

**Ecological Impact Assessment  
Land off Westgate, Cleckheaton**

**Strata Homes Ltd**

**Report Reference: ER-4666-03-C**

**02/02/2023**

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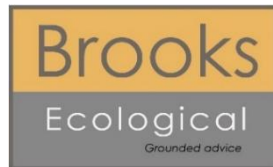
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Revision A – Minor amendments (27/08/2021)  
 Revision B – Incorporate New Site Layout and Revised Landscape Plans. Update to Defra Metric 3.1. (05/01/2023)  
 Revision C – Major changes to southern POS area (01/02/2023)

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## Summary

The proposals have engaged with the NPPF Mitigation Hierarchy and have been able to avoid most potential significant effects at the Site.

Residual significant effects can be mitigated and compensated on site through a Construction Environmental Management Plan (CEMP: Biodiversity), Biodiversity Management Plan (BMP) and Invasive Weed Management Plan (IWMP).

Despite on-site habitat creation and enhancement measures, the proposed development is still expected to result in a net loss in Habitat Units. Some form of Biodiversity Offsetting will be required to address this shortfall. Gains are predicted for both Hedgerow and River Units.

# 1. Introduction

- 1.1.1. Brooks Ecological Ltd was commissioned by Strata Homes Ltd to carry out an Ecological Impact Assessment (EclA) for a Site referred to as land off Westgate, Cleckheaton.
- 1.1.2. The British Standard BS:42020 recommends that a proportional assessment of ecological impacts should be made - such that decision making relating to the NPPF 'mitigation hierarchy', the planning balance', and the use of conditions is suitably informed.
- 1.1.3. The purpose of the EclA report is to use the information gathered, alongside the proposals for the Site, to:
  - identify any significant effects associated with the proposed development,
  - set out any mitigation (including monitoring) required to address these effects, and to ensure compliance with legislation and policy,
  - identify suitable enhancement,
  - identify measures required to secure mitigation and enhancement,
  - identify and assess any residual effects and their legal, policy and development management consequences.
- 1.1.4. This report adapts the format set out in the Chartered Institute for Ecology and Environmental Management (CIEEM) guidelines for Ecological Report Writing (December 2017).



## Ecological Impact Assessment (EclA) Checklist



	EclA Criteria <small>(to ensure decisions are based on adequate information in accordance with Clauses 6.2 and 8.1 of BS42020:2013)</small>	Yes No n/a	Paragraph reference number(s)
Pre-app/ scope	1. Where pre-application advice has been received from the Local Planning Authority and/or an NGO and/or statutory body (e.g. NE DAS, NRW DAS), it has been fully accounted for in the EclA		
	2. The scope, structure and content of the EclA is in accordance with published good practice <sup>(i, ii and iv)</sup>		
Surveys, Sites, Species and Habitats	3. Adequate* and up-to-date <sup>(i)</sup> : a. Desk study has been undertaken <sup>(ii)</sup> b. Phase 1 habitat survey (or equivalent) has been undertaken <sup>(iii)</sup> c. Phase 2 ecology surveys have been undertaken (where necessary) <sup>(iii)</sup>		
	4. All statutory and non-statutory sites likely to be significantly affected are clearly and correctly identified		
	5. All protected or priority species and priority habitats <sup>(ii)</sup> likely to be significantly affected are clearly and correctly identified, and adequate surveys have been undertaken to inform the baseline		
	6. Any invasive non-native plant species present are clearly and correctly identified		
Impacts and Effects	7. Where a separate PEA Report states that Phase 2 ecology surveys are required, these have been undertaken in full and results submitted with the application (or lack of such surveys is justified)		
	8. The assessment is based on clearly defined development proposals along with relevant drawings/plans (and any plans used are the same version number as those submitted with the application) or 9. The residual ecological effects are considered to be not significant at any geographical scale irrespective of the detailed development proposals, and the assessment is based on a worst-case-scenario 10. The report describes and assesses all likely significant ecological effects (including cumulative effects) clearly stating the geographical scale of significance (where relevant)		
Mitigation, Compensation and Enhancement	11. The mitigation hierarchy has been clearly followed <sup>(v)</sup>		
	12. The report: a. Clearly identifies the proposed mitigation and compensation measures, and explains how these will adequately address all likely significant adverse effects b. Includes, where necessary, proposals for post-construction monitoring c. Recommends how proposed measures may be secured through planning conditions/obligations and/or necessary licences		
	13. A summary table of proposed mitigation and compensation measures has been provided		
	14. The need for any mitigation licences required in relation to protected species is clearly identified		
Competence/Good Practice	15. Proposals to deliver ecological enhancement/biodiversity Net Gain have been provided		
	16. Limitations <sup>(vi)</sup> of the ecological work have been correctly identified and the implications explained		
	17. All relevant key timing issues (e.g. site vegetation clearance or roof removal) that may constrain or adversely affect the proposed timing of development have been identified		
Conclusions	18. All ecological work and surveys accord with published good practice methods and guidelines OR deviation from such guidelines is made clear and fully justified, and the implications for subsequent conclusions and recommendations made explicit in the report <sup>(vii)</sup>		
	19. All ecologists and surveyors hold appropriate species licences (where relevant) and/or have all necessary competencies to carry out the work undertaken		
	20. The report clearly identifies where the proposed development complies with relevant legislation and policy, highlighting any possible non-compliance issues, and highlighting circumstances where a conclusion cannot be drawn as it requires an assessment of non-ecological issues (such as socio-economic ones)		
	21. The report provides a clear summary of losses and gains for biodiversity, and a justified conclusion of an overall net gain for biodiversity		
	22. Justifiable conclusions <sup>(viii)</sup> based on sound professional judgement <sup>(viii)</sup> have been drawn as to the significance of effects on any designated site, protected or priority habitat/species or other ecological feature, and a justified scale of significance has been stated		

## 2. Method

### Scope of Assessment

- 2.1.1. The application site 'the Site' comprises a collection of working and disused mill buildings, alongside associated hardstanding and previously cleared ground.
- 2.1.2. The extent of this assessment is the development area within the red line boundary, as defined in Figure 2.1.
- 2.1.3. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.
- 2.1.4. Ecological surveys and reports informing this assessment comprise of the following:
  - Preliminary Ecological Appraisal Report (PEAR) completed by Brooks Ecological in July/ August 2020. ER-4566-01
  - Bat Emergence Survey completed by Brooks Ecological in August/ Sept. 2020. ER-4566-02

### Desk Study

- 2.1.5. A full desk study including consideration of local biological records, aerial photographs, local designations and planning guidance has been carried out.

### Field Survey

- 2.1.6. Full details of the methodologies used and the results obtained are contained in the relevant documents referenced above. Unless stated otherwise these followed the relevant survey guidelines referenced in reports.

**Figure 2.1** Site area under assessment (red line)



## Assessment Method

- 2.1.7. In assessing the significance of effects, we refer to Section 5 of CIEEM (2018) - that a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In relation to ecological features we consider the following factors in combination, including;
- the feature's value on an ascending scale from Site, to international value
  - the site's position in the local landscape,
  - its current management and
  - its size, rarity or threats to its integrity
- 2.1.8. There are several tools available to aid this consideration, including established frameworks such as Ratcliffe Criteria or concepts such as Favourable Conservation Status. Also of help is reference to Biodiversity Action Plans in the form of the Local BAP and Section 41 of the NERC Act (2006) to determine if the site supports any Priority Habitats, Habitats of Principal Importance or presents any opportunities in this respect.
- 2.1.9. The assessment considers the development proposals set out below; from which the potential impacts can be summarised as:
- Vegetation and habitat removal
  - Disturbance, pollution or interference arising from the Site's construction
  - Disturbance, pollution or interference arising from the Site's operation

This report deals with any significant effects potentially arising from these impacts. It looks at how the mitigation hierarchy can be applied to any effects and the implications of any residual significant effects.

### 3. Ecology Baseline

3.1.1. A summary of the points salient to this assessment are set out below:

#### Designated Sites and Conservation Areas

3.1.2. Impacts on both Statutory (International and National) and Non-Statutory designations or their interests have been ruled out at PEA Stage.

#### Habitats

3.1.3. The Site comprises habitats mapped opposite and described in the table overleaf.

- *u1b - developed land, sealed surface*
- *351, 17 - Vacant, derelict land*
- *g3c, 17, 12, 10 - Other neutral grassland*
- *h3h - mixed scrub*
- *w1g6 - line of trees*
- *R9 - river / streams (other)*

#### Potential future changes to the baseline

3.1.4. The Site's use and ecological baseline will likely be unchanged until the time of the proposed development.

3.1.5. In the absence of re-development, much of the Site would remain unmanaged and naturally succeed to mixed scrub vegetation over time.

Figure 3.1 The Site's habitats



3.1.6. The table below sets out the habitats at this site and their relevance in this assessment.

**Table 3.1** Site Habitats Summary

Habitat Feature	Codes	Notes	Valued at what scale
Habitats of Low or Very Low Distinctiveness.	u1b 351,17	Developed land; sealed surface encompasses the various buildings within the Site and areas of tarmacadam hardstanding used as car parking or access roads. No significant vegetation is present in association with these.  Vacant, derelict land encompasses the footprint of cleared buildings, former car parking or access sections around the buildings which have been left unmanaged for some years and are now colonised by ruderal vegetation and invasive weeds.	Negligible
Other Neutral Grassland	g3c, 17, 12, 10	This habitat covers a large proportion of the Site and whilst is keyed out as <i>other neutral grassland</i> , this area has largely succeeded to a tall ruderal herb community with scattered scrub and areas of dense bracken.	Site Level
Mixed Scrub	h3h	In addition to scattered scrub within the grassland habitat, large tracts of the Site are dominated by areas of dense scrub habitat, either as small sections of dense bramble, but in most part as a mixed species composition.	Site level
Line of trees	w1g6	Around the eastern and southern boundaries and surrounding one of the buildings in the north-west are planted semi-mature poplars with their understorey comprising the aforementioned dense mixed scrub habitat.	Site Level
River/ Stream (Other)	r9	Blacup Beck passes along much of the Site's southern boundary, originating from a spring a short distance to the west and is culverted under the centre of the Site. Where it passes through the Site, Blacup Beck is a moderate flowing minor watercourse, approximately 1m in width and 10cm depth at the time of the survey. The bed comprises silt with pebbles and cobbles alongside debris such as bricks. The banks are silt and approximately 1.5m in height, densely vegetated with the aforementioned grassland habitat including large amounts of Himalayan balsam and giant hogweed.	Local Level
Culvert		A section of the stream (circa 90m long) in culverted beneath the Site.	Site

3.1.7. The Site was initially mapped and assessed against DEFRA Metric 2.0 calculator. However, given the time that has elapsed between the baseline survey, and this revised report, the Site has been re-assessed using the latest iteration of the DEFRA Metric- version 3.1. Information collected during the initial walkover survey has been used to ensure the habitat types and condition scores have been amended to reflect the criteria used in 3.1.

3.1.8. Since Metric 2.0, there have been significant changes to the way condition scores are calculated for River Units. For Version 3.1, River condition scores can only be calculated through a Modular River Physical (MoRPh) Survey. For this project, there will be no direct impact on the waters, and thus the condition score is unlikely to change between the pre and post development calculations. As the condition score will not change, a MoRPh survey has not been completed and an indicative assessment of 'Moderate' condition has been used.

**Figure 3.2** Summary of DEFRA Metric Baseline (updated to version 3.1) – Site Baseline<sup>1</sup>.

Westgate Cleckheaton														
A-1 Site Habitat Baseline														
Condense / Show Columns			Condense / Show Rows											
Main Menu			Instructions											
Ref	Habitats and areas			Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline	Retention category biodiversity value					
	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	
1	Urban	Developed land; sealed surface	1.35	V Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0	0	0.00	0.00	1.35	
2	Urban	Vacant/derelict land/ bareground	1.24	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	4.96	0	0.13	0.00	0.52	1.11	
3	Grassland	Other neutral grassland	2.31	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	9.24	0	0.08	0.00	0.32	2.23	
4	Heathland and shrub	Mixed scrub	1.58	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	6.32	0	0.23	0.00	0.92	1.35	
5	Total habitat area		6.48					20.52	0.00	0.44	0.00	1.76	6.04	
												Total area lost (excluding area of Urban trees and Green walls)		6.04

<sup>1</sup> Our report provides an estimate of the sites baseline value in Biodiversity Units. This is based on thorough assessment at the time of survey and using the information available at this time. In this assessment we have used the latest version of DEFRA's Biodiversity Metric Tool, the UK Habitats Classification and relevant guidance. This assessment requires subjective judgments to be made in terms of habitat type and condition and could be open to other interpretations. Reliance on the Unit Score, or conversion of this into a monetary value, would be at the developer's own risk.

### B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	Hedge number	UK Habitats - existing habitats		Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action address habitat losses	Ecological baseline	Retention	
		Hedgerow type	Length (km)	Distinctiveness	Condition	Strategic significance		Total hedgerow units	Length retained	Length enhanced
1	LT1	Line of Trees	0.133	Low	Moderate	Area/compensation not in local strategy/ local strategy	Same distinctiveness band or better	0.53	0	0
2	LT2	Line of Trees	0.13	Low	Moderate	Area/compensation not in local strategy/ local strategy	Same distinctiveness band or better	0.52	0	0
3	LT3	Line of Trees	0.19	Low	Moderate	Area/compensation not in local strategy/ local strategy	Same distinctiveness band or better	0.76	0	0
4	LT4	Line of Trees	0.01	Low	Moderate	Area/compensation not in local strategy/ local strategy	Same distinctiveness band or better	0.04	0	0
5										
			0.46					1.85	0.00	0.00

### C-1 Site River Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	Existing river type		Habitat distinctiveness	Habitat condition	Strategic significance	Watercourse encroachment	Riparian encroachment	Suggested action	Ecological baseline	Retention	
	River type	Length (km)	Distinctiveness	Condition	Strategic significance	Extent of encroachment	Extent of encroachment		Total river units	Length retained	Length enhanced
1	Other Rivers and Streams	0.2	High	Moderate	Low potential/action not identified any plan	No Encroachment	Minor	Restore	2.28	0.2	0
2	Culvert	0.09	Low	Poor	Low potential/action not identified any plan	N/A - Culvert	Major	Restore	0.14	0	0.09
3											
4											
5											
		0.29							2.42	0.20	0.09

### Species and Species Groups

3.1.9. Potential constraints relating to relevant groups were investigated through the surveys listed below. Those highlighted are of relevance to the Site and are referenced later in the assessment.

**Table 3.2** Summary of relevant faunal issues

Species/ Group (Feature)	Notes	Valued at what scale
Amphibians	No waterbodies are present on Site and only one is found on mapping within a 500m radius, which is formed by a natural spring which then forms the start of Blacup Beck. This pond supports a gentle flow and being connected to Blacup Beck, is colonised by small fish. The pond is isolated from any other ponds in the wider landscape and there are no records of GCN within 1km of the pond. The risk of GCN being present here is therefore negligible. The pond and Blacup Beck will likely be of use to common toad (NERC Act 2006), with the Site providing good opportunities for their terrestrial foraging and hibernation. The retention of suitable habitat on Site should be designed into any future development.	Site level
Bats	Three onsite buildings were assessed as offering low to moderate roosting suitability. These were subject to detailed emergence survey and the likely absence of bat roosts concluded. The Site offers good habitat for foraging and commuting bats and links Cleckheaton to countryside further south. Detailed Bat Activity surveys are recommended to assess the Site's usage by the local bat populations. Surveys have been commissioned by the developer.	Local Level
Birds	The Site is likely to support a good number of bird territories and displacement of this is inevitable. However, the site is unlikely to support any rare or notable species, or assemblages, and thus the significance of this impact is likely to be low. Standard precautions apply regarding clearance of vegetation.	Site Level
Riparian mammals	A single otter record, dating from 2006, is returned along the River Spen. The section of Blacup Beck that passes through the Site is disconnected from the River Spen due to it being culverted under Cleckheaton for c.500m. Whilst otters are likely to occur along the River Spen, it is considered unlikely that individuals would make use of this section of Blacup Beck. There are no records of water vole in the search area and the section of Blacup Beck bordering the Site is assessed as suboptimal for the species. Water voles are therefore assessed as being unlikely to make use of the application site.	N/A
Badgers	There are no badger records within 1km, but the Site falls within the area of increased probability of badger activity. No signs were noted during the walkover survey, however significant areas of the Site were not accessible and thus badgers setts could not be discounted from the Site. Due to dense vegetation, further survey during the winter months is recommended. Should any setts be found it is unlikely to be difficult to license their closure as there is plenty of suitable habitat nearby.	Site level (if present)
Reptiles	Despite the Site providing some apparently suitable terrestrial habitat and corridors to other areas, the lack of reptile populations within the area means the Site is very unlikely to support this group. Reptiles are assessed as likely absent from the site.	N/A

Species/ Group (Feature)	Notes	Valued at what scale
White clawed crayfish	There are no records for WCC in the search area and dedicated survey has demonstrated likely absence.	N/A
Invasive non-native plant species	<p><u>Giant hogweed</u> is recorded along the watercourse both within the Site and off-Site to the west. There is some evidence of management of growth off-site but still prevalent.</p> <p><u>Himalayan balsam</u> is also found along the watercourse both within the Site and off-Site to the west.</p> <p><u>Japanese rose</u> is found to the north.</p>	<b>Local level</b>

## 4. Description of the Proposed Development

- 4.1.1. Proposals are for residential development, as shown in Figure 4.1 opposite.
- 4.1.2. The following assessment is based on the Site Layout shown in the Landscape Masterplan drawing R/2487/1 Rev. G (Jan. 23) produced by FDA Landscape Ltd.

**Figure 4.1** Landscape Masterplan (FDA Landscape)



## 5. Impacts and Effects of Development

5.1.1. Figure 5.1 shows the development footprint (black hatch) in relation to the mapped habitats.

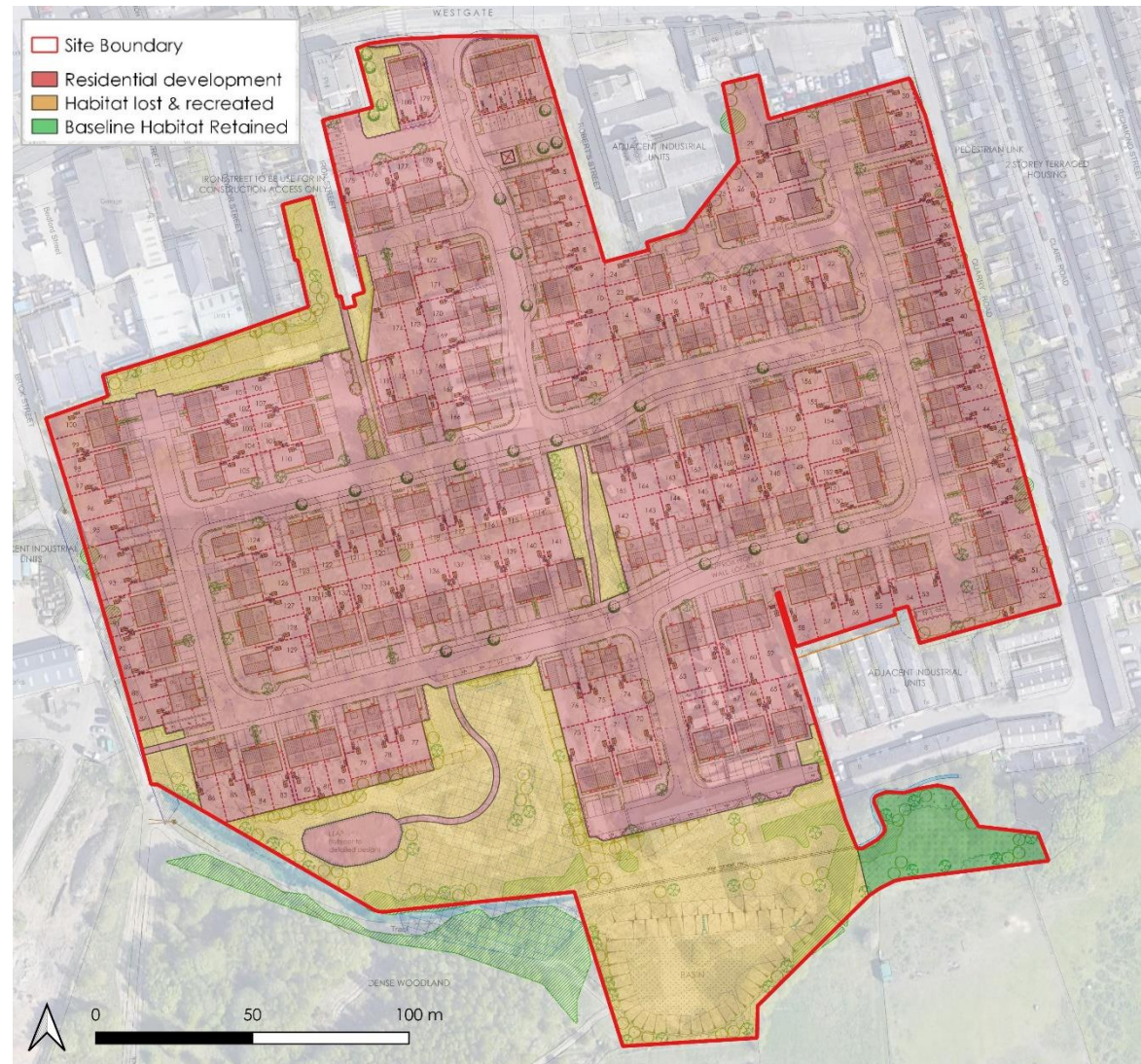
5.1.2. The development footprint shows the sum extent of proposed built development and associated clearance works.

**Figure 5.1** Development footprint in relation to existing on-Site habitats



- 5.1.3. Figures 5.2 summarise the impacts of development on existing vegetation.
- 5.1.4. Areas shown in red and orange will be cleared of existing vegetation and subject to extensive earthworks, which will result in the permanent loss of baseline habitats.
- 5.1.5. Areas marked red will then be built out, either as sealed surfaces; i.e. roads, houses, garages, driveways, footpaths, etc.
- 5.1.6. Following development, areas marked orange will be landscaped, primarily for their amenity value.
- 5.1.7. The areas marked green will be retained in situ and protected from development. Retained habitats may also be enhanced to increase their biodiversity value.

**Figure 5.2** Summary of impacts on existing habitats



**Table 5.1** lists the anticipated Impacts and Effects associated with the proposals (in the absence of mitigation).

Impact - Clearance		Stage
1	<b>Habitat will be removed</b> from the Site by clearance and soil stripping using heavy machinery.	Clearance

	Significant Effects - in the absence of mitigation	Acting on	Acting at scale (Maximum)
1a	<p><b>Direct habitat loss.</b> Figure 5.2 outlines the extent of on-site habitat loss (red and orange areas). All habitat types (with the exception of the stream) will be impacted to some extent. Impacts on habitats of low or very low distinctiveness are of negligible significance and effects upon these habitats is not accessed further.</p> <p>Impacts on medium distinctiveness habitats include the loss of 2.01ha (87%) of Other neutral grassland, 1.33ha (84%) of mixed scrub and 469m (100%) of mature linear tree planting.</p> <p>Large scale habitat loss will impact on all faunal receptors, either through injury or killing during clearance, or through loss of shelter or foraging opportunities.</p> <p>In the absence of mitigation, clearance could lead to the further spread of INNS throughout the Site and offsite.</p>	Mixed Scrub Other Neutral Grassland Line of Trees Culvert Amphibians Bats Birds INNS	Site Site Site Site Site Local Site Local
1b	<p><b>Damage to retained habitat</b> such as by storage of clearance machinery or materials in these areas. In the absence of mitigation to protect retained habitat, there is likely to be an increase in mortality and reduction in condition of all retained vegetation.</p> <p>0.3ha of other neutral grassland and 0.25ha of mixed scrub will be retained along the southern boundary, along with all 0.2km of River/Stream (other).</p> <p>Any impacts on the stream and culvert could have indirect impacts on wildlife it supports, both within the Site and downstream.</p>	Mixed Scrub Other Neutral Grassland Line of Trees Rivers/Streams (Other) Culvert	Site Site Site Local Local
1c	<p><b>Disturbance.</b> The noise and activity at the Site will render it and areas immediately off-site inhospitable to wildlife during this period, especially those species/ groups that are sensitive to human activity.</p>	Bats Birds	Local Site
1d	<p><b>Pollution.</b> There is the potential for sediment or chemicals to be released from the Site, or into retained habitat during this stage.</p> <p>Impacts would be greatest if pollution were to enter the stream along the southern boundary.</p>	Mixed Scrub Other Neutral Grassland Rivers/Streams (Other) Culvert	Site Site Local Local

	Significant Effects - in the absence of mitigation	Acting on	Acting at scale (Maximum)
1e	Potential effects on <b>Protected Species</b> . Precautions will be required to ensure that impacts on badgers, nesting birds, and the spread of Invasive Non-Native Species (INNS) can be avoided.	Protected Species	Criminal Offence

	Impact – Construction activities	Stage
2	<b>Construction activities</b> will take place over a 2-3 year period. Construction of roads and sewers will be followed by footings and then above ground construction of buildings.	Construction

	Significant Effects - in the absence of mitigation	Acting on	Acting at scale (Maximum)
2a	<b>Damage to retained habitat</b> such as by storage of machinery or materials in these areas. Without adequate protection measures in place, all retained habitats could be adversely affected.	Mixed Scrub Other Neutral Grassland Rivers/Streams (Other) / Culvert	Site Site Local
2b	<b>Disturbance</b> . The noise and activity at the Site will render it and areas immediately off-site inhospitable to wildlife during this period; especially those species/ groups that are sensitive to human activity.	Birds Bats	Site Local
2c	<b>Pollution</b> . There is the potential for sediment or chemicals to be released from the Site during this stage. The highest risk would come from works to open up the culvert.	Rivers/Streams (Other) / Culvert	Local

	<b>Impact - Landscaping</b>	<b>Stage</b>
3	<b>Landscaping activities</b> will take place period during the construction period and will, be phased around completion of roads and housing.	Construction

	<b>Significant Effects - in the absence of mitigation</b>	<b>Acting on</b>	<b>Acting at scale (Maximum)</b>
3a	Damage to retained habitat such as by storage of machinery or materials in these areas. Access will be required to retained areas to commence management and in itself could result in damage.	Mixed Scrub Other Neutral Grassland	Site Site
3b	Pollution. There is the potential for sediment or chemicals to be released from the Site during this stage. Impacts would be greatest if pollution were to enter the stream along the southern boundary.	Rivers/Streams (Other)	Local
3c	Inappropriate habitat creation or management techniques could mean that the proposals fail to deliver on BNG commitments. Management could inadvertently cause the spread of INNS.	All habitats and species INNS	Local Local

	<b>Impact – human habitation</b>	<b>Stage</b>
4	<b>The Site will be populated.</b> Units will be inhabited, and traffic and services will access the Site regularly. Pedestrian access across the Site and along rights of way will increase. Presence of domestic pets will increase. Retained and created habitat will be managed by the Site Management Company.	Operation

	<b>Significant Effects - in the absence of mitigation</b>	<b>Acting on (feature)</b>	<b>Acting at scale (Maximum)</b>
4a	Damage to retained and created habitat such as by inappropriate use, littering, release of invasive species.	Mixed Scrub Other Neutral Grassland Rivers/Streams (Other)	Site Site Local
4b	Disturbance. The noise and activity at the Site will be present of a lower order and will likely be tolerable to species habituated to the urban conditions prevailing locally. The presence of dogs and cats will	Birds	Local (could extend offsite)

	<b>Significant Effects - in the absence of mitigation</b>	<b>Acting on (feature)</b>	<b>Acting at scale (Maximum)</b>
	result in some predation and displacement, but this area will already be affected by these species to a lesser degree.		
4c	In the absence of correct management retained and created habitats will not provide the necessary biodiversity units committed to through the BNG process.	All habitats	Local

## 6. Mitigation & Residual Effects

- 6.1.1. Potential **avoidance** of unnecessary impacts has already been designed into the plan at this stage. The proposals will incorporate the following **mitigation** in relation to the identified **effects** above, as illustrated below and set out in Table 6.1 overleaf.
- 6.1.2. There will be a requirement for the proposals to secure **Biodiversity Net Gain (BNG)** (in accordance with BS: 8683) at a level determined by the Local Planning Authority (LPA) in line with their own policies and guidance in the NPPF. Proposals have been designed to maximise the amount of Biodiversity Units achievable on Site, any shortfall in Units will need to be off-set through the creation of Units off-Site by direct works, or through contribution to a strategic fund operated by the LPA or a third party. An agreement detailing any off-setting required would be the subject of a condition of planning. Calculations setting out the position of the proposals in relation to BNG are set out below. These are based on the provided layout and landscaping details available at this time.
- 6.1.3. Themes which will need to be applied to the proposals to achieve the calculated BNG position are set out (and committed to) in the plan below. These themes would need to be the subject of a suitable Biodiversity Management which would provide a means of achieving the required habitats and condition.
- 6.1.4. Achieving the required Biodiversity Net Gain position will ensure that effects relating to habitat loss are addressed - both in respect of the habitats identified as valued features, and also the lower value habitats which would previously have been scoped out of Impact Assessments. Our impact assessment therefore only highlights where habitats present place a particular constraint on the protection of, or delivery of habitats on Site; or on off-set agreements.
- 6.1.5. In addition to any Biodiversity Net Gain agreement, Planning permission for the Site would be anticipated to be subject to standard conditions requiring the production of the following documents:
- A BS:42020 Biodiversity Management Plan (BMP).
  - A BS:42020 Construction Environmental Management Plan (CEMP: Biodiversity)
  - An Invasive Weeds Management Plan

**Table 6.1** lists the mitigation put in place to address the effects identified in table 5.1

Impact - Clearance		Stage
1	<b>Habitat will be removed</b> from the Site by clearance and soil stripping using heavy machinery.	Clearance

	Significant Effects - in the absence of mitigation	Mitigation / Compensation	Residual Magnitude
1a	<b>Direct habitat loss.</b>	Biodiversity offsetting will be agreed to ensure the Site achieves a net neutral, or net gain in biodiversity score. The BMP will detail the provision and management of new and existing habitats; namely creating a mosaic of more diverse grassland and scrub habitat to the south. The BMP will detail the provision of bird nesting and bat roosting features.	<b>Neutral / Minor Positive</b>
1b	<b>Damage to retained habitat</b> such as by storage of clearance machinery or materials in these areas.	The CEMP will detail installation of barrier fencing and silt traps to protect retained habitat.	<b>Neutral</b>
1c	<b>Disturbance.</b> The noise and activity at the Site will render it, and areas immediately off-Site, inhospitable to wildlife during this period.	The CEMP will detail time limits to work on Site and the installation of screened fencing to limit visual disturbance of sensitive habitat. However, residual adverse impacts will likely persist.	<b>Minor Negative</b>
1d	<b>Pollution.</b> There is the potential for sediment or chemicals to be released from the Site, or into retained habitat during this stage.	The CEMP will detail silt fencing to protect retained habitat and watercourses and the location of bunded compounds for storage of machinery and materials	<b>Neutral</b>
1e	Potential effects on <b>Protected Species.</b> Precautions will be required to ensure that impacts on badgers, WCC, nesting birds, and the spread of Invasive Non-Native Species (INNS) can be avoided.	The CEMP and IWMP will detail necessary pre-works checks for badgers, nesting birds and INNS.	Avoided entirely.

	<b>Impact- Construction</b>	<b>Stage</b>
2	<b>Construction activities</b> will take place over a 2-3 year period. Construction of roads and sewers will be followed by footings and then above ground construction of buildings.	Construction

	<b>Significant Effects - in the absence of mitigation</b>	<b>Mitigation / Compensation</b>	<b>Residual Magnitude</b>
2a	<b>Damage to retained habitat</b> such as by storage of machinery or materials in these areas.	The CEMP will detail installation of barrier fencing to protect retained habitat – creating a Biodiversity Protection Zone.	<b>Neutral</b>
2b	<b>Disturbance.</b> The noise and activity at the Site will render it, and areas immediately off-Site, inhospitable to wildlife during this period.	The CEMP will detail time limits to work on Site and the installation of screened fencing to limit visual disturbance of sensitive habitat.	<b>Minor Negative</b>
2c	<b>Pollution.</b> There is the potential for sediment or chemicals to be released from the Site during this stage.	The main contractors CEMP will detail silt fencing to protect retained habitat and existing watercourses and the location of bunded compounds for storage of machinery and materials.  It will also detail mitigation measures that will be put in place during the works to the culvert. Despite this, given the nature of the works, there is likely to be a minor residual negative effect through the release of pollutants (silt/ fine rubble particulates) into the watercourse.	<b>Minor Negative / Neutral</b>

	<b>Impact - Landscaping</b>	<b>Stage</b>
3	<b>Landscaping activities</b> will take place period during the construction period and will, be phased around completion of roads and housing.	Construction

	<b>Significant Effects - in the absence of mitigation</b>	<b>Mitigation / Compensation</b>	<b>Acting at scale</b>
3a	Damage to retained habitat such as by storage of machinery or materials in these areas. Access will be required to retained areas to commence management, and in itself could result in damage.	The CEMP will detail installation of barrier fencing to protect retained habitat and any precautions required in accessing the Biodiversity Protection Zone The BMP will specify habitat creation and management activities.	<b>Neutral</b>
3b	Inappropriate habitat creation or management techniques could mean that the proposals fail to deliver on BNG commitments	The BMP will detail; the planting and management required to achieve BNG commitments. This will include monitoring so that evidence can be provided, or remedial action can put in place as required.	<b>Neutral</b>

	<b>Impact – Human habitation</b>	<b>Stage</b>
4	<b>The Site will be populated.</b> Units will be inhabited, and traffic and services will access the Site regularly. Pedestrian access across the Site and along rights of way will increase. Presence of domestic pets will increase.	Operation

	<b>Significant Effects - in the absence of mitigation</b>	<b>Acting on (feature)</b>	<b>Acting at scale</b>
4a	Damage to retained and created habitat such as by inappropriate use, littering, release of invasive species.	Landscaping has been designed to accommodate public access, through the clear definition of POS (with amenity grass and introduced scrub) and 'Nature Area' (wildflower grass and scrub/trees). The management company will remove litter and monitor for INNS and other potential issues as they arise.	Neutral

	<b>Significant Effects - in the absence of mitigation</b>	<b>Acting on (feature)</b>	<b>Acting at scale</b>
4b	Disturbance. The noise and activity at the Site will be present of a lower order and will likely be acceptable to species habituated to the urban conditions prevailing locally. The presence of dogs and cats will result in some predation and displacement.	Landscaping is designed to maximise the amount of habitat which groups such as birds can use for cover, and to provide connectivity. New nesting (for birds) and roosting (for bats) provisions will be included in the BMP.	Neutral
4c	In the absence of correct management retained and created habitats may not provide the necessary biodiversity units committed to through the BNG process.	The BMP will provide full details of habitats to be created and their suitable management suitable management The BMP will include monitoring so that evidence can be provided, or remedial action can put in place as required.	Neutral

## 7. Biodiversity Net Gain

### Proposed Habitats

7.1.1. Habitats present on Site post-development have been based on the Landscape Masterplan produced by FDA Landscape and the Biodiversity Management Plan produced by Brooks Ecological (ER-4666-04).

7.1.2. Planting types specified in the Landscape proposal have been assigned a UK Habitat Classification description that best fits the target habitat.

7.1.3. Area measurements for each of the planting types has been calculated using GIS Mapping.

### Condition Assessment

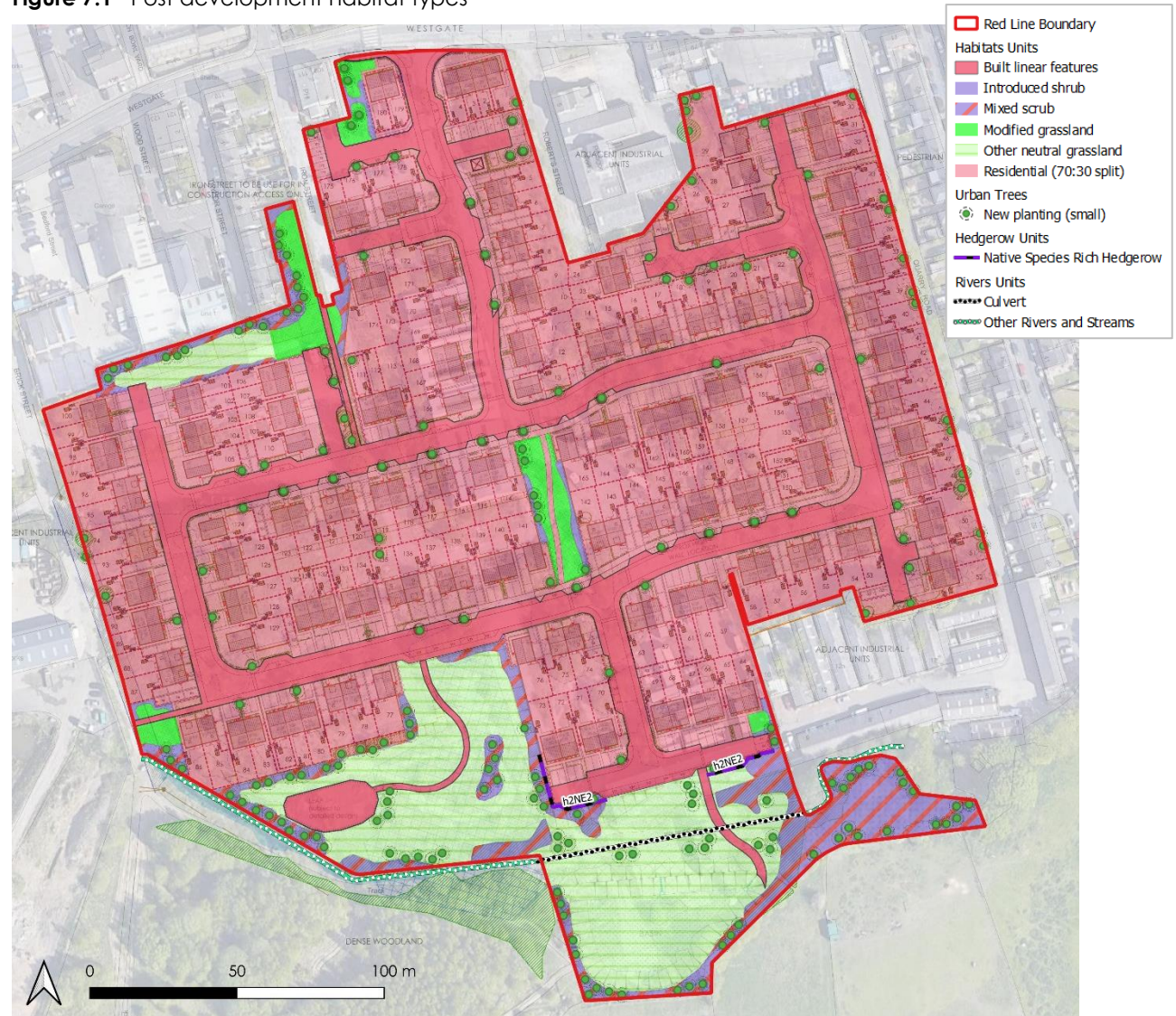
7.1.4. The condition assessment for each proposed habitat is based on what is realistic and achievable for the Site, based on the Landscape Masterplan.

### Net Gain Assessment

7.1.5. This exercise identifies an overall net loss of -6.64 Habitat Units (-32.37%), but gains of 3.20 Hedgerow Units (+172.61%). There will be no change in River Units (0%).

7.1.6. The client has been provided with a copy of the Biodiversity Metric 3.1 Calculation Tool excel spreadsheet. This will be made available for review if required. A summary is presented overleaf.

Figure 7.1 Post development habitat types



On-site baseline	<i>Habitat units</i>	20.52
	<i>Hedgerow units</i>	1.85
	<i>River units</i>	2.42
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	13.88
	<i>Hedgerow units</i>	5.05
	<i>River units</i>	2.42
On-site net % change <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-32.37%
	<i>Hedgerow units</i>	172.61%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-6.64
	<i>Hedgerow units</i>	3.20
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	-32.37%
	<i>Hedgerow units</i>	172.61%
	<i>River units</i>	0.00%

## 8. Timing Issues

8.1.1. Other than the standard constraint surrounding nesting birds and vegetation clearance, no specific timing issues are foreseen.

## 9. Cumulative Effects

9.1.1. No in-combination effects have been identified.

## 10. Offsite Measures or Compensation

10.1.1. The scheme is expected to result in a net loss in Habitat Units, despite on-site measures being proposed within the Landscape masterplan and BMP.

10.1.2. Some form of offsetting will be required to ensure the proposals deliver a net gain for biodiversity overall. This could be secured through the use of blue line land (if available to the client) or through a commuted sum, either to the council, or a third party broker.

## 11. Enhancement

11.1.1. Opportunities to provide enhancement, and how to secure this, have been identified in Table 6.1 above and will be detailed in the BMP and Landscaping Plan documents.

## 12. Monitoring

12.1.1. The CEMP document will detail the role of an Ecological Clerk of Works (ECOW) in overseeing protection measures.

12.1.2. The BMP document will identify any management specific monitoring which might be required in respect of habitat enhancement proposed.

## 13. Policy and Legislation

13.1.1. Given the implementation of the mitigation set out above, it is anticipated that the proposals will comply with the relevant policy and legislation relating to wildlife and ecology.

## 14. Conclusion

14.1.1. Mitigation, submitted as part of the planning application, will be able to address all significant effects resulting from the development.

14.1.2. Biodiversity offsetting will need to be agreed with the LPA, to ensure the Site delivers a net neutral or net gain for biodiversity.

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