

Preliminary Ecological Appraisal and Biodiversity Net Gain Assessment

Land at Station Yard, Woodend, Cleator

15th July 2024

Report 0724/3

Report commissioned by;

Daniel Sowerby

Sowerby House
Dearham
Cumbria

Report prepared by;



South Lakes Ecology
Survey and Habitat Management

Tamsin Douglas MSc MCIEEM
13 Rydal Road
Ulverston LA12 9BU
01229 582018

mail@southlakesecology.co.uk

EXECUTIVE SUMMARY

A Preliminary Ecological Assessment was carried out on a small area of land at Station Road, Woodend, Cleator. The landowner is applying for planning permission to construct a detached bungalow on the land.

The purpose of the survey was to identify protected and/or notable habitats and species which may be impacted by the proposed scheme, to determine the likelihood of these impacts and suggest whether further surveys are required to quantify these impacts or to propose mitigation to compensate for these impacts.

The council has also requested a Biodiversity Net Gain assessment is carried out, providing a 10% gain in biodiversity units.

A desktop search for records and information, a field survey, and a protected species data search were undertaken to establish species and habitats present on and around the land.

A total of 4 broad habitat types were recorded in the survey area, and these were mapped and described in their local context. Within the red line boundary habitats include hedgerow, bare ground/derelict land, hardstanding and stone wall. The wall will be retained, the hedgerow will also be retained but is likely to be damaged by the construction work. The derelict/ sparsely vegetated land and hardstanding will be lost to the development.

Numerous records of notable and protected species were collected. There are no notable records from the site, but nearby records of great crested newt, hedgehog, red squirrel and otter. There are no suitable breeding or hibernation features on the site, or near to the site (within 200m) suitable for these animals. Habitat on site is not especially suitable for foraging terrestrial amphibians (including great crested newts).

The features of ecological interest or concern which could be affected by the proposed works are:-

- **Resting and dispersing terrestrial mammals (hedgehog)**
- **Nesting birds in hedgerow/ scrub**

After analysing records in the context of this project, no further ecological surveys are required. The risk of encountering mammals such as hedgehog on site is considered to be slight, and can be managed through cautionary methods of work (detailed in the report). Any trimming or removal of trees to facilitate the construction work should be carried out after the bird nesting season (i.e. between September and March).

The habitats on site are of low ecological value and the loss of these areas can be compensated for by planting trees and establishing a species rich grassland. The new trees will connect to existing mature trees and hedgerows. The existing hedgerow will be enhanced, and a new hedgerow planted along the eastern boundary.

These new proposals will result in a 10.07% uplift in habitat biodiversity units, and a 91.28% uplift in hedgerow units for the project.

These enhancements to the habitats on site will exceed the threshold 10% net gain in biodiversity value, and meet the trading rules required.

A planting plan, management plan and monitoring plan have also been included in the report.

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1. INTRODUCTION

1.1 The aim of the survey

The aim of the survey was to identify any habitat or protected species issues or potential ecological constraints or concerns that would result from the proposed construction of a detached bungalow on land at Station Yard, Woodend.

The survey was carried out following technical guidelines provided by CIEEM (Chartered Institute of Ecology and Environmental Management) and mapped following UK Habitat Classification guidance (see Appendices for full references).

1.2 Biodiversity Net Gain

Following the Environment Bill 2021, a demonstrable net gain in biodiversity is required for most new developments (with some specific exceptions). This is mandatory for most projects from 12th February 2024, and for small sites from 2nd April 2024. As part of the assessment the current biodiversity value of the landholding is calculated, and compared with the likely biodiversity value of the land after the development after taking account of enhancement measures prescribed by the ecologist. The aim is for a minimum of a 10% gain in biodiversity value of the land after completion of the development.

The standard means of calculating Biodiversity Net Gain (BNG) is using the DEFRA Matrix 4.0, but this is not valid for this site as it is so small (and there is no priority habitat on site). For this site the DEFRA Small Sites Matrix is used. The full details and calculations are included in the appendices.

1.3 Proposed works

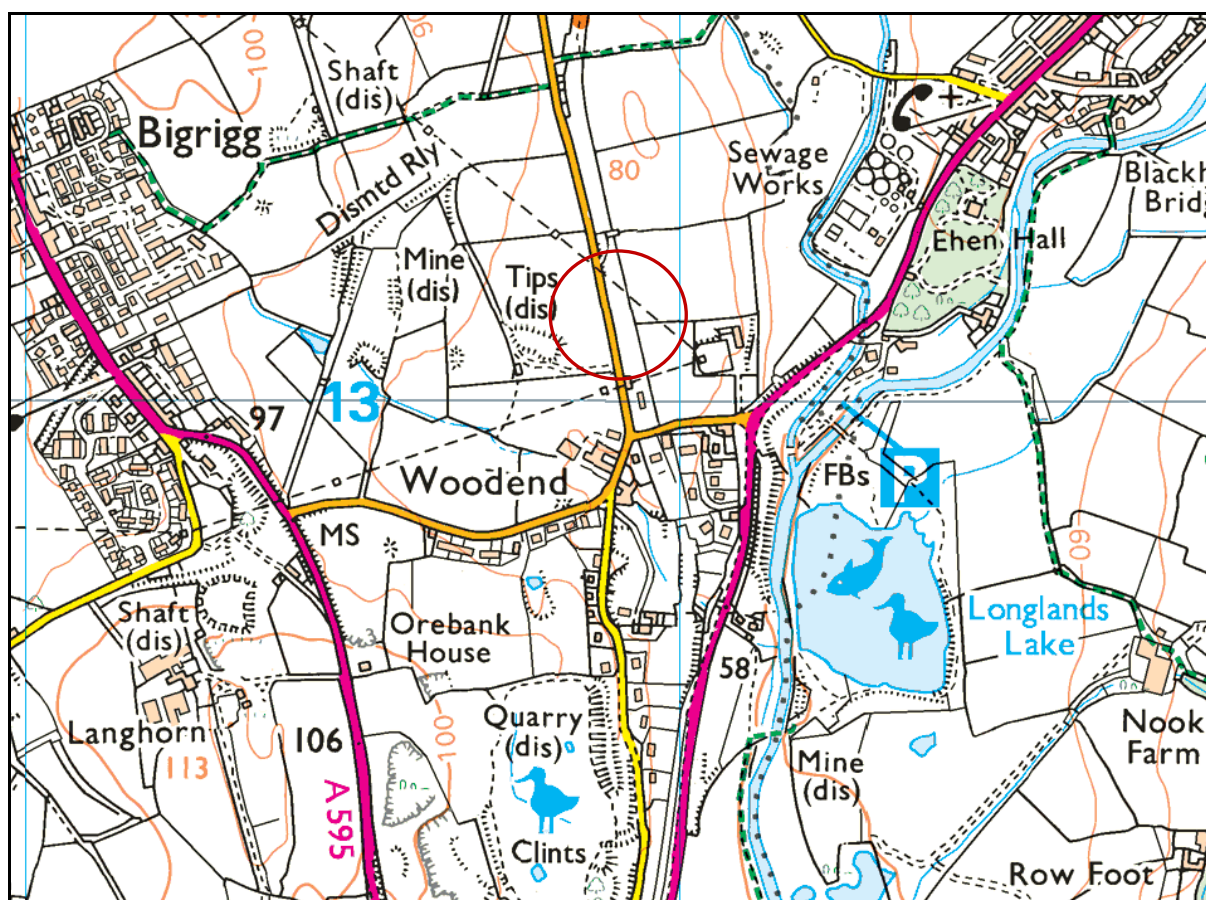
The land-owner is applying for planning permission to construct a detached bungalow (with associated access and services) on land previously part of the railway line.

There is no set timescale for the works.

1.4 The survey area/ zone of influence

The habitat survey was carried out on the proposed works area (site grid reference NY009 131). Adjacent open land and field parcels were surveyed using binoculars from the roadside or public rights of way. A zone extending to 500m from the development footprint was surveyed from public rights of way and access land to establish whether any ponds likely to support great crested newts were present.

Figure 1: Location of the proposed development



OS Map copied under licence (No. 100055725)

Figure 2: Aerial photograph showing surrounding habitat (red circle shows location)



Imagery date = 2023

2. SURVEY METHOD

2.1 Desktop study

Aerial photographs (Google Earth) and Ordnance Survey maps were used to assess the likely habitat types in and around the site, and to search for waterbodies that could host protected species such as great crested newts. Natural England and JNCC websites were used to obtain boundaries of any statutorily designated sites in the area.

Cumbria Biodiversity Data Centre was consulted and a data search requested for protected species within 2 km radius of the centre of the site.

2.2 Habitat survey

The extended phase 1 habitat survey was carried out by Tamsin Douglas MCIEEM (South Lakes Ecology) on July 12th 2024.

The area was walked over, and habitats within the study area were described and mapped using standard UK Habitats Classification methodology (UKHab 2020). The Professional edition of the UKHab guidance was followed, and habitats classed to level 5 of the hierarchy were applicable. Secondary codes were used with regard to land management, origin and habitat mosaics only. The minimum mappable unit was 25m², with target notes used to describe smaller features.

2.3 Protected species survey

Evidence of and potential for protected species was assessed on the site on 12th July 2024. In particular, the potential for the following species/ animal groups was assessed:-

Birds

The site was assessed for its potential to support notable bird species, or important assemblages of wintering or passage birds. In particular the habitats on site were assessed for their potential and likelihood to support breeding birds, and any evidence/ sightings noted.

Reptiles

The site was assessed for its potential to support reptiles such as common lizard, slow-worm and adder, following guidance issued in the 'Herpetofauna Workers Manual'.

Amphibians

A search of the site was made to identify and assess any possible breeding ponds for amphibians, notably great crested newt *Triturus cristatus*. Accessible ponds within 300m of the proposed development were assessed for suitability to host great crested newt using methods detailed by Oldham *et al* (2000). An assessment was also made of the quality of the habitat for foraging and potential for hibernation sites. Survey was carried out following guidance published in the 'Herpetofauna Workers Manual'.

Bats

The site was assessed for its suitability for roosting, foraging and commuting bats. Trees, buildings and other structures were appraised for likelihood of hosting roosting and/or hibernating bats, and topographical features of interest to commuting bats were noted. Survey followed methods described in the BCT Good Practice Guidelines (4th edition).

Terrestrial mammals

The potential of the site to support other protected terrestrial mammals, notably badger *Meles meles*, otter *Lutra lutra* and water vole *Arvicola amphibius* was assessed. Evidence of

activity such as badger setts/ otter holts, paths, latrines, droppings/ spraints and feeding signs were noted and appropriate guidance followed.

Other species

Presence of and potential for other protected and/ or notable species was recorded.

Potential of the site to support important invertebrate assemblages was inferred from habitat quality, and any sightings recorded.

2.4 Invasive species survey

The presence of any invasive species within the survey area was recorded and mapped.

2.5 Survey constraints

The weather (bright, warm and calm) was suitable for signs or sightings of most diurnal wildlife that is active in summer months, including most mammals and reptiles. As this was just a brief snapshot survey of the site, The likely presence of species mentioned above was inferred from the potential of the habitat to support them.

The time of year was suitable for assessing botanical quality of grasslands and other vegetation types.

The bird nesting season is coming to an end, with most birds not singing as regularly. The likelihood of breeding birds being present on the site was inferred from the habitat.

3. BASELINE ECOLOGICAL CONDITIONS

3.1 Desktop survey results

3.1.1 Protected and statutory sites search

There are several protected sites within 5km of the land at Woodend. The closest of these is River Ehen SSSI and SAC (Special Area of Conservation), designated for its population of freshwater pearl mussels, which is 375m to the south-east.

Table 1: Protected sites within 5km of proposed development

Protected area/ site	Description of interest	Distance from site
River Ehen SSSI	Freshwater pearl mussel	375m
River Ehen SAC	Freshwater pearl mussel	375m
Clints Quarry SSSI	Geological and botanical	600m
Florence Mine SSSI	Geological	2.7km
Black Moss SSSI	Botanical	2.7km
Haile Great Wood SSSI	Botanical	3.6km
St Bees Head SSSI	Geological, botanical & cliff nesting birds	5km

None of these protected areas are close enough to the site to be directly impacted by these proposals. The nature of the proposals, and distance from the statutory sites means that there is no requirement to consult with Natural England about this project.

3.1.2 Non-statutory sites and notable habitats search

No search was carried out for non-statutory sites as the project has such a small zone of influence. Deciduous woodland is the only notable habitat listed under section 41 of the NERC Act (previously known as BAP habitats) that is within 1km of the site (300m south).

Other notable habitats found within 2km of the site include lowland fens, wood pasture, ancient woodland and replanted ancient woodland.

3.1.3 Protected and notable species search

The data search from Cumbria Biodiversity Data Centre provided detailed records of protected, rare, scarce and alien species within 2km radius of the proposed works.

A search was carried out on the Magic website, which shows all EPS (European Protected Species) licences, and records from great crested newt pond surveys. There are no nearby positive records of great crested newt (there are negative ones within 600m) – the closest positive records are 1.7km to the west (on the other side of the A595), and 2.3km north.

The EPS licence search provided records of common pipistrelle, soprano pipistrelle, brandt's bat, whiskered bat and natterer's bat roosts within 5km of the land-holding.

A total of over 3600 records were produced by the data search, the vast majority of which were records of birds (almost 3000 bird records). A table of key species which are of notable consideration within the context of this project is shown in Table 2 below.

Notable bird species have not been included in the table below, unless they are of specific interest to this project, or have further legislative protection, as all species of bird are

protected whilst nesting. Bird records are also usually recorded at a tetrad (2km square) scale, so are over-represented in the data search as it will pick up records from up to 4 adjacent tetrads.

Invertebrate records are only included if they are within 500m of the site and likely to occur on habitats present on site. Aquatic species (such as fish and freshwater pearl mussel) have been excluded as there is no aquatic habitat on or near to the site.

Table 2: Species of conservation concern which have been recorded within 2km of the site

Species	Priority species listed under s41 of NERC Act 2006*?	Wildlife and Countryside Act 1981 (as amended) Sch 1,5 or 8.	Proximity to site	Number of records (most recent)
Common toad	Yes	Yes	0.5km	18 (2011)
Common frog		Yes	0.6km	20 (2011)
Palmate newt		Yes	0.5km	9 (2011)
Smooth newt		Yes	0.7km	5 (2011)
Great crested newt	Yes	Yes	0.5km	9 (2011)
Otter	Yes	Yes	0.4km	10 (2014)
Hedgehog	Yes		300m	80 (2020)
Red squirrel	Yes	Yes	0.4km	90 (2020)
Badger**			0.5km	2 (2011)
Bat (6 named species)	Yes	Yes	0.4km	37 (2020)
Slow worm	Yes	Yes	1.2km	1 (1988)
Common lizard	Yes	Yes	0.8km	1 (2009)

*Previously BAP (Biodiversity Action Plan) priority species

** Badgers protected under Protection of Badgers Act 1992

The nearest great crested newt record was an observation of 8 individuals in a pond at the edge of Woodend, 500m from the site.

The nearby otter record was of a spraint, suggesting that they pass through the local area.

There were several hedgehog records in the Woodend area (within 300m of the site), suggesting that they are active in the local area.

3.2 Habitat survey results

The habitats were mapped, following UKHab methodology (see methods section and appendices), as shown in Figure 3 in the appendices. Descriptions of the major habitats are given in section 3.2.2 below, and detailed target notes on habitats or species of interest included as appendices to this report.

Photographs of the area of the proposed works are provided at the end of the report.

Land adjacent to the site was assessed using binoculars, and is described in 3.2.4 below.

3.2.1 Habitats recorded within survey area

- h2 Hedgerow
- u1b Developed land sealed surface
- u1f Derelict ground (patchy vegetation)
- u1d Wall
- n/a Individual tree

3.2.2 Habitat descriptions

h2 – Hedgerows (h2b 70)

Hedgerows (boundary line of shrubs over 20m long) are of intrinsic value, aesthetically, ecologically and functionally. They have value as stock proofing, but also for birds and small mammals as they provide food and shelter/ nesting opportunities. Hedgerows that aren't as intensively managed (not flailed annually) are of higher value as they offer more nesting potential for birds and generally produce more berries. Hedges can also form important flightlines (navigational tools) for bats, and can provide sheltered foraging areas for them. Hedgerows can also be of importance as 'wildlife corridors', linking larger areas of habitat such as woodlands.

There is a gappy hedgerow on an earthbank along the west (roadside) boundary of the site. Species include hazel and hawthorn, with some ivy, rose and bramble.

The hedge on site provides good bird nesting potential, and habitat links to other roadside and boundary hedgerows and areas of rougher ground.

The hedge will probably be damaged by the proposals, but re-instated when construction is complete.



Hedgerow on
western roadside
boundary.

u1b – Developed land, sealed surface (hardstanding)

At the northern and western edges of the site is an area of hardstanding, providing the current vehicle access into the site from the roadside at the south-west corner (by the wall).

This area has no ecological value.

u1f – Derelict land (patchy vegetation) (u1f 17 77)

The bulk of the site comprises sparsely vegetated land. The original railway area has been extensively tipped on over the years, resulting in a compressed area of material. Vegetation has established in places, but overall cover is less than 50%. The densest cover is alongside the wall in the south-west corner, and along the fenceline to the east – with the central area having patchy cover.

Species are varied, but typical of newly establishing vegetation on disturbed urban sites. Creeping bent grass is frequent, with hairy willowherb, white clover, kidney vetch, lesser trefoil, pineapple weed and scarlet pimpernel. Some bramble is establishing in places. The denser vegetation along the boundaries includes dock, hogweed, creeping thistle, mullein, evening primrose and tufted vetch.

This habitat will have some (limited) value to nectaring invertebrates, foraging birds and small mammals. If left it will slowly establish a full cover of vegetation, likely to be dominated by tall ruderal species and establishing scrub.

All of this habitat will be lost to the development.



Patchy
vegetation and
derelict land.

u1d – wall

There is a short section of sandstone wall alongside the access point to the property from the road.

There are some gaps in the mortar which could be used by invertebrates, but this feature has little ecological value. The wall will be retained in the development.

Individual trees

There is one maturing hawthorn shrub at the south-west corner of the site.

This has some scope to host nesting birds, and will be lost to the proposals.

A summary table of the habitats described above and their importance in the context of British conservation and the legal framework is shown below (Table 3).

Table 3: Habitats of conservation concern

Habitat	Priority habitat listed under s41 of NERC Act 2006?*	Is habitat a notable consideration?
Hedgerows	Yes	Yes, but not being removed so no issue under Hedgerow Act
Hard standing	No	No
Sparsely vegetated ground	No	No
Wall	No	No
Tree	No	No

* Previously UK Biodiversity Action Plan (BAP) habitat

3.2.3 Surrounding habitat (adjacent to red line boundary)

To the east and west are agricultural habitats (pasture and silage fields). To the south is the scaffold yard with some scattered maturing trees. To the north along the old railway line are other areas of establishing vegetation on tipped material, some with good vegetation cover and dominated by tall herbs and ruderal species.

The proposals are very unlikely to impact surrounding habitats.

3.2.4 Ponds within 500m of the proposed development

One pond was shown on the OS map 400m to the south-west of the site, which does appear to have a record of great crested newt from it (8 individuals recorded in a newt survey carried out in 2011). The pond is not accessible/ visible from public rights of way or the road network so couldn't be further assessed.

Longland Lake is also within 500m (400m to the south-east), but this is a large water body with a good wildfowl population – and is unlikely to host breeding newts (there are no records from this waterbody in the data search).

No other ponds within 500m of the proposals were identified on aerial imagery, maps or from the field work.

3.3 Protected and notable species survey results

3.3.1 Birds

Nesting birds are likely within the hedgerow and scrub on the site. The remainder of the redline area is not suitable nesting habitat. Timing constraints need to be followed for any scrub or hedge removal/ trimming.

The site is not suitable for wintering or migratory birds.

3.3.2 Reptiles

The habitat onsite has low suitability for reptiles, and there are no nearby records. Surrounding habitat also has very low suitability as it is dominated by intensive agriculture.

It is considered very unlikely that any reptiles will be impacted by these proposals.

3.3.3 Amphibians

There are no waterbodies on site, or in the immediate vicinity – the closest is over 400m away. There are no good quality hibernation features on the site, or areas likely to appeal to foraging newts, as there is limited vegetation cover. Free ranging hens are also present on site (from the adjacent scaffold yard) making presence of terrestrial amphibians on site even less likely.

The nearest pond is a known GCN breeding pond, so they are present in the local area. Common frog, common toad, palmate newt and smooth newt are also recorded in the local area.

There is no good terrestrial habitat for amphibians on site, and no waterbodies within 400m. There are no good continual habitat links between the known breeding pond and the site (interrupted by roads or unsuitable habitat). It is considered unlikely that amphibians, including GCN, will be encountered on site.

3.3.4 Bats

There are no suitable features on site for roosting bats. They are very likely to forage over the ground in suitable conditions.

The proposals are very unlikely to have any impacts on foraging bats, and will not impact on any potential or known roosting areas.

3.3.5 Terrestrial mammals

No signs of terrestrial mammals were seen on site. There are nearby records of red squirrel, hedgehog, badger and otter. There is no suitable habitat on site for dispersing/ feeding squirrels, and the site is very unlikely to appeal to badgers or otter due to the lack of good foraging areas.

Hedgehogs could be seen in or around site, and there are a lot of records from the local area. There is no good hibernation habitat on the land, but they may take shelter through the day under or around building materials and debris on site during the construction phase.

Some simple precautions should be followed to ensure no impacts on terrestrial mammals such as hedgehog.

3.3.6 Other species

No other sightings or potential for notable or protected species were recorded.

3.3.7 Protected and notable species summary

There were no signs or sightings of protected or notable species within 50m of the proposed development, or in the broader survey area.

The potential for protected and notable species identified during the survey within 50m of the site was:-

- Potential for nesting birds in hedge and nearby trees and scrub: moderate
- Potential for foraging and dispersing terrestrial mammals: low

3.4 Invasive species survey results

No invasive species were seen or recorded on the property during the survey, but Japanese knotweed was recorded immediately north (just beyond the farmer's access track).

4. SURVEY CONCLUSIONS

The features of ecological interest or concern which could affect, or be affected by the proposed works are:-

- **Nesting birds**

Nesting birds are likely to use the remnant hedge and scrub on site, which are likely to be damaged/ removed for the works. Timing constraints will apply for any tree pruning/ trimming/ removal.

- **Terrestrial mammals**

There is no resting, hibernating or breeding habitat on site, but transient individuals (particularly hedgehog) could be encountered on site. Some precautionary measures recommended.

5. RECOMMENDATIONS

5.1 Recommendations for further survey

No further ecology surveys are required for this proposal.

5.2 Recommended avoidance and mitigation measures for ecological impacts not requiring further survey

Breeding birds

All vegetation trimming or removal should take place outside the nesting season (i.e. not between 15th March and end of August).

Terrestrial mammals

Care should be taken when moving/ lifting stored material or debris from site in case hedgehogs have taken refuge under it. Ensure that there are no open holes or trenches overnight which could trap small mammals (and holes should be kept covered and then checked first thing in the morning, and any wildlife carefully removed using gloves and put out of harm's way).

6. Biodiversity Net Gain assessment

6.1 Rationale

The principles of Biodiversity Net Gain (BNG) are enshrined in local planning policy, and became a legal requirement for most developments from February 2024. The requirements for small sites are not legally needed until April 2024, but many councils have already adopted the policy. The local planning authority (Cumberland Council) has requested a BNG assessment for this development, with a target increase of 10%. Habitats enhanced or retained as part of the BNG calculation need to be managed appropriately for a minimum of 30 years to satisfy the requirements of the metric.

The area of the proposed development, and nature of the proposals mean that the standard metric is not required, and the statutory small sites metric can be used to calculate losses and proposed gains. Detailed results are in the appendices and the Excel file with detailed calculations is attached separately.

6.2 Recommended measures

The site will be levelled and cleared, so all habitats on site will be lost. The derelict land has some biodiversity value, so there will need to be some new medium quality habitats created as part of the project. It is proposed that there is a species rich neutral grassland created. This will be moderate quality neutral grassland (moderate quality as it will be managed as a lawn and be kept at a uniform height). A suitable native species-rich mix will be detailed in the planting plan below. Additionally, 14 small trees will be planted along the boundary of the property (on the north and south boundaries and/ or within the garden).

The hedgerow will be re-instated along the roadside (existing hedge is likely to be damaged by the construction process), and a new hedgerow will be planted along the eastern boundary.

There are no watercourses on site.

These measures will enhance the connectivity of the habitat by linking existing hedges to the north and south, provide nesting places for birds, resting places for small mammals, and habitat for invertebrates.

6.3 Metric calculations and conclusions

The current biodiversity value of the site is 0.3904 habitat units and 0.084 hedgerow units.

All of the habitat units will be lost to the proposals. The new habitats (species rich grassland and new trees) will provide 0.4297 biodiversity units – equating to a 10.07% gain. The existing hedgerow will be enhanced after construction, and planting of the new hedgerow will result in the site supporting 0.0767 biodiversity units of hedgerow – an increase of 91.28%.

A copy of the headline results page of the BNG calculation is shown in Figure 3 below. These indicate that enhancements to the habitats on site will exceed the threshold 10% net gain in biodiversity units, and meet the trading rules required.

Figure 3. Headline summary of BNG metric calculations.

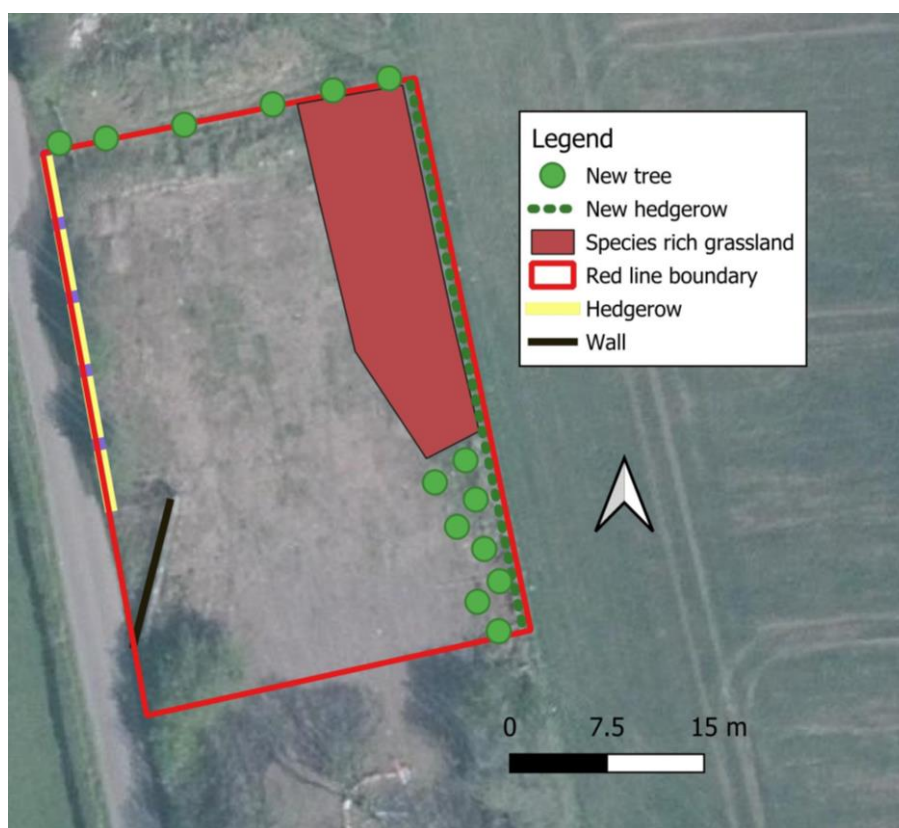
Site Name		Station Yard, Woodend, Cleator	
Sheet Name		Headline Results	
Headline Results			
Headline		BNG Targets Met ✓	
Trading Rules		Trading Rules Satisfied ✓	
Next steps		Check for input errors/rule breaks present in the metric ⚠	
Baseline Units	Habitat units	0.3904	
	Hedgerow units	0.0840	
	Watercourse units	Zero Units Baseline	
Post-development Units	Habitat units	0.4297	
	Hedgerow units	0.1607	
	Watercourse units	0.0000	
Total net unit change	Habitat units	0.0393	✓
	Hedgerow units	0.0767	✓
	Watercourse units	0.0000	
Total net % change	Habitat units	10.07%	✓
	Hedgerow units	91.28%	✓
	Watercourse units	% target not appropriate	
Habitats units required to meet target		0.0000	
Hedgerow units required to meet target		0.0000	
Watercourse units required to meet target		0.0000	

7. Implementation and monitoring

7.1 Planting plan

Figure 4 shows the proposed planting, with detailed methods and species lists included below for each type of planting.

Figure 4. Proposed planting plan



7.1.1 New hedgerow and existing hedgerow

The proposed new hedgerow will form the eastern boundary of the property, and should be planted once the construction of the bungalow has been completed and the garden area levelled. Native species should be used – predominantly hawthorn as for other hedges in the area.

The existing hedgerow will need some additional saplings planted to thicken it up the number will depend upon the extent of damage following the construction work.

A mix of 80% hawthorn (*Crataegus monogyna*), 10% hazel (*Corylus avellana*) and 10% elder (*Sambucus nigra*) is recommended, though other locally native species such as blackthorn (*Prunus spinosa*) could be used.

All plants purchased should be UK native species and UK grown from a reputable supplier.

The hedgerow should be planted between November and March, but not in frozen or waterlogged ground.

1. Prepare the ground – removing all surface vegetation and perennial weeds.

2. Keep the rootstock of the young trees damp until they are planted, to maximise survival.
3. Plant the seedlings in a staggered double row, 5 per metre. The 40m hedge will require 400 saplings (320 hawthorn, 40 elder and 40 hazel), with any additional ones for the existing hedgerow.
4. Voles, rabbits and deer are likely to nibble on the young trees – so they should be planted with protection tubes until they are well established.
5. The new plants shouldn't need watering, unless there is extreme dry weather in the early part of the growing season (April- May).

7.1.2 Species-rich neutral grassland

The key to establishing species-rich grassland is having a relatively low nutrient soil to start with. If topsoil needs to be imported for the garden an inert low nutrient soil would be best for the species rich grassland area (to a depth of approximately 10cm).

The most effective way to create the wildflower grassland is to start from scratch by seeding an area of bare ground. Seeds should be sown in autumn or early spring (Oct-November or March) to get the best establishment.

A suitable seed mix would be a mix for heavier soils and a mild climate, with component species that can tolerate regular mowing (and will flower at a low height). Seeds must be UK native, with 20-30% herbs and the remainder native grasses. Two suggested suitable mixes would be:

- A. 'Wild flower lawn mix' - three packs to the equivalent of 233m² coverage required
<https://wildflowerlawnsandmeadows.com/product/wild-flower-lawn-seed-mix/>
- B. 'Flowering lawn seed mix' - 1.1kg of seed mix required
<https://britishwildflowermeadowseeds.co.uk/products/flowering-lawn-seed-mix>

Method:

1. Prepare the ground. Remove any perennial weeds (such as docks) before tipping the final layer of low nutrient topsoil on the land. Level and lightly roll or tread over the ground to firm up the seed bed.
2. Seed can be sown by hand or using a small lawn fertiliser applicator. The seed needs to be sown on the surface, not drilled. An inert carrier, such as sand, can be used to help indicate which areas have been sown to avoid excessive sowing in one area/ missing out others.
3. Lightly roll, or tread over, the sown area to ensure seeds are in contact with the soil.
4. The area may need protection from birds to prevent them consuming the sown seeds. Light horticultural fleece is best as there is no risk of entanglement with the birds. The fleece should be checked regularly and removed as soon as the seeds are germinating well.
5. During the first growing season perennial weeds (such as dock and nettle) should be removed before they seed, to prevent them dominating. There is no need to cut the lawn until it is well established.

7.1.3 Additional tree planting

Some additional tree planting has been proposed to complement the existing and new hedgerow. Recommended native species include oak (*Quercus petraea*), rowan (*Sorbus aucuparia*) and wild cherry (*Prunus avium*), though fruit trees such as plum, apple, pear and cherry would also be suitable.

Fourteen bare-rooted trees (1.25-1.5m height) should be planted over the winter months (November to March), with a minimum gap of 3.5m between trees (closer if dwarf rootstock fruit trees are planted- check specific guidance for species chosen) to allow them to develop full crowns. They should be spaced out along the south-eastern and northern boundaries and within the new garden as appropriate (the plan above just gives a suggested layout). As for the new hedgerow, the new saplings will need protecting from deer and rabbits, and shouldn't need watering unless there is extreme dry weather during the early part of the growing season.

7.2 Management plan

Habitats retained or enhanced as part of the BNG calculations need to be managed appropriately for a minimum of 30 years to count as an offset for the biodiversity losses resulting from the development.

7.2.1 Hedgerow

The new hedgerow should be permitted to grow tall and thick, to maximise its biodiversity value (ideally 1.5m high and 1.5m wide to attain good condition status). Trimming should be carried out only when necessary, but not between March and August as this is the bird nesting season.

All tree tubes should be removed and composted/ recycled as appropriate once the hedge is suitably established (probably after 2-3 years).

7.2.2 Grassland

One established, management of the species rich grassland will be through regular mowing throughout the growing season. To ensure a flower rich turf the minimum cutting height should be 5cm. The lawn is likely to need to be cut every 2-4 weeks depending on the growing conditions and time of year.

There should be no nutrient added to the lawn, or any herbicide or pesticides applied as these will negate any wildlife benefits.

7.2.3 Trees

The planted trees should be permitted to grow tall and develop full crowns. As for the hedgerow, tree tubes should be removed once they are established, as should the stakes (ensuring that the young trees develop suitably strong roots without relying on the additional support).

7.3 Monitoring

An initial check of the new hedgerow, grassland and tree planting should be carried out at the end of the first full season of growing (i.e. if sown spring/autumn 2025 the plants should be checked late summer 2026). This is to assess the success of the planting and establish if any additional saplings are needed.

Following this initial check, a walkover survey should be carried out at 5 yearly intervals and the condition assessed of the grassland, trees and hedgerow to ensure that management is appropriate.

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APPENDICES

Figure 5: Habitat map



*Contains Ordnance Survey data © Crown copyright and database right [2013]
Aerial image obtained from Blackwells online 12 month licence July 2024.*

Survey target notes

Refer to figure 5 for locations of target notes.

No.	Description
1	Compacted chippings along entrance from road, providing vehicular access.
2	Existing gappy hedgerow on earth bank. Hazel and hawthorn, with some rose, ivy and bramble.
3	Sandstone wall. Well pointed, but some small gaps that could be used by invertebrates.
4	Patchy vegetation/ bare ground. Some hairy willowherb, creeping bent grass, white clover, selfheal, silverweed, pineapple weed, bramble, coltsfoot, scarlet pimpernel. Overall cover less than 50%. Some value for nectaring invertebrates.
5	Boundary fence with some taller vegetation – thistles, hogweed, dock, mullein evening primrose and tufted vetch.
6	Small hawthorn, likely to be lost to development.

Description of Wildlife Law and Legislation referred to in this document

National Planning Policy Framework (2018)

Current guidance recommends that planners ensure that all new developments:

- minimise impacts on biodiversity and protected sites
- result in a measurable net gain in biodiversity (typically 10%)
- safeguard wildlife-rich habitat and wider ecological networks
- promote conservation/ restoration and enhancement of priority habitats and ecological networks
- promote protection/ recovery of priority species

Nesting birds

Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), wild birds are protected from being killed, injured or captured. Under this legislation their nests and eggs are also protected from being damaged, destroyed or taken (this includes nests in the process of being built as well as those with eggs and/or chicks in).

Birds which are listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected by special penalties at all times. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

Amphibians

The four widespread species of amphibian (common frog, common toad, smooth newt and palmate newt) receive partial protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 9(5). It is an offence to sell or possess (dead or alive) these species. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

Great crested newts are a European Protected Species, and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981.

It is an offence for anyone intentionally to kill, injure or disturb a great crested newt, to possess one (whether live or dead), or sell or offer for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by great crested newt for shelter.

Biodiversity Action Plans – Species and Habitats

The UK Biodiversity Action Plan (UK BAP) was published 1994, in response to the Convention on Biological Diversity (CBD), which the UK signed up to in 1992 in Rio de Janeiro. National and Local action plans were developed for the most threatened species and habitats.

The plans, and species and habitats to which they related are reviewed and updated regularly. The current lists can be found on the JNCC website. These have now been succeeded by NERC Act 2006 (see below) but are still commonly used for guidance.

Natural Environment and Rural Communities (NERC) Act 2006

Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act. This purpose of this list is to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment

and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

56 habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. There are 943 species of principal importance included on the S41 list. As above, these are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

Hedgerow Regulations (1997)

These protect countryside hedgerows from being uprooted, grubbed out or otherwise destroyed. Local planning authorities need to be consulted, and an application made to remove any hedgerow (or section of a hedgerow) under these regulations.

Permission may be refused if the hedgerow concerned is deemed 'important'. There are many criteria for designating an important hedgerow, focussing on features such as archaeological value, historical and cultural value and ecological value. To be of ecological importance the hedgerow must have a minimum number of native woody species as well as some associated features of interest and/or support certain protected species of animal or plant. Further information about the criteria can be found at: www.gov.uk/countryside-hedgerows-regulation-and-management or <http://www.legislation.gov.uk/uksi/1997/1160/contents/made> .

Photographs



Photo 1.
Looking north over
the land.

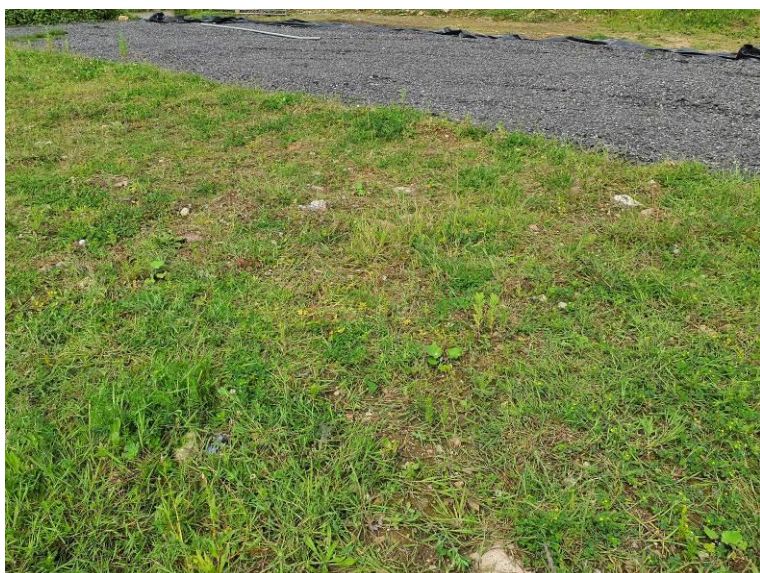


Photo 2.
Patchy vegetation
and area of hard
standing.



Photo 3.
Close up of
vegetation. Cover
variable from 70-
25%. Average less
than 50% cover.



Photo 4.
Hard standing and
adjacent earth bank
with gappy
hedgerow.



Photo 5.
Taller vegetation
behind the sandstone
wall at the southern
end of the site.



Photo 6.
View from the access
point from the road-
looking north-east.



Photo 7.
Looking north along
roadside showing
earth bank and
hedgerow.

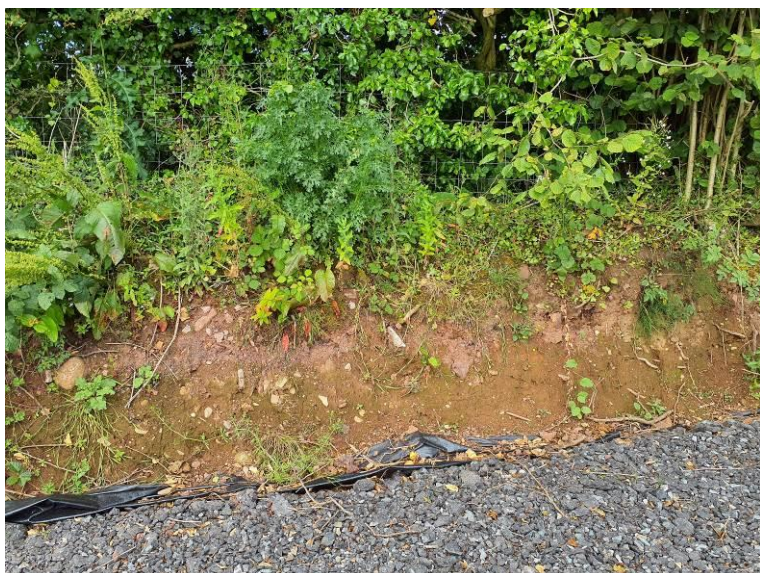


Photo 8.
Earthbank and
hedgerow. Quite
compacted with
limited scope for use
by mammals or
amphibians
(especially given
proximity to road).



Photo 9.
Narrow strip of taller
vegetation alongside
the fence line
(looking south along
fence with pasture to
the left of image).
Dominated by dock
and thistle.