Esk Valley Environmental Ltd

Wayne and Debbie Fletcher
3 Stakesby Vale,
Whitby,
North Yorkshire

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

20th March 2023

To Whom it May Concern,

RE: Small Site Metric Technical Note
for The Paddock, Stainsacre

Introduction

Esk Valley Environmental ltd was commissioned by Cheryl Ward, on behalf of Wayne and Debbie Fletcher (the client) to deliver a Biodiversity Net Gain (BNG) assessment of a proposed residential development at Stainsacre (The site). An application has been submitted to the local planning authority (The North York Moors Planning Authority) which has received comments back with regards to BNG on site. The clients have been advised that a BNG assessment should be conducted of the site in line with the recently adopted Environment Act 2021, and recommended that a Natural England Small Sites Metric calculation is completed.

This technical note has been prepared to accompany the completed Small Sites Metric calculation tool and summarises the results of a site walkover of the site conducted in March 2023 and details the habitat enhancement and creation required on site to achieve the required 10% gain.

The aim of the site walkover was to:

- Determine and describe habitats present on site;
- Identify any priority habitats present on or immediately adjacent to site; and,
- Identify an appropriate habitat enhancement / replacement strategy to be designed and implemented to achieve BNG on site.

The site consists of the north eastern area of a grazed paddock on the eastern side of Stainsacre. The site is intensively grazed by horses and is closely grazed, a small area is also used for storage of agricultural implements and vehicle parking.

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

Biodiversity Net Gain

BNG is a process whereby development leaves biodiversity in a measurably better state than before and is a policy requirement under the National Planning Policy Framework (NPPF; 2019)[1] . BNG will soon become a legal requirement in England[2] with the Environment Act (2021) setting out a mandatory 10 % net gain in biodiversity for new development[3].

The BNG process is governed by a set of UK good practice principles (2016)[4] along with industry guidance which outlines the practical implementation of the principles (2019)[5]. The key principle is the application of a mitigation hierarchy, which sets out that development should first avoid biodiverse habitats, then mitigate/minimise impacts upon habitats, then restore/reinstate habitats. As a last resort, once the mitigation hierarchy has been maximised on-site, the project may use biodiversity offsetting to compensate for any residual biodiversity impacts due to the project. The principles require use of a metric e.g. Natural England Biodiversity Metric v3.1, to assess and quantify net biodiversity change. Applying this process enables transparent reporting on biodiversity outputs to demonstrate delivery against the current policy requirement for BNG.

Esk Valley Environmental has in-house biodiversity expertise, working on BNG across England since 2018. We have in-depth experience of applying BNG assessments to residential, road, rail and energy infrastructure developments, using the Defra metric, Natural England Biodiversity Metric v3.1.

The SSM is a simplified version of the Natural England Biodiversity Metric 3.1, specifically designed for use on small development sites. Such sites are defined (for the purposes of the SSM) as small sites where BOTH of the following criteria are met:

1. Development sites where;
   - For residential developments the number of dwellings to be provided is between one and nine inclusive on a site having an area of less than one hectare
   - Where the number of dwellings to be provided is not known the site area is less than 0.5 hectares
   - For all other development types where the site area is less than 0.5 hectares or less than 5,000sqm

2. Where there is no priority habitat present within the development area (excluding hedgerows and arable margins)

[1] Ministry of Housing, Communities & Local Government, 2019. National Planning Policy Framework (NPPF), last updated 20 July 2021. Accessed from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

[2] Department for Environment Food & Rural Affairs, 2020. Environment Bill 2020: Policy Statement. Accessed from: https://www.gov.uk/government/publications/environment-bill-2020/30-january-2020-environment-bill-2020-policy-statement

[3] Department for Environment Food & Rural Affairs, 2020. Environment Bill 2020: Nature and conservation covenants (parts 6 and 7). Accessed from: https://www.gov.uk/government/publications/environment-bill-2020/10-march-2020-nature-and-conservation-covenants-parts-6-and-7

[4] CIEEM, CIRIA, IEMA, 2016. Biodiversity Net Gain: Good practice principles for development. Accessed from: https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf

[5] CIEEM, CIRIA, IEMA, 2019. Biodiversity Net Gain: Good practice principles for development. A practical guide. Accessed from: https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

Methodology

A site walkover and habitat assessment was undertaken by Mark Tarrant MEECW on the 14th March 2023. Mark has a BSc in Biology and has worked professionally as a consultant ecologist since 2008. He has extensive experience in conducting BNG assessments, including using the latest 3.1 metric.

The weather during the survey period was cold, but clear, with little wind. The survey involved a site walkover and preliminary assessment of key habitats and land use. The survey methodology was based upon the standard UKHab methodology described in the UK Habitat Classification User Manual Version 1.1[6].

Limitations

The habitat survey provides a snapshot of ecological conditions and does not record plants or animals that may be present at the site at different times of the year.

The habitat areas measured for the purposes of the metric are based on areas measured at the time of the UKHab survey and may change due to changes in land use. The habitat measurements have not been undertaken with calibrated instruments and are therefore not to a precise scale. All polygon areas were input into the metric in square metres, rounded up to the nearest full number. This can cause a slight variation to the sum of the individual numbers but is unlikely to substantially change the results.

Esk Valley Environmental Ltd is satisfied that this report represents a robust appraisal of the site. If any action or development has not taken place on this land within twelve months of the date of this report, the findings of this survey should be reviewed by a suitably qualified ecologist and may need to be updated in line with CIEEM's 'Advice Note on the Lifespan of Ecological Reports and Surveys' (2019)[7].

Results

There are no internationally designated sites in or partly within the search area.
The site falls on the northern extent of North York Moors National Park. There are no National Nature Reserves NNRs, Areas of Outstanding Natural Beauty AONBs, Local Nature Reserves LNRs, North Yorkshire SINC (Site of Importance for Nature Conservation) or Yorkshire Wildlife Trust Reserves within 2 km of the site. There are no irreplaceable habitats within the site boundary.

The site was found to consist of intensively grazed pasture, it is currently used as winter grazing for the owners horses. The species present were indicative of modified grassland of low distinctiveness. Horses were present in the field at the time of survey. There is one small fruit tree present that has been planted on the site.

[6] Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. 2020. The UK Habitat Classification User Manual Version 1.1. Accessed from: http://www.ukhab.org/

[7] Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM, Winchester. Available online: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

SSM

The baseline habitats found within the site are shown in the table below:

Habitat		C. Strategic significance	Areas (M^2)			Baseline results		
A. Broad Habitat	B. Habitat type		D. Total Area	E. Area retained	F. Area enhanced	Total habitat units onsite	Area Lost	Units lost
Grassland	Modified grassland	Area not in local strategy	2239	0	0	0.8956	2239	0.8956
Urban	Artificial unvegetated, unsealed surface	Area not in local strategy	653	0		0.0000	653	0.0000
Urban	Urban Tree	Area not in local strategy	5	5	5	0.0036	-5	-0.0036

All modified grassland on site will be lost to development. The one tree currently present will be relocated.

Proposed habitat creation on site will include a sedum roof on part of the main house, a neutral grassland mix for the majority of the garden area, with a neutral grassland mix enhanced with wildflowers on the grass banking.

		Condition Assessment		D. Strategic significance	E. Total Area Areas (M^2)	Habitat units created onsite
A. Broad Habitat	B. Habitat type	Acceptable condition options	C. Targeted condition			
Grassland	Other neutral grassland	Moderate, Good	Moderate	Area not in local strategy	1803	1.2070
Urban	Other green roof	Moderate, Good	Moderate	Area not in local strategy	49	0.0176
Grassland	Other neutral grassland	Moderate, Good	Good	Area not in local strategy	186	0.1563
Urban	Developed land; sealed surface	N/A - Other	N/A - Other	Area not in local strategy	854	0.0000

In addition a further 5 fruit trees will be planted on site. These are captured in the urban tree area calculator below.

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

Tree size (Diameter at breast height)	A. Total number of trees pre development	B. Number of trees lost to development	C. Number of trees retained & enhanced post development	D. Number of new trees planted post development	Areas			
					Area pre development	Area lost to development	Area Enhanced by development	Area of new trees planted post development
Small -DBH ≤ 30cm	1	0	1	5	5	0	5	23
Medium - DBH > 30 to≤ 90cm					0	0	0	0
Large - DBH > 90cm					0	0	0	0
Total	**1**	**0**	**1**	**5**	**5**	**0**	**5**	**23**

The following table outlines the headline results from the SSM calculations. As can be seen from the table, BNG targets are met, the scheme actually delivers a 55.26% gain, which is well in excess of the 10% requirement.

Headline		**BNG Targets Met**	
Next steps		**Submit metric to LPA**	
Total net unit change	***Habitat units***	**0.4969**	
	Hedgerow units	**0.0000**	
	River units	**0.0000**	
Total net % change	***Habitat units***	**55.26%**	
	Hedgerow units	**% target not appropriate**	
	River units	**% target not appropriate**	

Discussion/Recommendations

A walkover of the site and assessment of the habitats present has identified low distinctiveness habitats present. A single dwelling residential development is proposed to be constructed on site.

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY

For the purposes of the metric it is assumed that all modified grassland will be lost during the construction process. Following completion of construction the area surrounding the house would be seeded to create other neutral grassland, being over sown with a wildflower / meadow mix including such species as borage, musk mallow, marjoram, cornflower, field sabious and greater knapweed. Commercially produced meadow mixes are available from a variety of sources. A wildflower rich neutral grassland will be created on the grass banking adjacent to the vehicular access.

An alternative to commercially available mixes would be the use of seeding via green hay. Green hay, taken from a species rich donor site and spread on a species poor recipient site is a method of restoring and recreating wildflower grasslands. Green hay is harvested wildflowers and grasses just as they are shedding seed and still 'green'. The hay is quickly transferred to the species-poor recipient site where it is spread allowing the seed to drop. Green hay can be relatively cheap; however the logistics of transferring the hay quickly need to be carefully planned. This means that the donor and recipient sites must be close together. Using green hay can be a very successful method of undertaking grassland restoration and recreation.

A lean to on the main house will be fitted with a green roof. A sedum roof has been proposed. Sedum roofs tend to require lower levels of maintenance than other green roofs. The five additional small urban trees, fruit trees, are to be planted in the neutral grassland, exact location is yet to be confirmed.

A suitable maintenance scheme will have to be established to ensure the condition of the habitats established on site. This should include yearly maintenance of the sedum roof in line with the installers prescribed treatments. It is anticipated to include yearly feeding and weeding, and ensuring good drainage. The other neutral grassland should be subject to a suitable management routine to ensure it establishes well and doesn't become rank over time. The site should be mown regularly in the first year after sowing, to encourage the perennial flowers and grasses to make strong root growth. Cut to a height of 5cm (2in), about six to eight weeks after the seedlings appear, and repeat every two months throughout the first summer. These cuts can be lower, at 4cm (1½in). Once established it is recommended that the area is subject to a main summer cut, between late June and the end of August, the cut vegetation should be left in situ for some days to allow the seeds to drop and reseed for the following year.

Mark Tarrant

Director

Esk Valley Environmental Ltd
Brookfield Farm,
The Howe,
Whitby,
North Yorkshire.
YO21 2EY