



FUTURESECOLOGY

Yorkshire Country Properties

Phase 2: Land at Abbey Lane, Shepley

BIODIVERISTY IMPACT ASSESSMENT

Report Reference Number: FE78/BIA01

February 2021

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Figure 1: Phase 2: Detailed Phase 1 Habitat Plan including Offsite Habitats

Figure 2: Phase 2 BIA Plan Post Development with Offsite Habitats

1.0 INTRODUCTION

- 1.1 The following report has been prepared by Futures Ecology Ltd. on behalf of Yorkshire Country Properties. This summary report presents the results of the Biodiversity Impact Assessment (BIA) Calculations using the DEFRA Biodiversity Metric (BM) 2.0 Calculation Tool. This has been used to inform the development design with the aim of achieving a net gain post development.

SITE LOCATION AND CONTEXT

- 1.2 The site is located north east of Shepley, to the east of Abbey Road, Shepley. The site is centred on grid reference SE19931012 within the district of Kirklees.

DEVELOPMENT PROPOSALS

- 1.3 The site is part of an allocated housing site (HS203) in the Kirklees Council Local Plan¹. The development proposal for Phase 2 is for the construction of c. 52 residential dwellings.
- 1.4 Additional offsite land known as The Knowle located immediately north and east of the site has been included within the assessment. This land is to be enhanced.

BACKGROUND

- 1.5 In order to inform the BIA the existing Ecological Impact Assessment (EcIA) Report, MAB Environment & Ecology Ltd. August 2020 has been reviewed. Habitats present within the site include: mixed plantation woodland, poor semi-improved grassland, tall ruderal vegetation, a ditch, laurel hedges, buildings/ structures and scrub.

2.0 METHODOLOGY

- 2.1 A detailed habitat survey was undertaken on the 10th December 2020 to fully inform the Biodiversity Impact Assessment (BIA) using the DEFRA 2.0 metric. The survey was undertaken to:
- Adequately map site the onsite habitats to inform the BIA;
 - Map habitats within the immediate vicinity of the site in offsite locations;
 - Undertake a habitat condition assessment as per those outlined within The Biodiversity Metric 2.0 Technical Supplement².
- 2.2 Survey methodology followed guidance from Joint Nature Conservation Committee (JNCC) 2016³ comprising a walkover of the survey area mapping (using JNCC standard habitat codes) and broadly describing and classifying the principal habitat types and identifying the dominant plant species present within each habitat type, noting any

¹ Kirklees Council. *Kirklees Local Plan Allocations and Designations*, Adopted 27 February 2019.

² I. Crosher *et al*, 2019. *The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: technical supplement (Beta version, July 2019)*. Natural England

³ JNCC (2016) *Handbook for Phase1 Habitat Survey – a technique for environmental audit*. ISBN 0 86139 636 7

features of interest. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

Survey Limitations

- 2.3 The habitats survey was undertaken during a sub-optimal survey period. However, as background information is available within the existing EclA, the completion of detailed mapping and condition assessment of the habitats are not considered to be significantly constrained.

3.0 BASELINE: ECOLOGY

- 3.1 Following completion of the updated survey a detailed habitat plan was produced, see Figure 1. Habitat changes from the existing EclA Report, MAB Environment & Ecology Ltd. February 2021 include:

- The extent of the plantation woodland has been mapped to show the areas present on site.
- Mapping of areas of introduced shrubs dominated by cherry laurel *Prunus laurocerasus* or a bamboo *Phyllostachys bambusoides*.
- Mapping of the introduced shrub hedgerows present on site.
- Re-classification of the mixed plantation woodland to coniferous plantation woodland as there is 10% or less broadleaved trees in the canopy.
- The ditch previously described as dry during the survey undertaken on the 7th August 2020 and 28th January 2021⁴. This was noted to have a slow flow towards the north during the survey.

- 3.2 Photographs of the habitats are provided within Appendix A.

- 3.3 A summary of the habitats present on site are provided in Table 1 below including UK Hab equivalent habitats for the purpose of the BIA.

Table 1: Summary of Habitats

Phase 1 Habitat Type	UK Hab (using Biodiversity Metric 2.0 Calculation Table G-9)
Tall ruderal vegetation	Sparsely vegetated land – Ruderal / Ephemeral
Poor semi-improved grassland	Grassland -Modified grassland
Scrub	Heathland and shrub – Bramble scrub
Introduced Shrubs	Urban - Introduced shrub
Coniferous Plantation Woodland	Woodland and forest - Other coniferous woodland
Bare ground	Urban – Vacant/ derelict land/ bare ground
Hardstanding	Urban – Developed land; sealed surface

⁴ EclA Report, MAB Environment & Ecology Ltd. February 2021.

Phase 1 Habitat Type	UK Hab (using Biodiversity Metric 2.0 Calculation Table G-9)
Ditch	Lakes - Ditches

- 3.4 From the completed DEFRA Biodiversity Metric, the value of the existing site habitats are 4.72 Biodiversity Habitat Units (BHU) and 0.18 Hedgerow Units.

4.0 **BIODIVERSITY IMPACT ASSESSMENT**

- 4.1 In accordance with NPPF (2019) and Policy LP30 Biodiversity and Geodiversity of the Kirklees Local Plan⁵ the development will “*minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist*”.
- 4.2 The proposed development aims to retain and enhance the watercourse and coniferous plantation woodland in the south west. Post development new habitats will be created (species rich neutral grassland, mixed woodland, native tree / scrub planting, native species rich hedgerow planting, reedbeds and a pond).
- 4.3 Post development the habitat enhancements and creation as outlined in this document with long-term management (for a minimum of 30 years) will achieve a net gain of 0.17 Hedgerow Units (total net change of 93.93%). However, a net gain in Habitat Units will not be achieved with the current proposed development resulting in a total net unit change of -1.72 Habitat Units (total net % change -29.47%).
- 4.4 Furthermore, the Habitat Trading is currently unacceptable due to the losses of low distinctiveness habitats, these comprise, poor semi-improved grassland (modified grassland), tall ruderal vegetation, introduced shrub, bare ground and coniferous plantation woodland.
- 4.5 Figure 2 outlines the potential habitat areas post development across the site.

5.0 **DISCUSSION & CONCLUSION**

- 5.1 The above calculation does not account for the following additional enhancement measures that will be provided within the development as these cannot be quantified using the DEFRA BM calculator. The inclusion of the following biodiversity enhancements above what has already been outlined above would be considered a benefit to biodiversity.
- Bat and bird boxes to be installed within the new residential properties as shown upon
 - Amenity grassland lawn areas (within the gardens of the residential properties) can be seeded with a flowering lawn mix used (such as Emorsgate EL1). The species diversity and flowers will improve the value of the habitat to invertebrates.

⁵ Kirklees Council. *Kirklees Local Plan Strategy and Policies*, Adopted 27 February 2019

5.2 As the development proposals cannot deliver a net gain on-site there is a requirement to secure a net gain via an alternative mechanism. This could include a combination of the following:

- Utilising off-site land under the control of the applicant to deliver the off-site requirement. The land should ideally be located in a strategic ecologically beneficial location.

In this instance the applicant does not have any available. However, The Knowle located along the northern and eastern boundary has been included within the calculations to aid in achieving a net gain.

- A Biodiversity Credit is calculated based on the Biodiversity Units required for the Local Planning Authority (LPA) or another third-party Habitat Bank (to be approved by the LPA) to take on responsibility to deliver the Net gain for biodiversity.⁶

Calculation of the financial contributions

5.3 Following discussion with Kirklees Council on the 15th January 2021 a financial proposal was to be provided within this report. It is recommended that the approach taken by Leeds City Council⁷ is utilised where the sum of 1 Habitat Unit will be £20,000 and the payment secured by the S106 agreement.

5.4 For example, the -1.71 Habitat Unit loss would be £34,400.

⁶ <https://www.leeds.gov.uk/planning/conservation-protection-and-heritage/achieving-net-gain-in-biodiversity-guidance-for-developers>

⁷ <https://www.leeds.gov.uk/planning/conservation-protection-and-heritage/achieving-net-gain-in-biodiversity-guidance-for-developers>

APPENDIX A: SITE PHOTOGRAPHS



Photograph 1: View looking south east into the site with areas of grassland interspersed with coniferous plantation woodland (not mixed plantation and not extensive plantation cover)



Photograph 2: View along the south western boundary of the site with sporadic areas of coniferous plantation woodland.



Photograph 3: Introduced shrub area near to hedgerow H1.



Photograph 4: View looking northwards but in the the south of the site, showing grassland interspersed with sporadic coniferous plantation woodland and the fence line leading to area of tall ruderal vegetation.



Photograph 5: Tall ruderal vegetation in the northwest of the site.



Photograph 6: View along the fence line south of the tall ruderal vegetation.



Photograph 7: View looking south east across the site from the northern boundary.



Photograph 8: Habitat along the northern boundary in the north east of the site adjacent the line of coniferous trees.



Photograph 9: Grassland in the north east of the site.



Photograph 10: Area of privet (mapped as dense scrub) on the south eastern boundary.



Photograph 11: View looking north west from the southern corner of the site.



Photograph 12: View looking north east into an area of coniferous plantation located within the grassland.



Photograph 13: View looking north west towards an area of introduced shrub and coniferous trees.



Photograph 14: Short coniferous tree line in the southern area of the site.



Photograph 15: Area of bamboo (introduced shrub) surrounded by the dominant habitat of tall ruderal vegetation.



Photograph 16: The poly tunnel in the south of the site surrounded by bare ground, tall ruderal vegetation and introduced shrub hedgerow H1 and H1.



Photograph 17: Area of tall ruderal vegetation northwest of the poly tunnel in the south) and areas of introduced shrub.



Photograph 18: Hedgerow H1 and bare ground. Small patch of dense bramble scrub adjacent to the polytunnel.



Photograph 19: Introduced shrub area north of the poly tunnel.



Photograph 20: View looking north east from the south of the site along the watercourse.



Photograph 21: Area of bare ground and H2 in the south of the site.



Photograph 22: View looking north west along the bare ground and H1



Photograph 23: Area of introduced shrub north of the polytunnel (in the south of the site).



Photograph 24: View looking north east along the north western site boundary, H3 an area of introduced shrub.

APPENDIX B: OFF-SITE HABITAT PHOTOGRAPHS



Photograph 1: The northern boundary of The Knowle



Photograph 2: Looking east along The Knowle



Photograph 3: North eastern corner of The Knowle



Photograph 4: Dense bramble in the north eastern corner of The Knowle



Photograph 5: Looking south along The Knowle adjacent to the eastern boundary of the development site.



Photograph 6: Looking North along The Knowle towards the north eastern corner.



Photograph 7: Looking North along The Knowle adjacent to the eastern boundary of the development site.

APPENDIX C: BM 2.0 CALC TOOL BETA TEST – DEC 2019 UPDATE



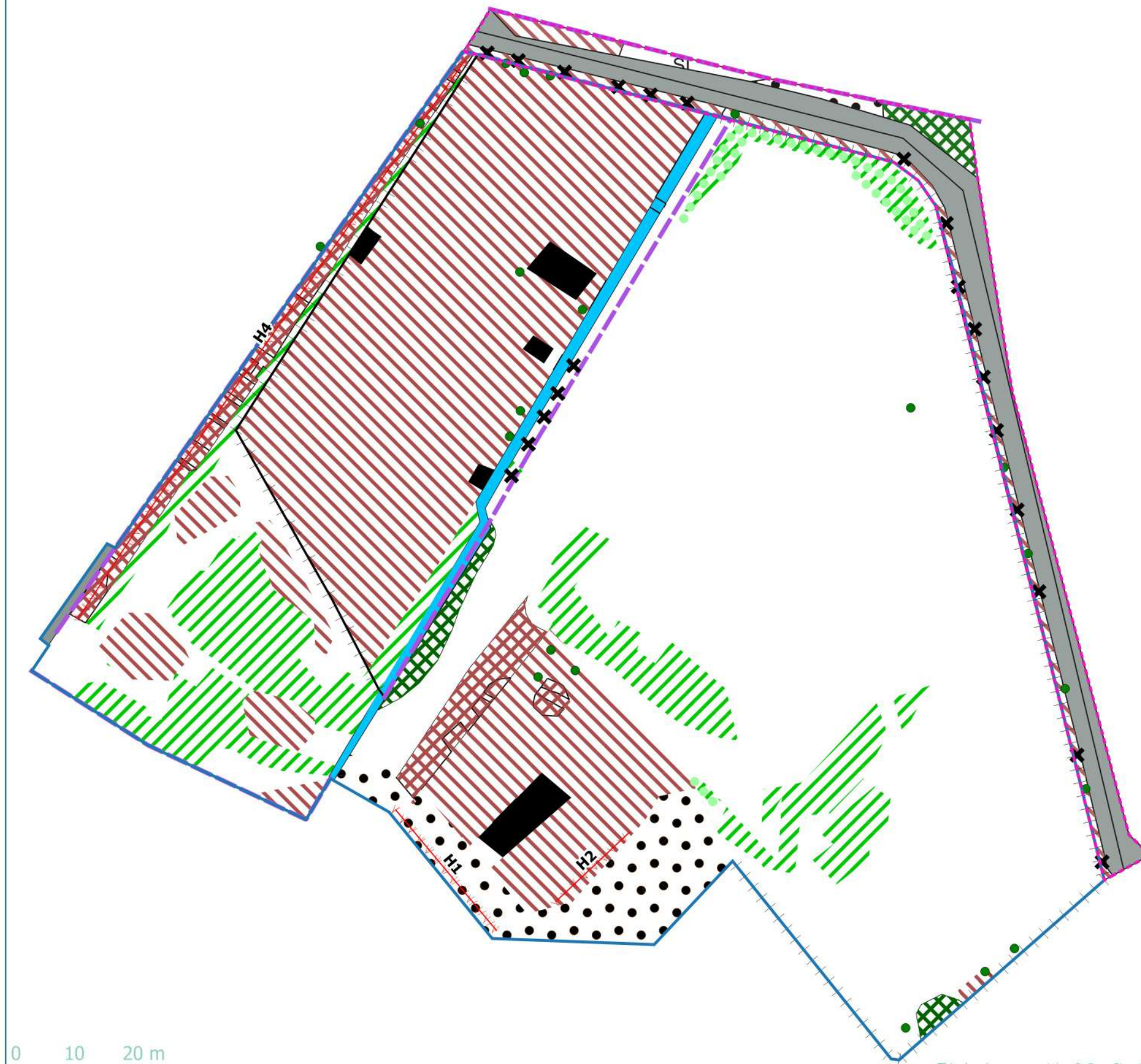
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Key

- FE78 Site Boundary Phase 2
- The Knowle Boundary
- Phase 1 Habitats
 - Bare ground
 - Buildings
 - Built Environment: Buildings/hardstanding
 - Built Environment: Gardens (lawn and planting)
 - Coniferous woodland - plantation
 - Introduced shrub
 - Other tall herb and fern - ruderal
 - Poor semi-improved grassland
 - Scrub - dense/continuous
 - Ditch
 - Wall
 - Hedges: Introduced shrub
 - Fence
 - Coniferous trees
 - Scrub - scattered
 - coniferous trees
 - Broadleaved tree



Client: Yorkshire Country Properties
Project: Phase 2: Abbey Road, Shepley
Title: Figure 1 - Detailed Phase 1 Habitat Plan with Offsite Habitats

Plan Reference: FE78_01
Project Reference: FE78
Report Reference: BIA01

Author: REH /JSE
Date: 11/2/2021
Scale: 1:766 @A3

Futures Ecology Ltd\Projects\FE78 Phase 2: Abbey Road, Shepley\QGIS\Figure 1 - Detailed Phase 1 Habitat Plan
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Key

FE78 Site Boundary Phase 2

The Knowle Boundary

Phase 2 - On-Site Biodiversity Habitats

Ditch

Garden

Hard Standing

Introduced Shrub

Mixed Woodland

Mixed Woodland - plantation

Native Scrub

Neutral Grassland

Wetland - Reedbed

Wildlife Pond

Phase 2 - Native Hedgerows - New

Phase 2 - Retained Introduced Shrub Hedge

BNG Street Trees

Medium Tree

Small Tree



0 10 20 m

This drawing may contain: © OpenStreetMap contributor or Map data © 2019 Google

Client: Yorkshire Country Properites

Project: Phase 2: Abbey Road, Shepley

Title: Figure 2 - Detailed Phase 1 Habitat Plan with Offsite Habitats

Plan Reference: FE78_02

Project Reference: FE78

Report Reference: BIA01

Author: REH /JSE

Date: 10/2/2021

Scale: 1:700 @A3

Futures Ecology Ltd\Projects\FE78 Phase 2: Abbey Road, Shepley\QGIS\Figure 2 - Detailed Phase 1 Habitat Plan with Offsite Habitats

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