



Greater Cambridge Partnership

CAMBOURNE TO CAMBRIDGE

Environmental Statement

Technical Report 5: Ecology, Appendix 5.10:
Hedgerow Survey (Draft)





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Hedgerow survey (Draft)

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Contents

1 Introduction	1
1.1 Project Background	1
1.2 Ecological Background	1
1.3 Brief and Objectives	1
2 Methodology	2
2.1 Survey Area	2
2.2 Field Survey	2
2.3 Evaluation of Results	3
2.4 Dates of Survey and Personnel	3
2.5 Notes and Limitations	3
3 Results	4
3.1 Field Survey	4
3.2 Overview	4
3.3 Ecological Field Survey of Hedgerows	4
3.4 Protected Species	8
4 Summary	9
5 References	10

Annexes

Annex 5.10.1

Study & Survey Areas

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1 Introduction

1.1 Project Background

- 1.1.1. Greater Cambridge Partnership (GCP) is proposing to construct the infrastructure required to enable a high-quality public transport service to operate between Cambourne and Cambridge – this scheme is known as the Cambourne to Cambridge Better Public Transport project (referred to throughout as the ‘Proposed Scheme’).
- 1.1.2. The Proposed Scheme lies to the west of Cambridge, the route running for approximately 13.6km between the town of Cambourne and Cambridge City Centre along the A428/A1303 corridor, terminating on Grange Road in the western outskirts of Cambridge.

1.2 Ecological Background

- 1.2.1. The Proposed Scheme intersects many hedgerows on Site. All hedgerows which contain cover by predominantly (80% or more) one native woody species are considered a Habitat of Principal Importance (HPI) , and they can be further protected under the Hedgerows regulations (1997) as an Important Hedgerow, if they meet a set of criteria set out within the legislation. Cambridge Ecology undertook hedgerow surveys in 2021 (Cambridge Ecology, 2021). However Cambridge Ecology experienced access issues which made it not possible to survey all habitats on Site. Additionally the route has changed since their surveys in 2021 resulting in new habitats requiring survey. Summarise Cambridge Ecology’s findings and how many are affected.
- 1.2.2. Cambridge Ecology identified nine important hedgerows on Site, of these six have the potential to be directly impacted by the Proposed Development.

1.3 Brief and Objectives

- 1.3.1. WSP UK Ltd was commissioned by Greater Cambridge Partnership (GCP) to undertake a Hedgerow survey and report, with the following objectives:
 - Determine whether hedgerows could be classed as 'Important Hedgerows' under Wildlife and Landscape criteria listed in the Regulations in order to complete the baseline to inform impact assessment and mitigation.

2 Methodology

2.1 Survey Area

- 2.1.1. The hedgerow survey area consisted of hedgerows within the Red Line Boundary which would likely be directly impacted by the Proposed Development and had not been surveyed by Cambridge Ecology.
- 2.1.2. Hedgerows were resurveyed which Cambridge Ecology had surveyed in 2021 but with restricted access resulting in a survey from the roadside of the hedgerow. This was to gain better survey data of the ground flora.

2.2 Field Survey

- 2.2.1. The hedgerows were surveyed with regard for the information required by the Wildlife and Landscape Criteria of the Regulations.
- 2.2.2. In accordance with the Regulations the hedgerows were measured from the point or points where they met another hedgerow(s) or where there was a gap of more than 20 metres between the end of the hedgerow and the nearest line of hedgerow. Gaps within a hedgerow were included in the total length provided they were 20 metres or less in length.
- 2.2.3. Notes were made on the following in accordance with the criteria outlined in Schedule 1, Part II of the Regulations:
 - Number of woody species, on average, in a 30 metre length;
 - Presence of rare tree species such as black poplar *Populus nigra* ssp. *betulifolia*, large-leaved lime *Tilia platyphyllos* and small-leaved lime *Tilia cordata* and wild service tree *Sorbus torminalis*;
 - Number of standard trees, on average, within each 50 metre section;
 - Number of gaps in the hedge;
 - Presence of woodland ground flora species listed in Schedule 2 of the Regulations;
 - Presence of ditches, banks or walls;
 - Number of connections with other hedgerows, ponds or woodland;
 - Presence of parallel hedges within 15 metres of the hedge; and
 - Presence of bridleways, footpaths, byways or public paths.
- 2.2.4. In accordance with the Regulations the number of woody species present per 30 metre length was recorded in the following manner:
 - Where the length of the hedgerow did not exceed 30 metres, the total number of woody species present in the hedgerow was recorded;
 - Where the hedgerow was between 30 metres and 100 metres in length, the number of woody species present in the central 30 metre stretch was recorded;
 - Where the hedgerow length was between 100 metres and 200 metres, the number of woody species present in the central 30 metre stretches of the two halves of the hedgerow were recorded and the mean of the two calculated; and

- Where the length of the hedgerow was over 200 metres, the numbers of woody species present in the central 30 metre stretch of each third of the hedgerow were recorded and the mean of the three calculated.

2.2.5. With regard for the Hedgerow Survey Handbook (2nd Edition) (DEFRA, 2007) further details, not required under the Regulations, such as hedgerow height, width, integrity, structure, and management history were recorded.

2.3 Evaluation of Results

2.3.1. The field survey information was then assessed to establish whether each hedge fulfilled the Wildlife and Landscape criteria within the Regulations.

2.4 Dates of Survey and Personnel

2.4.1. The Hedgerow surveys were lead by Jennie Fincham and Rob Evans, two experienced and qualified habitat surveyors, with experience following the Hedgerow Regulations. The surveys were undertaken in May and June 2022.

2.5 Notes and Limitations

2.5.1. One qualifying criterion within the Hedgerow Regulations 1997 relates to whether the hedgerow in question supports protected species and, or species of conservation concern. It is not possible to establish the presence or likely absence of all protected species within one visit; therefore, information relating to protected species within the hedgerows has been excluded from this assessment. Further surveys for legally protected species which may be associated with hedgerows have taken place as separate assessments of the Site and are not reported within this document but will be reported in the respective technical reports and Environmental Statement.

2.5.2. Only Wildlife and Landscape criteria of the Regulations were considered within this assessment; therefore, it is possible hedgerows which do not qualify as 'important hedgerows' under these criteria may still qualify under archaeology and history criteria.

3 Results

3.1 Field Survey

3.2 Overview

- 3.2.1. Of the 15 hedgerows surveyed, one (H10) qualifies as an 'important hedgerow' under the Wildlife and Landscape criteria of the Regulations.

3.3 Ecological Field Survey of Hedgerows

- 3.3.1. 15 hedgerows were identified within the Site and subject to survey. Hedgerow locations are shown on **Figure 5.10.1-1, Annex 5.10.1**.

Hedgerow 1

- 3.3.2. Hedgerow 1 is located in the centre of the Site, in the south east of Coton Orchard. The Hedgerow was unmanaged with gaps and approximately 0.05km long. The hedgerow was approximately 1.5m to tall and 1.5m wide. It had one woody species, dominated by common hawthorn *Crataegus monogyna* with bramble *Rubus fruticosus* agg. also frequent and had a field layer including common nettle *Urtica dioica* and occasional ground ivy *Glechoma hederacea*.
- 3.3.3. There were two associated features with this hedgerow included a dry ditch running directly alongside the hedgerow and four standard trees growing.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 2

- 3.3.4. Hedgerow 2 is located in the centre of the Site, in the south of Coton Orchard. The Hedgerow was untrimmed with outgrowths and approximately 0.8km long. The hedgerow was approximately 2m tall and 1m wide. The hedgerow had five woody species growing dominated by common hawthorn, blackthorn *Prunus spinosa*, elm *Ulmus* sp. with frequent ash *Fraxinus excelsior* and occasional elder *Sambucus nigra*. Additional non woody species in the hedgerow included bramble and common ivy *hedera helix*. The ground flora included common nettle and cocksfoot *Dactylis glomerata*. The hedgerow had on average at least one standard tree every 50m.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 3

- 3.3.5. Hedgerow 3 is located in the centre of the Site in the west of Coton Orchard. The Hedgerow was untrimmed with outgrowths and approximately 0.18km long. The hedgerow was approximately 2.5m tall not including the trees growing and 1m wide. The hedgerow had

five woody species growing with dominant blackthorn and common alder *Alnus glutinosa* trees growing, frequent common hawthorn and dog rose *Rosa canina*. Additional non woody species in the hedgerow included common ivy. The ground flora was dominated by cocksfoot and perennial rye grass *Lolium perenne*. The hedgerow had on average at least one standard tree every 50m.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 4

3.3.6. Hedgerow 4 is located in the centre of the Site, to the south of Saint Neots Road. The hedgerow was trimmed and dense and 1.07km long. The hedgerow was approximately 1.5m wide and 2m tall. Google Earth indicated that this hedgerow was less than 30 years old. It comprised common hawthorn.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 5

3.3.7. Hedgerow 5 is located in the centre of the Site on the eastern side of Long Road. The Hedgerow was trimmed and dense and approximately 0.12km long. The hedgerow was approximately 1.5m tall and 1m wide. The hedgerow had one woody species growing dominated by common hawthorn.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 6

3.3.8. Hedgerow 6 is located in the centre of the Site along the western side of long road. The Hedgerow was trimmed and dense and approximately 0.9km long. The hedgerow was approximately 1.5m tall not including the trees growing and 1m wide. The hedgerow had five woody species growing including elm, ash, hawthorn, dog rose and blackthorn. Additional non woody species included bramble. The ground flora was dominated by barren brome *Bromus sterilis* with abundant broadleaved dock *Rumex obtusifolius* and bristly oxtongue *Helminthotheca echioides*. The hedgerow was associated with a ditch.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 7

3.3.9. Hedgerow 7 is located in the centre of the Site along the southern side of St Neots Road. The Hedgerow was intensively managed and approximately 0.4km long. The hedgerow was approximately 1.5m tall not including the trees growing and 1m wide. The hedgerow had five woody species growing including hawthorn, blackthorn, elm, dogrose, bramble, and ash. Additional non woody species in the hedgerow included bramble. The ground flora was dominated by barren brome with abundant broadleaved dock and bristly oxtongue. The hedgerow had standard mature trees growing but these only averaged one tree per 100m of hedgerow.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 8

3.3.10. Hedgerow 8 is located in the centre of the Site along the southern side of St Neots Road. The Hedgerow was trimmed and dense and approximately 0.5km long. The hedgerow was approximately 1.5m tall not including the trees growing and 1m wide. The hedgerow had four woody species growing with dominant blackthorn and hawthorn, frequent dog rose and occasional field maple. The ground flora had abundant barren brome and soft brome, false oat and cocksfoot and frequent herbs including bristly oxtongue, smooth tare and hogweed. The hedgerow had gaps which congregated to more than 10% of the hedgerow length. The hedgerow was associated with a ditch.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 9

3.3.11. Hedgerow 9 is located in the centre of the Site along the southern side of St Neots Road to the west of Hedgerow 7. The Hedgerow was trimmed and dense and approximately 0.13km long. The hedgerow was approximately 1.5m and 1m wide. The hedgerow had five woody species growing with dominant hawthorn and blackthorn, frequent dog rose and ash and occasional oak *Quercus robur*. Additional non woody species in the hedgerow included common ivy, black bryony *Dioscorea communis* and bramble. The ground flora was dominated by barren brome, soft brome and creeping thistle as well occasional bristly oxtongue, doves foot cranesbill, common field speedwell. The hedgerow had five trees growing, less than an average of one tree per every 50m of the hedgerow.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

Hedgerow 10

- 3.3.12. Hedgerow 10 was dominated by plum *Prunus domestica*, a non-native species. Additionally there were four native woody species including ash, hawthorn, oak and rose. The hedgerow was tall and leggy and on average four metres tall and two metres wide. The Hedgerow had one connection to another hedgerow and on average one tree every 50m.
- Important under the Hedgerow Regulations 1997: No
 - HPI under the NERC Act 2006: No

Hedgerow 11

- 3.3.13. Hedgerow 11 is located along Scotland Road to the north of the Site. The hedgerow was trimmed and dense and approximately 2.5m wide and 1.5m wide. The hedgerow had six woody species growing dominated by blackthorn and common hawthorn with frequent elm, ash and English oak and dog rose. Additional none woody species included black bryony. The hedgerow was adjacent to a public footpath.
- 3.3.14. There were four associated features with this hedgerow which included a dry ditch running directly alongside the hedgerow, mature oak trees growing, on average at least one every 50m, a footpath alongside the hedgerow and a hedgerow running parallel, approximately 15m.
- Important under the Hedgerow Regulations 1997: Yes
 - HPI under the NERC Act 2006: Yes

Hedgerow 12

- 3.3.15. Hedgerow 12 has not been surveyed by Cambridge Ecology and was within the Site. However it is within the Bourn Airfield development area and additionally is unlikely to be impacted by the Proposed Development. For these reasons a hedgerow survey was not undertaken for this hedgerow.

Hedgerow 13

- 3.3.16. Hedgerow 13 is located in the west of the Site on the southern side of Broadway road. The Hedgerow was intensively managed and approximately 0.08km long. The hedgerow was approximately 1.5m tall not including the trees growing and 1m wide. The hedgerow had one woody species dominated by hawthorn. The ground flora was a modified perennial rye dominated grassland
- Important under the Hedgerow Regulations 1997: No
 - HPI under the NERC Act 2006: Yes

Hedgerow 14

3.3.17. Hedgerow 14 is located in the west of the Site at the entrance to Cambourne off Broadway. The Hedgerow was intensively managed and recently planted. The hedgerow was approximately 1.5m tall and 1m wide. The hedgerow had one woody species growing dominated by common hawthorn. Google Earth indicates the hedgerow was younger than 30 years old, which is supported by its visual appearance.

- Important under the Hedgerow Regulations 1997: No
- HPI under the NERC Act 2006: Yes

3.4 Protected Species

- 3.4.1. Section 3.3 of this report assesses hedges based on botanical criteria. A hedge may also qualify as an important hedgerow if it contains animal or plant species which are listed in the Hedgerows Regulations 1997 Schedule 6 (a).
- 3.4.2. No plant species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (and subject to full protection) were recorded during field surveys that would qualify a hedgerow as an important hedgerow.
- 3.4.3. Data obtained from protected species surveys undertaken across the scheme as part of the wider ecological assessment has been cross-referenced to inform whether any of the hedgerows qualify as important solely on the basis of Schedule 6 (a). No protected species were recorded during field surveys that would qualify a hedgerow as an important hedgerow.

4 Summary

- 4.1.1. One of the fourteen surveyed hedgerows qualified as an 'Important Hedgerow' under Wildlife and Landscape criteria of the Regulations, due to having six species per 30m of hedgerow with four associated features.
- 4.1.2. All the hedgerows within the Site except for hedgerow 10 qualify as Habitat of Principal Importance (HPI) in accordance with the Natural Environment and Rural Communities (NERC) Act (2006) and as UKBAP Priority habitat in accordance with the UK Biodiversity Action Plan (2007). All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this Priority habitat (JNCC, 2008).

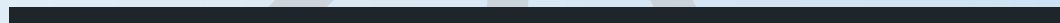
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Annex 5.10.1

Study & Survey Areas



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Annex 5.10.1 is currently being prepared

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