BIODIVERSITY ACCOUNTING ASSESSMENT REPORT

at

Land at Leeds Road
Heckmondwike
West Yorkshire
WF16 9DB

Client:
Orion Homes

Client Address:
5 Benton Office Park
Bennet Avenue
Horbury
Wakefield
WF4 5RA

JCA Ref:
22876a/JF R1

Date of Report:
13/03/2026

JCA Limited
Arboricultural & Ecological Consultants

Quality Assurance

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Revision 1: New Site Layout					12/03/26	James Foster	13/03/26	Liz Davies

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development 2018* and the *CIEEM's Code of Professional Conduct.*

Executive Summary

JCA Limited was instructed by **Orion Homes** to carry out a Biodiversity Accounting Assessment (BAA) of **Land at Leeds Road, Heckmondwike** (hereafter referred to as the 'Site') to inform a planning application for the construction of 49 residential properties. ('the Proposed Development').

The purpose of the assessment is to determine the baseline biodiversity value of the Site and to assess if there are sufficient biodiversity enhancement opportunities available within the Site boundary to compensate for any residual biodiversity losses as a result of the Proposed Development.

To fulfil the brief, the Biodiversity Metric 4.0 (June 2024 update) was used to calculate the baseline biodiversity value of all existing habitats on-site. The metric was then used to provide a comparative measure of any habitat creation and enhancements associated with the Client's Proposed Development. The resulting balance determines the extent of Biodiversity Units (BU) generated through the proposed habitats post development.

The baseline habitat units present on-site are 10.11 BU. The baseline hedgerow units present on-site are 0.25 BU.

On balance of impacts and habitat retention/enhancement/creation, the report concludes that the Proposed Development will result in a net loss of -8.47 habitat BU, equivalent to a net loss of 83.81% and a net loss for hedgerows of -0.01 BU, equivalent to a net loss of -5.85%.

In addition, the Proposed Development has not satisfied the trading rules due to a loss of medium distinctiveness habitats: other neutral grassland (-9.48 habitat units) and low (-0.01 hedgerow units) and very low (-0.01 hedgerow units) distinctiveness hedgerows.

There is a unit deficit of 9.48 for habitats and 0.04 hedgerows.

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 JCA Limited have been instructed by **Orion Homes** to undertake a Biodiversity Accounting Assessment (BAA) of a site located at **Land at Leeds Road**, **Heckmondwike** (hereafter referred to as the 'Site').

1.1.2 The purpose of this report is to:

- Assess the baseline biodiversity value of the Site through the total sum of the habitats within the Site, and their calculated biodiversity value.
- Assess if there are sufficient biodiversity enhancement and/or creation opportunities available within the Site boundary to compensate for any residual biodiversity losses as a result of the Proposed Development.
- To determine the level of overall residual biodiversity gains or losses associated with the Proposed Development.

1.1.3 The Site location and red line / survey area are shown in **Appendix 1**.

1.2 Site description

1.1.4 The site is situated 1.2km north of Heckmondwike centre, at grid reference: SE 21493 24760.

1.1.5 The site is situated in a suburban area and is bordered to the north and east by arable grasslands with hedgerows and scattered trees and to the south and west by residential properties with scattered trees and gardens.

1.3 Details of Proposed Development

1.3.1 The development proposed at the site is the construction of 49 residential properties.

2. Biodiversity Accounting in Context

2.1 Biodiversity Net Gain Principles

2.1.1 Biodiversity Net Gain: Good Practice Principles for Development published by CIEEM et. al (2016) states that delivering biodiversity net gain goes beyond balancing relative gains and losses. It also involves doing everything to avoid biodiversity losses in the first instance. The application of the DEFRA metric detailed in this report supports developments to adopt this approach by:

a) Providing a habitat balance sheet which can be used to identify those habitats with the greatest value and subsequently those with the greatest impacts if lost;

b) Supporting and incentivising the mitigation hierarchy by quantifying the benefits of avoiding and mitigating impacts on high value features;

c) Promoting the value of biodiversity enhancements and demonstrating the potential for additionality on retained habitats;

d) Providing a balance of losses, enhancements or on-site compensation to determine if a measure net gain contribution can be achieved;

e) Providing transparent, robust and credible evidence to help inform the best possible Site options for biodiversity; and,

f) Ensuring that any residual off-Site compensation required (e.g. through biodiversity offsetting) is proportionate to the impacts and can secure a measurable net gain contribution for biodiversity overall.

2.2 Relevant Planning Policy and Legislation

2.2.1 In England, Biodiversity Net Gain (BNG) is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). All planning permissions granted in England will have to deliver at least 10% Biodiversity Net Gain (BNG) to be maintained for a period of at least 30 years. The concept seeks measurable improvements for biodiversity by creating or enhancing habitats in association with development.

2.3 Local Policy and Guidance

2.3.1 Kirklees Local Plan 2013 – 2031 (Kirklees Council, Adopted February 2019)

Policy LP24: Design, Policy LP30: Biodiversity and Geodiversity and Policy LP31: Strategic Green Infrastructure Network, of the Kirklees Local Plan apply to the Proposed Development.

Policy LP24: Design

Good design should be at the core of all proposals in the district and should be considered at the outset of the development process, ensuring that design forms part of pre-application consultation of a proposal. Development briefs, design codes and masterplans should be used to secure high quality, green, accessible, inclusive and safe design, where applicable. Where appropriate and in agreement with the developer schemes will be submitted for design review.

Proposals should promote good design by ensuring:

a. the form, scale, layout and details of all development respects and enhances the character of the

townscape, heritage assets and landscape;

b. they provide a high standard of amenity for future and neighbouring occupiers; including maintaining

appropriate distances between buildings and the creation of development-free buffer zones

between housing and employment uses incorporating means of screening where necessary;

c. extensions are subservient to the original building, are in keeping with the existing buildings in

terms of scale, materials and details and minimise impact on residential amenity of future and neighbouring occupiers;

d. high levels of sustainability, to a degree proportionate to the proposal, through:

    i. The re-use and adaptation of existing buildings, where practicable;

    ii. design that promotes behavioural change, promoting walkable neighbourhoods and making walking and cycling more attractive;

    iii. considering the use of innovative construction materials and techniques, including reclaimed and recycled materials;

    iv. Where practicable, minimising resource use in the building by orientating buildings to utilise passive solar design. This includes encouraging the incorporation of vegetation and tree planting to assist heating and cooling and considering the use of renewable energy;

    v. providing charging points to encourage the use of electric and low emission vehicles;

    vi. incorporating adequate facilities to allow occupiers to separate and store waste for recycling and recovery that are well designed and visually

unobtrusive and allows for the convenient collection of waste;

vii. designing buildings that are resilient and resistant to flood risk, where such buildings are acceptable in accordance with flood risk policies and through incorporation of multi-functional green infrastructure where appropriate;

viii. designing places that are adaptable and able to respond to change, with consideration given to accommodating services and infrastructure, access to high quality public transport facilities and offer flexibility to meet changing requirements of the resident / user.

e. the risk of crime is minimised by enhanced security, and the promotion of well-defined routes, overlooked streets and places, high levels of activity, and well-designed security features;

f. the needs of a range of different users are met, including disabled people, older people and families with small children to create accessible and inclusive places; any new open space is accessible, safe, overlooked and strategically located within the site and well-integrated into wider green infrastructure networks;

g. development contributes towards enhancement of the natural environment, supports biodiversity and connects to and enhances ecological networks and green infrastructure;

h. the retention of valuable or important trees and where appropriate the planting of new trees and other landscaping to maximise visual amenity and environmental benefits; and

i. the provision of public art where appropriate.

2.3.2 Policy LP30: Biodiversity and Geodiversity

Proposals the council will support proposals that seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network. that protect and enhance features of ecological and geological interest and provide net gains in biodiversity will be supported.

Proposals will be required to:

result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;

ix. minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;

x. safeguard and enhance the function and connectivity of the Kirklees Wildlife

Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;

xi. establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and

incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

2.3.3 Policy LP31: Strategic Green Infrastructure Network

Within the Strategic Green Infrastructure Network identified on the Policies Map, priority will be given to safeguarding and enhancing green infrastructure networks, green infrastructure assets and the range of functions they provide.

Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure:-

i. the function and connectivity of green infrastructure networks and assets are retained or replaced;

ii. new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees;

iii. the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist;

iv. (iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network.

The council will support proposals for the creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies.

2.3.4 Biodiversity Action Plan (BAP) for Kirklees

The BAP for Kirklees (Kirklees Metropolitan Council, No Date) concentrates on species and habitats that had national action plans produced or are of local conservation concern.

Species listed on the Kirklees BAP include.

- Common bullfinch *Pyrrhula pyrrhula*
- Common grasshopper warbler *Locustella naevia*
- Linnet *Linaria cannabina*
- Starling *Sturnus vulgaris*
- Corn bunting *Miliaria calandra*

- Curlew *Numenius Arquata*
- Tree sparrow *Passer montanus*
- Turtle dove *Streptopelia turtur*
- Red grouse *Lagopus lagopus*
- Reed bunting *Emberiza schoeniclus*
- Ring ouzel *Turdus torquatus*
- Skylark *Alauda arvensis*
- Song thrush *Turdus philomelos*
- Spotted flycatcher *Muscicapa striata*
- Tree pipit *Anthus trivialis*
- Twite *Carduelis flavirostris*
- Grey partridge *Perdix perdix*
- Hawfinch *Coccothraustes coccothraustes*
- Dunnock *Prunella modularis*
- House sparrow *Passer domesticus*
- Lapwing *Vanellus vanellus*
- Willow tit *Parus montanus*
- Wood warbler *Phylloscopus sibilatrix*
- Yellow wagtail *Motacilla flava*
- Yellowhammer *Emberiza citronella*
- Atlantic salmon *Salmo salar*
- European eel *Anguilla Anguilla*
- Common lizard *Lacerta vivipara*
- Common toad *Bufo bufo*
- Great crested newt *Triturus cristatus*
- Brown hare *Lepus europaeus*
- Brown long-eared bat *Plecotus auratus*
- Mountain hare *Lepus timidus*
- Noctule *Nyctalus noctule*
- Otter *Lutra lutra*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Water vole *Arvicola amphibius*
- Hedgehog *Erinaceus europaeus*
- Northern wood ant *Formica lugubris*

Habitats listed on the Kirklees BAP include.

- Arable field margins
- Blanket bog
- Hedgerow
- Inland rock outcrop and scree habitats
- Lowland dry acid grassland
- Lowland heathland
- Hay meadows
- Lowland mixed deciduous woodland
- Open mosaic habitats on previously developed land
- Other semi-natural grassland

- Ponds
- Reedbeds
- Rivers and riverine
- Scrub

3. Methodology

3.1 Background

3.1.1 Biodiversity accounting of existing and post-development habitats and linear features on-site was carried out using the Biodiversity Metric 4.0 Calculator Tool, following guidance set out in the metric user guide (Natural England et al, 2024). The process for data collation and analysis associated with the assessment is detailed in Sections 4.2 – 4.3 below.

3.2 Assessing strategic significance

3.2.1 A desk study was conducted to collate baseline data about ecological sites within the zone of influence of the proposed development site, following guidelines set out by the Charted Institute of Environmental and Ecological Management (CIEEM, 2017). This data-gathering exercise was undertaken to obtain any available information relating to statutory nature conservation-sites, ecological networks, local plans and priority habitats to help establish the strategic significance of the site. Sources of information used are shown in Table 1.

Table 1: Summary of information sources used for the desk study

Organisation/source	Information sought
MAGIC	Locations of and citations for all national statutory wildlife sites, including SSSI, and all international sites including SAC, SPA or Ramsar sites within 5 kilometres of the site. Priority Habitats within 300m.
Kirklees Council	LNRS, Adopted Local Plan, evidence base, and polices map

3.2.2 This evidence was reviewed and used to assess the strategic significance of the site, and/or individual habitats and whether it lies within an ecological network for the area.

3.3 Baseline Data

3.3.1 A baseline analysis of the existing habitats on-site was carried out from the information gathered during the Site's ecological assessment visit carried out by James Foster (Assistant Ecologist, JCA Limited) on 02/06/2025.

3.4 Biodiversity Net Gain

3.4.1 Biodiversity Net Gain complements and works with the biodiversity mitigation hierarchy set out in the National Planning Policy Framework paragraph 180a. To achieve a net gain in a way that is consistent with the mitigation hierarchy and reflects the 'spatial-hierarchy' preference for local enhancements, the following steps should be followed:

(1) Aim to avoid or reduce biodiversity impacts through site selection and layout;

(2) Enhance and restore biodiversity on-site;

(3) Create or enhance off-site habitats, either on their own land or by purchasing biodiversity units on the market; and

(4) As a last resort, to prevent undue delays, purchase statutory biodiversity credits from the UK Government where they can demonstrate that they are unable to achieve biodiversity net gain through the available on-site and off-site options.

3.4.2 On completion of the fieldwork the habitat information was mapped and areas were imported into the DEFRA Biodiversity Statutory Metric Calculation Tool. The metric calculates the baseline biodiversity units for the site based on the following factors:

- Area
- Habitat distinctiveness
- Habitat condition
- Strategic significance

3.4.3 Once inputted the metric provides biodiversity units for the proposed habitats based on the following factors:

- Area
- Habitat distinctiveness (full metric only – automatically calculated for small sites metric)
- Habitat target condition
- Strategic significance
- Time habitat is created (full metric only)
- Time to the target condition (full metric only – automatically calculated for small sites metric)
- Difficulty of creation (full metric only – automatically calculated for small sites metric)

3.4.4 The difference between the baseline units and proposed units is then used as a measure of change and is used to assess the number of biodiversity units achieved.

Habitats, hedgerows and rivers are inputted as separate factors, with each requiring net gains.

3.4.5 The Small Sites Metric user guide (2024) states that the SSM cannot be used where Priority habitats (excluding hedgerows and arable field margins), statutory protected sites or habitats or European Protected Species are present.

3.4.6 As per the Small Sites Metric user guide (2024) page 30 and pages 55-56 of Statutory Biodiversity Metric user guide (2024):

- We will record any medium, large and very large trees in private gardens.
- And any small trees that are ancient or veteran in private gardens.
- Small trees outside of private gardens will be counted.
- Exceptions; we cannot count newly planted trees within private gardens.

3.4.7 As per the Small Sites Metric user guide (2024) page 26 and page 49 of Statutory Biodiversity Metric user guide (2024):

- Where urban-vegetated garden is used for baseline habitat units, if there are parcels of higher distinctiveness these will be mapped and counted separately to avoid under-recording biodiversity.

Mitigation hierarchy

3.4.8 Development proposals should first seek to avoid impacts by retaining habitats. Second, development proposals should look to minimise the impact by producing plans that are designed to limit habitat disturbance, damage, and loss, thereby mitigating against any unavoidable impacts. Third, proposals should look to restore any damaged or degraded habitats. Then, only as a last resort should proposals compensate for unavoidable residual impacts to damaged or lost habitats that remain after avoidance and mitigation measures.

3.5 Impact Assessment

3.5.1 The existing baseline habitat plan for the Site was overlain with the Landscape Proposals (Dwg number: 2403-02-007) of the Proposed Development using GIS software to provide an area (Ha) of temporary and permanent habitat loss.

3.5.2 The area of any retained/enhanced or created habitats proposed as part of the development was also mapped to provide an area (Ha) (or length (Km) for linear features) of the on-site compensation proposals being provided. An estimate of future condition, time until establishment and the likelihood of success was then calculated using landscaping data provided by the client and professional judgement.

3.6 Habitat Creation and Enhancement

3.6.1 The area of any retained/enhanced or created habitats proposed on-site as part of the Proposed Development was mapped using the Landscape Proposals (2403-02-007) of the final development, to provide an area (Ha) (or length (Km) for linear features) estimate of on-site compensation provided. This includes areas of developed land, which are assigned a very low (or null) value, notably, areas of buildings and/or roads.

3.6.2 Condition and strategic significance for each habitat or linear feature were projected using available ecological data or professional opinion about the likely value.

3.7 Residual Effects

3.7.1 The residual effects of the Proposed Development scheme were calculated using the Biodiversity Metric 4.0 Calculator Tool. This subtracts the pre-development baseline values from that of the post-development values to determine the change in overall habitat value for the Site, taking into account any habitat trading.

3.7.2 Habitat trading is where the loss of a habitat must be compensated for through the creation or restoration of areas of equivalent or greater distinctiveness value. Guidance by Defra is that the loss of high distinctiveness areas, such as Habitats of Principal Importance (HPI, NERC Act, S.41), require compensation in a like-for like manner (creation or restoration of habitat of the same habitat classification as that impacted). Within the Biodiversity Metric 'trading up' (where compensation through creation of a higher distinctiveness habitat) can occur, however, 'trading down' (compensation through creation of lower distinctiveness habitats) is not permitted. Therefore, if present, despite gains in lower distinctiveness habitats, these will not reduce the net gain requirement for the development. This also applies to the different habitat features i.e. habitats, hedgerows and rivers and streams. Hedgerow creation gains will not reduce net gain requirements for either rivers and streams or habitats.

3.7.3 Where the resulting biodiversity balance is negative, a residual net loss of biodiversity is recorded. Where the balance is positive a residual net gain of biodiversity is recorded.

4. Biodiversity Metric 4.0

4.1 Introduction

4.1.1 The assessment was carried out by JCA Limited using the ecological data gathered during the Site's ecological assessment survey carried out on 02/06/2025.

4.2 Strategic Significance

4.2.1 There are no priority habitats and potential ecological network areas within the vicinity of the site. The site is therefore not considered to be ecologically desirable.

4.2.2 The site is not included in the West Yorkshire Local Nature Recovery Strategy: Local Habitat Map and does not have any Measure Priority Recommendations. The habitats of the site are considered to have low strategic significance post development (Area/compensation not in local strategy/ no local strategy).

4.3 Existing Site Value

4.3.1 The existing biodiversity value for each habitat, together with the cumulative value of all habitats is provided in Table 2.

Table 2: Baseline habitats on-site and their ecological value as categorised by the Biodiversity Metric 4.0 calculator.

Biodiversity Metric Reference Number	Biodiversity Metric 4.0 Habitat Type	Total Area on-site (Ha)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
1	Modified grassland	0.0279	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.06
2	Modified grassland	0.0126	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.03
3	Other neutral grassland	1.1844	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	9.48
4	Bramble scrub	0.0254	Medium	Condition Assessment N/A	Area/compensation no in local strategy/ no local strategy	0.10
5	Developed land; sealed surface	0.056	V.Low	N/A - Other	Area/compensation not in local strategy/ no local	0.00

Biodiversity Metric Reference Number	Biodiversity Metric 4.0 Habitat Type	Total Area on-site (Ha)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
					strategy	
6	Introduced shrub	0.0129	Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	0.03
7	Urban Tree	0.0529	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.42
	Total (area excl. trees)	**1.32**	**–**	**–**	**–**	**10.11**

The following habitat types were recorded on-site:

4.3.2 Modified grassland

The modified grassland habitat is low distinctiveness and was found to be in poor condition, as it failed essential criteria A (There are 6-8 vascular plant species per m^2 present, including at least 2 forbs), criteria B (Sward height is varied) and condition E (Cover of bare ground is between 1% and 10%,) and criteria E (cover of bare ground).

4.3.3 Other neutral grassland

The other neutral grassland habitat is medium distinctiveness and was found to be in moderate condition, as it failed criteria C (cover of bare ground) and criteria F (10 or more vascular species per m²).

4.3.4 Bramble scrub

The bramble scrub on-site is medium distinctiveness and has a value equivalent to poor condition scrub.

4.3.5 Developed land; sealed surface

The developed land; sealed surface is very low distinctiveness and has no condition and no value.

4.3.6 Introduced scrub

The introduced shrub is low distinctiveness and has no condition.

4.3.7 Urban trees

The urban trees on-site are medium distinctiveness and moderate condition and were found to be in moderate condition, as the trees failed criteria A (native species: failed by two trees), criteria C (the tree is mature: failed by all trees) and criteria E (natural

ecological niches: failed by nine trees).

4.3.8 The existing biodiversity value for each hedgerow, together with the cumulative value of all hedgerows is provided in Table 3.

Table 3: Baseline hedgerows on-site and their ecological value as categorised by the Biodiversity Metric 4.0 calculator.

Biodiversity Metric Reference Number	Biodiversity Metric 4.0 Habitat Type	Total Length on-site (Km)	Distinctiveness	Condition	Strategic Significance	Ecological Baseline Habitat Unit
1	Native hedgerow	0.054	Low	Moderate	Area/compensation not in local strategy/ no local strategy	0.22
2	Native hedgerow	0.011	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.02
3	Non-native and ornamental hedgerow	0.008	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	0.01
	Total	**0.07**	**–**	**–**	**–**	**0.25**

4.3.9 The native hedgerow on-site (Ref: 1) is low distinctiveness and was found to be in moderate condition, as the hedgerow failed criteria A2 (width: >1.5m average along length), criteria B2 (gaps: gaps make up <10% of total length), criteria C2 (plant species indicative of nutrient enrichment dominate <20%).

4.3.10 The native hedgerow (Ref: 2) was found to be in poor condition, as the habitat failed criteria A1 (Height: >1.5m average along length), criteria A2 (width: >1.5m average along length), criteria C1 (undisturbed ground) and criteria C2 (plant species indicative of nutrient enrichment dominate <20%).

4.3.11 The non-native and ornamental hedgerow is very low distinctiveness and has a value equivalent to a poor condition hedgerow.

5. Proposed Development Impact Assessment

5.1 Description of the Proposed Development

5.1.1 The Proposed Development involves the construction of 49 residential properties.

5.1.2 The Proposed Development will see the removal of on-site habitats to facilitate the development. The modified grassland, other neutral grassland, bramble scrub, introduced shrub and urban trees will be removed.

5.1.3 The Proposed Development will see the removal of on-site hedgerows to facilitate the development. The native hedgerow and ornamental non-native hedgerow will be removed.

5.1.4 The Proposed Development will see the creation of modified grassland, mixed scrub, developed land; sealed surface and the planting of nine small sized urban trees.

5.1.5 The Proposed Development will see the enhancement of poor condition modified grassland into moderate condition modified grassland.

5.1.6 The Proposed Development will see the creation of native hedgerows.

5.2 Habitats to be Retained

5.2.1 The Proposed Development will see the retention of 10 small sized urban trees. The retention of these trees will avoid any direct impacts of loss of habitat.

5.3 Habitats to be Enhanced

5.3.1 The Proposed Development will see the enhancement of 0.0126 ha of poor condition modified grassland into moderate condition modified grassland. The enhancement of this habitat will deliver 0.04 habitat BU.

5.3.2 The modified grassland to be created by enhancement has been given a target condition of moderate. To achieve this at least four of the following condition assessment criteria must be passed (including essential criteria A). It is advised to target criteria A, C, D, F or G.

- Criteria A: There are 6-8 vascular plant species per m2 present, including at least 2 forbs. **Note - this criterion is essential for achieving Moderate or Good condition.**
- Criteria B: Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.

- Criteria C: "Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble Rubus fruticosus agg. may be present).
- Criteria D: Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.
- Criteria E: Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
- Criteria F: Cover of bracken Pteridium aquilinum is less than 20%.
- Criteria G: There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).

5.4 Habitats to be Lost

5.4.1 The Proposed Development will see the loss of modified grassland, other neutral grassland, bramble scrub, introduced shrub and urban trees habitats on-site to facilitate the development. This will result in a total loss of 9.76 habitat BU

5.4.2 The other neutral grassland and urban trees are on-site are medium distinctiveness habitats of moderate condition. The loss of these habitats is considered to be moderate.

5.4.3 The bramble scrub on-site is a medium distinctiveness habitat with a condition equivalent to poor. The loss of this habitat is considered to be minor due to the small size of the habitat area.

5.4.4 The modified grassland on-site is a low distinctiveness habitat of poor condition. The loss of this habitat is considered to be minor.

5.4.5 The introduced shrub on-site is a low distinctiveness habitat with a condition equivalent to poor condition. The loss of this habitat is considered to be minor.

5.4.6 The Proposed Development will see the loss of the native hedgerow, and non-native and ornamental hedgerows on-site to facilitate the development. This will result in a total loss of 0.25 hedgerow BU

5.4.7 The native hedgerows on-site are low distinctiveness hedgerows of poor and moderate condition. The loss of these hedgerows is considered to be minor.

5.4.8 The ornamental and non-native hedgerow on-site is a very low distinctiveness hedgerow with a condition of poor. The loss of this hedgerow is considered to be minor.

5.5 Habitats to be Created

5.5.1 The Proposed Development will see the creation of modified grassland of moderate condition, mixed scrub of moderate condition, developed land; sealed surface, vegetated gardens and the planting of nine urban trees of moderate condition as part of the development. Delivering a total of 1.30 habitat units.

5.5.2 0.0441 ha of poor condition modified grassland will be created on-site, delivering 0.15 habitat units. The modified grassland to be created has a target condition of moderate. To achieve this at least four condition assessment criteria must be passed (including essential criteria A), **please see section 5.3.2.** It is advised to target criteria A, C, D, F or G.

5.5.3 0.0192 ha of moderate condition mixed scrub will be created on-site, delivering 0.13 units. The mixed scrub to be created has a target condition of moderate. To achieve this at least three of the following condition assessment criteria must be passed. It is advised to target criteria A, C, D or E.

- Criteria A: The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). At least 80% of scrub is native, there are at least three native woody species and no single species comprises more than 75% of the cover (except hazel Corylus avellana, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).
- Criteria B: Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.
- Criteria C: There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.
- Criteria D: The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
- Criteria E: There are clearings, glades or rides present within the scrub, providing sheltered edges

5.5.4 0.7503 ha of developed land; sealed surface will be created on-site. Developed land; sealed surface does not have a target condition or biodiversity value.

5.5.5 0.453 ha of vegetated garden will be created on-site, delivering 0.87 units. vegetated garden does not have a target condition.

5.5.6 Nine small sized trees of moderate condition will be planted on-site, delivering 0.11 units. The urban trees to be planted on-site have a target condition of moderate. To achieve this at least three of the following condition assessment criteria must be passed. It is advised to target criteria A, B, D, or E.

- Criteria A: the tree is a native species (or at least 70% within the block are native species).

- Criteria B: the tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).
- Criteria C: the tree is mature (or more than 50% within the block are mature).
- Criteria D: there is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
- Criteria E: natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
- Criteria F: more than 20% of the tree canopy area is oversailing vegetation beneath.

5.5.7 The Proposed Development will see the creation of 0.12km poor condition native hedgerows as part of the development, delivering 0.23 hedgerow units.

5.5.8 The native hedgerow to be created on-site has been given a target condition of 'Poor'. None of the relevant condition assessment criteria are needed to be passed in order to achieve this target condition. However, as a measure of best practice the hedgerow will aim to meet the following criteria and the habitat must meet its definition as per the UKHab Habitat classification system (2023).

- "A hedgerow with >80% canopy cover of UK native species or archaeophyte woody species".
- The hedgerow should aim to be over 1.5 metres in average height along the length.
- The hedge should have a gap between the ground and base of the canopy of <0.5 metres for 90% of its length.
- There should be >1m width undisturbed ground with perennial herbaceous vegetation on at least one side of the hedgerow.
- There should be no invasive non-native species present.

5.6 Overall Impacts

5.6.1 The retention, enhancement and loss of habitats and hedgerows as a result of the Proposed Development are quantified in Table 4 & 5.

Table 4: Summary of baseline habitat biodiversity value through retention and enhancement.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Habitat Type	Baseline Units Retained		Baseline Units Enhanced		Baseline Units Lost	
		Area (ha)	Unit	Area (ha)	Unit	Area (ha)	Unit
1	Modified grassland	0	0	0	0	0.03	0.06
2	Modified grassland	0	0	0.0126	0.03	0	0
3	Other neutral grassland	0	0	0	0	1.18	9.48
4	Bramble scrub	0	0	0	0	0.03	0.10
5	Developed land; sealed surface	0.04	0	0	0	0.02	0
6	Introduced shrub	0	0	0	0	0.01	0.03
7	Urban Tree	0.0407	0.33	0	0	0.01	0.10
	Total	**0.04**	**0.33**	**0.01**	**0.03**	**1.28**	**9.76**

Table 5: Summary of baseline habitat biodiversity value through retention and enhancement.

Biodiversity Metric Reference Number	Statutory Biodiversity Metric Hedgerow Type	Baseline Units Retained		Baseline Units Enhanced		Baseline Units Lost	
		Length (km)	Unit	Length (km)	Unit	Length (km)	Unit
1	Native hedgerow	0	0	0	0	0.05	0.22
2	Native hedgerow	0	0	0	0	0.01	0.02
3	Non-native and ornamental hedgerow	0	0	0	0	0.01	0.01
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.25**

5.6.2 On balance of impacts and habitat retention/enhancement/creation, the report concludes that the Proposed Development will result in a net loss of -8.47 habitat BU, equivalent to a net loss of 83.81% and a net loss for hedgerows of -0.01 BU, equivalent to a net loss of -5.85%.

5.6.3 In addition, the Proposed Development has not satisfied the trading rules due to a loss of medium distinctiveness habitats: other neutral grassland (-9.48 habitat units) and low (-0.01 hedgerow units) and very low (-0.01 hedgerow units) distinctiveness hedgerows.

5.6.4 There is a unit deficit of 9.48 for habitats and 0.04 hedgerows.

Table 6: Summary value of baseline habitat biodiversity value through retention, creation and enhancement

On-site baseline	Habitat units	10.11

	Hedgerow units	0.25
On-site post intervention	Habitat units	1.64
	Hedgerow units	0.23
Total net change %	Habitat units	-83.81 (-8.47)
	Hedgerow units	-5.85 (-0.01)
Trading rules satisfied Yes/No	Habitat units	No
	Hedgerow units	No

5.6.5 Should the Proposed Development be subject to future change, the conclusions and recommendations in this report will need to be revised. This is to be undertaken via the recalculation of the impact assessment element through the most up-to-date biodiversity metric.

6. References

JCA Ltd. Preliminary Ecological Appraisal. Ref: 22876/JF

CIEEM, CIRIA, IEMA (2016) Biodiversity Net Gain. Good practice principles for development.

CIEEM, CIRIA, IEMA (2019) Biodiversity Net Gain. Good practice principles for development. A practical guide. CIRIA C776a. London, 2019.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Department for Communities and Local Government (2005), Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

DEFRA (2023) Biodiversity Metric Calculation tool (spreadsheet) (Biodiversity Metric 4.0)

DEFRA (2023) Biodiversity Metric 4.0 User guide

DEFRA (2023) Biodiversity Metric 4.0 and SSM: Technical Annex1 (habitat condition assessments)

Ministry of Housing, Communities and Local Government (2021), National Planning Policy Framework.

Multi-Agency Geographical Information for the Countryside (MAGIC) Website

Appendices

Appendix 1: Baseline UKHab Habitat Map

Site name & address

Land at Leeds Road,
Heckmondwike, West Yorkshire,
WF16 9DB

Key

Red Line Boundary

Individual tree Baseline

Existing Small Urban Tree

Hedgerow Baseline

Non-native and ornamental hedgerow

Native hedgerow

Habitats Baseline

Bramble scrub

Developed land; sealed surface

Introduced shrub

Modified grassland

Other neutral grassland

Scale 0 25 50 m

Site Land at Leeds Road	Client Orion Homes
Project Biodiversity Accounting Assessment	Author JF
Plan ref 22876a/JF R1	Revision 1

Appendix 2: Proposed UKHab Habitat Map

Site name & address

Land at Leeds Road,
Heckmondwike, West Yorkshire,
WF16 9DB

Key

- Red Line Boundary

Individual tree Proposed

- Proposed Small Urban Tree
- Retained Small Urban Tree
- Lost Urban Tree

Hedgerows Proposed

- Native hedgerow

Habitats Proposed

- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Vegetated garden

Scale 0 25 50 m

Site Land at Leeds Road	Client Orion Homes
Project Biodiversity Accounting Assessment	Author JF
Plan ref 22876a/JF R1	Revision 1

Appendix 3: Proposed Development Plan

KEY:

AMENITY SPACE
Total Area: 405m²

N

Revision notes:

Rev:	Date:	Notes:	By:
-	17.06.2025	FIRST ISSUE	CC
A	29.07.2025	DRAWING UPDATED TO CORRESPOND WITH LAYOUT 2403-02-001A	CC
B	10.02.2026	DRAWING UPDATED TO CORRESPOND WITH LAYOUT 2403-02-001E	CD
C	20.02.2026	DRAWING UPDATED TO CORRESPOND WITH LAYOUT 2403-02-001F	CD

Revision notes:

Rev:	Date:	Notes:
..	..	..

Revision notes:

Rev:	Date:	Notes:
..	..	..

Date: 17.06.2025

Project: Leeds Road, Heckmondwike

Scale @ A1: 1:500

Drawing Number: 2403-02-007

Revision: C

Drawn By: CC

Drawing Title: AMENITY SPACE PLAN

OrionHomes
SO GOOD TO COME HOME TO
Unit 5, Benton Office Park, Bennett Avenue,
Horbury, Wakefield, WF4 5RA, Tel: 01924 831030

Appendix 4: Photographic Evidence

Photo 1: Other neutral grassland on the north of the site, viewed from the north.

Photo 2: Other neutral grassland on the north of the site, viewed from the east.

Photo 3: Other neutral grassland on the north of the site, viewed from the west.

Photo 4: Other neutral grassland and modified grassland on the south of the site, viewed from the north.

Photo 5: Modified grassland on the southwest of the site, viewed from the north.

Photo 6: Modified grassland on the southeast of the site, viewed from the north.

Photo 7: Bramble scrub and scattered trees on the west of the site, viewed from the east.

Photo 8: Bramble scrub on the west of the site, viewed from the east.

Photo 9: Introduced shrub on the south of the site, viewed from the north.

Photo 10: Introduced shrub on the south of the site, viewed from the west.

Appendix 5: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management.

Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Batchelor's degree, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence, a Natural England Level 2 bat survey class licence (and the Scottish and Welsh equivalents) and a CSCS card.

James Foster, Assistant Ecologist

BSc (Hons) Biology.

James gained his undergraduate degree in biology in 2012 from University of Leeds. James has plenty of experience in ecology, having worked countless projects of different scales all over the north and midlands. James has 12 years of experience surveying anything from reptiles to hedgerows and holds a Great crested newt licence level 1 and is working towards his bat licence and barn owl licence.

The Information and advice which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and bona fide opinions.

Signed

.....

James Foster *BSc (Hons)*

12/03/2026

Reviewed by

.....

Elizabeth Davies*, BSc (Hons)* MCIEEM

13/03/2026

For and on behalf of ***JCA Ltd***

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ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

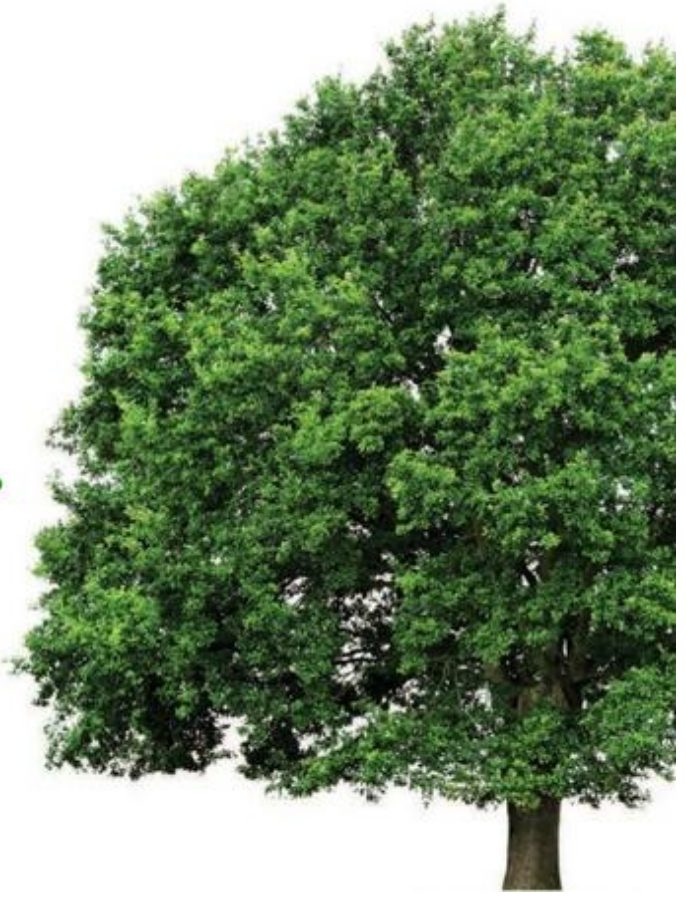
- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control



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