
Jackson Fold Farm, Pilsworth Road, Bury, BL9 8QZ

Further Bat and Biodiversity Metric Calculation

24th January 2024

INTRODUCTION

Following feedback from Greater Manchester Ecology Unit (GMEU), further bat surveys and a Biodiversity Net Gain (BNG) metric calculation have been completed at Jackson Fold Farm, Pilsworth Road, Bury, BL9 8QZ (National Grid Reference SD 8209 5723).

Development proposals are to convert the outbuildings to dwellings and to construct a new set of stables with associated access and landscaping. Works will require the removal of existing agricultural sheds.

Further bat surveys and the Biodiversity Net Gain metric calculations have been completed by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking bat and habitat surveys as a professional ecological consultant with over twenty years' experience. Richard is also a licensed bat worker and holds a Level 4 FISC. The additional surveys were completed on the undertaken on the 22nd January 2024.

FURTHER BAT SURVEYS

Previous bat surveys completed in 2023 had been undertaken of a set of brick outbuildings as part of proposed works to convert the buildings. These surveys had comprised of an initial bat scoping survey followed by two sets of bat emergence surveys. The 2023 bat surveys did not record any evidence of roosting bats at the site.

However, the surveys had not examined a set of agricultural sheds located at the western end of the site. The agricultural sheds are now proposed for demolition. In order to update the ecology assessment of the site, an additional bat scoping survey of the agricultural sheds was completed.

The additional bat scoping assessment was undertaken on the 22nd January 2024. The location of the additional buildings is shown at Target Note 1 on Figure 1 in the Appendix. Photographs of the buildings are also provided in the Appendix.

The buildings comprise of three interconnected, open-sided, agricultural sheds. The buildings have concrete bases and the lower halves of the sheds are constructed of cinderblock which extends to a height of approximately 1.5 m. There are further block pillars which support wooden trusses which hold the roof.

The roof of two of the sheds are flat and constructed of corrugated metal panels. The south-most shed has metal trusses which support a shallow pitched roof which is clad in corrugated asbestos panels. The sheds have open sides with some sections clad in Yorkshire boarding and some sections clad in further corrugated asbestos and metal panels.

The sheds do not support any obvious suitable roosting habitat for bats. They do not support suitable crevice roosting features and the sheds are draughty and bright internally. Therefore, the sheds were assessed as offering a **negligible** bat roosting potential.

However, the sheds could be used by nesting swallow during the breeding season.

BIODIVERSITY METRIC CALCULATION METHODS

An ecological walkover/habitat assessment was carried out on the 22nd January 2024. This is not an ideal time of year to conduct habitat surveys as some plants species will have died back and may not be evident. However, given the habitats present, it was considered possible to appropriately assess broad habitat present from vegetative and dead plant matter.

Based upon the development proposals, the relative biodiversity units at the site before and after the proposed development have been calculated following methodologies and using tools provided within DEFRA's Statutory Biodiversity Metric Calculator Version (DEFRA November 2023).

Metrics use combinations of measurements to provide an assessment of the biodiversity value of a particular site. The metric allows the biodiversity impact of a development to be quantified so that the offset requirement, and the value of any compensatory action, can be clearly defined.

Metrics are transferable between sites and habitats, allowing an impact on one habitat type to be offset with conservation action elsewhere, or involving a different habitat type and/or quality of habitat.

The DEFRA Biodiversity Metric produces an assessment of the number of biodiversity units present at a site. The greater the number of units, the more valuable a site. The Tool uses the following measurements to produce an overall calculation of 'biodiversity units' present at a site:-

- Type and conservation value of habitats present
- The size of each habitat parcel
- Whether the site is in a location identified as a local nature priority

As the calculation takes account of all of the various factors above, this means that a small site comprising of habitats of high conservation value and distinctiveness can be calculated to have higher value in terms of biodiversity units than a larger area of low value habitat.

BIODIVERSITY NET GAIN CALCULATION

Existing Habitats

The study area is approximately 0.42ha in area and is located around the existing barn complex at Jackson Fold Farm.

The study site is located within a semi-rural setting to the south east of Bury. Immediate surrounding land uses comprise of agricultural land (principally horse grazed pasture owned by the applicant) and also land used for land fill which have been restored to grassland and woodland habitats. A further active landfill site is located immediately to the south of the site and the M66 motorway is located approximately 200m to the west of the site.

In summary, habitats located immediately around the farm buildings principally comprise of areas of hardstanding plus typical ruderal vegetation around the edges of the outbuildings plus small patches of modified grassland. There is an area of derelict pasture located at the site which has developed into a tall herb habitat dominated by nettle. There is a midden located to the rear of the outbuildings. There are some young, scattered trees also present around the outbuildings comprising of young, self-seeded ash, sycamore and elder.

Recorded habitats are described below in relation to the UKHab habitat classification system, along with an assessment of their 'condition' to allow calculation of the baseline biodiversity value of the site. Rationale behind condition scores is provided in the table below where relevant.

Table 1- Existing Habitats Summary Descriptions

Target Note	Habitat description	UKHab type and condition
2	There are areas of tarmac located adjacent to the main site hardstanding access road. The patches of tarmac are fringed with patches of short, modified grassland which comprises principally of perennial rye-grass, Yorkshire fog and common bent. There are scattered patches of soft rush, along with a small stand of bramble and some self-seeded willow saplings (less than 7.5cm DBH). The grassland is species-poor with approximately five species per metre square. Therefore, the grassland is assessed as being in a 'poor' condition.	Developed land/sealed surface & Modified Grassland (Poor condition)
3	At the north-west corner of the site, there is an area of disused land next to the farm buildings. The habitats have developed on former pasture and now comprises of a tall herb habitat comprising principally of nettle with some scattered broadleaved dock and Himalayan balsam. Ground layer is sparse and comprises principally of springy turf-moss with spear thistle and some scattered patches of Yorkshire fog. There are patches of species-poor, modified grassland around the farm buildings which comprises principally of perennial rye-grass, Yorkshire fog and common bent. Ruderal/Ephemeral- 'Poor' condition passes only Criterion C of 'Urban' Condition sheet. The grassland is species-poor with approximately four species per metre square. Therefore, the grassland is assessed as being in a 'poor' condition.	Ruderal/Ephemeral- 'Poor' condition & Modified Grassland (Poor condition)
4	Area of midden located to the rear of the farm buildings. There is a dead tree present here along with two young self-seeded trees (ash and sycamore). Trees assessed as being in a poor condition as they only pass criteria A and B. Artificial unvegetated, unsealed surface	Artificial unvegetated, unsealed surface. Individual rural tree-poor condition
5	Area of modified grassland which has developed around the footings of a former static caravan. Grassland comprises of short Yorkshire fog with nettle, docks, ragwort, creeping thistle and soft rush. The grassland is species-poor with approximately five species per metre square. Therefore, the grassland is assessed as being in a 'poor' condition.	Modified Grassland (Poor condition)
6		Ruderal/Ephemeral- 'Poor' condition

Target Note	Habitat description	UKHab type and condition
	This is an area of tarmac hardstanding located at the site entrance. There is a fringe of tall herb habitat present comprising of nettle and broadleaved dock with patches of bramble. Ruderal/Ephemeral- 'Poor' condition passes only Criterion C of 'Urban' Condition sheet.	

Proposed Habitats

The development proposals will convert two of the existing blocks of outbuildings to provide residential accommodation. A new stable block would also be constructed at the site.

New areas of vegetated garden will be created to the rear of the converted outbuildings with new areas of modified grassland to be seeded around the proposed stables and access road.

In order to deliver a biodiversity net gain, 9 x new native trees will be planted within the development site. Suitable species of native tree would include silver birch, alder, oak, rowan or wild cherry.

In addition, a new 700m² area of native mixed scrub habitat would be created along a field boundary within a horse-grazed pasture field located to the east of the site (see Figure 2). This area of land is under the same ownership as the applicant but outside of the red line planning boundary. The band of scrub would link to other areas of woodland located on Pilsworth Road and to a further block of woodland located to the north of the study site.

The existing land comprises of closely grazed, species-poor, modified grassland. The grassland comprises principally of Yorkshire fog with common bent and patches of soft rush with occasional herbs including common ragwort, creeping buttercup, nettle and broadleaved dock. The grassland supports approximately four species per metre square and is therefore considered to be species-poor and in a 'poor' condition.

The proposed scrub habitat would comprise of a mixture of native species which can provide nectar sources for insects and berries/fruits for invertebrates and birds.

The following small tree/scrub species are recommended as they offer suitable foraging opportunities to various native wildlife (including birds and invertebrates): hawthorn, blackthorn, hazel, elder, rowan, wild cherry, crab apple, and holly.

It is recommended that the scrub is planted in 5 parallel rows, with plants staggered between rows and located at approximate 1.5 m intervals.

The perimeter of the scrub habitat would be fenced off to prevent encroachment by horses.

The proposed habitats are shown on Figure 2 in the Appendix.

Biodiversity Metric Calculation Results

Based upon the proposals, the relative biodiversity units at the site before and after the completion of development proposals have been calculated following methodologies and using tools provided within the DEFRA's Statutory Biodiversity Metric Calculator Version (DEFRA November 2023).

The on-site, baseline biodiversity units are calculated at 0.4 biodiversity units and zero hedgerow units.

The on-site, biodiversity units after the completion of development are calculated at 0.17 biodiversity units and zero hedgerow units.

The off-site, baseline biodiversity units are calculated at 0.14 biodiversity units.

The off-site, biodiversity units after the completion of development are calculated at 0.47 biodiversity units.

Therefore, taking account of the on-site and off-site net changes, the development would result in a combined biodiversity net gain of 0.1 biodiversity units or a 25.84% gain in biodiversity units.

A copy of the Headline Biodiversity Metric Calculations are provided in the Appendix with the full calculations provided within the associated Metric Toolkit Spreadsheet.

APPENDIX*Biodiversity Metric Calculation Headline Results*

On-site baseline	Habitat units	0.40	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.17	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	-0.23	-57.08%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	0.14	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.47	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.33	234.73%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.10	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.10	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	25.84%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Photograph 1- View of the site looking West



Photograph 2- View of site from North



Photograph 3- View of the western half of site



Photograph 4- View of interior of buildings at Target Note 1



Photograph 5- View of interior of buildings at Target Note 1



Photograph 6- Tall ruderal habitat at Target Note 3



Photograph 7- Tarmac and modified grassland at Target Note 2



Photograph 8- Habitat at proposed location for off-site scrub planting

