ECOLOGY TECHNICAL NOTE

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PLANNING I DESIGN I ENVIRONMENT

LOWER BERSE FARM, RUTHIN ROAD, WREXHAM - NET BENEFIT FOR BIODIVERSITY HABITAT CALCULATIONS

1.1 This technical note has been written in response to comments received from Emma Broad, LPA Ecologist for Wrexham County Borough Council (received by the Planning Officer on 2nd October 2024), regarding the provision of '*detailed figures on habitat gains vs losses*' in order to make an assessment of the provision of Net Benefit for Biodiversity for the scheme.

1.2 Further explanation of the Enhancements and the 'Net Benefit' stage of the step-wise approach are provided in the Green Infrastructure Statement (TEP Ref: 8745.013).

1.3 The following sets out the methods and assumptions made in producing the habitat losses and gains calculations along with a discussion of the results.

Method

1.4 In order to calculate the habitat gains versus losses across the site, the existing Phase 1 habitat survey (Figure 8.1 of the Environmental Statement; TEP Drawing Ref: G8745.018) and the most up to date Masterplan Framework (TEP Ref: PS9730.001I) have been digitised and the area of pre-development and post-development habitats have been calculated.

1.5 A number of assumptions have been made given that this is an outline application and detailed plans are not yet available. These include:

- Baseline habitats are considered to be lost or retained. It is anticipated that retained habitats will be enhanced through long-term management. During detailed design, it is anticipated that further areas of land can be identified as being retained and enhanced rather than lost.
- Baseline individual trees are identified from those mapped in the Phase 1 Habitat Survey and do not include trees within hedgerows or woodland.
- Post-development individual trees have been calculated from indicative tree locations shown on the Masterplan Framework. These are split between trees in public open spaces/ semi-natural settings and those planted along the roads, which are classed as Urban trees.
- Some post-development design elements have been grouped together to assist in providing as direct a comparison as possible of habitat gains versus habitat losses i.e. Post-development hardstanding and buildings includes: LAP, LEAP, local centre MUGA, NEAP, residential dwellings, roads and school (built area); post-development amenity grassland comprises grass verges.
- Since detailed design/ planting plans are not yet available for Drainage Attenuation (including swales), Public Open Space and Strategic Open Space these post-development areas cannot be directly compared with existing baseline habitats. However, it is assumed that they will comprise a mix of amenity grassland, wildflower meadow, native shrub and

woodland planting and can be indirectly aligned with the baseline habitats: poor semi-improved grassland; semi-improved neutral grassland; semi-natural broad-leaved woodland; dense scrub; and tall ruderal vegetation. This is shown in the results table by the coloured groupings for related baseline (salmon) and post-development (green) habitats.

Results

1.6 Tables 1, 2 and 3 set out the habitat losses and gains for the site with respect to habitat areas, linear habitats and individual trees. A further explanation is provided below each table.

Table 1: Area Habitats Losses and Gains

Area Habitats	Baseline Total (ha)	Baseline Lost (ha)	Baseline Retained (ha)	Created (ha)	Net Change	Net Change (ha) (using subtotals)
Arable	36.62	36.62			-36.62	-36.62
Improved grassland	22.01	22.01			-22.01	-22.01
Hardstanding and buildings	1.29	1.26	0.03	43.13	41.87	41.87
Amenity grassland	0.28		0.28	0.54	0.54	0.54
Standing water	0.01		0.01		0.00	0.00
Poor semi-improved grassland	5.59	5.36	0.23		-5.36	
Semi-improved neutral grassland	3.87	3.87			-3.87	
Semi-natural broad-leaved woodland	2.08	0.04	2.04		-0.04	
Dense/continuous scrub	0.70	0.33	0.37		-0.33	
Tall ruderal	0.41	0.41			-0.41	*-10.01*
Drainage Attenuation (including swales) - would likely be seeded with a wet grassland mix				2.54	2.54	
Public Open Space - to include a mix of amenity and wildflower meadow, native shrub planting				17.17	17.17	
Strategic Open Space - to include wildflower meadow, native shrub and woodland planting				6.52	6.52	*26.23*
TOTAL	**72.86**	**69.90**	**2.95**	**69.90**	**0.00**	**0.00**

* it is noted that 69.90+2.95 = 72.85 rather than 72.86 – this is due to rounding errors in the calculations

1.7 Table 1 sets out the baseline habitats and their areas along with the calculations based on the assumptions set out above of what habitats are lost and retained. The created habitats are those identified from the Masterplan Framework. The net change columns confirm that the area lost equals the area created, hence the zero value; this is not a measure of biodiversity value.

1.8 The calculation indicates that while arable land, improved grassland, semi-improved neutral grassland and the majority of poor semi-improved grassland, will be lost as a result of the proposals there will be a significant increase in habitats of higher ecological value which can be createdwith a diverse mix of wildflower meadow and wet meadow grasslands, native shrub planting and woodland, albeit with a requirement for some of this land to be managed as amenity grassland (a total of 26.23 ha as indicated by the green highlighted values in Table 1). This is an increase in areas compared with baseline habitats of similar ecological value (a total of 10.01 ha as indicated by the salmon highlighted values in Table 1). The provision of habitats of ecological value within the open space provision confirms a net benefit for biodiversity at this site. During detailed design, it is likely that some grassland and other habitats identified as being lost in the above calculations will be able to be retained and enhanced, further increasing the net benefit for biodiversity at this site.

Table 2: Linear Habitats Losses and Gains

Linear Habitats	Baseline Total (km)	Baseline Lost (km)	Baseline Retained (km)
Native species-rich defunct hedge	0.74	0.04	0.70
Native species-rich hedge and trees	3.48	0.43	3.05
Native species-rich intact hedge	1.52	0.03	1.50
Species-poor defunct hedge	0.53	0.29	0.24
Species-poor hedge and trees	0.24		0.24
Species-poor intact hedge	2.38	0.91	1.48
Running water	0.76	0.07	0.69
TOTAL	**9.65**	**1.76**	**7.89**

* there is no 'Created' column for hedgerows as these will only be identified at Detailed Design

1.9 Losses of linear habitats have been limited as far as is possible within the Masterplan Framework. There are significant opportunities for hedgerow creation, including hedgerows with trees, within Public Open Space, Strategic Open Space and development parcels which will be identified during Detailed Design and will likely lead to a net gain in hedgerow habitat within the site. Retained hedgerows will be enhanced and managed in the long-term as will the retained watercourse leading to an overall net benefit for biodiversity with respect to linear habitats.

Table 3: Individual Trees Losses and Gains

Trees	Baseline Total (number)	Baseline Lost (number)	Baseline Retained (number)	Created (number)
Scattered broad-leaved trees	32		32	653
Urban trees - along roads (excluding those in development blocks)				196
TOTAL	**32**	**0**	**32**	**849**

1.10 The losses and gains for trees indicates a significant increase in scattered tree cover for the site, delivering a net benefit for biodiversity, and in excess of the 3:1 ratio as required through Planning Policy Wales, with respect to these habitats.

Conclusions

1.11 The calculations of net benefit for biodiversity within this Technical Note are necessarily based on the Indicative Masterplan Framework and its interpretation taking account of the assumptions set out. Any permission granted would need to be subject to a condition requiring details to be submitted and approved, based on the proposals for layout, landscaping and ecological enhancement included within the detailed design. Nevertheless, the assessment undertaken at this stage clearly demonstrates the potential to achieve net benefit for biodiversity in association with this development, indeed, it is likely that the net benefit illustrated in this Technical Note can be exceeded as part of the final design.