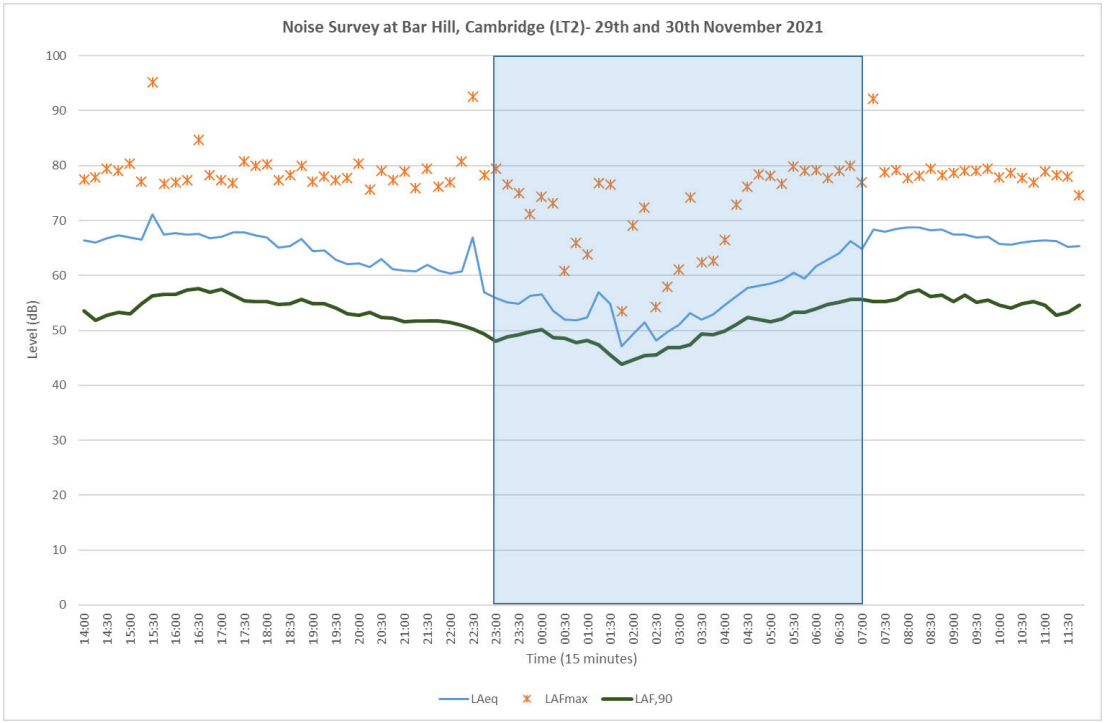
Survey Details

	OS Reference	Description
LT1	TL 38698 64404	Survey carried out over 24-hours with microphone set up on tri-pod 1.3m above ground level (GL) in free-fields conditions. Measurements carried out for approximately 24 hours
LT2	TL 40178 63535	Survey carried out over 24-hours with microphone set up on tri-pod 1.3m above ground level (GL) in free-fields conditions. Measurements carried out for approximately 24 hours
ST1	TL 38996 65564	Short-term attended measurements carried out during day and night period. Measurements carried out in free-field conditions
ST2	TL 40834 64421	Short-term attended measurements carried out during day and night period. Measurements carried out in free-field conditions
ST3	TL 38472 63754	Short-term attended measurements carried out during day and night period. Measurements carried out in free-field conditions
Weather Conditions		Predominantly dry, with light westerly winds. Short period of drizzle early morning but not considered to have affected noise levels
Equipment Used		Survey carried out using Norsonic type 1 sound level meters, with unattended measurements (LT1, LT2) fitted with environmental monitoring kit. All sound level meters were calibrated before and after the survey with no drift in accuracy noted.

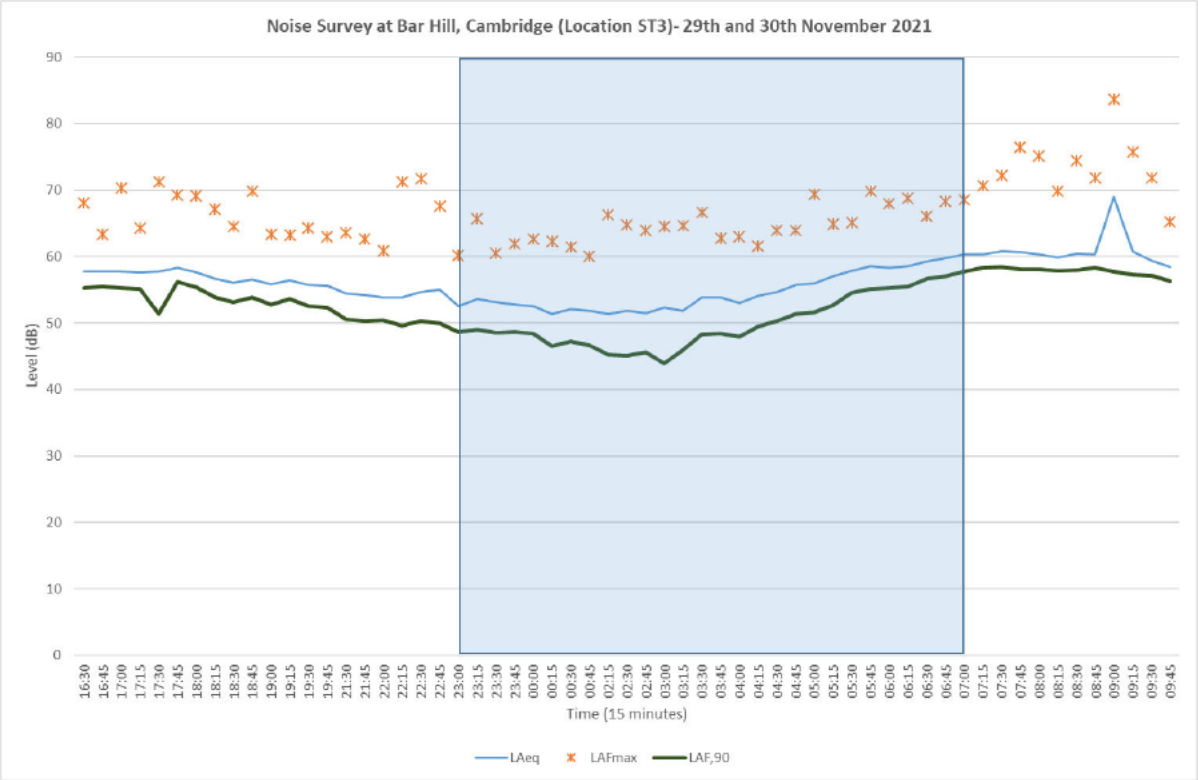
Survey Results – 29 November to 30 November 2021 (LT1)



Results – 29 November to 30 November 2021 (LT1)



Results – 29 November to 30 November 2021 – ST3



Survey Results – Measurement Locations - ST1-ST2

	Date	Time Period	Noise Level dB		
			L_{AeqT}	L_{Afmax}	$L_{A90,T}$
ST1	29.11.21	15:00 – 15:30 hrs	66	76	60
		20:13 – 20:40 hrs	66	76	53
	30.11.21	01:10 – 01:30 hrs	56	74	41
		10:15 – 10:40 hrs	68	81	58
ST2	29.11.21	14:25 – 14:50 hrs	46	62	42
		20:45 – 21:15 hrs	46	56	45
	30.11.21	01:40 – 02:10 hrs	41	56	40
		10:50 – 10:15 hrs	48	60	46

TECHNICAL APPRAISAL REPORT - BAR HILL, CAMBRIDGE

Introduction

A Technical Appraisal Report has been prepared in support of the Site Assessment Update. This includes an appraisal of baseline conditions at the site, consideration to potential air quality impacts as a result of the proposed development and how these will be assessed, as well as the guidance that will be utilised to determine appropriate mitigation for the scheme.

Baseline Conditions

As required by the Environment Act (1995), South Cambridgeshire District Council (SCBC) has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean nitrogen dioxide (NO_2) concentrations and 24-hour mean particulate matter with an aerodynamic diameter of less than 10µm (PM_{10}) concentrations are above the Air Quality Objectives (AQOs) within the district. As such, one Air Quality Management Area (AQMA) has been declared, which is described as follows:

> "An area along the A14 between Bar Hill and Milton. Note, although PM_{10} is also a relevant pollutant within this AQMA and was included in 2008, the modelled PM_{10} boundary is smaller and inside the NO_2 boundary, so the NO_2 boundary is the adopted one."

The site is partly located within the AQMA. As such, there is the potential for traffic generated by the development to increase pollution levels within the designation. This will therefore be considered as part of the Air Quality Assessment for the scheme.

It is noted that monitoring data provided in SCDC's 2021 Annual Status Report (ASR)[1] indicates pollutant concentrations within the AQMA have been below relevant AQOs since 2014. As such, SCDC intend to the revoke the AQMA in the near future.

Background Pollutant Concentrations

Predictions of NO_2 and PM_{10} concentrations on a 1km by 1km grid basis have been produced by Department for Environment, Food and Rural Affairs (DEFRA). These maps cover the entire of the UK to assist Local Authorities (LAs) in their Review and Assessment of air quality. The proposed

[1] SCDC's 2021 ASR, 2021.

development is partially located in two grid squares. Data for these locations was downloaded from the DEFRA website[2] and are summarised in Table 1.

Table 1 Background Pollutant Concentrations

National Grid Reference (NGR)	Background 2021 Concentration (µg/m^3)	
	NO_2	PM_{10}
538500, 264500	9.68	17.08
539500, 263500	11.37	18.33

As shown in Table 1, background NO_2 and PM_{10} concentrations are well below the AQOs of 40µg/m^3 at the proposed development site.

Key Issues and Requirement for Assessment

The proposals have the potential to cause air quality effects as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. These issues will be assessed in accordance with the following assessment methodology.

Assessment Methodology

Baseline air quality conditions in the vicinity of the site will be defined based on recent monitoring results and information from the DEFRA Air Quality Resource. Sensitive locations that could be affected by the proposals will also be identified, as well as any relevant planning policies or guidance.

During the construction of the proposed development there is the potential for air quality effects as a result of fugitive dust emissions from earthworks, construction and trackout activities. It is proposed to assess these in accordance with the Institute of Air Quality Management (IAQM) guidance 'Assessment of Dust from Demolition and Construction V1.1'[3].

During the operation of the development there is the potential for air quality effects as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site. It is proposed to assess these through detailed dispersion modelling using ADMS-Roads in order to

[2] http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2017.
[3] Guidance on the Assessment of Dust from Demolition and Construction V1.1, IAQM, 2016.

fully quantify NO_2 and PM_{10} concentrations at sensitive locations both with and without the development in place.

The assessment will be undertaken using relevant traffic data, local land use characteristics and 1-year of hourly meteorological records taken from the Cambridge observation station. The modelling outputs will be verified against local monitoring data in accordance with the DEFRA methodology. Impacts will be predicted at sensitive receptor locations and also displayed graphically throughout the assessment extents using contour plots.

The significance of potential effects at sensitive receptors will be determined based on the predicted magnitude of change in pollutant concentrations as a result of development related road vehicle exhaust emissions and the criteria provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'[4].

Mitigation

If required following assessment of potential impacts, suitable mitigation measures will be identified in order to reduce air quality impacts to an appropriate level with reference to the recommendations included within documents 'Land-Use Planning & Development Control: Planning for Air Quality'[5] produced by the IAQM and 'Greater Cambridge Sustainable Design and Construction Supplementary Planning Document'[6] produced by the Greater Cambridge Shared Planning Service. These may include:

- Provision of electric vehicle charging points;
- Provision of low-emission energy infrastructure;
- Implementation of a Construction Dust Management Plan; and,
- Implementation of a Travel Plan.

The above is not exhaustive and any additional mitigation measures required to reduce air quality impacts to an appropriate level will be incorporated into the development proposals, where necessary.

4 Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.
5 Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.
6 Greater Cambridge Sustainable Design and Construction Supplementary Planning Document, Greater Cambridge Shared Planning Service, 2020.

Conclusion

The Technical Appraisal Report confirms air quality impacts associated with the proposed development will be assessed and appropriately mitigated. As such, the scheme should be categorised as green in Greater Cambridgeshire's Housing and Economic Land Availability Assessment.

Technical Appraisal Report produced by Pearl Hutchinson, Principal Air Quality Consultant, Redmore Environmental, on 16th November 2021.

Date: 01/11/2021

Ref: 7437/CRS

Proposed Development at Slate Hall Farm,Barhill,Cambridge

Contamination and Ground Stability

The assessment from Greater Cambridge assesses the site as Amber risk with regards to Contamination and Ground Stability.
The site plan included in the assessment includes Slate Hall Farm in the centre of the site but it should be noted that the proposed development site does not include Slate Hall Farm

The assessment also states that the site area is 107.48ha when in fact it is 100ha. Presumably the 107.48ha includes Slate Hall Farm

Various investigations of the site have already been carried out which conclusively show that the site should be assessed as Green, especially since the proposed development of the site is principally for logistics and industrial use which is a less sensitive use than others such as residential.

These investigations are;

1. A Preliminary Risk Assessment (PRA) report ,or historic desk study, by DTS Raeburn dated February 2020 ref E13287, a copy of which is attached
   This report shows that the site has remained undeveloped throughout its history with the exception of localized tree planting and the construction of hardstanding access routes.
   Therefore there is no known previous development on the site which might have caused a contamination risk .

2. In February 2020 eight trial pits were excavated across the site by DTS Raeburn in which infiltration tests were carried out to investigate the potential use of soakaways for surface water drainage.
   The report on this investigation ref E12387-2 L1 is attached.
   The trial pits showed relatively consistent natural ground conditions across the site with typically 1.5-2.0m of loose-dense sandy clays and gravels overlying firm to stiff Kimmeridge Clay.
   No imported fill materials were encountered nor any signs of soil or groundwater contamination

3. In September/October 2020 three boreholes to 20m depth were sunk in the western part of the site to investigate the deeper ground conditions to inform the design of proposed large logistics or industrial units.
   The report on this investigation dated November 2020 ,ref E31287-3 is attached
   The ground conditions encountered were very similar to those in the previous trial pits in 2. above with again no imported fill material encountered nor any signs of soil or groundwater contamination.

4. In September 2021 ten boreholes to 5.0m depth were sunk across the site for the purposes of ground water monitoring over a period of at least 12 months
   The boreholes logs ref E13287-4 are attached.
   Again the soil and ground water conditions were very similar to the previous investigations with no indications of imported fill materials nor any signs of soil or ground water contamination.

Further extensive geo-environmental site investigations will be carried out in due course to suit the detailed development layout and building locations.

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Based on these investigations to date and the history of the site it is not expected that significantly different or environmentally adverse soil or ground water conditions will be encountered .

The investigations to date show that the ground conditions are suitable for the proposed development

Therefore it is our firm view that these investigations provide clear evidence that the site should be assessed as Green rather than Amber with regards to Contamination and Ground Stability

C R Short

BSc(Hons 1) CEng MICE MIStructE
Director
MJM Consulting Engineers Ltd

Bar Hill, Junction 25
Local Plan evidence base HELAA review – Strategic Highways Impact

184265/N13

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1. The Greater Cambridge Housing and Economic Land Availability Assessment (HELAA) forms part of the evidence base for the emerging Greater Cambridge Local Plan.

2. Sites have been assessed using a methodology that incorporated a 'Red, Amber, Green' (RAG) scoring system. The assessment largely seems to have been carried out using judgement although specialist consultees were used. As part of the suitability criteria, a number of elements associated with transport matters were considered.

3. The site is referenced as number 40248 in the HELAA document referred to as Land at Slate Hall Farm, Bar Hill.

HELAA transport assessment criteria

4. National Highways (previously Highways England) were consulted to consider how impacts on the Strategic Road Network (SRN) might be assessed. Principally in the context of the site this relates to the A14.

5. This assessment was based upon the capacity of junctions but it is not clear what data or models were used.

6. Zones were identified to consider how sites are located proximate to the SRN. Bar Hill, Junction 25 is located in Zone 2, A14 West which was allocated an Amber score with limited capacity for Growth.

Site assessment

7. The site was provided an Amber score due to its location within Highways England Zone 2 - A14 West and meaning there is considered to be limited capacity for growth.

8. There is value in understanding how the capacity of junctions and each zone was determined.

9. The limited capacity for growth conclusion is perhaps surprising given the recent upgrades undertaken to this part of the SRN.

10. The conclusion is that, whilst perhaps limited, there is some capacity for growth in the area.

11. The suitability of any site will need to be determined through a Transport Assessment. In this regard the conclusion that there is (limited) capacity on the network ensures that such assessments will ultimately determine the suitability.

Summary

12. It is unclear what models or data was used in order to determine the relative capacity of the SRN across the area.

13. The Zone within which the site is located suggests some, albeit limited capacity for growth. Whilst the conclusion is somewhat surprising given the recent improvements to the A14 in this area and Junction 25, this allows a later assessment to confirm the suitability of the site and proposals and this therefore considered suitable.

Cambs 70/89

FOR DIVISIONAL USE ONLY

AGRICULTURAL LAND CLASSIFICATION

SLATE HALL FARM, BAR HILL, CAMBRIDGESHIRE

1. BACKGROUND

1.1 The site, an area of 146.3 hectares, is the subject of an application for the development of a shopping centre complex near Bar Hill, Cambridgeshire. MAFF surveyed the site in January and February 1990 to assess the agricultural land quality.

1.2 On the published Agricultural Land Classification map sheet No 135 (provisional, scale 1:63360 (MAFF, 1971)), the area is shown as mainly grade 2 with smaller areas of grade 3 in the vicinity of New Close Farm and the south east corner of the site.

2. PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

2.1 Climate data for the site was obtained from the published agricultural climatic dataset. (Met Office, 1989). This indicates that for the site's median altitude of 15m AOD the annual average rainfall is 547mm (21.5"). This data also indicates that field capacity days are 89 and moisture deficits are 118mm for wheat and 113mm for potatoes. These climatic characteristics do not impose any climatic limitations on the ALC grading of the survey site.

Altitude and Relief

2.2 The land surveyed is gently undulating and ranges in altitude from 13m to 20m AOD. The altitude is at a maximum around the track at Grid Ref: TL388640 and falls gently towards the northwest and east/south east to 14m and 13m AOD respectively. Gradient and altitude do not constitute limitations to the ALC grade.

Geology and Soils

2.3 The published 1:50,000 scale drift edition geology map sheet 187 (Geological Survey of GB 1975) shows the survey area to comprise Lower Greensand deposits through the central part and smaller deposits of Kimmerdge Clay and Gault Clay to the northwest and southeast corners of the site respectively.

2.4 The Soil Survey of England and Wales have mapped the soils in the area on two occasions; firstly, in 1973 at a scale of 1:63360 and secondly, in 1983, at a reconnaissance scale of 1:250,000. These maps show the occurrence of the Wicken (*1), Denchworth (*2) and Evesham 3 (*3) Associations where the clayey geological deposits outcrop and the Cottenham (*4) and Bearsted 1 (*5) Associations where the Lower Greensand deposits occur. During the current survey a more detailed inspection of the soils was carried out.

Three main soil types occur over the site.

(*1) Wicken Association 1973 : Gleyed brown calcareous soil (Grey calcareous Jurassic or Cretaceous Clay with thin Head).

(*2) Denchworth Association 1973 : Gleyed brown calcareous soil (Grey calcareous and non calcareous Jurassic and Cretaceous Clays).

(*3) Evesham 3 Association 1983 : Slowly permeable calcareous clayey and fine loamy over clayey soils. Some slowly permeable seasonally waterlogged non-calcareous clayey soils. (Jurassic and Cretaceous Clay).

(*4) Cottenham Association 1973 : Brown Earth (may be gleyed) (Lower Greensand with drift).

(*5) Bearsted 1 Association 1983 : Well drained coarse loamy and sandy soils over sand or sandstone, in places ferruginous. Some slowly permeable coarse and fine loamy soils affected by ground water. (Cretaceous sand and sandstone).

2.4.1 In the vicinity of the depot, GR:TL 391642 and Slate Hall Farm slightly droughty deep fine loamy soils predominate. They typically comprise sandy clay loam or occasionally sandy loam topsoils over (sandy) clay, (sandy) heavy clay loam or occasionally sandy clay loam subsoils to depth. (50/120cm^{+}) At depth the profiles may overlie the following:-

2.4.1a) East of Slate Hall Farm below depths of 70/80cm^{+} profiles often contain approximately 10-20% small and very small ironstone nodules which either extend to 120cm or occur in thin bands of varying thicknesses.

2.4.1b) In the vicinity of Slate Hall Farm and north of the depot subsoils typically merge into loamy medium sand at depths 85/100cm^{+}.

2.4.1c) North of the track running between New Close Farm and Slate Hall Farm subsoils generally merge into gleyed calcareous clays 50/115cm^{+}.

2.4.2 North east of the depot and in the northwest and southeast quarters of the site clayey soils predominate. These soils typically comprise heavy clay loam or clay (in the south east) topsoils over clay or occasionally heavy clay loam subsoils which often become calcareous at depth (50/60cm^{+}). Towards the south east profiles are often calcareous in the upper horizons and topsoil clay content typically exceeds 50%.

2.4.3 Gravelly soils outcrop in a small area in the vicinity of New Close Farm. The soils typically comprise medium clay loam or occasionally heavy clay loam topsoils over slightly stony gleyed heavy clay loam subsoils which generally merge into gravelly material* at depths 50/90cm^{+}. Subsoils often become moderately stony in thin bands directly above the gravelly material. North of New Close Farm Cottages profiles typically overlie gleyed clay, below the gravel, at depths 90/120cm^{+}.

* Gravelly material: typically comprises 50% flints in a matrix of medium sand and clay loam pockets.

3. AGRICULTURAL LAND CLASSIFICATION

3.1 The definition of the Agricultural Land Classification grades are included in Appendix 1.

3.2 The table below shows the breakdown of ALC grades in hectares and % terms for the survey area.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	41.0	28
3a	76.3	52.2
3b	25.7	17.6
Urban	0.4	0.3
Agricultural Buildings	2.9	1.9
TOTAL	146.3	100

3.3 GRADE 2

Approximately a quarter of the survey area has been mapped as grade 2. This land is associated with the soils described in paragraph 2.4.1 and subparagraphs 2.4.1a), 2.4.1b) and 2.4.1c).

3.3.1 Where the soil variants described in subparagraphs 2.4.1a) and 2.4.1b) occur the profiles are freely draining (wetness class 1) and hold moderately good reserves of water. The ironstone fragments or coarse textures at depth together with the fine loamy profile textures impose a slight limitation on the water holding capacity of these soil profiles. As a result, the minor droughtiness limitation restricts this land to grade 2.

3.3.2 Where the soil variants described in sub paragraph 2.4.1c) occur the fine loamy upper horizons overlie slowly permeable clays at depths (50/115cm^{+} ie wetness class I or II). These profiles are slightly droughty because the fine loamy textures impose a slight limitation on

the available profile moisture reserves. Within this area topsoils are typically sandy clay loams. As a result slight droughtiness, and where profiles are wetness class II, slight wetness and workability, imperfections exclude this land from a higher grade.

3.4 SUBGRADE 3a

The majority of the survey area has been mapped as subgrade 3a.

3.4.1 Most of the land graded 3a occurs in association with the better drained variants of the soils described in paragraph 2.4.2 above. Soil profile pit observations indicated that the subsoils are slowly permeable at depth, typically 45/55cm^{+} (ie wetness class II). This land is consequently limited by moderate wetness and workability imperfections which derive from the reduced subsoil permeability at depth combined with the heavy, decalcified**, topsoil textures. These factors restrict the land to subgrade 3a (Good quality agricultural land).

3.4.2 The remainder of the land graded 3a occurs in association with the moderately droughty gravelly soil variants described in paragraph 2.4.3. (Profiles are typically slowly permeable at depth (ie wetness class II) and topsoils are fine loamy (eg medium clay loams).) The presence of flints, in varying densities, moderately reduces the waterholding capacity of these profiles. As a result the moderate droughtiness imperfection constitutes the chief limitation to the ALC grade.

3.5 SUBGRADE 3b

The remainder of the survey area (approximately 18%) has been mapped as subgrade 3b. These areas occur towards the northwest and southeast corners of the site.

3.5.1 Towards the southeast corner of the site and north of New Close Farm the land is associated with the soils described in paragraph 2.4.2. Topsoils comprise decalcified** heavy clays (45/50 %$^{+}$ Clay)

** Decalcified - Towards the southeast profiles can be calcareous throughout, however topsoil clay contents exceed 50%.

which overlie subsoils of similar textures. Subsoils are slowly permeable directly below the topsoil and as a result the drainage status has been assessed as wetness class III. Thus the wetness and workability imperfections impose a significant limitation on the agricultural potential of this land. Hence the land is restricted to subgrade 3b (Moderate quality agricultural land).

3.5.2 North of New Close Farm Cottages the land graded 3b is associated with the heavier gravelly soils described in paragraph 2.4.3. Topsoils typically comprise non calcareous heavy clay loams over gleyed subsoils which overlie gravelly material at depth. Profile pit observations indicate that the subsoils are slowly permeable directly below the topsoil (ie wetness class III). As a result significant wetness and workability limitations exclude this land from a higher grade.

3.6 URBAN

The depot on the A604 road has been mapped as urban.

May 1990

Resource Planning Group
Cambridge RO

Appendix 1

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 and horticultural crops can usually be grown but on some land in the 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 more more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations will affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. When more demanding crops and 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 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 level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In most 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 very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

References

GEOLOGICAL SURVEY OF GREAT BRITIAN 1975 Drift edition Geology Sheet No 187, 1:50,000 scale.

MAFF 1971, Agricultural Land Classification Map Sheet 135, scale 1:63360.

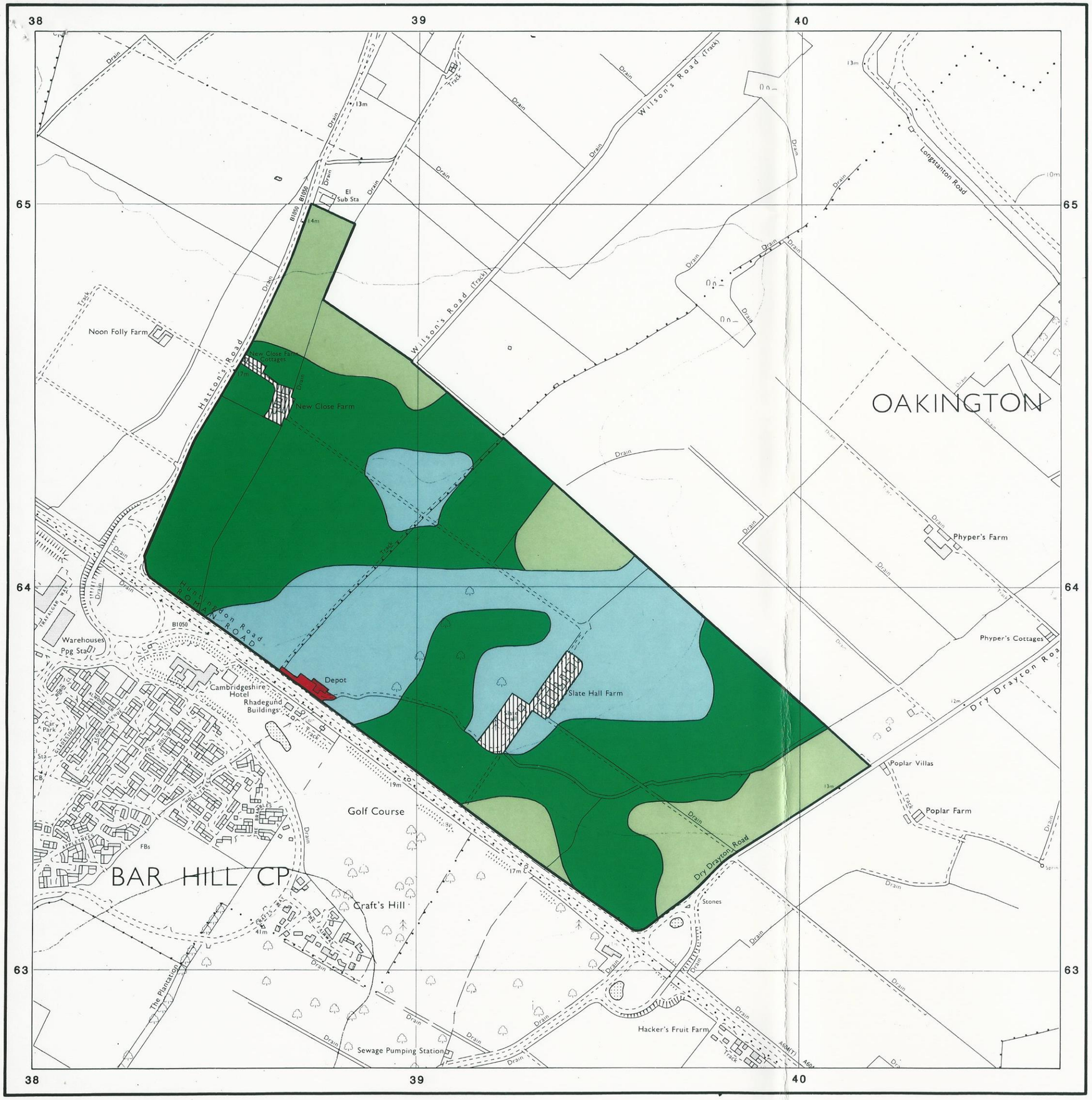
MAFF 1988, Agricultural Land Classification of England and Wales (Revised Guidelines and criteria for grading the quality of agricultural land.) Alnwick.

METEOROLOGICAL OFFICE 1989. Data extracted from the published ALC agroclimatic dataset.

SOIL SURVEY OF ENGLAND AND WALES 1973 (Provisional) The Soils of Cambridge and Ely scale 1:63360.

SOIL SURVEY OF ENGLAND AND WALES 1983. 'The Soils of Eastern England' Sheet 4 1:250,000.

Agricultural Land Classification
Slate Hall Farm, Bar Hill



AGRICULTURAL LAND

Agricultural Grades	Agricultural Land Quality
Grade 1	Very high
Grade 2	
Grade 3 a	
Grade 3 b	
Grade 4	
Grade 5	Very low

Disturbed

Agricultural Buildings

Unsurveyed

NON AGRICULTURAL LAND

Land predominantly in urban use

Other land primarily in non-agricultural use

* Land in this category does not occur on this map

SOURCE MAPS Base maps taken from the O.S. **1 : 10000** Sheets **TL 36 NE, SE, 46 NW, SW**

This map is accurate only at the scale shown. Any enlargement could be misleading

Scale 1:10000

100 0 100 200 300 400 500 600 700 800 900 1000

Metres

Drawn by the Cartographic Unit, Farm & Countryside Service Cambridge. Ref. H 70 89

MAFF Ministry of Agriculture Fisheries and Food

Wilson's Road (Trac

B1050

Hatton's Road

Drain

New Close Farm Cottages

New Close Farm

17m

Pit 1

Pit 2

Pit 3

Pit 4

Pit 5

Pit 6

Pit 7

70/89

Huntingdon Road

ROMAN ROAD

B1050

Depot

Cambridgeshire Hotel

Rhadegund Buildings

Track

19m

Golf Course

State Hall Farm

Dry Drayton Road

Stones

17m