

**Town and Country Planning Act 1990 – Section 78 Town and County Planning
(Development Management Procedure) (England) Order 2015 Town and
Country Planning (Inquiries Procedure) (England) Rules 2002**

Appeal by NRS Aggregates Ltd

Land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster,
Worcestershire

Against the refusal of planning permission by Worcestershire County Council for
application 19/000053/CM

“Proposed sand and gravel quarry with progressive restoration using site
derived and imported inert material to agricultural parkland, public access and
nature enhancement”

Appeal Ref. APP/E1855/W/22/3310099

Addendum to Ecological Impact Assessment

January 2023



ECOLOGY ADDENDUM

1 Introduction

- 1.1.1 Prior to the drafting of this addendum, an updated Phase 1 Habitat Survey of the site was conducted on the 16th of January 2023. The findings of the updated habitat survey were used to determine if any material change to the site had occurred since the Preliminary Ecological Appraisal (PEA) completed during 2019 or the Habitat Condition Assessment, conducted as part of the Biodiversity Metric 2.0 submitted in 2020. Additionally, the updated habitat survey was used to inform if there was any likely change in the occurrence, population size or distribution of protected/priority species since 2019. If it was considered that there was potential for material change in protected/priority species onsite this could impact upon the determinations set out in the Ecological Impact Assessment (EclA).
- 1.1.2 This Addendum and its terminology are in accordance with the ‘Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2022)¹, and the Guidelines for Preliminary Ecological Appraisal (CIEEM 2017)².
- 1.1.3 This Addendum (and its associated figures and appendices) is not intended to be a standalone document and should be read in conjunction with the 2019 EclA and the 2019 Preliminary Ecological Appraisal.
- 1.1.4 Additional relevant information to the determination of the scheme’s ecological impacts is provided in the Appendices to this Addendum.
- 1.1.5 An updated Phase 1 Habitat map is provided in Appendix A.
- 1.1.6 Updated site photographs are provided in Appendix B.
- 1.1.7 A revised Biodiversity Metric Calculation is provided in Appendix C.
- 1.1.8 The updated metric has been undertaken utilising the latest Biodiversity Metric (Defra Biodiversity Metric 3.1). The Defra Metric 3.1 was published in April 2022 and replaces previously published 3.0 and 2.0 Biodiversity Metrics. Natural England advise³ that *‘Biodiversity Metric 3.1 has been extensively tested. Natural England will be recommending to the Secretary of state that Biodiversity Metric 3.1 forms the basis of*

¹ Chartered Institute of Ecologist and Environmental Managers, (2022), Guidelines for Ecological Impact Assessment, Version 1.2, Available at: [Guidelines for Ecological Impact Assessment \(EclA\) | CIEEM](#)

² Chartered Institute of Ecologist and Environmental Managers, (2017), Guidelines for Preliminary Ecological Appraisal (GPEA), Available at: [Guidelines for Preliminary Ecological Appraisal \(GPEA\) | CIEEM](#)

³ Natural England, (2021), The Biodiversity Metric 3.1 (JP039), Available at: [The Biodiversity Metric 3.1 - JP039 \(naturalengland.org.uk\)](#)

the statutory biodiversity metric used to underpin future mandatory biodiversity net gain as set out in the Environment Act 2021’.

- 1.1.9 This Addendum confirms the current baseline ecological conditions on site, and within its surrounding, remain broadly as described within the 2019 EclA.
- 1.1.10 This addendum concludes that the assessments ‘of the likely significant effects’ (detailed with the 2019 EclA) remain correct, and the ecological evidence underpinning these determinations should still be viewed as robust.
- 1.1.11 This Addendum demonstrates the schemes continued conformity with all relevant ecological policy and legislation.

2 Baseline Conditions

2.1 Habitats

2.1.1 An updated Phase 1 Habitat Survey was conducted on the 16th January 2023, by Director of Ecology Justine Walsh (BSc Hons) and Amy Tose (BSc Hons, qualifying member CIEEM). The updated habitats recorded are mapped and referenced within the PEA report (Heatons, 2023). The Phase 1 Habitat Survey followed the standard methodology (JNCC, 2016)⁴, and as described in the Guidelines for Preliminary Ecological Assessment (CIEEM, 2017)⁵. This comprised of a walk over survey of the site during which habitat types, habitat conditions and boundary features were identified and mapped.

2.1.2 The survey confirmed the current habitats on site to broadly remain the same as those identified within the 2019 EclA and are considered to offer the same value to the same species groups as reported previously. None of the further survey data elevated or reduced previous assessment in respect of importance of ecological features with regards to species or habitats.

2.1.3 The survey was conducted during a period considered to be sub optimal (January). However, due to ease of identification of the majority of habitats present across the site and extensive previous ecological assessment conducted, the ‘time of year’ is not considered to be a limiting factor on the validity of any conclusions drawn.

2.1.4 The habitats present across the site are summarized below. Composition of main species present is also provided and are detailed in accordance with the JNCC’s DAFOR scale⁶.

- Arable
- Semi-improved grassland
- Improved grassland
- Tall ruderal
- Defunct hedgerow
- Hard standing

⁴ Joint Nature Conservation Committee (2016), Handbook for Phase 1 Habitat Survey, Available at: [Handbook for Phase 1 habitat survey \(jncc.gov.uk\)](https://jncc.gov.uk)

⁵ Chartered Institute of Ecologist and Environmental Managers, (2017), Guidelines for Preliminary Ecological Appraisal (GPEA), Available at: [Guidelines for Preliminary Ecological Appraisal \(GPEA\) | CIEEM](#)

- Bare ground
- Standing trees
- Woodland
- Bracken
- Bramble

2.1.5 Composition of main species present is also provided and are detailed in accordance with the JNCC's DAFOR scale⁷.

2.2 Arable

2.2.1 The site primarily comprised of arable fields. At the time of the survey, all crops had been harvested and the fields retained winter stubble.

2.2.2 The previous assessment of arable land as 'important at the site level only' remains appropriate.

2.3 Semi improved Neutral Grassland

2.3.1 Semi-improved neutral grassland formed the field boundaries along the edges of several arable fields on the western and northeastern area of the site. Cock's foot (*Dactylis glomerata*) and Yorkshire Fog (*Holcus lanatus*) were dominant throughout. Scattered patches of bramble (*Rubus fruticosus*) scrub were occasional along the boundaries of the grasslands.

2.3.2 The previous assessment of the semi-improved grassland as 'important at the site level only' remains appropriate.

2.4 Improved Grassland

2.4.1 Two areas of improved grasslands fields were present on the eastern part of the site. The fields were separated by a farmers track (bare ground). This grassland had limited vegetative species diversity being dominated by Perennial rye grass (*Lolium perenne*). The area was intensively grazed by horses resulting in a uniformly short sward height (approx. 10mm) throughout. The grassland showed evidence of nutrient enrichment.

2.4.2 The previous assessment of the improved grassland as 'important at the site level only' remains appropriate.

⁷ Joint Nature Conservation Committee (2008), UK Terrestrial Biodiversity Surveillance strategy, Vegetation sampling, Available at: [Vegetation Sampling Workshop \(jncc.gov.uk\)](http://jncc.gov.uk)

2.5 Tall ruderal

- 2.5.1 Three areas of tall ruderal vegetation were present within the site.
- 2.5.2 One area ran parallel with a section of the sites northeastern boundary and is dominated by Common sorrel (*Rumex acetosa*) with bramble also frequent. Hogweed (*Heracleum sphondylium*) and Cock's-foot were also present but occasional with creeping thistle also present but rare.
- 2.5.3 A second area of tall ruderal occurred between the two improved grassland fields, with it also extending along the eastmost boundary of the southern field. The habitat was similar in its vegetative species assemblage the north tall ruderal area (described above). Nether area contained invasive species⁸.
- 2.5.4 A third area surrounded a section of hard standing and improved grassland in the south of the site. This area was dominated by dense bramble growth with Buddleia (*Buddleja davidii*) and willow scrub (*Salix*) also being present but rare.
- 2.5.5 The previous assessment of tall ruderal being 'important at the site level only' remains appropriate.

2.6 Defunct hedgerow

- 2.6.1 A defunct species poor hedgerow was located in the eastern half of the site running west to east between two arable fields. This hedgerow was between 2m to 3m in height with a width of between 1.5m to 2m. The hedgerow was unmanaged with frequent and large gapes along its length. Its woody vegetation was dominated by hawthorn (*Crataegus monogyna*) with elm (*Ulmus procera*) present but rare.
- 2.6.2 A second defunct hedgerow occurred along the sites northeastern boundary, running west to east. Its vegetative composition was similar to the other defunct hedgerow (in the east of the site, detailed above). However, elder (*Sambucus nigra*) also comprised part of its woody vegetation, but only occurring occasionally.
- 2.6.3 The previous assessment of hedgerows as 'important at the site level only' remains appropriate.

2.7 Standard trees

- 2.7.1 There were a number of mature and semi-mature scattered trees recorded across the site including oak (*Quercus robur*), Beech (*Fagus sylvatica*), Sweet chestnut (*Castanea sativa*), Lime (*Tilia sp.*), Redwood (*Sequoia sp.*) and Conifers.

⁸ As listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)

- 2.7.2 Several mature trees displayed ecologically desirable characteristics, including broken / split limbs, woodpecker holes, hollow interiors, standing deadwood etc. This allows for the trees to support a greater range of protected and priority fauna species (i.e., bats, birds, invertebrates).
- 2.7.3 Due to their features these trees are to be considered to be in 'good' condition to support biodiversity.
- 2.7.4 The semi-mature trees lacked the desirable ecological features of the mature trees. However, they are still considered to potentially support a range of species. As such, these trees are considered to be in 'moderate' condition.
- 2.7.5 The previous assessment of the semi-mature trees being 'important at the site level only' remains appropriate.
- 2.7.6 The mature trees are considered to be 'important at a local (borough) level'.

2.8 Hard standing and bare ground

- 2.8.1 There is a hard standing track present towards the centre of the site that separates the eastern and western sides.
- 2.8.2 An area of hard standing also occurs in the south of the site and is frequently in use by the farmer for storing materials, machinery, and stock piling soil.
- 2.8.3 The hard standing and bare ground were assessed as being of negligible importance.

2.9 Woodland

- 2.9.1 Two areas of woodland were present within the site boundary.
- 2.9.2 An area of broadleaved woodland occurred adjacent to the sites northwestern boundary and an of plantation woodland was present along the southwestern boundary.
- 2.9.3 For both woodlands the habitat descriptions and species compositions remain consistent with those detailed within the 2019 PEA.
- 2.9.4 Additionally, the habitat condition assessment for both woodlands remain consistent with those detailed within the 2020 biodiversity metric 2.0.
- 2.9.5 In line with previous determinations, within the 2019 EclA, both areas of woodland are considered to be of Local importance (borough level).
- 2.9.6 The intention remains that both areas of woodland are retained and enhanced as part of the scheme.

2.10 Bracken

2.10.1 An area of bracken is present in part along the southern boundary of the site, adjacent to a brick wall. The area is dense in nature and is approximately 2m to 3m in width.

2.10.2 The area of bracken is considered of negligible importance.

3 Biodiversity Impacts

3.1 Likely Significant Effects (Fauna)

- 3.1.1 With the context of the 2019 EclA, an effect is considered to be potentially significant upon a species if it could result in a change to its conservation status or the degree of integrity of any important ecological feature.
- 3.1.2 There is not considered to be any material change in the habitats currently on site or to the habitats proposed to be created/restored as part of the restoration scheme. As the habitats and ecological features on site have not materially altered, it is considered unlikely that the presence and abundance of protected and priority species has changed (either in their type or distribution) from that determined during previously undertaken surveys (2019 and 2020).
- 3.1.3 The conclusions of the 2019 Ecological Impact Assessment are deemed to still be valid.

3.2 Biodiversity Net Gain & Ecological Enhancement

- 3.2.1 An updated quantitative assessment of biodiversity impacts was undertaken using Biodiversity Metric 3.1 Calculation (Appendix C). Metric 3.1 determined the sites 'Baseline Score' as being 115.93 Biodiversity Units (BU) for habitats, and 74.84 Hedgerow Units (HU) for hedgerows. These values were calculated based upon the updated phase 1 mapping and habitat condition assessment completed in January 2023.
- 3.2.2 Once the existing habitat baseline is determined, the metric quantifies the likely biodiversity net gain/loss for the proposed scheme's delivery based upon its indicative layout and the restoration and ecological mitigation measures proposed. Metric 3.1 allows for the habitats on site (both current and future planned) to be described in terms of distinctiveness, condition and strategic significance.
- 3.2.3 Delay factors relating to the commencement of future habitat creation/restoration/enhancement can also be imputed as variables within the metric as these can also have a material effect on predicted future net-biodiversity values on site. This is particularly relevant for this scheme, as the phasing plans allow for significant temporal variation in the likely commencement date of different areas of proposed habitat creation/restoration/enhancement.
- 3.2.4 The previous Biodiversity Metric 2.0 did not allow for the accounting for any delay factors, and was less precautionary in the timescale that it deemed habitat creation

and enhancement could be delivered. As such Metric 3.1 is significantly more conservative in the scale of its measurable gains, and as such can be viewed as more robust as it is more representative of a 'worst case scenario' as regards the scheme's biodiversity impacts.

3.2.5 The outputs of the updated Biodiversity Metric 3.1. are summaries below:

HABITATS:

- Existing Baseline = 115.93 Biodiversity Units
- On-site Post-Intervention= 161.51 Biodiversity Units
- Total Net Unit Change (B-A) = +45.58 Gain of Biodiversity Units

HEDGEROWS:

- Existing Baseline= 2.74 Hedgerow units
- On-site Post-Intervention= 5.68 Hedgerow Units
- Total Net Unit Change (B-A) = +2.94 Gain of Hedgerow Units

3.2.6 The Biodiversity Metric 3.1 demonstrates the proposed scheme will deliver a likely substantial net gain for biodiversity of **+39.31% BU** for habitats, and **+107.51% HU** for hedgerows.

3.2.7 This significant 'likely' net gain is due to areas of low distinctiveness arable land, improved grassland, scrub and tall ruderal vegetation being replaced by high distinctiveness acid grassland, woodland, parkland, waterbodies and the planting of scattered trees.

3.2.8 Existing ecological functionality will be maintained at the site via the retention of the hedgerow and woodland networks and further enhanced through new hedgerow planting and the creation of additional woodland areas and scattered trees.

3.2.9 These measures will ensure that there is wider landscape habitat connectivity and that suitable habitat resources are available for protected species (bats, birds, small mammals, invertebrates, herpetofauna, etc.).

3.2.10 The phased nature of the development will limit the total duration of works/disturbance within each section of the site allowing for the restoration habitats (in one location or another) to occur continuously after the completion of the first phase. Meaning that the combined adverse impacts upon mobile site fauna is likely to be reduced as areas of refuge are always available.

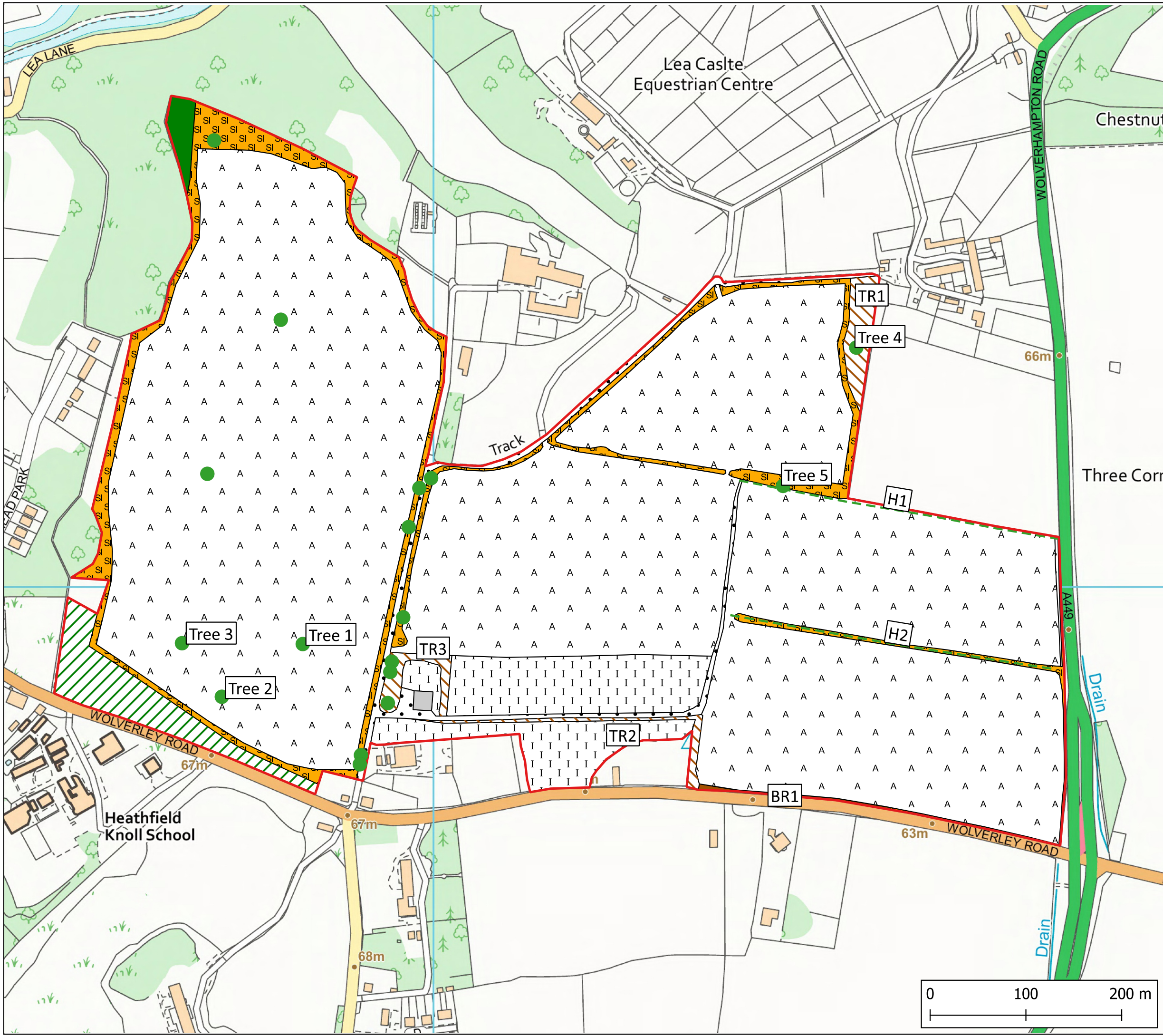
3.2.11 The conclusions of the 2019 EclA are deemed to still be valid in that the scheme should deliver a significant long-term gain in site biodiversity value.

4 Conclusion

- 4.1.1 This addendum demonstrates (via presentation of updated habitat type and condition assessment), that the conclusions detailed within the previous the 2019 Ecological Impact Assessment remain both accurate and robust.
- 4.1.2 The site remains materially unchanged in importance since previous assessments and is likely to support the same species assemblages and populations as previously determined.
- 4.1.3 The proposed mitigation and enhancement measures continue to be deemed appropriate for the likely scale of ecological impacts and the delivery of significant Biodiversity Net Gain has been re-tested and reaffirmed, despite the usage of a more precautionary metric.
- 4.1.4 The significant net gains in biodiversity units (shown to be possible as part of this development) exceed the current requirements set out in both national policy (i.e., NPPF 2021) as well as the future legal minimum of 10% net gain, as detailed in the assented (but not yet enforced) Environment Act 2021⁹.

⁹ Environment Act 2021, Available at: [Environment Act 2021 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2021/24/section/127)

Appendix A – January 2023, Phase 1 Habitat Map, REF: ED.001



- Red Line Boundary
- Scattered Tree
- Defunct hedge - species-poor
- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Neutral grassland - semi-improved
- Improved grassland
- Bracken - continuous
- Tall ruderal vegetation
- Arable
- Bare ground
- Hardstanding

Heatons

Planning Environment Design

PROJECT
LEA CASTLE FARM APPEAL

DRAWING TITLE
PHASE 1 HABITAT MAP

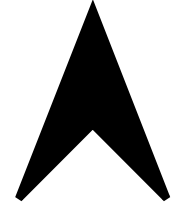
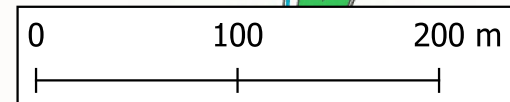
DATE
JANUARY 2023

REFERENCE
ED.001

SCALE
1: 3750 @ A3

STATUS
FINAL

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Appendix B – Site Photographs



Broad-leaved plantation woodland located in the south-west corner of the site.



Broad-leaved semi-natural woodland located in the north-west corner of the site.



TR1 located in the north-east corner of the site.



Improved grassland area, intensively grazed by horses.



Area of hard standing, bare ground track and TR3.



Defunct species-poor hedgerow.



Arable cultivated land, that covers the majority of the site.



Area of bracken found in part along the southern boundary.

Appendix C – Biodiversity Net Gain Assessment