

The Biodiversity Metric 3.0 - Calculation Tool

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Project details	
Planning authority:	Kirklees Borough Council
Project name:	Land off Northorpe Lane, Mirfield
Applicant:	Newett Homes
Application type:	Outline
Planning application reference:	2019/92378
Assessor:	J. Harries
Reviewer:	K. Haymes
Metric version:	3
Assessment date:	29.03.2022
Planning authority reviewer:	

Instructions

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Results

View all

Reset view

Cell style conventions	
	Enter data
	Automatic lookup
	Result

On-site baseline map

Insert

On-site post intervention map

Insert

Off-site baseline map

Insert

Off-site post intervention map

Insert

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Technical data

Results

Urban tree helper		
Tree size	Tree number	Area
Small	8	0.0036
Medium	11	0.0448
Large	36	0.4069
Total	55.00	0.4553

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1

2

3

4

On-site
baseline

A-1 On-site
habitat
baseline

B-1
On-site hedge
baseline

C-1
On-site river
baseline

On-site post development

A-2 Habitat
creation

A-3 Habitat
enhancement

B-2 Hedgerow
creation

B-3 Hedgerow
enhancement

C-2 River creation

C-3 River
enhancement

Off-site
baseline

D-1
Off-site
habitat baseline

E-1
Off-site hedge
baseline

F-1
Off-site river
baseline

Off-site post development

D-2 Off-site habitat
creation

D-3 Off-site habitat
enhancement

E-2 Off-site hedge
creation

E-3 Off-site hedge
enhancement

F-2 Off-site river
creation

F-3 Off-site river
enhancement

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Headline results

Detailed results

Habitat trading
summary

On-site baseline	Habitat units	4.81
	Hedgerow units	0.10
	River units	0.20
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	2.94
	Hedgerow units	1.52
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	-38.77%
	Hedgerow units	1423.31%
	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)	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 & enhancement)	Habitat units	-1.86
	Hedgerow units	1.42
	River units	-0.20
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-38.77%
	Hedgerow units	1423.31%
	River units	-100.00%
Trading rules Satisfied?	No - Check Trading Summary	

Net project biodiversity units (including all on-site & off-site habitat retention/creation)	Habitat units	-1.86
	Madroño vine units	1.43
	River units	-0.20
Total project biodiversity % change (including all On-site & Off-site Habitat Creation + Retained Habitat)	Habitat units	-39.17%
	Madroño vine units	1433.31%
	River units	-100.00%

[illegible][illegible]

On site change by river type						
River type	Baseline		Post development on site		Change	
	Existing length	Existing value	Proposed length	Proposed value	Length change	Value change
Acute Habitat	0.0	0.0	0.0	0.0	0.0	0.0
Low Rivers and Streams	0.0	0.0	0.0	0.0	0.0	0.0
Medium Rivers	0.0	0.0	0.0	0.0	0.0	0.0
Large Rivers	0.0	0.0	0.0	0.0	0.0	0.0
Channel	0.0	0.0	0.0	0.0	0.0	0.0

Category	Area lost (hectares)	Area lost (%)
Very High	0	
High	0	
Medium	1.135	63
Low	0.103	10
Very Low	0.102	7

Category	Number of Publications
Openly Available	10
Peer-reviewed	80
Preprint	10
Published	10

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Category	Length lost (KM)	Length lost (%)
YHigh	0	
High	0	
Medium	0	
Low	0	
VLow	0	

Percentage of species

Species: Native range associated with built or ditch

Native range associated with built or ditch

Native range associated with built or ditch

Line of Trees (Ecologically Functional)

Line of Trees (Ecologically Functional) with Bank or Ditch

Native range

Line of Trees

Line of Trees - Associated with Discontinuous Bank or ditch

Native range

Associated value on-site

Existing length off-site

Proposed value off-site

Hedge Type	On-site unit change	Off-site unit change	Proposed value off-site	Existing value off-site
Zero Specified Hedge/None	10	0	0	0
Station Hedge/None Associated with bank or stock	0	0	0	0
Station Hedge/None with bonds	0	0	0	0
One of Times, (Ecologically Invalid)	0	0	0	0
One of Times, (Ecologically Invalid) with Bank or Stock	0	0	0	0
Station Hedge/None	0	0	0	0
One of Times, Associated with bank or stock	0	0	0	0
Hedge (Unspecified) Non-Station	0	0	0	0

Category	Length lost (KM)	Length lost (%)
Very High	0	
High	0	
Medium	6.06	#C2D1D1
Low	0	

Category	Percentage
Existing value off site	100%
Proposed value off site	0%
Carols	0%
Culvert	0%

Employees

Offices unit change Existing value off site Proposed value off site Offices unit change

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Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?

Very High Distinctiveness						
Habitat group	Group	On Site Unit Change	Off Site Unit Change	Project wide Unit Change	Unit Losses	
Grassland - Lowland dry acid grassland	Grassland	0.00	0.00	0.00		
Grassland - Lowland meadows	Grassland	0.00	0.00	0.00		
Grassland - Upland low meadows	Grassland	0.00	0.00	0.00		
Heathland and shrub - Mountain heaths and yellow ash	Heathland and shrub	0.00	0.00	0.00		
Lakes - Aquatic led naturally fluctuating water bodies	Lakes	0.00	0.00	0.00		
Scarcely vegetated land - Submontane grasslands	Scarcely vegetated land	0.00	0.00	0.00		
Scarcely vegetated land - Limestone pavement	Scarcely vegetated land	0.00	0.00	0.00		
Wetland - Bogs and heath	Wetland	0.00	0.00	0.00		
Wetland - Deposition on Peat substrate (W1150)	Wetland	0.00	0.00	0.00		
Wetland - Fens (pasture and forest)	Wetland	0.00	0.00	0.00		
Wetland - Lowland raised bog	Wetland	0.00	0.00	0.00		
Wetland - Coenocytic Valley mire(1) (G8.1)	Wetland	0.00	0.00	0.00		
Wetland - Purple moor grass and rush pastures	Wetland	0.00	0.00	0.00		
Wetland - Transition mire and peatling bog (W1160)	Wetland	0.00	0.00	0.00		
Woodland and forest - Wood pasture and parkland	Woodland and forest	0.00	0.00	0.00		
Rocky shore - High energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00		
Rocky shore - Moderate energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00		
Rocky shore - Low energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00		
Rocky shore - Features of littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00		
Intertidal sediments - Natural intertidal on peat, clay or chalk	Intertidal sediment	0.00	0.00	0.00		
		0.00	0.00	0.00		0.00

Very High Distinctiveness Summary	
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00

High Distinctiveness					
Habitat group	Group	On Site Unit Change	Off Site Unit Change	Project wide Unit Change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	0.00	0.00	0.00	
Grassland - Floodplain Wetland Mosaic (CFM)	Grassland	0.00	0.00	0.00	
Grassland - Lowland calcareous on peatland	Grassland	0.00	0.00	0.00	
Grassland - Tall herb communities	Grassland	0.00	0.00	0.00	
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Upland Heathland	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Low heathland scrub (Zone 1)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Upland Heathland	Heathland and shrub	0.00	0.00	0.00	
Lalans - High alderway slens	Lalans	0.00	0.00	0.00	
Lalans - Low alderway slens	Lalans	0.00	0.00	0.00	
Lalans - Mast Lalans	Lalans	0.00	0.00	0.00	
Lalans - Low alderway slens	Lalans	0.00	0.00	0.00	
Lalans - Moderate alderway slens	Lalans	0.00	0.00	0.00	
Lalans - Post Lalans	Lalans	0.00	0.00	0.00	
Lalans - Ponds (Pondy Lalans)	Lalans	0.00	0.00	0.00	
Lalans - Temporary slens, ponds and pools	Lalans	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal vegetated dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Island rock outcrops and scrub habitats	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Maritime cliff and dunes	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Open Moors Habitat on Previously Developed Land	Urban	0.00	0.00	0.00	
Woodland - Broadleaved	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Felled	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland beech and new woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Mature pine woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	
Coastal heath - Coastal heath	Coastal heath	0.00	0.00	0.00	
Rocky shore - High energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral mud sediments	Intertidal sediment	0.00	0.00	0.00	
Coastal sediments - Sublittoral and saline mudflats	Coastal sediments	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Atlantic	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Atlantic	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediments	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral muddy sand	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

High Distinctiveness Summary	
High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Unit Deficit: Like for like not satisfied	0.00

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Medium Distinctiveness Summary	
Medium Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Medium Distinctiveness Broad Habitat Deficit to be offset by training up	-3.96
Higher distinctiveness surplus units minus Medium Distinctiveness Broad Habitat Deficit	0.00
Cumulative surplus of units	0.00

Low Distinctiveness				
Habitat group	Group	On site unit change	Off Site Unit Change	Project wide unit change
Cropland - Cereals crops	Cropland	0.00	0.00	0.00
Cropland - Cereals crops other	Cropland	0.00	0.00	0.00
Cropland - Horticulture	Cropland	0.00	0.00	0.00
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00
Cropland - Mixed cereals crops	Cropland	0.00	0.00	0.00
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00
Grassland - Modified grassland	Grassland	0.00	0.00	0.00
Grassland - Roughland	Grassland	0.00	0.00	0.00
Heathland and shrub - Rhododendron on scrub	Heathland and shrub	0.00	0.00	0.00
Lakes - Ornamental lakes or ponds	Lakes	0.00	0.00	0.00
Urban - Vacant land - Urban Highly vegetated land	Urban	0.00	0.00	0.00
Urban - Ruinate	Urban	0.00	0.00	0.00
Urban - Agriculture	Urban	0.00	0.00	0.00
Urban - Paved/built green wall	Urban	0.00	0.00	0.00
Urban - Paved/built green wall	Urban	0.00	0.00	0.00
Urban - Ground level planters	Urban	0.00	0.00	0.00
Urban - Extensive green roof	Urban	0.00	0.00	0.00
Urban - Extensive green roof	Urban	0.00	0.00	0.00
Urban - Paved/built green wall	Urban	0.00	0.00	0.00
Urban - Path garden	Urban	0.00	0.00	0.00
Urban - Sand pit quarry or open cast mine	Urban	0.00	0.00	0.00
Urban - Sustainable urban drainage feature	Urban	0.00	0.00	0.00
Urban - Vacant/derelict land/development	Urban	0.00	0.00	0.00
Urban - Vacant/derelict land/development	Urban	0.00	0.00	0.00
Woodland and forest - Other continuous woodland	Woodland and forest	0.00	0.00	0.00
Control separately - Artificial infrastructure and value specific	Control separately	0.00	0.00	0.00
Intermittent sediment - Artificial linear course sediment	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mud	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial area sand	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mud	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mixed sediment	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mixed sediment	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mixed sediment	Intermittent sediment	0.00	0.00	0.00
Intermittent sediment - Artificial linear mixed sediment	Intermittent sediment	0.00	0.00	0.00
Intermittent Hard Structures - Artificial hard structures	Intermittent Hard Structures	0.00	0.00	0.00
Intermittent Hard Structures - Artificial features of hard structures	Intermittent Hard Structures	0.00	0.00	0.00
Woodland and shrub - Tree Inclusions group (other)	Woodland and shrub	0.00	0.00	0.00
		2.00	2.00	2.00

Low Distinctiveness Summary	
Low Distinctiveness Net Change in Units	2.09
Cumulative surplus of units	2.09

Land off Northorpe Lane, Mirfield

A-1 Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

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Habitats and areas				Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units
1	Urban	Developed land; sealed surface	0.014	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
2	Urban	Developed land; sealed surface	0.088	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
3	Urban	Vegetated garden	0.007	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.01
4	Grassland	Modified grassland		Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.00
5	Urban	Introduced shrub	0.027	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.05
			1.37					4.81

Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments	
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost		Assessor comments	Reviewer comments
		0.00	0.00	0.01	0.00		Existing residential building - 28 Northorpe Lane	
		0.00	0.00	0.09	0.00		Hardstanding associated with the existing residential property and carp tanks in the north of site.	
		0.00	0.00	0.01	0.01		Garden planting in association with gardens of the existing residential property	
		0.00	0.00	0.00			Amenity grassland strip along Northorpe Lane, parcel to the north-west. Land not under applicant control - owned by Kirkdees Highways so not given area value / excluded from assessment.	
		0.00	0.00	0.03	0.05		Flower beds containing ornamental shrubs were located adjacent to the existing property . Species recorded included fuschia (Fuschia magellanica), cherry laurel and Leyland cypress.	
0.00	0.00	0.00	0.00	1.37	4.81			

[illegible]

Land off Northorpe Lane, Mirfield	
A-3 Site Habitat Enhancement	
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		Post development/ post intervention habitats													
Baseline habitats		Proposed Habitat (Pre-Populated but can be overridden)		Change in distinctiveness and condition		Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal risk multiplier		Difficulty risk multipliers	Habitat units delivered	Comments	
Baseline ref	Baseline habitat	Proposed Broad Habitat	Proposed habitat	Distinctiveness change	Condition change				Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of enhancement		Assessor comments	Reviewer comments
						0.00							0.00		

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

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Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Hedge number	Hedgerow type	Length KM	Distinctiveness	Condition	Strategic significance		Total hedgerow units
1	H1	Native Hedgerow	0.025	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.10
2								
3								
4								
5								
6								
			0.03					0.10

Retention category biodiversity value						Comments	
Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
0.025		0.10	0.00	0.00	0.00	A native, species-poor intact hedgerow consisting largely of dominant holly (Ilex aquifolium) was recorded at the west of the site associated with the adjacent properties on Northorpe Lane. The composition of the hedgerow on site comprised fewer than four native woody species in any 30m section and as such were not considered species rich. The hedgerow contained abundant hawthorn (Crataegus monogyna) and occasional Lawsons cypress (Chamaecyparis lawsoniana). The understorey was predominantly bramble and common nettle. Using the Hedgerow BAP Targets and Favourable Condition Attributes the hedgerow was not found to be in a favourable condition due to its inability to meet the threshold for herbaceous vegetation, non-native woody species and nutrient enrichment. Using the HEGS survey methodology as defined in Clements and Tofts (1992) the hedgerows on site were awarded a hedgerow grade of 4+ giving it low value. Habitat condition: Meets A1, A2, B1, B2, D1 and D2 but fails both C1 and C2, so in Moderate Condition. Retained but not in POS so management & enhancement not possible.	
0.03	0.00	0.10	0.00	0.00	0.00		

B-2 Site Hedge Creation

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		Proposed habitats		Habitat distinctiveness	Habitat condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers	Hedge units delivered	Comments	
Baseline ref	New hedge number	Habitat type	Length km	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation		Assessor comments	Reviewer comments
1	H2	Native Species Rich Hedgerow	0.1504	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	5	Low	1.11	Native hedgerow with a minimum of five native species to be planted per 30m of hedgerow along northern site boundary, connecting to the offsite woodland / Kirdees WHN. Addition of POS along newly created hedgerow, which will encourage perennial herbaceous vegetation to gain C1/C2 in condition assessment.	
2		Native Hedgerow	0.0848	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.16	Beech hedging will be planted along the site entrance and to selected frontages to give structure to the site and separate drives and parking spaces.	
3		Hedge Ornamental Non Native	0.1576	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.15	Ornamental evergreen flowering hedges will be planted along selected frontages to give structure to the site and separate drives and parking spaces.	
4												
5												
6												
7												
			0.39							1.42		

C-1 Site River Baseline

Condense / Show Columns

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Existing river type			Habitat distinctiveness	Habitat condition	Strategic significance	Watercourse encroachment	Riparian encroachment	Suggested action	Ecological baseline	Retention category biodiversity value						Comments	
Baseline ref	River type	Length KM	Distinctiveness	Condition	Strategic significance	Extent of encroachment	Extent of encroachment		Total river units	Length retained	Length enhanced	Units retained	Units enhanced	Length Lost	Units Lost	Assessor Comments	Reviewer comments
1	Ditches	0.05	Medium	Poor	Low potential/action not identified in any plan	No Encroachment	No Encroachment	Restore	0.20			0.00	0.00	0.05	0.20	A dry ditch ran west to east in the north of the site. The ditch had different vegetation to the surrounding grassland consisting largely of abundant false-oat-grass, common nettle and creeping thistle. The ditch contained evidence of recent fires such as burnt wood and ash. Condition Assessment - Poor (water body dries out). No ditch replacement proposed.	
2																	
3																	
4																	
5																	
6																	
		0.05							0.20	0.00	0.00	0.00	0.00	0.05	0.20		