

# Biodiversity Net Gain Technical Note



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**Lidl, Birstall**  
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## Section 1: Introduction

- 1.1. This note has been prepared by Tyler Grange Ltd on behalf of LIDL GB. It sets out the results of a Biodiversity Net Gain (BNG) calculation utilising Defra's Metric Version 2.0 for a parcel of land located opposite the Birstall Shopping Park, in Birstall (OS SE 23584 27437), hereafter referred to as the 'Site'. This report has been produced alongside an Ecological Impact Assessment (EclA) of the site (Tyler Grange report reference **13438\_R01a\_EclA\_AS\_MM\_260321** dated 26<sup>th</sup> March 2021) and should be read in conjunction with the EclA for the site.
- 1.2. The National Planning Policy Framework (NPPF) published February 2019, states that planning and decisions should contribute to and enhance the natural environment by, amongst other, *'identifying and pursuing opportunities for securing measurable net gain for biodiversity'*. The Kirklees Council Local plan strategy and policies (*Policy LP30*) also specifies the need for net gain in biodiversity.
- 1.3. Emerging national and local policy to be incorporated within the Environment Bill (publication expected to be during 2021) will mandate net gains in biodiversity post-development in accordance with approved metrics.
- 1.4. In line with the requirement of Local Planning Policy and section 170 of the NPPF, this note provides the summary of the baseline biodiversity value of the site assessed against the proposed post-development value to detail the change in biodiversity value onsite.



## Section 2: Methodology

- 2.1 The DEFRA Biodiversity Metric 2.0 (JP029) was published on the 29<sup>th</sup> July 2019<sup>1</sup> and was the current version in use at the time of assessment. This calculator is used to '*measure and account for biodiversity losses and gains resulting from development*'. The calculator requires baseline habitat data as well as the information on habitats to be lost and created to calculate the total number of biodiversity units on site post-development.
- 2.2 Baseline: an extended Phase I habitat survey of the site was undertaken by Tyler Grange in August 2020. This data was used to determine the area and value of habitats currently on site '*the baseline*'. This data was then transported into classification of the UK Habitats<sup>2</sup> to utilise within the Defra 2.0 metric.
- 2.3 Retained/ replacement habitats: the landscape proposals (see **Appendix 1**) was then used in combination with the baseline data, to calculate the areas of retained and replacement habitats on site.
- 2.4 The calculator automatically assigns distinctiveness scores to each habitat type, and the user inputs scores for condition, ecological connectivity, strategic significance and total area (in hectares); as per the guidance, the area of trees on site was calculated using the integrated 'street tree helper' tool within the metric spreadsheet.
- 2.5 No condition or connectivity scores are required for hardstanding or building as part of the calculator.
- 2.6 Biodiversity units: the information above was then input into the Defra V2.0 calculator, to determine the number of biodiversity units at baseline and at post-intervention (i.e. habitat creation + retention). The calculator then uses this data to produce the total net unit and percentage change. The Defra calculator is provided separately to this note.
- 2.7 Further information on the baseline habitats is available in the EclA for the site (**13438\_R01a\_EclA\_AS\_MM\_260321** – Tyler Grange).

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<sup>1</sup> <http://publications.naturalengland.org.uk/publication/5850908674228224>

<sup>2</sup> UK Habitat Classification Working Group (2018) UK Habitat Classification – Habitat Definitions V1.0



## Section 3: Results

3.1. Table 3.1. below summarises the existing biodiversity baseline value of the site.

**Table 3.1** habitat units at baseline

Habitat type	Area (ha)	Baseline Units	Units lost	Units retained	Units enhanced
Tall Ruderal (Sparsely vegetated land – ruderal/ephemeral)	0.10	0.22	0.22	0.00	0.00
Poor semi-improved grassland	Too small to register in the metric	0.00	0.00	0.00	0.00
Introduced shrub	0.03	0.20	0.20	0.00	0.00
Mixed plantation woodland	0.19	1.39	1.39	0.00	0.00
Hardstanding	1.17	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1.51</b>	<b>1.80</b>	<b>1.80</b>	<b>0.00</b>	<b>0.00</b>

3.2. **Table 3.2** below summarises the post-development value of the site, which excludes enhancements. The BNG calculations workbook provides additional detail regarding habitat condition for each proposed habitat type.

**Table 3.2** Post development habitat creation

Habitat type	Area (ha)	Units delivered
Introduced Shrub	0.06	0.28
Amenity Grassland	0.01	0.02
Hardstanding	1.42	0.00
Artificial Unvegetated Unsealed Surface	0.02	0.00
<b>Total</b>	<b>1.51</b>	<b>0.30</b>

3.3. **Table 3.3** below summarises the projected net biodiversity value of the site post development.

**Table 3.3** Projected Net Biodiversity Value

Habitat	Baseline	Lost	Retained	Created	Enhanced	Percentage change
Habitats	1.80	1.80	0.00	0.30	-	-1.50 units / net loss of 84.40%



- 3.4. It is also noted that the proposals show additional native tree planting scattered within the mixed scrub and across hardstanding, but that the number of trees originally onsite exceeds this number, resulting in an overall net loss.
- 3.5. Additional native hedgerow planting is also proposed, as indicated in **Appendix 1** and accounted for in the accompanying metric. The new hedgerows would comprise species of field maple *Acer campestre*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, wild privet *Ligustrum vulgare*, dog rose *Rosa canina* and elder *Sambucus nigra*. The overall length would total 240m, resulting in a net gain in hedgerow length of 240m. As the baseline hedgerow value is 0 units as no hedgerows are present, it is not possible to calculate the uplift in hedgerow percentage gains with the metric. This hedgerow planting would generate a total of 1.08 hedgerow units.



## Section 4: Conclusion

- 4.1. The Defra 2.0 Metric has calculated that without including off-site habitat creation, the proposed development at this stage as illustrated on the attached illustrative landscape strategy plan would amount to a relatively minor measurable net loss in biodiversity value of **1.50** biodiversity units, equating to a **83.40%** net loss in biodiversity value.
- 4.2. The existing EclA report for the site has made recommendations for the inclusion of bat roost and bird nesting features to provide enhancements to this regard.
- 4.3. It will, therefore, be necessary for off-site contributions to be made to the Local Planning Authority or 3<sup>rd</sup>-party land owner to create the required deficit of units off-site.
- 4.4. To achieve a 10% net gain, as targeted by Kirklees Council and emerging National Policy, it will therefore be necessary for the creation of an additional 1.68 biodiversity units off-site. This is calculated as: 10% increase on baseline of 1.80 = 1.98. Residual post-development value = 0.30.  $1.98 - 0.30 = 1.68$  units.



# Appendix 1: Landscape Proposals



SEE DRAWINGS BY SMR ARCHITECTS FOR SURFACING AND BOUNDARY DETAILS

**PLANTING NOTES**

All trees to be planted and procured in accordance with BS 8545:2014. The providing nursery shall demonstrate Plant Health Certification and/or an adopted biosecurity policy. Aftercare shall be in accordance with the approved Landscape Management Document.

**PLANTING SCHEDULES**

ORNAMENTAL PLANTING SCHEDULE			
Nr	Name	Ht in cm	Pot(L) Density
96	Bergenia cordifolia 'Purpurea'	3L	5.00
74	Geranium endressii 'Wargrave Pink'	3L	5.00
Shrub			
Nr	Name	Ht in cm	Pot(L) Density
82	Ceanothus thyrsiflorus repens	30-40cm(D)	3L 5.00
77	Choisya ternata 'Sundance'	30-40cm	3L 5.00
110	Cistus 'Silver Pink'	30-40cm	3L 5.00
75	Cornus sanguinea 'Mid-Winter Fire'	40-60cm	3L 5.00
62	Escallonia 'Apple Blossom'	30-40cm	3L 5.00
118	Euonymus fortunei 'Emerald Gaiety'	20-30cm(D)	3L 5.00
129	Euonymus fortunei 'Emerald n Gold'	20-30cm(D)	3L 5.00
236	Hebe albicans 'Red Edge'	20-25cm	3L 5.00
85	Hebe pinguifolia 'Pagei'	20-30cm(D)	3L 5.00
224	Lavandula angustifolia 'Hidcote'	20-25cm	3L 5.00
82	Philadelphus 'Manteau d'Hermine'	30-40cm	3L 5.00
85	Prunus laurocerasus 'Otto Layken'	30-40cm	3L 5.00
110	Santolina chamaecyparissus nana	20-25cm	3L 5.00
210	Skimmia japonica 'Rubella'	30-40cm	3L 5.00
115	Spiraea japonica 'Goldflame'	30-40cm	3L 5.00
200	Viburnum davidii	20-25cm	3L 5.00

All shrub material shall be first quality, sturdy, well rooted non-refrigerated stock with well branched heads and fibrous root systems. Shrubs shall be planted into 450mm good quality fibrous topped incorporating organic compost and slow release fertiliser in accordance with all good horticultural practice. A proprietary geotextile membrane is to be installed between the soil and much of the planted areas (with 200mm minimum overlap) cut with T or X slits to fit around the plants as required. Sufficient pegs to be used to ensure that membrane does not lift. All plant material shall be a minimum of 3L pot size unless otherwise specified and conform to BS3090 Part 1 and BS 4428. Finished beds shall be dressed with 50mm depth of purple slate chippings.

**TREE SCHEDULE**

SPECIES	NUMBERS REQUIRED	
	Ht in m	4.5 min
Acer campestre	7	16-18
Betula utilis 'Jaegermontii' (Buj)	9	
Carpinus betulus 'Frans Fontaine' (ChFF)	4	
Pyrus calleryana 'Chanticleer' (PcC)	3	
Sorbus aucuparia 'Sheerwater Seedling' (SaS)	5	

All trees to have clear stems to 2.0m above ground level with well developed branching heads with a single, central leader and healthy, fibrous root systems. Trees shall be planted into pits of an appropriate size to accommodate the root system without restriction, backfilled with a 3:1 topsoil/compost mix and shall be secured to a machine rounded stake using 1 no. tree tie with rubber spacers. Finished height of stake shall not exceed 1/3 height of staked tree above ground. Extra heavy standard trees in hard landscape within tree grilles to be underground guyed and fitted with an irrigation system such as RootRain by GreenRain Urban. Underneath hard surfacing a crate system such as StrataCell by GreenBlue Urban, is to be installed. The extent of the pit to be fitted with a tree pit crate system is shown by the blue dashed line. All pits are to be 1m deep.

**NATIVE HEDGE**

NATIVE HEDGE SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
60	Acer campestre	60-80cm	1u1	BR	
60	Corylus avellana	40-50cm	1/0	BR	
600	Crataegus monogyna	40-50cm	1u1	BR	
120	Ilex aquifolium	50-60cm	C	2L	
180	Ligustrum vulgare	50-60cm	0/1	BR	
60	Rosa canina	50-60cm	1/1	BR	
120	Sambucus nigra	60-80cm	1/1	BR	

Hedge to be planted in a previously prepared trench, 300mm wide and 450mm deep backfilled with a 2:1 mix of multipurpose topsoil to BS3882:2007 and planting compost. Bare-root transplants to be dipped in a suitable mycorrhizal dip before planting. Plants to be planted in a double staggered row, 300-350mm wide, at 5m plants per linear metre with species planted randomly throughout in groups of 7 or 30 of a single species. The hedge lines shall be matched after planting with forest mulch to a uniform depth of 50mm.

**TURFING**

The topsoiled area to be turfed, is to be grade and cross-graded to even running falls, to allow the finished levels of the turf to be 40mm above the adjoining paved areas. The surface should be lightly and uniformly firmed by rolling or treading and reduced to a fine ribbed up to 20mm in depth. All rubbish, stones greater than 50mm in diameter etc. shall be removed from the surface. Apply an even application of approved fertiliser at a rate of 70g/m<sup>2</sup> and rake in. No turves shall be laid in exceptionally frosty weather or in other unsuitable weather conditions. The turves shall be laid in a stretcher bond pattern, closely butted and firmed into position, to the correct levels. The turves should be laid off planks, working over turves previously laid. A dressing of fine, sifted topsoil (complying with BS 3882) should be applied to the laid turf and brushed well into the joints. Turves shall be watered regularly to prevent them drying out before they establish.

**KEY**

- Existing trees, hedges and vegetation to be retained
- Proposed 2000mm high close boarded timber fencing (detailed by others)
- Existing trees, hedges and vegetation to be removed
- Proposed 2000mm high acoustic fence (detailed by others)
- Proposed Extra heavy standard (18-18cm girth) tree
- Proposed 450mm high knee high fence (detailed by others)
- Proposed Beech hedging
- Proposed 2000mm high paladin fence (detailed by others)
- Proposed native hedge
- Proposed retaining wall to engineers details (detailed by others)
- Proposed ornamental shrub planting
- Proposed 1100mm high brick wall with railing (detailed by others)
- Proposed amenity grass seed
- Proposed bed boxes (from left to right) Swift box Sparrow box
- Proposed species rich grass seed
- Proposed wildlife habitat boxes (from left to right) Schweigger 2FE bat boxes or equivalent Insect refuge Underground bee shelter
- Proposed wildflower grass seed
- Proposed wildflower grass seed for wet soils

**WOODHEAD ROAD**

**BANKWOOD WAY**

RETAIL UNIT  
24535 SF

GARDEN CENTRE  
5510 SF

Paradigm House  
1

EXTERNAL PLANT

PROPOSED FOOD STORE

**BANKWOOD WAY**

Rev G: Updated to include additional native hedge to car park boundary and adjustment of species list (SF) Nov 21  
 Rev F: Native hedge added behind the store (SF) Oct 21  
 Rev E: Additional tree planting (SF) Oct 21  
 Rev D: Entrance to Paradigm House updated and knee rail added (SF) Sept 21  
 Rev C: Bollards and cycle hoops added in front of retail units (SF) Sept 21  
 Rev B: Updated to latest sitelayout (SF) July 21  
 Rev A: Amended in line with Proposed Site Plan Rev P3 (SEL) Mar 21

Native Hedge Mix (5.1m m double)  
 46nr Acer campestre  
 46nr Corylus avellana  
 461nr Crataegus monogyna  
 92nr Ilex aquifolium  
 138nr Ligustrum vulgare  
 46nr Rosa canina  
 92nr Sambucus nigra

20nr Lavandula angustifolia 'Hidcote'  
 25nr Skimmia japonica 'Rubella'

<p>Sue Farmer as sole and exclusive Landscape Architect</p> <p><b>fdalandscape</b></p> <p>Westleigh Hall Wakfield Road Barnsley South Yorkshire S19 2JZ Telephone 01454 861611 Fax 01454 861616 Email info@fdalandscape.co.uk www.fdalandscape.co.uk</p>	<p>Client Lidl Great Britain Ltd</p> <p>Project Proposed Store BANKWOOD WAY, BIRSTALL</p> <p>Drawing Title <b>LANDSCAPE DETAILS</b></p> <p>Scale 1:200 @AO</p> <p>Date Mar 21</p> <p>Drawn by SEL</p> <p>Checked by R/2459/JG</p>
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