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19/06/2023

Dear Rick,

RE: Biodiversity Net Gain Calculation, Old Miner's Rescue Station v3

Further to your request to complete a Biodiversity Impact Assessment for the proposed redevelopment of the Old Miner's Rescue Station, I write to confirm that the assessment has been completed and revised as per our discussions. The process has been iterative and with the scheme adapted from earlier calculations in order to achieve net gain for biodiversity.

I can confirm that the final scheme is able to achieve net gain of 24.85% habitat units.

The appendix sets out an outline of the method used in the assessment and the baseline habitat condition data. I have also provided an Excel spreadsheet with the full calculation.

The calculation isn't as simple as providing a 10% increase in green space, as the baseline accounts for the canopy and understorey of trees (thereby having a greater surface area than the green space at floor level), and the calculation is weighted by the time that new habitats take to mature, risks of the habitat failing, and the biodiversity value of the chosen new habitats. The calculation also highlights where habitats of greater distinctiveness are lost to those of lower distinctiveness (these are known as the Trading Rules, where projects should aim to not Trade Down from habitats of higher to lower distinctiveness, and where medium or greater distinctiveness habitats are lost, habitats of the same broad type should be created in compensation).

The pre-interference site is a developed area of land, with minimal existing habitats (limited to two small areas of grass lawn, introduced shrubs and two mature holly trees). You have confirmed that you are mostly retaining the existing green areas, but in order to return the existing green space into a memorial garden, there will be a small loss of the grassland (a 1 m strip (14 m²)) and all of the existing shrubs, which will be replanted as a rose garden ('introduced shrubs' in the calculation). The scheme now also includes two new areas of mown grassland (19 and 25m²) one of which also includes a small tree (up to 30cm dbh when at 30 years old).

As the existing grass lawn is surprisingly species rich (it even includes a single stand of common spotted orchid), it qualifies as medium distinctiveness. Therefore, a scheme that compensates for loss to this habitat should include other medium distinctiveness grassland habitats to meet the Trading Rules. However, as the area we are dealing with is very small, it will be difficult to create such habitats. I trust that the LPA will agree with this approach.

With kind regards,


Jo Pedder 

Appendix 1 Method

Biodiversity Impact Assessment Method

The metric used for this assessment was the Natural England Joint Publication Biodiversity Metric 3.1 Auditing and Accounting for Biodiversity (the Metric). Note that v4 of the metric has now been released, but Natural England state that

Users of previous versions of the Biodiversity Metric should continue to use that metric (unless requested to do otherwise by their client or consenting body) for the duration of the project it is being used for. This is because users may find that certain biodiversity unit values generated in biodiversity metric 4.0 will differ from those generated by earlier versions.

Given the small scale of the Site and its impacts, I consider that it is proportionate to keep with the same metric that we have been working on since June 2022.

Baseline

Baseline habitat data was obtained from an ecology survey conducted on the 22nd June 2022. Species lists and habitat types were recorded to UK Habitat Classification standards. Although a year has passed since the last field survey, given that the Site is mostly buildings and hardstanding with a small area of mown lawn, the habitats will not have changed such that the metric calculation would be affected.

Calculation

The Metric uses habitat as a proxy for wider biodiversity with different habitat types scored according to their relative biodiversity value. This value is then adjusted depending on the condition and location of the habitat to calculate 'biodiversity units' for that specific project or development. Biodiversity metric 3.1 incorporates similar but separate calculations for habitats that require a different method of measurement such as hedgerows, lines of trees, rivers and streams and street trees.

The Metric can be used to measure both on-site and off-site biodiversity changes for a project or development. The Metric accounts for the distinctiveness of habitats, the condition of habitats, the time habitats need to reach maturity, and some of the risks of failure associated with habitat creation and enhancement. In calculation terms, the change in biodiversity units is determined by subtracting the number of pre-intervention biodiversity units (i.e. those originally existing on-site and off-site) from the number of post-intervention units (i.e. those projected to be provided). It is important to note that achieving gains in biodiversity from the calculation does not necessarily mean a development meets any wider requirements of planning policy or law relating to nature conservation or biodiversity.

Appendix 2 Data

Table 1 - Pre-intervention habitats on site

Habitat Type	Area (ha)	Condition	Notes on habitat and condition selection
Grassland – other neutral grassland	0.0081	Poor	Too many species were recorded for this habitat to qualify as 'modified grassland', which would be typical of lawn. 'Other neutral grassland' is only other appropriate habitat. Only meets one of the condition criteria.
Urban - Developed land; sealed surface	0.1464	N/A - Other	
Urban – Introduced shrubs	0.0015	Condition Assessment N/A	
Urban – Urban tree	0.0081	Poor	Only meets one of the condition criteria.
Total	0.16		

Table 2 - Post-intervention habitats on site

Proposed habitat type	Area (hectares)	Condition	Notes
Grassland – other neutral grassland	0.0067	Poor	Very small area lost for new shrubs (rose garden)
Urban - Developed land; sealed surface	0.1439	N/A - Other	Only 'loss' of developed land is under the green roof.
Urban – Introduced shrubs	0.0029	N/A	These are new shrubs (rose garden) – the baseline shrubs are removed
Urban – Urban tree	0.0081	Poor	No impact
Urban – Urban tree	0.0041	Poor	Proposed small urban tree - up to 30cm dbh when at 30 years old, such as a silver birch
Grassland – Modified grassland	0.0044	Poor	Two small mown lawns to the east of the building.
Total	0.16		