# BIODIVERSITY IMPACT ASSESSMENT METRIC

## MILTON KEYNES EAST

MARCH 2021

Landscape Architecture
Masterplanning
Ecology

hda

**MILTON KEYNES EAST**

**HDA Ref: 2090.52**

**Client: St James**

**Date: 24th March 2021**

**TECHNICAL NOTE TO ACCOMPANY BIODIVERSITY IMPACT ASSESSMENT CALCULATIONS**

1. This briefing note accompanies the Biodiversity Impact Assessment calculation prepared in relation to the proposed development of land east of Milton Keynes, Buckinghamshire.

2. The Biodiversity Impact Assessment calculation is based on the landscape design shown on the *Illustrative Masterplan* (HTA Design, 2021) and further guidance from HTA Design. The outcome of the assessment should be taken as provisional and subject to review at the detailed design stage. The proposals provide a useful indication however of the likely effects of the proposed development on the habitat resource of the site and whether the development is likely to achieve 'net gain' for biodiversity as required under planning policy policy.

3. The Biodiversity Impact Assessment calculator used was Defra's 2019 Biodiversity Metric 2.0- Calculator. Extracts from the completed calculator are included in *Appendix A*.

4. The assessment of the baseline habitats and their corresponding condition assessments have been arrived at through field survey and review by a competent ecologist.

*Broad habitats*

5. The calculations for the losses and gains in broad habitats (e.g. cropland, grassland or woodland) indicated on the *Illustrative Masterplan* (HTA Design, 2021) are summarised in Table 1 below.

**Table 1:** Summary of losses and gains in broad habitats

| Habitat type | Baseline (prior to proposed works) | Type of impact | Post development | Overall Loss / Gain Post Development |
|---|---|---|---|---|
| Cropland | 323.37ha of cereal crop generating 646.74 biodiversity units. | Retention of 1.44ha. | 2.88 biodiversity units retained. | -643.86 biodiversity units and -321.93ha of cropland habitat. |
| Grassland | 33.23ha of modified grassland generating 79.05 biodiversity units. | Retention of 0.8ha. | 1.6 biodiversity units retained. | +364.57 biodiversity units and +68.22ha of grassland habitats. |
| | | Creation of 11.59ha of modified grassland. | 35.71 biodiversity units generated by creation of 11.59ha.<br><br>(Assuming it will become established in moderate condition in 10 years) | |
| | 21.98ha of other neutral grassland generating 206.81 biodiversity units. | Enhancement of 8.3ha of other neutral grassland. | 114.50 biodiversity units generated by enhancement of 8.3ha of other neutral grassland.<br><br>(Assuming it will become enhanced from fairly good to good condition in 10 years) | |
| | | Creation of 48.97ha of other neutral grassland. | 332.69 biodiversity units generated by creation of 48.97ha.<br><br>(Assuming 30.58ha will become established in fairly good condition in 12 years and 18.39ha will become established in moderate condition in 10 years) | |
| | 16.65ha of amenity grassland generating 34.65 biodiversity units. | Retention of 10.26ha. | 21.50 biodiversity units retained. | |
| | | Creation of 60.16ha of amenity grassland. | 179.08 biodiversity units generated by creation of 60.16ha of amenity grassland.<br><br>(Assuming 22.33ha will become established in poor condition in 1 year and 37.83ha will become established in moderate condition in 3 years) | |
| Aquatic habitats | 0.96ha of ditches generating 3.84 biodiversity units. | Enhancement of 0.22ha of ditch. | 1.57 biodiversity units generated by enhancement of 0.22ha of ditch.<br><br>(Assuming it will become enhanced from poor to fairly good condition in 7 years) | +113.58 biodiversity units and +8.84ha of aquatic habitats. |
| | 0.09ha of ponds and temporary ponds generating 0.68 | Retention of 0.07ha. | 0.53 biodiversity units retained. | |
| | | Enhancement of 0.02ha of ponds. | 0.36 biodiversity units generated by enhancement of 0.02ha of pond. | |

| | | | | |
|---|---|---|---|---|
| | biodiversity units. | | (Assuming it will become enhanced from poor to fairly good condition in 3 years) | |
| | | Creation of 6.38ha of ponds. | 87.03 biodiversity units generated by creation of 6.38ha of ponds.<br><br>(Assuming it will become established in moderate condition in 3 years) | |
| | 7.22ha of fens generating 182.67 biodiversity units. | Retention of 7.22ha. | 182.67 biodiversity units retained. | |
| | N/A | Creation of 3.2ha of reedbeds. | 28.61 biodiversity units generated by creation of 3.2ha of reedbeds.<br><br>(Assuming it will become established in good condition in 15 years) | |
| Woody habitats | 13.11ha of other mixed woodland generating 99.11 biodiversity units. | Retention of 5.16ha. | 34.06 biodiversity units retained. | +299 biodiversity units and +62.42ha of woody habitats. |
| | | Enhancement of 5.55ha of other mixed woodland. | 54.57 biodiversity units generated by enhancement of 5.55ha of other mixed woodland.<br><br>(Assuming it will become enhanced from moderate to fairly good condition in 10 years) | |
| | | Creation of 20.1ha of other mixed woodland. | 48.63 biodiversity units generated by creation of 20.1ha of other mixed woodland.<br><br>(Assuming it will become established in moderate condition in 25 years) | |
| | 1.27ha of other woodland – young trees generating 5.08 biodiversity units. | Retention of 0.6ha. | 2.40 biodiversity units retained. | |
| | 0.46ha of other broadleaved woodland generating 3.17 biodiversity units. | Enhancement of 0.46ha of broadleaved woodland. | 3.87 biodiversity units generated by enhancement of 0.46ha of broadleaved woodland.<br><br>(Assuming it will become enhanced from moderate to fairly good condition in 10 years) | |
| | | Creation of 23.36ha of other broadleaved woodland. | 57.76 biodiversity units generated by creation of 23.36ha of other broadleaved woodland. | |

| | | | | |
|---|---|---|---|---|
| | | | (Assuming it will become established in fairly good condition in 32+ years) | |
| | 1.42ha of mixed scrub generating 6.25 biodiversity units. | Retention of 0.45ha. | 1.98 biodiversity units retained. | |
| | | Creation of 21.85ha of mixed scrub. | 201.13 biodiversity units generated by creation of 21.85ha of mixed scrub.<br><br>(Assuming it will become established in fairly good condition in 5 years) | |
| | N/A | Creation of 1.15ha of traditional orchard. | 8.95 biodiversity units generated by creation of 1.15ha of traditional orchard.<br><br>(Assuming it will become established in fairly good condition in 25 years) | |
| Amenity planting | N/A | Creation of 28.5ha of vegetated gardens. | 55.01 biodiversity units generated by creation of 28.5ha of vegetated gardens.<br><br>(Assuming it will become established to poor condition in 1 year) | +60.63 biodiversity units and +29.47ha of amenity planting. |
| | | Creation of 0.97ha of allotments. | 5.62 biodiversity units generated by creation of 0.97ha of allotments.<br><br>(Assuming it will become established to fairly poor condition in 1 year) | |

6. *Table 1* above identifies that the emerging development proposals would result in a total increase in biodiversity units for broad habitats of +184.04 units (gain). This is a 14.51% increase over the baseline value of the site, thereby providing a strong indication that the proposed development would exceed the 10% threshold to be considered as delivering a biodiversity net gain[1].

7. In addition, the value of the site for biodiversity could be further enhanced through delivery of measures set out in the 2021 EIA which are not represented in the Biodiversity Impact Assessment calculation[2]. These measures include:
    - Provision of features for bats and breeding birds on new buildings and existing trees, and creation of habitat piles within areas of informal open space.
    - Use of fruit and nut producing species, and pollen and nectar-rich species in the formal landscape planting scheme.
    - Provision of box-type compost bins within the site/gardens of the proposed development to provide habitat for invertebrates, amphibians and reptiles.

[1] Defra's Net Gain Consultation Proposals (December 2018) indicates that "*a 10% gain in biodiversity units would be a suitable level of net gain to require in order to provide a high degree of certainty that overall gains will be achieved, balanced against the need to ensure any costs to developers are proportionate.*"
[2] This is due to inherent limitations in the Defra metric calculator.

- Provision of gaps in boundary fencing to allow movement of wildlife such as Hedgehogs around the site.
- Sensitive use of lighting to avoid adverse effects on nocturnal wildlife.

*Linear habitats*

8. The Linear Impact Assessment calculation based on the loss/gain of 'linear features' (e.g. hedgerows, treelines) currently depicted comes out at +8.51 units (gain). This is an increase of approximately 3.01% of the baseline value, thereby indicating no net loss of biodiversity.

9. Although it should be noted that the 'broad habitats' described above will provide a substantial contribution towards habitat connectivity, the emerging landscape proposals indicate further opportunities for provision of linear habitat provision and St James has confirmed that further linear habitats, equivalent to approximately 5km of species-rich hedgerows with trees in good condition, will be provided to achieve a minimum of 10% net gain in linear habitats.

*Conclusion*

10. The Biodiversity Impact Assessment calculation based on the emerging landscape scheme currently indicates that a 14.51% net gain in biodiversity in broad habitats and no net loss of linear habitats would arise as a result of the proposed development[3]. St James has confirmed that further linear habitats will be provided to achieve a minimum 10% net gain for both broad and linear habitats.

CB 24/03/2021

[3] Please note that the calculation is provisional and should be reviewed at appropriate design stages.

**Appendix A**

Extracts from Biodiversity Offsetting Calculation

**Newport Pagnell**

# A-1 Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| | Habitats and areas | | | Habitat distinctiveness | Habitat condition | Ecological connectivity | Strategic significance | Suggested action to address habitat losses | Ecological baseline | Retention category biodiversity value | | | | | | | | Bespoke compensation agreed for unacceptable losses | Comments | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ref | Broad Habitat | Habitat type | Area (hectares) | Distinctiveness | Condition | Ecological connectivity | Strategic significance | | Total habitat units | Area retained | Area enhanced | Area succession | Baseline units retained | Baseline units enhanced | Baseline units succession | Area lost | Units lost | | Assessor comments | Reviewer comments |
| 1 | Cropland | Cropland - Cereal crops other | 323.37 | Low | N/A - Agricultural | Low | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 646.74 | 1.44 | | | 2.88 | 0.00 | 0.00 | 321.93 | 643.86 | | Areas of agricultural crops across the site. Area to be retained associated with field in the north of the site within which no proposals are shown. | |
| 2 | Grassland | Grassland - Modified grassland | 20.64 | Low | Poor | Low | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 41.28 | 0.8 | | | 1.60 | 0.00 | 0.00 | 19.84 | 39.68 | | Area of improved grassland as described in TN131. Species indicative of G4 UK habitat classifications. In poor condition due to the dominance of undesirable species such as Perennial Rye-grass and White Clover, with very little other sward speices with a contibuting factor of heavy cattle grazing. | |
| 3 | Grassland | Grassland - Modified grassland | 12.59 | Low | Fairly Poor | Low | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 37.77 | 0 | | | 0.00 | 0.00 | 0.00 | 12.59 | 37.77 | | Areas of semi-improved grassland as described in TN174,175,176,177. Species indicative of G4 UK habitat classifications. Assessed in fairly poor condition due to heavy cattle grazing and the high percentage of undesirable species, such as Perennial Rye-grass and White Clover. However, common wildflowers can be found the sward. | |
| 4 | Grassland | Grassland - Other neutral grassland | 0.72 | Medium | Moderate | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 6.34 | 0 | | | 0.00 | 0.00 | 0.00 | 0.72 | 6.34 | | Area of semi-improved grassland as described in TN180. Species indicative of G4 UK habitat classifications in moderate condition. Physical damage to sward over 5% due to light sheep grazing, failing one condition criteria. | |
| 5 | Grassland | Grassland - Other neutral grassland | 16.49 | Medium | Fairly Good | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 181.39 | | 8.3 | | 0.00 | 91.30 | 0.00 | 8.19 | 90.09 | | As described in TN173. Areas of grassland communties characteristic of NVC classification MG4 (Meadow Foxtail - Great Burnet grassland). However during an assessment of the area in May and August 2019, area found to more closely relate to 'other neutral grassland', in good to moderate contion. Notwithstanding this, the grassland is relatively speices rich in comparison to that occuring elsewhere. Some of this will be lost due to road constuction. However an additional 30.58ha of lowland meadow is to be created across the site. | |
| 6 | Urban | Urban - Amenity grassland | 1.35 | Low | Fairly Poor | Low | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 4.05 | 0.26 | | | 0.78 | 0.00 | 0.00 | 1.09 | 3.27 | | As described in TN9, 4,12,65, 215, 225 areas of amenity grassland assessed in poor condition due to species-fairly poor grassland which is heavily managed. | |
| 7 | Woodland and forest | Woodland and forest - Other woodland; mixed | 5.72 | Medium | Moderate | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 50.34 | | 5.55 | | 0.00 | 48.84 | 0.00 | 0.17 | 1.50 | | TN115, 147, 158 - Assessed in moderate condition as fails 4 condition criteria. However, woodland has a continous canopy, standing deadwood and mature trees with dying limbs.<br>TN2 - assessed in moderate condition, due to dense scrub layer and occasional areas of ground flora. | |
| 8 | Woodland and forest | Woodland and forest - Other woodland; Young Trees planted | 1.27 | Medium | Poor | Low | Area/compensation not in local strategy/ no local strategy | Same broad habitat or a higher distinctiveness habitat required | 5.08 | 0.6 | | | 2.40 | 0.00 | 0.00 | 0.67 | 2.68 | | TN11, 105, 251 - Assessed in poor condition due to planted woodland being sparce and open in character, with little understorey. Fails most condition criteria. | |
| 9 | Woodland and forest | Woodland and forest - Other woodland; broadleaved | 0.46 | Medium | Fairly Poor | Low | Within area formally identified in local strategy | Same broad habitat or a higher distinctiveness habitat required | 3.17 | | 0.46 | | 0.00 | 3.17 | 0.00 | 0.00 | 0.00 | | TN134 - Assessed in poor condition due to dominace of one tree species, ground flora sparse and open in character. Little standing deadwood within area. Fails most condition criteria. | |
| 10 | Urban | Urban - Developed land; sealed surface | 11.73 | V.Low | N/A - Other | N/A | Area/compensation not in local strategy/ no local strategy | Compensation Not Required | 0.00 | 10.94 | | | 0.00 | 0.00 | 0.00 | 0.79 | 0.00 | | Areas of hardstanding, roads and buildings across the site. | |
| 11 | Lakes | Lakes - Ditches | 0.96 | Medium | Poor | Low | Area/compensation not in local strategy/ no local strategy | Same broad habitat or a higher distinctiveness habitat required | 3.84 | | 0.22 | | 0.00 | 0.88 | 0.00 | 0.74 | 2.96 | | Condition assessed as poor due to failing most of the condition criteria. The majority of the ditches across the site are dry or hold inconsistent water levels with little submerged plants. | |
| 12 | Lakes | Lakes - Ponds (Non- Priority Habitat) | 0.02 | High | Poor | Medium | Within area formally identified in local strategy | Same habitat required | 0.15 | | 0.02 | | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | | TN118 - assessed in poor condition due to high percentage of duckweed and lack of other aquatic or marginal vegetation. The water appears to be heavily polluted due to runoff from the farm, and waste materials such as old tyres were recorded within the water.<br>TN226 - Two newly created ponds with no marginal or aquatic vegetation within amenity grassland. | |
| 13 | Urban | Urban - Artificial unvegetated, unsealed surface | 3.51 | V.Low | N/A - Other | N/A | Area/compensation not in local strategy/ no local strategy | Compensation Not Required | 0.00 | 0 | | | 0.00 | 0.00 | 0.00 | 3.51 | 0.00 | | Areas of earth farm track across the site. | |
| 14 | Lakes | Lakes - Temporary lakes, ponds and pools | 0.07 | High | Poor | Medium | Within area formally identified in local strategy | Same habitat required | 0.53 | 0.07 | | | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | | Seasonally wet areas within TN115,116 woodland are free from human interference and refill and drain naturally. Assessed as Poor condition due to the ponds being very heavily shaded with no aquatic vegtation and are predicted to have heavy agricultural run-off. Occasional marginal plants present. | |
| 15 | Woodland and forest | Woodland and forest - Other woodland; mixed | 0.78 | Medium | Fairly Poor | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 5.15 | 0.78 | | | 5.15 | 0.00 | 0.00 | 0.00 | 0.00 | | TN219 - Area of mix planted woodland assessed as fairly poor condtion as dominated by Scot's Pine and consistent planting pattern visible. | |
| 16 | Woodland and forest | Woodland and forest - Other woodland; mixed | 6.61 | Medium | Fairly Poor | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 43.63 | 4.38 | | | 28.91 | 0.00 | 0.00 | 2.23 | 14.72 | | TN10, 50, 64, 71, 83, 208, 260 - Areas of mixed planted woodland, assessed as poor to fairly poor condition as failing multiple condition criteria and little ground flora. | |
| 17 | Urban | Urban - Amenity grassland | 15.3 | Low | Poor | Low | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 30.60 | 10.36 | | | 20.72 | 0.00 | 0.00 | 4.94 | 9.88 | | Areas of amenity grassland within site. Poor condtion due to failing most of the condition criteria. | |
| 18 | Heathland and shrub | Heathland and shrub - Mixed scrub | 1.42 | Medium | Poor | Low | Location ecologically desirable but not in local strategy | Same broad habitat or a higher distinctiveness habitat required | 6.25 | 0.45 | | | 1.98 | 0.00 | 0.00 | 0.97 | 4.27 | | TN16 - Assessed in poor condition due to failing most of the condition criteria. | |
| 19 | Grassland | Grassland - Other neutral grassland | 4.77 | Medium | Poor | Low | Area/compensation not in local strategy/ no local strategy | Same broad habitat or a higher distinctiveness habitat required | 19.08 | 0 | | | 0.00 | 0.00 | 0.00 | 4.77 | 19.08 | | Areas of grassland in poor condition due to high dominance of tall ruderal species including Common Nettle along the banks of the River Ouzel and M1. | |
| 20 | Wetland | Wetland - Fens (upland and lowland) | 7.22 | V.High | Fairly Good | Medium | Within area formally identified in local strategy | Bespoke compensation likely to be required | 182.67 | 7.22 | | | 182.67 | 0.00 | 0.00 | 0.00 | 0.00 | | Area of wetland, comprising reeds, sedges, willows and alder with pools throughout. Lies between the River Ouzel and a tributary. Land not proposed for development. | |
| 21 | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |
| | | Total site area ha | 435.00 | | | | | Total Site baseline | 1268.05 | 37.30 | 14.55 | 0.00 | 247.61 | 144.35 | 0.00 | 383.15 | 876.09 | | | |

**Newport Pagnell**

## A-3 Site Habitat Enhancement

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| | Baseline habitats | Post development/ post intervention habitats: Change in distinctiveness and condition | | | Area (hectares) | Distinctiveness | Condition | Ecological connectivity | Strategic significance | Temporal multiplier | Difficulty multipliers | Habitat units delivered | Comments | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baseline ref | Baseline habitat | Proposed habitat (Pre-populated but can be overridden) | Distinctiveness change | Condition change | | | | Ecological connectivity score | Strategic significance | Time to target condition/years | Difficulty of enhancement category | | Assessor comments | Reviewer comments |
| 5 | Grassland - Other neutral grassland | Grassland - Other neutral grassland | Medium - Medium | Fairly Good - Good | 8.3 | Medium | Good | Low | Location ecologically desirable but not in local strategy | 10 | Low | 104.09 | Remaining grassland within the west of the site to be enhanced with sensitive management. Assessed as good condition as within an area of green space and adjacent complimenting habitats. | |
| 7 | Woodland and forest - Other woodland; mixed | Woodland and forest - Other woodland; mixed | Medium - Medium | Moderate - Fairly Good | 5.55 | Medium | Fairly Good | Low | Location ecologically desirable but not in local strategy | 10 | Medium | 54.57 | Current mixed woodland areas to be enhanced through woodland management. Assessed as fairly good condition due to likelyhood of some disturbance through recreational pressure. | |
| 9 | Woodland and forest - Other woodland; broadleaved | Woodland and forest - Other woodland; broadleaved | Medium - Medium | Fairly Poor - Fairly Good | 0.46 | Medium | Fairly Good | Low | Within area formally identified in local strategy | 20 | Medium | 3.87 | Current broadleaved woodland areas to be enhanced through woodland management. Assessed as fairly good condition due to likelyhood of some disturbance through recreational pressure. | |
| 11 | Lakes - Ditches | Lakes - Ditches | Medium - Medium | Poor - Fairly Good | 0.22 | Medium | Fairly Good | Low | Area/compensation not in local strategy/ no local strategy | 7 | Medium | 1.57 | Ditches located within the central area of the site to be enhanced with scrub and woodland planting. Additional opportunities to plant aquatic and marginal vegetation within the ditch. | |
| 12 | Lakes - Ponds (Non- Priority Habitat) | Lakes - Ponds (Non- Priority Habitat) | High - High | Poor - Fairly Good | 0.02 | High | Fairly Good | Medium | Within area formally identified in local strategy | 3 | Low | 0.36 | Ponds to be enhanced with removal of debris and agricultural run-off expected to decrease due to change of land use. | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | Total site area | 14.55 | | | | | | Enhancement total | 164.45 | | |

**Newport Pagnell**

# A-2 Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| Post development/ post intervention habitats | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Proposed habitat | Area (hectares) | Distinctiveness | Condition | Ecological connectivity | Strategic significance | Temporal multiplier: Time to target condition/years | Difficulty: Difficulty of creation category | Habitat units delivered | Comments: Assessor comments | Comments: Reviewer comments |
| Cropland - Traditional orchards | 1.15 | High | Fairly Good | Medium | Within area formally identified in local strategy | 25 | Low | 8.95 | Orchards - Assessed as fairly good condition with sensitive mangement, encouraging pollentors and providing habitat linkages to the wider area. Orchard - Formally identified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). | |
| Grassland - Other neutral grassland | 30.58 | Medium | Fairly Good | Low | Location ecologically desirable but not in local strategy | 12 | Low | 219.36 | Species-rich grassland to be created around the site. Mainly in association with the River Ouzel. In addition, around attenuation basins, community paths and allotments. | |
| Grassland - Modified grassland | 11.59 | Low | Moderate | Low | Location ecologically desirable but not in local strategy | 10 | Low | 35.71 | Areas of grassland around road network and paths. These areas also include scattered tree planting which will enhance its habitat value. Assessed as moderate due to the proximity of main roads and likely management regimes for visability splays. | |
| Grassland - Other neutral grassland | 18.39 | Medium | Moderate | Low | Location ecologically desirable but not in local strategy | 10 | Low | 113.33 | Areas of grassland bordering playing fields, smaller road networks and community spaces. Not intensively managed. Assessed as moderate condition as likely some routine management requirement. | |
| Heathland and shrub - Mixed scrub | 21.85 | Medium | Fairly Good | Low | Location ecologically desirable but not in local strategy | 5 | Low | 201.13 | Native scrub planting around the site. Lining public paths and residential land parcels. | |
| Lakes - Ponds (Non- Priority Habitat) | 6.38 | High | Moderate | Medium | Within area formally identified in local strategy | 3 | Low | 87.03 | Wet attenuation basins and ponds across the site. To be sensitivly managed for wildlife. Area formally identified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). | |
| Urban - Allotments | 0.97 | Medium | Fairly Poor | Low | Area/compensation not in local strategy/ no local strategy | 1 | Low | 5.62 | Allotments located in the west of the site. Assessed as fairly poor condition due to limited influence over management. | |
| Urban - Developed land; sealed surface | 156.92 | V.Low | N/A - Other | N/A | Area/compensation not in local strategy/ no local strategy | 0 | Low | 0.00 | Aareas of hardstanding in the form of roads, buildings. | |
| Urban - Amenity grassland | 37.83 | Low | Moderate | Low | Area/compensation not in local strategy/ no local strategy | 3 | Low | 135.98 | Community grassland areas within green spaces. | |
| Urban - Vegetated garden | 28.5 | Low | Poor | Low | Area/compensation not in local strategy/ no local strategy | 1 | Low | 55.01 | Gardens within the site - Based on assumption of 70% hardstanding and 30% gardens within areas of 'Residential Use' Planting scheme around and within residential polts also considered within area. | |
| Wetland - Reedbeds | 3.2 | High | Good | Medium | Within area formally identified in local strategy | 15 | Medium | 28.61 | Reedbeds to be created in new ponds and wetland areas in the west of the site. Assessed in good condition as within area of green space and existing wetland habitat. Area formally identified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Woodland and forest - Other woodland; broadleaved | 23.36 | Medium | Fairly Good | Low | Within area formally identified in local strategy | 32+ | Medium | 57.56 | New native woodland to be created around the site. Assuming fairly good condition through woodland management. This is further enhanced by the scrub planting around the woodland edges. Area formally identified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). | |
| Woodland and forest - Other woodland; mixed | 20.1 | Medium | Moderate | Low | Location ecologically desirable but not in local strategy | 25 | Medium | 48.63 | Roadside woodland planting, cultivated with mixed species. Assuming moderate condition due to likelyhood of using fast growing species such as Scotts Pine and Silver Birch. | |
| Urban - Amenity grassland | 22.33 | Low | Poor | Low | Area/compensation not in local strategy/ no local strategy | 1 | Low | 43.10 | Playing fields and heavily managed areas of amenity grassland.<br>20% of emplomentzone included as vegetated areas. | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| **Totals** | **383.15** | | | | | | | **1040.02** | | |

**Newport Pagnell**

## B-1 Site Hedge Baseline

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

| | UK Habitats - existing habitats | | | Habitat distinctiveness | Habitat condition | Ecological connectivity | Strategic significance | | Ecological baseline | Retention category biodiversity value | | | | | | Comments | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baseline ref | Hedge number | Hedgerow type | length KM | Distinctiveness | Condition | Ecological connectivity | Strategic significance | Suggested action to address habitat losses | Total hedgerow units | Length retained | Length enhanced | Units retained | Units enhanced | Length lost | Units lost | Assessor comments | Reviewer comments |
| 1 | | Native Species Rich Hedgerow with trees - Associated with bank or ditch | 0.334 | High | Moderate | Medium | Within area formally identified in local strategy | Like for like | 5.07012 | | 0.334 | 0 | 5.07012 | 0 | 0 | Hedgerow retained and enhanced. | |
| 2 | | Native Hedgerow with trees - Associated with bank or ditch | 12.687 | Medium | Moderate | Low | Within area formally identified in local strategy | Like for like or better | 116.7204 | | 7.53 | 0 | 69.276 | 5.157 | 47.4444 | Some hedgerow loss due to road network and paths. Remaining hedgerows enhanced. | |
| 3 | | Native Hedgerow with trees - Associated with bank or ditch | 5.415 | Medium | Good | Low | Within area formally identified in local strategy | Like for like or better | 74.727 | 4.155 | | 57.339 | 0 | 1.26 | 17.388 | Some hedgerow loss due to road network and paths. Remaining hedgerows enhanced. | |
| 4 | | Native Hedgerow with trees - Associated with bank or ditch | 1.329 | Medium | Poor | Low | Within area formally identified in local strategy | Like for like or better | 6.1134 | | 1.184 | 0 | 5.4464 | 0.145 | 0.667 | Some hedgerow loss due to paths. Remaining hedgerows enhanced. | |
| 5 | | Native Hedgerow - Associated with bank or ditch | 3.292 | Medium | Moderate | Low | Within area formally identified in local strategy | Like for like or better | 30.2864 | | 1.983 | 0 | 18.2436 | 1.309 | 12.0428 | Some loss due to road network. Remaining hedgerows enhanced. | |
| 6 | | Native Hedgerow - Associated with bank or ditch | 2.565 | Medium | Good | Low | Within area formally identified in local strategy | Like for like or better | 35.397 | 0.897 | | 12.3786 | 0 | 1.668 | 23.0184 | Some loss due to road network and land parcels | |
| 7 | | Native Hedgerow - Associated with bank or ditch | 1.292 | Medium | Poor | Low | Within area formally identified in local strategy | Like for like or better | 5.9432 | | 1.292 | 0 | 5.9432 | 0 | 0 | Retained and enhanced | |
| 8 | | Native Hedgerow with trees | 0.498 | Low | Moderate | Low | Within area formally identified in local strategy | Same distinctiveness band or better | 2.2908 | | 0.27 | 0 | 1.242 | 0.228 | 1.0488 | Some loss due to pathways. Remaining enhanced. | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | Native Hedgerow | 0.842 | Low | Moderate | Low | Within area formally identified in local strategy | Same distinctiveness band or better | 3.8732 | | 0.717 | 0 | 3.2982 | 0.125 | 0.575 | Some loss due to pathways. Remaining enhanced. | |
| 11 | | Native Hedgerow | 0.102 | Low | Poor | Low | Within area formally identified in local strategy | Same distinctiveness band or better | 0.2346 | | | 0 | 0 | 0.102 | 0.2346 | Hedgerow lost | |
| 12 | | Line of Trees - Associated with bank or ditch | 0.212 | Low | Moderate | Low | Location ecologically desirable but not in local strategy | Same distinctiveness band or better | 0.9328 | | 0.212 | 0 | 0.9328 | 0 | 0 | Retained and enhanced | |
| 13 | | Native Hedgerow with trees | 0.15 | Low | Good | Low | Within area formally identified in local strategy | Same distinctiveness band or better | 1.035 | 0.15 | | 1.035 | 0 | 0 | 0 | Retained. | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | |
| | | Total Site length/KM | 28.72 | | | | | Total Site baseline | 282.62 | 5.20 | 13.52 | 70.75 | 109.45 | 9.99 | 102.42 | | |

**Newport Pagnell**

## B-3 Site Hedge Enhancement

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| | Baseline Habitats | Post development/ post intervention habitats: Proposed | Change in distinctiveness and condition | | Length KM | Distinctiveness | Condition | Ecological connectivity | Strategic significance | Temporal multiplier | Difficulty Multipliers | Hedge units delivered | Comments | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baseline ref | Baseline habitat | | Distinctiveness movement | Condition movement | | | | | Strategic significance | Time to target condition/years | Difficulty of enhancement Category | | Assessor comments | Reviewer comments |
| 1 | Native Species Rich Hedgerow with trees - Associated with bank or ditch | Native Species Rich Hedgerow with trees - Associated with bank or ditch | High - High | Moderate - Good | 0.334 | High | Good | Medium | Within area formally identified in local strategy | 20 | Medium | 5.90 | Hedgerows with trees across the site. Formally indentified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condition due to use of native species to plant up gaps and assuming rotational management to encourage flowering and producing a thicker more established hedgerow. | |
| 2 | Native Hedgerow with trees - Associated with bank or ditch | Native Species Rich Hedgerow with trees - Associated with bank or ditch | Medium - High | Lower Distinctiveness Habitat - Moderate | 7.53 | High | Moderate | Medium | Within area formally identified in local strategy | 10 | Medium | 94.08 | Hedgerows with trees across the site. Formally indentified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condition due to use of native species to plant up gaps and assuming rotational management to encourage flowering and producing a thicker more established hedgerow. | |
| 4 | Native Hedgerow with trees - Associated with bank or ditch | Native Species Rich Hedgerow with trees - Associated with bank or ditch | Medium - High | Lower Distinctiveness Habitat - Moderate | 1.184 | High | Moderate | Medium | Within area formally identified in local strategy | 10 | Medium | 11.61 | Hedgerows with trees across the site. Formally indentified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condition due to use of native species to plant up gaps and assuming rotational management to encourage flowering and producing a thicker more established hedgerow. | |
| 5 | Native Hedgerow - Associated with bank or ditch | Native Species Rich Hedgerow - Associated with bank or ditch | Medium - High | Lower Distinctiveness Habitat - Moderate | 1.983 | High | Moderate | Medium | Within area formally identified in local strategy | 5 | Medium | 25.69 | hedgerows across the site. Formaly indenified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condtion due to use of native species to plant up gaps and assuming rotational management to encorage flowering and producing a thicker more established hedgerows. | |
| 7 | Native Hedgerow - Associated with bank or ditch | Native Species Rich Hedgerow - Associated with bank or ditch | Medium - High | Lower Distinctiveness Habitat - Moderate | 1.292 | High | Moderate | Medium | Within area formally identified in local strategy | 5 | Medium | 13.87 | hedgerows across the site. Formaly indenified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condtion due to use of native species to plant up gaps and assuming rotational management to encorage flowering and producing a thicker more established hedgerows. | |
| 8 | Native Hedgerow with trees | Native Species Rich Hedgerow with trees | Low - Medium | Lower Distinctiveness Habitat - Moderate | 0.27 | Medium | Moderate | Medium | Within area formally identified in local strategy | 10 | Medium | 2.01 | hedgerows with trees across the site. Formaly indenified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condtion due to use of native species to plant up gaps and assuming rotational management to encorage flowering and producing a thicker more established hedgerows. | |
| 10 | Native Hedgerow | Native Species Rich Hedgerow with trees | Low - Medium | Lower Distinctiveness Habitat - Moderate | 0.717 | Medium | Moderate | Medium | Within area formally identified in local strategy | 10 | Medium | 5.33 | hedgerows across the site. Formaly indenified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condtion due to use of native species to plant up gaps and assuming rotational management to encorage flowering and producing a thicker more established hedgerows. | |
| 12 | Line of Trees - Associated with bank or ditch | Line of Trees - Associated with bank or ditch | Low - Low | Moderate - Good | 0.212 | Low | Good | Low | Location ecologically desirable but not in local strategy | 30 | Low | 1.09 | Hedgerows with trees across the site. Formally indentified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condition due to use of native species to plant up gaps and assuming rotational management to encourage flowering and producing a thicker more established hedgerow. | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | Total site length | 13.52 | | | | | | | 159.59 | | |

**Newport Pagnell**

# B-2 Site Hedge Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| | | Proposed habitats | | Habitat distinctiveness | Habitat condition | Multipliers: Spatial quality: Ecological connectivity | Multipliers: Spatial quality: Strategic significance | Multipliers: Temporal multiplier | Hedge units delivered | Comments | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Baseline ref | New hedge number | Habitat type | Length km | Distinctiveness | Condition | Ecological connectivity | Strategic significance | Time to target condition/years | | Assessor comments | Reviewer comments |
| 1 | | Native Species Rich Hedgerow with trees - Associated with bank or ditch | 1.5 | High | Good | Medium | Within area formally identified in local strategy | 20 | 11.22 | New hedgerows with trees to be planted across the site. Formally indentified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condtion due to use of native species and assuming rotational management. | |
| 2 | | Native Species Rich Hedgerow with trees | 10.6 | Medium | Good | Low | Within area formally identified in local strategy | 20 | 48.06 | New hedgerows to be planted across the site. Formally indenified in Buckinghamshire and Milton Keynes Biodiversity Action Plan (2010-2020). Assessed in good condition due to use of native species and assuming rotational management. | |
| 3 | | Line of Trees | 0.56 | Low | Moderate | Low | Location ecologically desirable but not in local strategy | 20 | 1.21 | Road side planting throughout road network | |
| 4 | | Line of Trees - Associated with bank or ditch | 0.13 | Low | Good | Low | Location ecologically desirable but not in local strategy | 30 | 0.29 | Tree planting along existing ditches in the centre of the site. | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| | | Creation Length/KM | 12.79 | | | | | | 60.79 | | |