

INCA Advice Note 21-08 LM Wind landscaping masterplan – calculation of biodiversity units

Introduction

This advice note details the biodiversity units (BDUs), which are predicted to be created as a result of the LM Wind landscaping masterplan. The masterplan is shown in Figure 1. The Environmental Impact Assessment for the South Industrial Zone, where LM Wind would be located, has assumed that all habitats in this area would be lost to development and has calculated the loss of BDUs on that basis. Any BDUs created through the landscaping masterplan would contribute towards compensating for this loss.



Figure 1. LM Wind landscaping masterplan

Calculations

The calculations have used the Defra BM2.0 metric to work out the BDUs. As all habitats existing prior to development are assumed to have been lost then the baseline for the calculations, in terms of BDUs, is zero.

The habitats in the masterplan fall into four categories. These are given below along with the equivalent BM 2.0 habitat category in parentheses;

- i) Maintained grassland (amenity grassland);
- ii) Low maintenance planting to car park zone (introduced shrub);
- iii) Native tree planting (urban woodland);
- iv) Tree planting to car park (street trees).

- i) Amenity grassland can achieve a maximum condition score of moderate. To do so it would require the inclusion of a variety of low growing wild flowers so that the grass can be maintained at a short level, albeit with a slight adjustment to the cutting height or frequency over the summer. This would give 3.59 BDUs/ha. Amenity grassland would cover 1.2ha thereby giving a total of **4.31** BDUs.
- ii) Introduced shrub can in theory achieve a condition score of good, but in a spatially constrained situation such as at LM Wind then it is more reasonable to assume that it would achieve moderate condition. This would be achieved by a mixture of species, between them providing flowers, berries and evergreen leaves for shelter, so that they benefit a range of wildlife. This would give 3.86 BDUs/ha. Introduced shrub would cover 0.17ha thereby giving a total of **0.66** BDUs.
- iii) Urban woodland is also theoretically able to achieve good condition but again it is more reasonable to assume that in such a spatially constrained location, where aesthetic considerations must be taken into account, that the target condition would be moderate. The proposed planting mix for this area contains a variety of native species which would be suitable to achieve moderate condition. This would give 3.09 BDUs/ha. Urban woodland would cover 0.26ha thereby giving a total of **0.79** BDUs
- iv) The BM2.0 calculation for the street trees is based on the area of their canopy and assumes 27 years to achieve their target condition. In order to calculate the total area, a 10m diameter for the canopy of each tree after 27 years has been assumed. A total of 200 trees would be planted giving a total area of 1.6ha. Street trees achieve 1.53 BDUs/ha thereby giving a total of **2.45** BDUs.

Conclusion

Assuming that the condition of each of the landscaping elements achieves a score of moderate, as outlined above, the total number of BDUs that are predicted to be achieved by the landscaping masterplan is **8.21**.