



Ecological Impact Assessment

Soothill, Batley

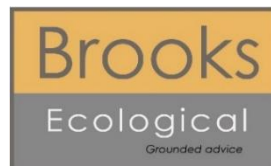
Keepmoat Homes

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Report Title:	Ecological Impact Assessment Soothill, Batley
Report Reference:	ER-4566-02
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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. The more valuable parts of the Site were highlighted during previous surveys. Development on these has been avoided and they can be enhanced as part of the proposals. Other less valuable areas can likewise be retained and enhanced alongside habitat provided within the development footprint.

Any residual significant effects can be mitigated and compensated on-site and secured via standard conditions provided in the British Standard BS:42020.

In terms of Biodiversity Net Gain, the scheme has gone to considerable effort (including the reduction of units) to adhere with the NPPF Hierarchy in terms of avoidance and mitigation. However, it has still not been possible to deliver a net gain for biodiversity on-site alongside the aspirations for housing provision – which already has granted outline permission here. This document evidences the efforts that have been made already in terms of avoidance and mitigation and It would now be appropriate to use off-site compensation/contributions to address any residual shortfall, if required by the LPA.

1. Introduction

1.1.1. Brooks Ecological Ltd was commissioned by Keepmoat Homes to carry out an Ecological Impact Assessment (EclA) for a Site referred to as Land at Soothill, Batley.

1.1.2. This report has been produced to satisfy Condition 18 of the Outline 2018/49/94189/E (varied under 2020/70/94202/E).

18. Detailed plans and particulars of the Reserved Matters in relation to layout and landscape pursuant to Conditions 1 and 2 (above) shall include an Ecological Impact Assessment (EclA) incorporating the results of an up-to-date ecological survey (no older than two appropriate survey seasons prior to submission) and describing the ecological importance of the site and its immediate vicinity. All surveys and assessment shall follow national good practice guidelines, where these exist. Reason: To ensure the development avoids or minimises ecological effects where possible and provides an overall net biodiversity gain, in accordance with the requirements of chapter 15 of the National Planning Policy Framework, and Policy LP30 of the Kirklees Local Plan

1.1.3. Neither LP30 or the NPPF provide a net gain percentage and current proposals provide more green space and less built development than outline permission has already been granted for.

1.1.4. Outline permission granted under 2018/49/94189/E and subsequently varied under approval 2020/70/94202/E approved 366 dwellings. The current application seeks permission to provide 319 dwellings as part of the Reserved Matters.

1.1.5. 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.

1.1.6. 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.

1.1.7. This report adapts the format set out in the Chartered Institute for Ecology and Environmental Management (CIEEM) guidelines for Ecological Report Writing (December 2017).

2. Method

Scope of Assessment

- 2.1.1. The application site 'the Site' comprises a number of fields located to the east of the Soothill area of Batley. The extent of this assessment is the development area within the red line boundary defined in Figure 2.1, overleaf. The original survey reported in the PEA included a parcel of scrub to the south west of Mill Forest Way.
- 2.1.2. The assessment uses a 2 km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.
- 2.1.3. Ecological surveys and reports informing this assessment comprise of the following:
- An updating Preliminary Ecological Appraisal (PEA) carried out by Brooks Ecological in September 2020. R-4566-01 November 2020
 - Additional Ecological Surveys - Breeding Bird Survey, Bat Activity and Emergence Survey, Water Vole Survey, Reptile Survey carried out by Brooks Ecological in 2016. R-2587-01. November 2016
 - A Preliminary Ecological Appraisal (PEA)/Phase 1 Habitat Survey/Bat Roost Potential Assessment/ Badger Survey carried out in Summer 2015 by WSP Parsons Brinckerhoff.

Desk Study

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

Field Survey

- 2.1.5. The following dedicated field surveys have been carried out at the site. Full details of the methodologies used and the results obtained are contained in the relevant documents referenced opposite. Unless stated otherwise these followed the relevant survey guidelines referenced in reports.
- Walkover / Extended Phase 1 Habitat Survey
 - Bat Activity Surveys – Transect and Remote Monitoring*
 - Bat Emergence Survey*
 - Reptile Survey*
 - Badger Survey*
 - Breeding Bird Survey*
- 2.1.6. *Due to the findings of these surveys (carried out in 2016) and in the absence of any substantial changes in conditions at the site in the intervening period (see R-4566-01), it has been possible to use these results to inform this assessment.

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 the 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

2.1.10. 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.

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, it is assumed that the Site would revert back to being used as agricultural grassland.

3.1.6. If left un-managed/un-grazed, the habitats on site would likely succeed to taller ruderal vegetation and native scrub over time.

Figure 3.1 The Site's habitats



3.1.7. The table below shows the Site's habitats in terms of their measured extent (ha or km) and Biodiversity Value (Habitat Units). This is an excerpt from the DEFRA Biodiversity Metric 2.0 Spreadsheet Calculator.

Table 3.1 Site Habitats as defined in Biodiversity Net Gain calculations – Site Baseline¹. Full details provided in the spreadsheet calculator provided electronically

Soothill									
A-1 Site Habitat Baseline									
Condense / Show Columns				Condense / Show Rows					
Main Menu				Instructions					
Habitats and areas				Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Grassland	Grassland - Modified grassland	9.42	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	18.84
2	Grassland	Grassland - Other neutral grassland	1.72	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	6.88
3	Grassland	Grassland - Other lowland acid grassland	0.15	Medium	Fairly Poor	Low	Within area formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	1.04
4	Heathland and shrub	Heathland and shrub - Mixed scrub	0.36	Medium	Fairly Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	2.16
5	Heathland and shrub	Heathland and shrub - Hawthorn scrub	0.62	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	2.48
6	Urban	Urban - Developed land; sealed surface	0.02	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
7	Urban	Urban - Amenity grassland	0.01	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.02
8									
9									
10									
Total site area ha			12.30					Total Site baseline	31.42

¹ 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.

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

Table 3.2 Site Habitats Summary

Codes	Habitat Feature	Extent	Notes
g4 u1b 310	Habitats of Low or Very Low Distinctiveness.	9.45 ha	Areas of built development (road), amenity grass and modified grassland. There are large expanses of seeded and improved grassland at the site. This has been abandoned in the recent past and is growing out but is still dominated by seeded grasses. These habitats have relevance to biodiversity at this site on the basis of their extent. Mitigation/compensation for any loss of these habitats is dealt with through the Biodiversity Net Gain process and they are not considered further in the EclA process.
g3c	Other Neutral Grassland	1.72 ha	Better semi-improved grassland found in managed paddocks in the south of the site and on made-ground left after previous development/clearance on land around Mill Forest Way. This is a common habitat type locally and it does not support rare or otherwise notable species here. Does not conform to the types of semi-natural grassland described in Kirklees' Local Biodiversity Action Plan. Loss will be mitigated/compensated through the Biodiversity Net Gain process - which will need to target grassland habitat on/off site. <u>Valued at Site Level</u>
g1a	Other Lowland Acid Grassland	0.15 ha	Habitat which is important in a district context, and at this site due to its being home to spring flying mining bees (<i>Adrena</i> sp.) as evidenced by the presence of one of their parasites - cuckoo bees (<i>Nomada</i> sp.) during the first Site visit in May 2016. This is a very small fragment of this habitat and does not conform well with the descriptions of the UK Priority and Kirklees LBAP Habitat 'Lowland Dry Acid Grassland'. Loss could be mitigated/compensated through the Biodiversity Net Gain process, which would need to target similar grassland habitat on/off site. However, avoidance of impacts on this habitat have been recommended. <u>Valued at Local Level</u>
h3h	Mixed Scrub	0.36 ha	Scrubland has colonised areas of made ground close to Mill Forest Way and along the small watercourse up the west of the site. This is a common habitat type locally and it does not support rare or otherwise notable species here. It does conform, in parts, to Kirklees' Local Biodiversity Action Plan for Scrub and Habitat Mosaics on Previously Developed Land, but is not felt to be a good example. Loss will be mitigated/compensated through the Biodiversity Net Gain process - which will need to target scrub habitat on/off site. <u>Valued at Local Level</u>
h3a	Hawthorn Scrub	0.63 ha	Old grown out hedgerows at the site have been mapped as this habitat type. This is a common habitat type locally and it does not support rare or otherwise notable species here, though it does provide useful connectivity through the site for wildlife. Loss could be mitigated/compensated through the Biodiversity Net Gain process, which would need to target scrub habitat on/off site. However, avoidance of impacts on this habitat have been recommended where possible. <u>Valued at Local Level</u>
	Total area	12.3 ha	

Species and Species Groups

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

Table 3.3 Summary of relevant faunal issues

Species/ Group (Feature)	Presence	Notes
Badgers	Dedicated badger survey was carried out in 2015, and has been updated during site visits in 2016 and 2020. Badgers, or evidence of them, has not been recorded at the site. Their likely absence is assumed.	Standard precautions apply regarding clearance of vegetation.
Reptiles	Surveys found reptiles to be likely absent from the site.	No further precaution/assessment required.
Amphibians	Surveys conclude that the site will be of limited value to this group.	No further precaution/assessment required.
Riparian Mammals	Surveys have confirmed likely absence.	No further precaution/assessment required.
Bats	Full monthly activity surveys confirmed low level foraging by common species, focused around the west-east linear features through the Site. Emergence survey of the only potential roosting feature on the site (an old wall to the north east) has confirmed likely absence of roosting.	Site of low importance to bats. No potential bat roost features noted. <u>Valued at Local Level</u>
Birds	No Schedule 1 species were found to utilise the Site for breeding. Only 5 red/amber listed and UK BAP species showed breeding behaviour: house sparrow and starling (nesting in adjacent housing), and linnet, dunnock and bullfinch in the scrub habitat. Old hedgerows and the small number of trees within these will support a typical range of nesting birds and provide opportunities for foraging.	Standard precautions apply regarding clearance of vegetation. <u>Valued at Local Level</u>
Invasive non-native plant species	Small amounts of Cotoneaster and Crocosmia have been identified.	Standard precautions apply regarding clearance of vegetation.

4. Description of the Proposed Development

- 4.1.1. A reserved matters planning application seeking full planning permission for 319 dwellings, spine roads, drainage infrastructure, and public open space.
- 4.1.2. Whilst much of the Site will be cleared for development, land to the centre of the Site will be enhanced as public open space, with a number of parcels being retained.
- 4.1.3. Proposals have had the opportunity to respond to the findings of the PEA and have built in all potential avoidance in terms of layout. The following sections examine impacts resulting from the proposals which could not be avoided.
- 4.1.4. Impacts are assessed on the basis of the effects which result on the valued habitats, species or sites which have been identified above.

Figure 4.1 Proposed Site Layout (Drawing number YO45-STE-XX-DR-M2-A-0001 Rev K).



5. Impacts and Effects of Development

- 5.1.1. Figure 5.1 shows the development footprint in relation to the mapped habitats (black hatch).
- 5.1.2. The development footprint shows the sum extent of proposed built development and associated clearance works.
- 5.1.3. This assessment includes areas that are to be developed as green space. Some of these areas will be subjected to vegetation clearance and profiling work resulting in a temporary habitat loss, whilst others will be enhanced to convert existing habitats.
- 5.1.4. Post development, existing vegetation in areas of public open space will be replaced with habitat of a similar or higher value.

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



5.1.5. Figures 5.2 summarises the impact of development on existing vegetation.

Habitats

5.1.6. Existing habitats occupying the proposed built areas and new spine road will be permanently lost to development.

5.1.7. Habitats in the large area of public open space will be retained and enhanced rather than cleared and replanted, to minimise ecological impacts.

5.1.8. Other areas of green space will be created to replace existing habitats.

5.1.9. Further information on the scope of these ecological enhancements are outlined in more detail in the Landscape Master Plan.

Figure 5.2 Summary of impacts on existing habitats (permanent and temporary loss)



Table 5.1 Anticipated Impacts and Effects associated with the proposals.

	Impact	Stage
1	Habitat will be removed 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	Direct habitat loss. There will be a loss of habitat generally which will be managed through the Biodiversity Net Gain process. Habitat loss will affect connectivity through and around the Site. Habitat loss will be likely to effect identified features of the Site.	Scrub Other Neutral Grassland Birds Bats	Local
1b	Damage to retained habitat such as by storage of clearance machinery or materials in these areas.	Scrub Other Neutral Grassland Other Lowland Acid Grassland	Local
1c	Disturbance. The noise and activity at the Site will render it and areas immediately off-site inhospitable to wildlife during this period. Wildlife in this area is likely to be habituated to noise levels associated with the urban fringe.	Birds Bats	Local
1d	Pollution. There is the potential for sediment or chemicals to be released from the Site, or into retained habitat during this stage.	Off-Site Scrub Other Neutral Grassland Other Lowland Acid Grassland	Local
1e	Potential effects on Protected Species. Precautions will be required to ensure that impacts on nesting birds, and the spread of Invasive Non-Native Species (INNS) can be avoided.	Protected Species	Criminal Offence

	Impact	Stage
2	Construction activities 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	Damage to retained habitat such as by storage of machinery or materials in these areas.	Scrub Other Neutral Grassland Other Lowland Acid Grassland	Local
2b	Disturbance. The noise and activity at the Site will render it and areas immediately off-site inhospitable to wildlife during this period.	Birds Bats	Local
2c	Pollution. There is the potential for sediment or chemicals to be released from the Site during this stage.	Off-site	Local

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

	Significant Effects - in the absence of mitigation	Acting on	Acting at scale (Maximum)
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.	Scrub Other Neutral Grassland Other Lowland Acid Grassland	Local
3b	Pollution. There is the potential for sediment or chemicals to be released from the Site during this stage.	Off-site	Local
3c	Inappropriate habitat creation or management techniques could mean that the proposals fail to deliver on BNG commitments.	All habitats and species	Local

	Impact	Stage
4	The Site will be populated. 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

	Significant Effects - in the absence of mitigation	Acting on (feature)	Acting at scale (Maximum)
4a	Damage to retained and created habitat such as by inappropriate use, littering, release of invasive species.	Scrub Other Neutral Grassland Other Lowland Acid Grassland	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 result in some predation and displacement, but this area will already be affected by these species to a lesser degree.	Birds	Local Off-site
4c	In the absence of correct management retained and created habitats will not provide the necessary biodiversity units resulting in failure to deliver on BNG commitments.	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. An agreement detailing any offsetting 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 Plan 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
 - Detailed Landscaping Plans
 - A Lighting Plan

Figure 6.1 Landscaping Masterplan - PDP Associates Document c-1772-100



Table 6.1 Biodiversity Net Gain Calculations - Post Development² (Full details provided in the spreadsheet calculator provided electronically).

Soothill

A-2 Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Post development/ post intervention habitats									
Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal	Difficulty	Habitat units delivered	Co
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category		Assessor comments
Heathland and shrub - Mixed scrub	0.16	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Low	1.15	Screening scrub planting
Urban - Vegetated garden	2.77	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	5.35	Landscape Architect Measurement used
Urban - Introduced shrub	0.27	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	1	Low	1.04	Includes non-native hedgerows
Urban - Developed land; sealed surface	4.29	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Housing plots
Grassland - Other neutral grassland	0.79	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	4.43	Seeded wildflower grassland in dev. Footprint
Urban - Developed land; sealed surface	1.36	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Roads and pavements
Urban - Amenity grassland	0.99	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	1.91	Grassland around site infrastructure
Heathland and shrub - Mixed scrub	0.18	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.69	Native hedgerows recorded here as no hedgrow baseline on site to count against.
Urban - Street Tree	1.32	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	27	Low	2.02	191 (Acer, Prunus etc) medium, 48 (Tilia, Juglans etc.) large trees
Totals	10.81							16.59	

² Our report provides an estimate of the sites post-development 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.

Soothill														
A-3 Site Habitat Enhancement														
Condense / Show Columns		Condense / Show Rows												
Main Menu		Instructions												
Post development/ post intervention habitats														
Baseline habitats		Change in distinctiveness and condition				Area (hectar es)	Distinctiv eness	Condition	Ecological connectivi ty score	Strategic significance	Temporal multiplier	Difficulty multipliers Difficulty of enhancem ent	Habitat units delivered	Com
Baseli ne ref	Baseline habitat	Proposed habitat (Pre-populated but can be overridden)	Distinctiveness change	Condition change	Ecological connectiv ity score				Strategic significance	Time to target condition/year s		Assessor comments		
2	Grassland - Other neutral grassland	Grassland - Other neutral grassland	Medium - Medium	Poor - Moderate	0.45	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	3.06	Better management of DNG to increase floral diversity - remove rank elements	
3	Grassland - Other lowland acid grassland	Grassland - Other lowland acid grassland	Medium - Medium	Fairly Poor - Moderate	0.14	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	1.04	Kirklees BAP Habitat. Management improved - removal of scrub.	
4	Heathland and shrub - Mixed scrub	Heathland and shrub - Mixed scrub	Medium - Medium	Fairly Poor - Moderate	0.24	Medium	Moderate	Low	Within area formally identified in local strategy	3	Low	2.15	Better management to create interface with grassland, improve diversity and control INWS	
5	Heathland and shrub - Hawthorn scrub	Heathland and shrub - Mixed scrub	Medium - Medium	Poor - Moderate	0.25	Medium	Moderate	Low	Within area formally identified in local strategy	5	Low	2.11	Better management to create interface with grassland, improve diversity and control INWS	
8	Grassland - Modified grassland	Grassland - Other neutral grassland	Low - Medium	Lower Distinctiveness Habitat - Moderate	0.24	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	1.49	Better management of DNG to increase floral diversity - remove rank elements	
9	Grassland - Modified grassland	Urban - Orchard	Low - Medium	Lower Distinctiveness Habitat - Moderate	0.12	Medium	Moderate	Low	Within area formally identified in local strategy	15	Low	0.76	Planting of new fruit trees and shrubs alongside grassland management	
10	Grassland - Other neutral grassland	Urban - Orchard	Medium - Medium	Poor - Moderate	0.16	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	1.09	Planting of new fruit trees and shrubs alongside grassland management	
					</									

Table 6.2 Mitigation put in place to address the effects identified in Table 5.1

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

	Significant Effects - in the absence of mitigation	Mitigation / Compensation	Residual Magnitude
1a	Direct habitat loss.	Complies with Biodiversity Net Gain policy if offset is sought. The BMP will detail the provision and management of connective habitat, including access features for small animals such as hedgehog. The BMP will detail the provision bird nesting and bat roosting features.	Neutral
1b	Damage to retained habitat such as by storage of clearance machinery or materials in these areas.	The CEMP will detail installation of barrier fencing to protect retained habitat.	Neutral
1c	Disturbance. 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.	Minor Negative
1d	Pollution. There is the potential for sediment or chemicals to be released from the Site, or into retained habitat during this stage.	The CEMP and Temporary Surface Water Management Plans will detail silt fencing to protect retained habitat and watercourses and the location of bunded compounds for storage of machinery and materials.	Neutral
1e	Potential effects on Protected Species. Precautions will be required to ensure that impacts on badgers, nesting birds, and the spread of Invasive Non-Native Species (INNS) can be avoided.	The CEMP will detail necessary pre-works checks for nesting birds and INNS.	Avoided entirely.

	Impact	Stage
2	Construction activities 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.	<i>Construction</i>

	Significant Effects - in the absence of mitigation	Mitigation / Compensation	Residual Magnitude
2a	Damage to retained habitat 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.	Neutral
2b	Disturbance. 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.	Minor Negative
2c	Pollution. There is the potential for sediment or chemicals to be released from the Site 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	Neutral

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

	Significant Effects - in the absence of mitigation	Mitigation / Compensation	Residual Magnitude
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.	Neutral
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.	Neutral

	Impact	Stage
4	The Site will be populated. 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.	<i>Operation</i>

	Significant Effects - in the absence of mitigation	Acting on (feature)	Residual Magnitude
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 and buffering of sensitive habitats has been designed in.	Neutral
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) will be provided.	Minor Negative
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

7.1.1. The proposed development is expected to result in a loss of just over 10% on-site. This is after avoidance and mitigation has been put in place. Calculations are based on proposals outlined in Section 6 above.

On-site baseline	Habitat units	31.64
	Hedgerow units	0.00
	River units	1.24
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	28.29
	Hedgerow units	0.00
	River units	0.00
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-3.35
	Hedgerow units	0.00
	River units	-1.24
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-10.59%
	Hedgerow units	0.00%
	River units	-100.00%

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 not expected to result in a net gain for biodiversity on-site, and the LPA may require that a contribution to off-site compensation be made.

11. Enhancement

11.1.1. Opportunities to provide enhancement, and how to secure this, have been identified in Figure 6.1 and Table 6.2 above and will be detailed in the BMP to be produced as a standard condition of planning.

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 to be agreed by standard conditions of planning will be able to address all significant effects resulting from the development.

14.1.2. The scheme will not be able to deliver a net gain for biodiversity (habitats) on-site. However, this document evidences the efforts that have been made already to adhere with the NPPF Hierarchy in terms of avoidance and mitigation. It would be appropriate to use off-Site compensation / contribution to address any residual shortfall - level and means to be agreed with the LPA.

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