

21 ENGINE LANE, SHAFTON, BARNESLEY

Ecological Walkover Report

April 2022



Report Control Sheet

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EXECUTIVE SUMMARY

Site Address	21 Engine Lane, Shafton, Barnsley, S72 8RE
Grid Reference	SE 40040 09548
Approximate Site Area	575m ²
Current Site Use	Currently the site comprises of a field, fenced on the southern aspect, and bordered by hedgerow across the northern and western aspects. The site is currently being used to accommodate a Shetland Pony.
Designated Sites within Zone of Influence	The site partially falls within the impact risk zone for the Carlton Main Brickworks SSSI and Dearne Valley Wetlands SSSI.
Notable Habitat Features	Notable habitats present included improved grassland, hedgerow and treeline.
Notable Species Applicable to the Assessment	• Bats (Potential roosting, foraging and commuting) • Breeding birds. • Common amphibians • Hedgehog
Recommended Ecological Enhancements/Mitigations	Gapping up northern hedgerow to enhance linear feature.

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1 INTRODUCTION

1.1. SCOPE & PURPOSE

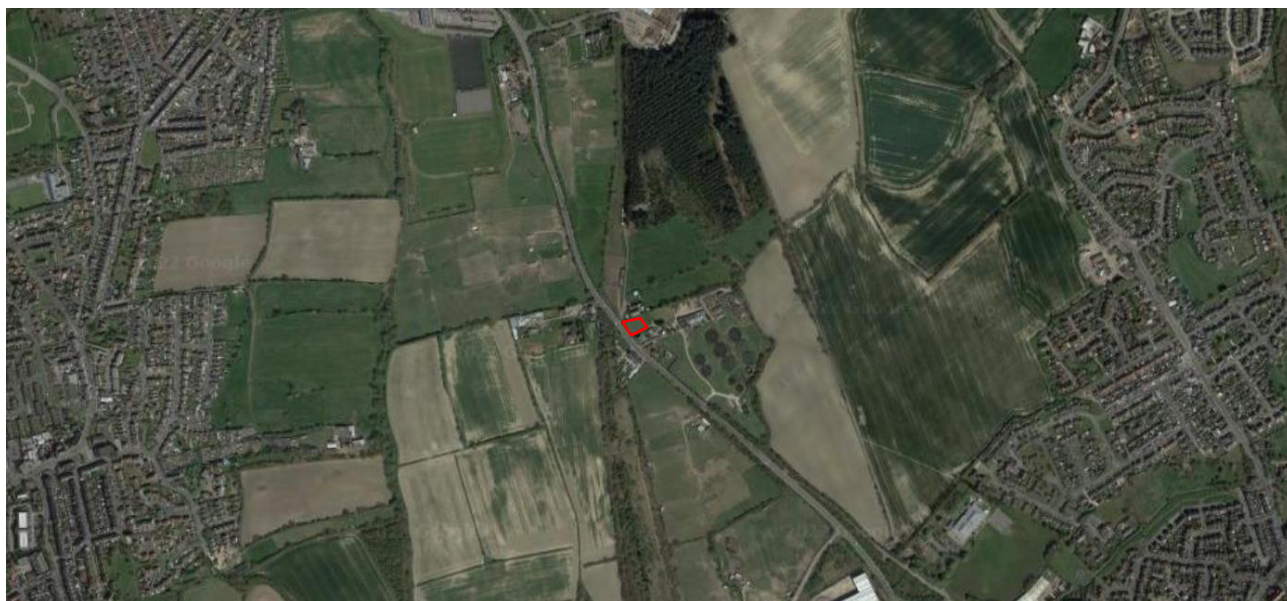
1.1.1. Swan Environmental Ltd was commissioned by Tom Vodden to undertake an Ecological walkover survey at 21 Engine Lane, Shafton, Barnsley.

1.1.2. The author of this report is Samuel Penrhyn-Lowe MZool, Assistant Ecologist The project has been overseen by Olivia Collington BSc (Hons), MEnvSc, CEnv,

1.2. LOCATION

1.2.1. Please refer to Figure 1.1 for the site location. The site is located in a predominantly rural stretch of land that is situated central of the 3 villages: Shafton, Cudworth, and Grimethorpe. The site itself is surrounded by agricultural fields in all directions and is immediately bordered by farmhouses to the south and west as well as a sewage treatment plant to the east.

Figure 1.1 Site Location



1.3. OBJECTIVES

1.3.1. The objectives of the Ecological Walkover are as follows:

- Identify the major habitats present
- Ascertain the presence or potential presence of any legally protected or notable species or habitats
- Identify any mitigation or further survey required and opportunities for strategic wildlife enhancements and long-term management.

2 METHODOLOGY

2.1. DESK STUDY

2.1.1. An initial desk-based assessment of the site was undertaken to collate baseline data. The desk study included:

- Review of Magic.gov.uk website for details of any designated sites, notable habitats and presence of European Protected Species Licences.
- Review of aerial and OS maps for habitat information, as well as determining locations of potential waterbodies to be considered in the assessment.
- Review of potential habitat links on and off site, to determine the potential zone of influence of the proposed development.
- On site consultation with the landowner which provided valuable information regarding historic land use and known species and habitats present within the site.

2.2. VEGETATION AND HABITAT ASSESSMENT

2.2.1. The Ecological Walkover of the site was undertaken by Olivia Collington. The survey was undertaken on the 21st April 2022. The weather was clear (1/8 oktas), with no precipitation and a temperature of 15°C.

2.2.2. The walkover survey was undertaken broadly in line with standard methodology as detailed in “JNCC Handbook for Phase 1 Habitat Survey” (2010). The assessment is undertaken with consideration of methodology as per “Preliminary Ecological Appraisal” (CIEEM, 2018).

2.2.3. A Phase 1 Habitat Plan has been produced and is presented in the Appendix of this report. The mapping is based on the “JNCC Handbook for Phase 1 Habitat Survey” (2010), though adjustments have been made based on judgement to demonstrate habitats in a clearer manner, or where standard guidance does not fit the conditions found on site.

2.3. FAUNA ASSESSMENT

2.3.1. A search for signs of protected and notable species of fauna was undertaken during the site walkover. This included both field signs of species, as well as potential for species to be present based on habitat availability.

2.3.2. The searches broadly included the following:

- Assessment of waterbodies on site and within 250m of the site boundary, and terrestrial habitats for suitability to support notable amphibians.
- Searches for field signs of, and habitat suitability for bats.
- Suitability of habitats to support reptiles, and searches for incidental field signs.
- Searches for field signs of badger (*Meles meles*), including setts, mammal paths, snuffle holes, badger hair and latrines to indicate activity.
- Searches of watercourses for signs of water vole (*Arvicola amphibius*), white-clawed crayfish (*Austropotamobius pallipes*) and otter (*Lutra lutra*), and assessment of habitat availability for the species.
- Assessment of the suitability of habitats to support notable birds and recording any field sightings of birds during the walkover.
- Assessment of the sites ability to support notable invertebrates and flora.
- Searches for non-native invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT

2.4.1. A Preliminary Roost Assessment (PRA) of the site was undertaken by Olivia Collington who holds a Class 1 Bat Survey Licence from Natural England (Reference 2020–46960-CLS–CLS).

2.4.2. The survey was undertaken following guidance set out in Collins (2016). This includes undertaking a detailed internal and external inspection of any features to compile information on potential and actual bat entry/ exit points, roosting locations and evidence of bats.

2.4.3. The buildings were assessed as per categories listed in Table 4.1 Collins (2016) and reproduced in Table 2.1.

Table 2.1 Assessment Criteria for Bat Roosting Potential

Bat Roosting Potential	Description
Negligible	Negligible features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitats to be used on a regular basis by larger numbers of bats.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats, but unlikely to support a roost of high conservation status.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and for longer periods of time.

2.5. BAT ACTIVITY ASSESSMENT

2.5.1. The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 5, which is used as a basis for determining the requirement for further surveys and/or mitigation.

Table 2.2 Assessment Criteria for Bat Activity Value

Suitability	Description
Negligible	No features on site suitable for use by commuting and foraging bats.
Low	Habitat that could be used by small number of commuting bats such as; defunct hedgerow, isolated features not well connected to surrounding habitat or isolated habitat that could be used by a small number of foraging bats such as a lone tree or patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees, scrub or linked back gardens. Habitat connected to wider landscape that could be used for bats for foraging such as; trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting or foraging bats such as; river valleys, streams, hedgerows, lines of trees or woodland edge. Site is close to or connected to known roosts.

2.6. SURVEY LIMITATIONS

2.6.1. This survey does not constitute a full botanical survey. Key species for each habitat type have been identified to give a broad representation of habitats present within the site.

2.6.2. It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment. This survey does not constitute a full botanical survey. Plant species may have been under-recorded, unidentifiable, or not visible due to a number of factors including the time of year the survey was carried out.

2.6.3. The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area (provided by data searches) and any direct evidence within the survey area.

2.6.4. The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

3 SURVEY RESULTS

3.1. SITE CONTEXT

3.1.1. The site is located within a predominately rural area. The village of Shafton lies approximately 1km to the north whilst the villages of Cudworth and Grimethorpe lie approximately 1km to the west and southeast respectively. Between the site and these villages is covered by agricultural fields and the occasional farmhouse. There is a patch of woodland 200m to the north and a sewage treatment plant that borders the site to the east. This includes a drain/stream that cuts through the land approximately 250 to the east.

3.1.2. Given the local habitats present, wildlife associated with agriculture and farmland are anticipated to be present.

3.2. DESIGNATED SITES

3.2.1. The site falls within the Impact Risk Zone of the following Statutory Sites, based on consultation with MAGIC.gov.uk:

- Carlton Main Brickworks Site of Special Scientific Interest (SSSI), located approximately 1.5km to the southeast of the site. This site is designated due to is exposed coal measures strata which is displayed in the exposed clay.
- Dearne Valley Wetlands SSSI, located approximately 2km to the west and south of the site. This site is designated due to its diverse assemblages of breeding birds, including breeding gadwall (*Mareca strepera*), shoveler (*Spatula clypeata*), garganey (*Spatula querquedula*), lowland damp grasslands, lowland scrub and a mixed assemblage of lowland open waters and their margins as well as lowland fen.

3.2.2. Two Local Nature Reserves (LNRs) also lie within 5km of the sit boundary. Carlton Marsh is paired with the upper portion of the Dearne Valley Wetlands. West Haigh Wood LNR lies 2.4km to the southeast of the site and is notable for archaeological features including abandoned Victorian ponds as well as mixed deciduous woodland dominated by oak. Dearne Valley Park LNR is located 4.4km to the southwest and is notable for its acidic oak woodland with mosaic of wetland habitats.

3.2.3. No other statutory sites are located within 5km.

3.3. HABITATS

3.3.1. Please refer to Drawing CW20-333 – 001 for the Phase 1 Habitat Map for the site. Photographs of the site are presented in the Appendix.

IMPROVED GRASSLAND

3.3.2. The majority of the site was comprised of an improved grassland field used as a grazed horse paddock. It was dominated by perennial ryegrass (*Lolium perenne*) with white clover (*Trifolium repens*), creeping buttercup (*Ranunculus repens*), common dandelion (*Taraxacum officinale*), cow parsley (*Anthriscus sylvestris*), broadleaved dock (*Rumex obtusifolius*), common bluebell (*Hyacinthoides non-scripta*) and common nettle (*Urtica dioica*).

TREELINE

3.3.3. A gappy treeline bordered the site along the northern boundary, stretching into the north-western corner. The species that made up this treeline consisted of hawthorn (*Crataegus monogyna*), willow (*Salix viminalis*), and bramble (*Rubus sp.*). The underlayer of this treeline consisted of bluebell, common dandelion, broad-leaved dock, and common nettle.

HEDGEROWS

3.3.6. A managed hedgerow bordered the site to the west, approximately 2.5m in height and 1m in width. The hedgerow was dominated by hawthorn (*Crataegus monogyna*) and the ground flora comprised common nettle and common cleavers (*Galium aparine*).

POLE AND WIRE FENCE

3.3.7. A pole and wire fence bordered the site to the east and the south.

3.4. SPECIES

FLORA

3.4.1. With the majority of the site comprising grazed improved grassland with limited floristic diversity and the hedgerow being managed, it is anticipated that the managed habitats are unlikely to support any notable plant species.

INVERTEBRATES

3.4.2. The grazed improved grassland, managed hedgerow, and treeline are anticipated to be of some value to invertebrates on the site. However, limited flowering flora species were observed across the site, reducing its value to invertebrates.

3.4.3. Overall, notable invertebrates may utilise the site for foraging but are not thought to utilise the site in significant numbers.

AMPHIBIANS

3.4.4. No ponds were located onsite or within 250 m of the site boundary. As great crested newts' upper dispersal limit is generally considered to be up to 250 m from a waterbody (though occurrence of greater distances does exist), great crested newts are not anticipated to be present on site (English Nature, 2001).

3.4.5. The presence of great crested newts within the site is reasonably discounted, though common amphibians may occur on site.

REPTILES

3.4.6. Reptiles are not anticipated to be on site and are not considered further.

BIRDS

3.4.7. The site provides a small range of potential breeding habitats for birds in association with the hedgerows and treeline habitats.

BATS

3.4.8. The treeline to the north of the site was subject to a PRA. No trees with bat roosting potential were identified.

3.4.9. The habitats on site are not anticipated to provide value for foraging bats due to the limited value of the habitat for invertebrate prey.

BADGER

3.4.10. No signs of badger were identified within the site or within 30 m of the site. The local area is suitable for the species and badger are anticipated to be present locally.

OTHER TERRESTRIAL MAMMALS

3.4.11. Given the habitats present within the site including hedgerows and scrub, it is anticipated that hedgehog could be present within the site.

NON-NATIVE INVASIVE SPECIES

3.4.12. No non-native invasive species were observed during the survey.

4 MITIGATION RECOMMENDATIONS

4.1. DESIGNATED SITES

4.1.1. The site is located within the impact risk zone for several SSSIs within the local area. It is anticipated that the designated sites are a sufficient distance away and are separated by anthropogenic barriers such as the agricultural fields and villages, such that no impacts as a result of development are anticipated.

4.2. HABITATS

TREELINE

4.2.1. As the treeline on the northern border of the site has gaps throughout, it is recommended that supplementary planting is undertaken to bolster the linear feature. All plant stock should be locally sourced. Appropriate species include hawthorn, elder, blackthorn and dog-rose (*Rosa canina*).

4.3. SPECIES

BREEDING BIRDS

4.3.1. Nesting birds are anticipated to utilise the treeline and hedgerows. It is recommended that the treeline and hedgerows are left undisturbed during the construction phase.

4.3.2. Should vegetation removal be required within the breeding bird season (March – August inclusive), a check should first be made for nests or nests in construction. If any nests or nests in construction are located a suitable buffer should be maintained until the young have fledged. The nesting bird check should be undertaken no more than 48 hours prior to the clearance by a suitably experienced ecologist.

BATS

4.3.3. The following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting on bats. The recommendations are as follows:

- Keep site lighting to minimum levels.
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- The use of integrated fittings such as cowls, shields, louvres and hoods, that effectively contain light spill from unintended areas.
- The use of hard landscaping features to block light and create dark corridors.
- Avoid illuminating habitats of value.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use.
- Column heights of lighting can be considered to minimise light spill.

5 FURTHER SURVEYS AND CONCLUSION

5.1. FURTHER SURVEYS

5.1.1. No further surveys are deemed necessary for this site under the current proposals.

5.2. CONCLUSION

5.2.1. The site was found to predominantly comprise improved grassland field bound by a hedgerow and a treeline. No significant ecological constraints were identified during the survey.

5.2.2. However specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings/retained treeline.
- Planting of additional vegetation such as hawthorn and dog-rose to fill in the treeline to the north.

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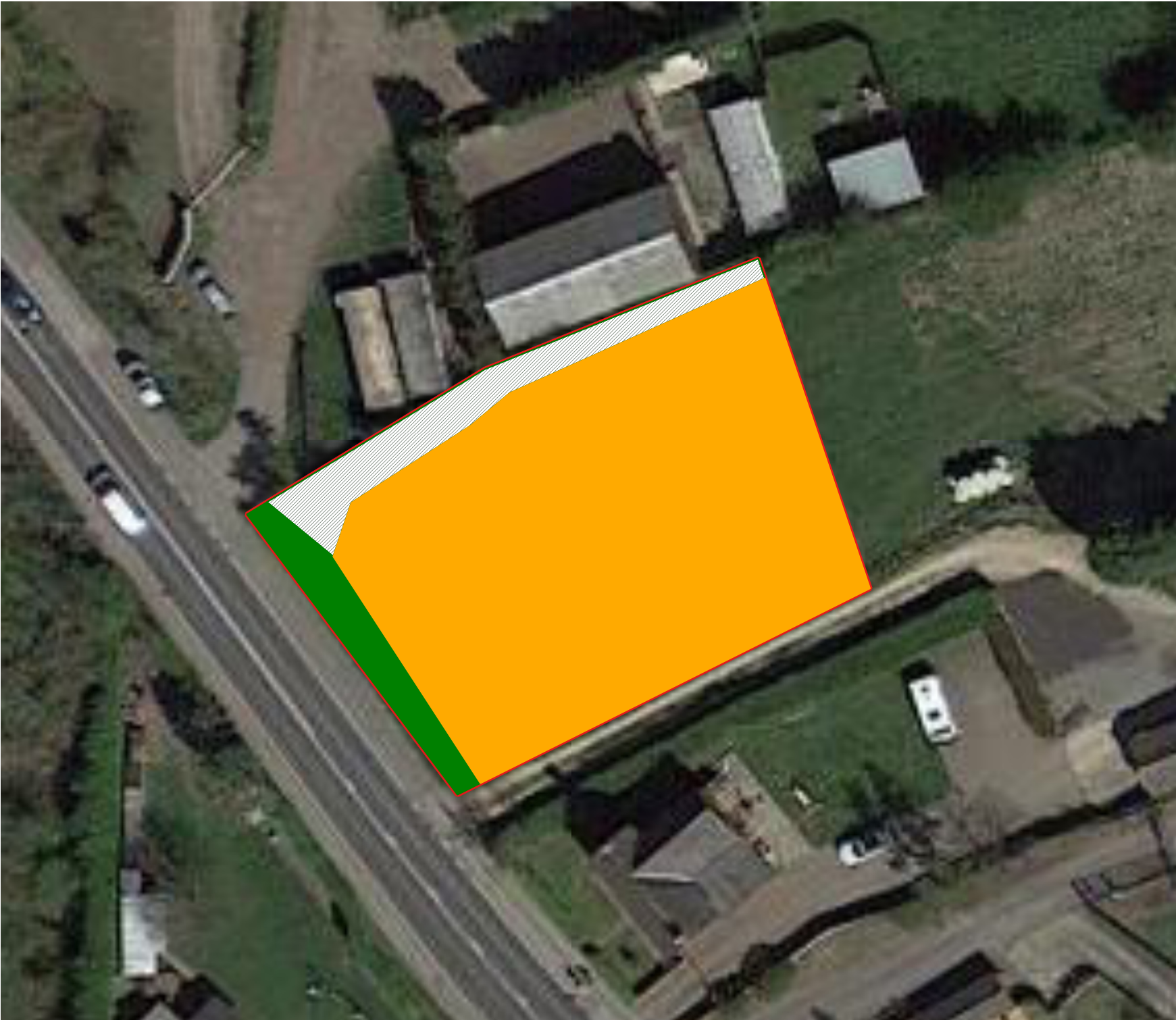
Feature	Photograph
Improved grassland used as a grazing paddock. Taken from behind the pole and wire fence at the south of the site.	
The treeline to the north of the site.	

The hedgerow to the west of the site.



The pole and wire fence to the east of the site and the land beyond.





Drawing Title : CW20-333 - 001
Date: 22/04/2022

- Key:
- Improved grassland
 - Hedgerow
 - Treeline
 - Boundary

Scale: 1:25000
Drawn By: SPL
Checked By: OC
Approved By: OC



Client: Tom Vodden
Site: 21 Engine Lane, Barnsley
Project Number: 20-333 | Rev: 1.0
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