Misbourne Greenway: Wendover Station - Great Missenden Station Section

Proposed Greenway from Dunsmore Lane to the Black Horse, Aylesbury Road

Looking south towards Mapridge Green Lane

December 2019
Misbourne Greenway: Wendover Station - Great Missenden Station Section on Network Rail Land

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Note: This document has been prepared in support of planning applications to Aylesbury Vale District Council and to Chiltern District Council for the northern and the southern sections of this 4km route respectively.

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View of similar path on spare railway land beside Exmouth Railway
Introduction and Summary

This document reports on the proposals to make a traffic-free path for walkers and cyclists from Dunsmore Lane, south of Wendover to the Black Horse on the approach to Great Missenden. This 4.2km long greenway is the key component in making good cycling route suitable for novices and families avoiding the very heavily trafficked A413. This route is part of a wider project to make a route from Wendover to Great Missenden, Amersham and further south down the Misbourne Valley.

The project is being promoted by Greenways and Cycloroutes who created the Waddesdon Greenway, by Sustrans who manage the National Cycling Network, and by Buckinghamshire County Council, who wish to see much higher levels of walking and cycling in their area in order to provide an alternative to the private car, and to see a fitter and more active population.

The standard of the path will be similar to that of the Waddesdon Greenway and finished 3m wide for shared use by pedestrians and cyclists. The whole route will be designed for wheelchair use and particularly for rehabilitation and athletes based at the Stoke Mandeville Stadium to which this Greenway will eventually connect. It is though not possible to provide for equestrians on account of the proximity of the route to the live railway.
Background of the Misbourne Greenway Project from Wendover to Great Missenden

Buckinghamshire County Council’s concept for a Buckinghamshire Greenway stretching the whole length of the county from London to Buckinghamshire, Brackley and Milton Keynes is shown in Fig 1.

This vision has emerged from a combination of the struggle with HS2 to ensure that local communities were not cut off and severed from their local networks and links, the desire to see a more active population for fitness and health, the need to enable the public to respond to global environmental concerns by driving less and by the realisation that traffic on many of the roads in the area was now simply too great for any sort of popular walking and cycling to flourish.

The traffic levels on the A413 between Wendover and Great Missenden is now 20,000 vehicles per day and expected to rise with HS2 construction traffic. This is far higher than the threshold at which current design standards call for a fully segregated route.

When considering what alternatives there might be, there was little choice. The main road and the railway take the easiest corridor through the Chilterns where they overlap at the summit just south of Wendover, and it is this corridor which also provides the best chance.

The opportunities really fall into 4 options, either east or west of the main road, or east or west of the railway.

The possibilities either side of the road were not attractive. There is no space along the verge, and any running down the fields edges comes into numerous conflicts over access drives and frontages. Furthermore, the proximity to the A413, its noise and stresses of the traffic meant that a quiet countryside route which will be attractive to a wide number of people could not be achieved.

The railway corridor was a more likely place and it is here that the Misbourne Greenway is proposed.

Aerial view near Firecrest Pub showing the different locations for a possible path avoiding the main road. One side or other of the railway corridor is preferred. This view shows the ‘surplus’ land on the west side of the railway.

Guidance for types of cycling facility required for different traffic conditions (DfT draft guidelines)
Outline description of Wendover and Great Missenden Proposals setting the context of the present project and its relationship with HS2 works

This Wendover and Great Missenden Greenway aims to deliver an attractive and popular path for walkers and cyclists which avoids all the traffic on the main A413 and creates a largely traffic free route between the two stations.

The project can be divided into 3 sections.

1. Wendover to Dunsmore Lane where the final arrangements will depend upon the eventual outcome of all of HS2's works. In the meantime during the interim years, there are bridleway and minor road options of a sort.

2. The central core new path along the railway corridor from Dunsmore Lane to the old Aylesbury Road near the Black Horse pub. This section, 4.2kms long is described in detail in this document and is proposed for construction in 2020. This new path will enable the public to travel down the Misbourne Valley in comfort, happily avoiding 5kms of the heavily trafficked main road A413.

3. The section to the centre of Great Missenden can run on the existing Aylesbury Road, although walkers do have the options of two separate footpaths through to the Link Road and High Street.

The first section, Wendover to Dunsmore Lane, can be followed at present. One can either travel along the London Road, cross at the roundabout and join the lane to Dunsmore, or alternatively go up Bacombe to join the bridleway and access road to Grove Farm.

In the longer term HS2 will affect all this area. Their current proposals provide for a route through to Bacombe and possibly Ellesborough Road. South of London Road, HS2 plan to demolish the existing bridge over the Chiltern Line, which is signed as a cycling route, and to construct a path parallel to the London Road as far as Hornbeam Cottage. We have asked that this path is set well back from the road in a landscaped corridor so as to maintain the quality of the Greenway.

Beyond Hornbeam Cottage the wide verge and setting down area can be modified to incorporate a continuation of the shared use path through to Dunsmore Lane. At the present time it is difficult to foresee the timing and programme of these HS2 works but we have requested that the London Road to Dunsmore Lane Link – a length of 1100 metres - is brought forward earlier rather than later.
The core Dunsmore Lane to Black Horse section is being developed by Greenways and Cicleroutes, who constructed the Waddesdon Greenway, along with Sustrans who are coordinating the overall Misbourne Greenway programme, and Buckinghamshire County Council as part of their Buckinghamshire Greenway vision. This section is described in detail in this document.

The key opportunity here is the presence of ‘spare’ railway land over the whole length of the railway from just south of Wendover to Great Missenden. This land, originally acquired should the railway need to expand, provides a good space for a Greenway as shown in the sections below.

The final section to Great Missenden is still open to discussion. This is outside the scope of this planning application. One option would be to introduce traffic calming along the road to create conditions more attractive for family cyclists. Another would be to reconstruct one of the existing footpath routes, or something nearby so as to continue the largely traffic free route to the Recreation Ground and centre of Great Missenden. Either way the route to the station must be via the Station Approach.

Details of the proposed Dunsmore Lane to Black Horse section of the Misbourne Greenway

The following pages describe the arrangement and details of the proposed path. This will follow the railway corridor, first on “spare” land to the west of the railway, and then along the field edge of Road Farm. The route is planned to be a 3m wide path, finished to the same tarmac standard as in the Waddesdon Greenway.

It will be designed for the shared use of walkers and cyclists, with easy gradients for elderly people and wheelchair users. It will not be available to horses on account of its close proximity to the trains. Our model for this project is the Exe path running on spare railway land to Exmouth.
Map 1 South from Dunsmore Lane

This map shows the first part of this section of the Misbourne Greenway running down the “spare” railway land on the west side of the Chiltern Railway. This land is generally 8-10 metres wide and was originally acquired against the possibility of the railway being four tracked at some future date. There is no intention to do this!

1. The end of the path past the London Road houses will end on Dunsmore Lane. Link to road to the level so as be run clear of buried services. Entrance to path controlled by two bollards set with 1.2m clear gap.

2. Follow the Lane to cross the railway bridge.

3. An alternative option along the field edge of the railway would have served the Firecrest Pub.

4. The connection from the road to the railway land requires a short ramp set in the corner of the field as shown in the sketch. This will leave the approach to the railway equipment unchanged.

5. Cut through onto the railway land. Here the precise line of the path will be arranged so as to thread through the vegetation keeping as much variety and interest as possible. The typical cross section shown on the next page illustrate the key features – the new fence against the live railway, the path generally near the existing boundary fence, and the remaining vegetation.

Another variation of arrangement occurs when we are passing trees. In this case a solitary tree is retained, its branches are pruned back to give us sufficient headroom, and the path is constructed on “tree cell” to minimise damage to tree roots now and in the future. The picture shows this type of construction through Wormstone Woods on the Waddesdon Greenway. Here on the Misbourne Greenway we propose to use “tree cell” past each individual tree for a distance of 10m either side of the trunk, and over longer lengths through coppices or groups of trees.

Note 4: Detail of entrance at Dunsmore Lane

1. Chicane to slow cyclists
2. Greenway rises to road on low bank set against side of road embankment. Path to be 2.0 metres wide over this section
3. New field fence
4. Power poles
5. Rail compound

View of railway compound

Preferred location of path near boundary fence for views

Clear ground for new fence

Typical arrangement of path on level ground

Scale: 1:2,500 at A3

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Over this section the Greenway continues to run along the railway land rising gently to cross Cobblershill Lane at grade before dropping away again to continue southwards towards Great Missenden.

1. The path runs along the wide railway verge. Each part of the way will take account of the vegetation and trees on site at that particular point, so as to create an interesting landscape and travelling experience as possible, and to maintain continuity of vegetation.

2. Along the boundary of the riding arena densely plant to screen path users off from the exercising horses.

### Section 40m north of Cobblershill Lane

- **Approximately at foot of ramp opposite livery yard**

1. **Existing paddock fence**
2. **Allow dense vegetation**
3. **Railway boundary fence**
4. **Trim back lower branches of trees to give plenty of air and space for the path**
5. **Past all trees construct path on tree cell or similar as shown from this example through Wormstone Wood on the Waddesdon Greenway Project.**

3. **Ramp gently up to the road, in earthworks, to create a 1:20 gradient.**
4. **Paint a red crossing area to warn oncoming traffic and erect signage either side on the road.**
5. **Ramp down back to ground level with a ramp 80m long. The first part of this will be constructed on gabions or similar as shown on the cross section. Prune the adjacent conifers and erect boundary fence in discussion with neighbour.**

6. **At the foot of the ramp maintain the existing soakaway area as shown in the cross section.**

View south from Cobblershill Lane showing the lower ground to the right of the picture and the overhanging conifers.

Further view of the Ewe path beside the line to Exmouth.
Map 2 Crossing Cobblershill Lane

Detail at Cobblershill Lane
1. 3m wide path winding its way through the coppice of trees.
2. Densely planted boundary to shield riding arena.
3. Earthworks ramp for 1:20 gradient to road.
4. Slow down chicanes either side of road – to the same detail as at Waddesdon Hill.
5. Paint crossing area red.
6. 3m path drops at 1:20 on gabion construction.
7. New boundary fence to the west of existing works access which is retained.
8. Close board or similar to maintain privacy of adjacent resident.
9. Ramp re-joins ground level and continues south.
10. Approach signing warning traffic of crossing cyclists will be required.

Typical cross section B along drain – 100m south of Cobblershill Lane
1. Railway
2. New security fence at top of “cutting”
3. Drainage area banks.
5. Proposed 300 dia. pvc land drain with inspection manholes at 100m centres.
6. Backfill with single sized stone to provide flood storage if required.
7. Finished Greenway 3m wide.
8. Level and grass verges.
9. Existing boundary unchanged.

Cobblershill Lane South Ramp cross section A - near foot of access steps
1. To the railway.
2. Existing workers access path and handrail.
3. New security boundary fence.
4. Gabions either side of ramp. These will reduce in height.
5. 300mm drain from road running down line of route to existing soakaway. Backfill with single sized stone for depth of 0.5 metre.
6. Greenway path laid on compacted fill.
7. Steel balustrade railings, 1.4m high.
8. Close board timber fencing, 1.8m high.
9. Existing railway boundary.
10. Trim Leylandii hedge back.

View of boundary trees from adjacent land
Map 3 Mayortorne Manor

There is ample railway land along this section and the Misbourne Greenway continues along just inside the fence from the field or weaving past trees as seems best.

1. Over this first part the path needs to take account of the existing provision for a soakaway by constructing to one side and extending the length of the soakaway to compensate for any loss of volume.

2. Continue along the railway margin. Note that the whole length of the new railway security fence will be installed in advance of any other access to the site and that once this is in place and secure then the contractor will be free to work at the most convenient route for the path.

3. The public footpath runs adjacent to the fence at this point. Provide a wicket gate so that the public can move onto the new path. Note that the railway path is only held under Licence and will not be a statutory right of way. So even if every walker was to follow the new path through choice, the existing Right of Way would need to remain.

4. The farm accommodation and access track cross this railway bridge, as well as a public footpath. We propose to install a 4.5m wide field gate and adjacent pedestrian wicket gate on the line of the railway boundary at (a) and a second 4.5m field gate just beyond the public footpath on the far side of the bridge at (b). The actual crossing of the farm road will be reinforced with a concrete slab.

5. The Misbourne Greenway continues south.

6. The public footpath cuts away through the fields towards the main road.

Example of concrete farm crossing near Waddesdon

Looking down the line of the public footpath with the ‘spare’ railway land to the right
Map 4 Dutchlands Farm

This rural section continues along the railway corridor. As far as possible the path will run close to the field fence so that the public will get good views over the open fields towards the hillside and Cockshoots Wood.

1. The precise position of the path will depend upon the vegetation at any one point.
2. Across this farm access (which is not a public right of way) 4.5m wide field gates will be arranged to prevent public trespass as well as a 1.2m wide wicket gate for Dutchlands Farm residents to access the Greenway.
3. The path continues in the wide space at the foot of the railway embankment.

Sketch of Dutchlands Farm Bridge Gates

1. Dutchlands Farm Railway Bridge
2. Existing wing walls with new security fence on top.
3. New boundary fence runs at the foot of the embankment.
4. Closing field fence.
5. 1.2m wide wicket gate to Dutchlands Farm residents. This gate may be locked if they require it.
6. New 4.5m wide field gate arranged to swing across path for livestock movement.
7. Existing reinforced concrete slab at the junctions of the new path and the farm access road.
8. The Misbourne Greenway in either direction.
9. Second farm gate to swing across path. Note both gates to also swing away from path if required.
10. Existing field boundary fence of railway land.
Map 5 Mapridge Green Lane to Road Farm

This map shows the key crossing of the Chiltern Railway passing under it along Mapridge Green Lane. The Greenway needs to ramp down to the lane and then back up to Road Farm’s field edge.

1 Here the railway land is relatively open, and the path can be arranged as shown in the photo.

2 Excavate ramp down to Lane.

3 The Lane will be surfaced full width to a heavy-duty standard to take farm access traffic. At each end of this section a concrete kerb across the width of the lane will prevent erosion and act as a grip to funnel rainwater into the road drainage.

4 The bank to the south of the lane was cast up by the construction of the road under the railway in 1890. The path will cut through as shown in the detail, ramping up at a gradient no steeper than 1:20. The landscaping and planting in this area is covered later in this report.

5 Farm access gate to link field to lane.

6 Road Farm, 15 Acre Field. Here the path runs along the field edge as shown in the cross section. The ground will be levelled up as a low causeway and the existing rail side vegetation will be extended and reinforced.
At this point the Misbourne Greenway crosses under the railway via a sunken lane constructed by the railway to accommodate an earlier historic route. The Greenway needs to ramp down at a gradient of 1:20 to thread its way through with the minimum of tree loss.

1. Path leaves the railway corridors.
2. Excavate 1:20 ramp in this corner of field. Plant sides with dense vegetation to stabilise the slope. As the excavation approaches the lane, cut the side slopes as steeply as the ground allows and provide low revetment walls if necessary so as to minimise disturbance to the roots of retained trees.
3. New field boundary planted with trees to replace any lost in the works.
4. The section of the lane under the bridge to be constructed to a standard suitable for the agricultural vehicles which occasionally use the land. Incorporate a drainage channel down one side which can be easily cleared of debris swept down in times of flood.
5. Cut back through bank to field edge.
6. Provide farm access gate 4.5m wide. Note that the precise arrangement of farm gates will be agreed with Road Farm who need to consider all their variations in livestock movement from one field to another on both sides of the railway and both sides of the lane.
7. Join the field edge and follow through to Road Farm. Over this section reinforce the existing planting along the field edge so as to compensate for some of the vegetation lost from the railway lands further north.

Note 7: Road Farm cross section looking north showing additional hedge planting

1. Level ground with material from the Mapridge Green Lane ramp excavations.
2. Construct 3m wide path with a central camber.
3. New field fence.
4. Plant additional hedge material to make impenetrable barrier against Network Rail’s boundary and to compensate for material lost further north.
5. Shallow ditch to contain run off where necessary.
Map 6 Road Farm Access Drive

The Greenway will pass under the Farm access drive so that the public are separate from the day to day business of the farm. The detailed sketch shows this arrangement, together with a link to the drive for local residents, and two steep livestock ramps to replace the existing. The whole area will be heavily planted.

1. Path continues along field edge.
2. Underpass beneath Farm access drive; as shown on detail.
3. Link path for farm residents.
4. Livestock ramp at 1:5 finished with grass surface.
5. Planting.
6. Path continues as shown in the section on Map 5.
7. Provide kissing gate for existing public footpath.
8. Path continues with wide views over the valley and set sufficiently far back from the road so that the noise of traffic is not audible.

View looking north from drive

View of typical concrete steeper wing walls

Proposed subway area from north

Waddesdon Greenway beside rail boundary near Aylesbury Vale Parkway Station
Map 6 Road Farm Access Drive

Road Farm Crossing arrangements: underpass and ramp

1. Road Farm Access Drive.
2. Proposed underpass with concrete sleeper wing walls. 3.0m wide x 2.4m high inside, 9m long, precast rectangular units to be constructed in open cut during a temporary road closure.
3. Chiltern mainline railway and bridge.
4. Misbourne Greenway continuing north and south along the field boundary.

5. Access ramp for Road Farm residents to be set at 1:20 gradient, or similar to gradient of drive.
6. Grassed ramp for the occasional use of livestock.
7. Line of fencing and stock gates.
8. Gates to be set 4 square to control stock movement. Devise planting to minimise straying off path or bank erosion.

Cross section through Road Farm Drive looking uphill towards Farm

1. Existing road on embankment.
2. Proposed local residents' access ramp constructed on fill to create an even ramp from the Drive to the Greenway. This new path to be 2.0m wide.
3. Retain existing grass access ramp for livestock occasional use.
4. Outline of underpass which will be situated east of the ramp.
Map 7 The Black Horse

This page shows the southern end of this stage of the Misbourne Greenway cyclists would join the old main road whilst pedestrians continue along the verge of existing paths or follow the roadside footway into Great Missenden.

1 Misbourne Greenway continues as a field edge path from Road Farm underpass.
2 Allow an easy bend on this corner.
3 Slow down chicane in fence.
4 Junction with road as shown in the detail and end of this section of the Misbourne Greenway.
5 1m wide footpath constructed in verge.
6 End of new footpath at drive to Town End Farm.

Looking northwards from Road Farm Drive

Detail at Aylesbury Road – start of Greenway

The arrangement shown here proposes feeding the cyclists into the road a little further away from the junction with the bypass, than if they emerged direct from the field edge. This would give a little more space for traffic speed measures to take effect. Walkers would have a narrow path set in the verge through to the Black Horse to link through to existing footpaths, and a field access to the field would be provided for the farmer’s occasional use.

1 Aylesbury Road towards centre of Great Missenden.
2 Misbourne Greenway coming around the field edge.
3 Greenway bends around within the wide verge so as to link to the road a little distance from the existing road junctions, and south of proposed 30mph markings.
4 Staggered chicanes to slow down cyclists
5 “Give Way” markings.
6 Culvert ditch over distance of 30 metres.
7 1.0m wide footway to run down centre of grass verge.
8 4.5m wide locked field gate set in hedge line.
9 Stone base grassed over for occasional farm use.
10 Warning signs of village entrance details and standard 30mph markings with Village Gateway features as used by the Highway Authority.
11 Paint red path across full width of road to advise motorists of presence of cyclists.
Map 8 Option to Great Missenden

*For information only: not part of this planning application*

This map shows the Aylesbury Road and nearby footpaths. At this stage we anticipate that cyclists will follow the road, where traffic calming would be appropriate, and that walkers might choose to use one of the field footpaths. It is possible that these will be signed as the Misbourne Greenway.

We have not drawn up any detailed proposals for this section and this map is not part of the section of Greenway which is the subject of this planning application.

1. Construct footpath in grass verge to lead pedestrians down to the start of existing footpaths. At this point cyclists will be on the road and inside the 30mph limit.

2. This field path runs through to the Buryfield Recreation Ground but suffers from its proximity to the noise of the main road.

3. This foot path passes under the railway and as the South Bucks Way runs up to Cobblerhill Farm with the opportunity of a number of circular walks via the planned Greenway.

4. There is no footway along this section of grass verge although there is evidence of it being quite well walked.

5. The roadside footway commences at this point and runs all along the south of the road to the centre. There is continuous parking of the far side of the road all of which would make the introduction of cycle lanes, for example, problematic.

6. This field path has the merit of avoiding the climb up the hill towards Great Missenden and being quite far from the noise of the Bypass. There might be scope for making up this path to an all-weather standard.

7. This section has a hard surface but it is narrowly constrained by fences. There might be scope for widening it into the adjacent field.

8. The path ends in this car park.
The Misbourne Greenway is designed to provide a viable alternative to following the main A13 road. To this end it must be constructed to a good all-year-round standard with a sealed surface suitable for all weathers.

This 4.2km section of Greenway links two public roads (Dunsmore Lane and Aylesbury Road at the Black Horse) and crosses a third – Cobblershill Lane. It also crosses the line of two public footpaths and uses a short section of BOAT at Mapridge Green Lane.

The approach to the roads will be guarded by “slow down” chicanes as illustrated from the Waddesdon Greenway.

The gradients along the route will be limited to 1:20 in order that the route is truly suitable for people in wheelchairs – a particularly important consideration given the proximity of the Stoke Mandeville rehabilitation centre to the route further north. Lighting will be photovoltaic solar units set along the centreline of the path.

Planting of hedges, trees, hedgerows and grasses is the subject of the ecological report. We will carry out the recommended planting both on site and offsite so as to ensure that the project fits into the landscape. Note that we are aiming to provide a balance of the ‘natural’ ground vegetation taken up by the construction of the Greenway without also taking into account the positive environmental benefits offered by the existence of the Greenway.

The immediate environs of the path are of great interest to the travelling public as well as the good view over the countryside. As far as possible the traveller should have a good view in at least one direction rather than being confined in a green tunnel of vegetation.

Seat at Waddesdon

Example of recessed LED greenway lighting (Bristol)

Example of concrete farm crossing with gates (Dartmoor)

View from the path on a winter’s day

View of finished path along Waddesdon Greenway

The path’s width will be 3.0m which is considered suitable for shared use by pedestrians and cyclists at the anticipated levels of use. This section of the Greenway is not close to peak generators such as school exits so its capacity is unlikely to be strained, except perhaps if popular mass events such as charity runs were to conflict with one another.

The gradients along the route will be limited to 1:20 in order that the route is truly suitable for people in wheelchairs – a particularly important consideration given the proximity of the Stoke Mandeville rehabilitation centre to the route further north. Lighting will be photovoltaic solar units set along the centreline of the path.

Design and Access Statement

Standard path arrangement on open ground

1. Excavate a thin layer of soil, or down to the rocky base, and set this to one side to be used to build up the shoulders at the end of the work.

2. If there are any sections of poor soils then lay a layer of polypropylene filter fabric to secure the base.

3. Construct a sound stone base 150mm thick and 3.5 metres wide. This extra width is needed to secure the sides of the finished path instead of using kerbs.

4. Lay the finished surface layer 3.0 metres wide. This typically will be a machine laid tarmac surface 60mm thick arranged with a central camber.

This can then be finished with limestone dust brushed in to give the most natural look possible.

5. Build up soil verges either side to reach the edge of the tarmac. These should slope away from the path at 1:5 so as to allow for easy mowing.

At the end of all this work the path will run on a slight ‘causeway’ some 150mm above the general ground level.
**Signage**

Signs at each end of the route will match the County Council’s signage guidance, as well as that of Sustrans for the National Cycle Network.

![Picture of typical sign approaching Aylesbury Vale Parkway Station](image)

**Construction Access**

The construction of the Misbourne Greenway requires a small amount of plant and some 250 lorry loads of stone and asphalt, spread over a 16-week (4 month) construction period averaging 3 or 4 long loads of materials a day. These will be delivered to the project at Dunsmore Lane, Mapridge Lane, Road Farm drive and Aylesbury Road as shown in the plan.

Road Farm will provide a construction base if this is required.

![Plan of construction access](image)

It is likely that the stone and aggregate materials will be taken by lorry along the field edge boundary and then transferred into dumpers for final placing along the line of the route, all designed to minimise damage to vegetation and trees along the way.

No general fill materials will be brought onto the site, or removed from the site, and any excavation being used for nearby fill.

The lineside fencing which will require vegetation clearance will be carried out during September, starting once the bird nesting season is over. Any earlier work will be carried out under the supervision of our qualified ecologist.

Planting will be carried out through the winter season.

**Flood Risk Assessment**

The path does not intersect any watercourses and it does not lie in any floodplain. The path surface will have a central camber such that all rainfall will reach the ground within a few metres of its present situation resulting in no change to the existing run of situation. The path will have an entirely neutral effect. It will not contribute to any drainage problem, but nor will it reduce any existing drainage matter.

At both Dunsmore Lane, and either side of Cobblershill Lane the proposed path will fall away from the road so no runoff from the path will come onto the roads. At the Aylesbury Road any runoff from the corner of the field is already channelled into a large roadside ditch and this will remain the same for that from the path.

Along the length of the railway the path will be built to a level some 200mm above existing ground level. This will have the effect of controlling any water which currently flows off the fields above the railway, onto the railway, and so to a small extent will reduce any current flooding issues.

**Maintenance Matters**

Provided the path itself is soundly constructed the principal year in, year out, maintenance task is vegetation management. It is vital to cut back the verges on a regular basis so as to maintain the width of the path. Hedges and bushes to the side need to be cut back on a regular basis and the vegetation between the path and the field boundary should be kept in control so that the views over the countryside are not lost.
Conclusions

These notes have set out our proposals for a Greenway route from Wendover to Great Missenden. Once built this traffic free route will transform the opportunities for cycling in this part of the Chilterns. The present situation where the weight of traffic appals even the most experienced cyclists, will be replaced by a path which will be suitable for everyone including novices and families.

When the Misbourne Greenway is finally completed we anticipate that the route from Uxbridge to Aylesbury and beyond will be one of the most interesting and significant Greenways in the whole country. This section from Wendover to Great Missenden is the first phase.
Misbourne Greenway: Wendover Station - Great Missenden Station Section on Network Rail Land

Appendix 1 - Ecological Report

Looking south towards Mapridge Green Lane

MISBOURNE GREENWAY: DUNSMORE LANE (WENDOVER) TO GREAT MISSENDEN SECTION

ECOLOGICAL REPORT
DECEMBER 2019

for

GREENWAYS AND CYCLEROUTES LTD
MISBOURNE GREENWAY: DUNSMORE LANE (WENDOVER) TO GREAT MISSENDEN SECTION

ECOLOGICAL REPORT

1 INTRODUCTION

The purpose of this report is to assess the impact on biodiversity of proposals to construct a shared use path between Dunsmore Lane, to the south of Wendover, and Great Missenden, and to make proposals for mitigation and enhancement as appropriate. This report has largely been informed by two survey reports compiled by Two Wheels Ecology, which are attached as appendices to this report.

2 SCHEME DESCRIPTION

The trail would run parallel to an active railway line. At the southern (Great Missenden) end of the section it runs through intensively managed farmland adjacent to the railway; at the northern (Wendover) end of the section it runs through surplus land within the railway fence. The latter area has a mixture of habitats: secondary woodland, scrub, tall herb vegetation, improved grassland and semi-improved grassland. An assessment of an alternative option for a trail running through farmland at the northern end of the route has also been included.

The path would be three metres wide for most of its length, although this has been narrowed where necessary to reduce impacts. An additional one metre width would be required for construction purposes and a more extensive belt of land, largely eight metres wide, would be within the ownership associated with the path. The path would not be lit.

The location of part of the path within land under the control of Network Rail has imposed some constraints on survey, although it has been possible to walk all of the route at least once.

2 METHODS

A data search has been carried out at Buckinghamshire & Milton Keynes Environmental Record Centre (BMERC) for protected and notable species and habitats within 1km of the entire length of the scheme, extending to 2km for bat records. A search for mitigation licences granted by Natural England within 1km of habitats within 1km of the scheme has also been made.

The following Extended Phase 1 field surveys have been carried out:

25th to 28th June 2019: a direct walkover of land outside Network Rail land ownership and indirect observation of land within the railway ownership (Two Wheels Ecology).

4th November 2019: a direct walkover covering all land within the Network Rail land and potentially affected by the proposals (Two Wheels Ecology).

26th November 2019: a walkover of the route, but without direct access to the Network Rail land (Wessex Ecological Consultancy).

This timetable means that the habitats within the railway corridor were not surveyed fully until November.

The zone of influence covered by the field surveys extended to 50m of either side of the route.

3 BASELINE CONDITIONS

3.1 Vegetation

A full break down of the habitats along the route is given in the appendices. The following are the main habitat types that would be affected:

Outside Railway Corridor

Agricultural land: The fields through which the route passes are in a grassland / arable rotation. All are intensively managed and where grassland is present this is species-poor and dominated by perennial rye-grass (Lolium perenne). The arable land is also species-poor and weed species are restricted to common plants such as goosegrass (Galium aparine) and black-twitch (Alopecurus myosuroides).

Habitat condition: Poor – species diversity in both pasture and arable land is low and limited to species tolerant of intensive agricultural management. Intensive management also means that structural diversity is low.

Hedges: At its southern end the trail would pass through a low hedge that is dominated by hawthorn (Crataegus monogyna) with small amounts of hazel (Corylus avellana). A dry ditch runs alongside the hedge. This section of hedge appears to have been planted relatively recently as part of highway improvement works.

At the crossing of Mapridge Green Lane the route breaks through a tree belt, which is contiguous with a historic boundary but has itself developed on earthworks formed when the railway was constructed and is therefore up to 120 years old. The tree belt forms part of a Local Wildlife Site. The route has been designed to avoid the larger trees but would affect the following:

Southern breach (to east of railway): one immature hawthorn (Crataegus monogyna); two sapling hornbeam (Carpinus betulus); a semi-mature, multi-stemmed field maple (Acer campestre), although it may be possible to retain part of this; and a seeding hazel (Corylus avellana). The ground flora under most of this area is bare, due to a combination of shade from the adjacent large beech (Fagus sylvatica) trees and grazing by cattle. Where the bank is fenced off from grazing there is a sparse under-growth of bramble (Rubus fruticosus agg) and small quantities of male fern (Dryopteris filix-mas) and common-feather moss (Kindebergia praelonga).

Northern breach (to west of railway): one immature hawthorn; a sapling beech; an immature pedunculate oak (Quercus robur); and a dead sapling hornbeam. The ground below is largely bare but has small quantities of bramble, false wood-brome (Brachypodium sylvaticum), common feather-moss and swan’s-neck thyme-moss (Mnium hornum).
In both cases continuity of tree canopy connections would remain over the path. Elsewhere the trail would avoid crossing hedgerows; at the entrance track to Road Farm an opening would be excavated under the track. The habitats affected would be improved grassland on the southern bank and sparse bramble and dog rose (Rosa canina) scrub on the northern bank.

Inside Railway Corridor

Secondary Woodland: Most of the land within the railway fence consists of secondary woodland. The dominant tree is pedunculate oak, with other species including wild cherry (Prunus avium) and apple (Malus domestica). Shrub species include hawthorn and some substantial stools of hazel. The ground layer is frequently dominated by bramble; more open areas are dominated by ground-ivy (Glechoma hederacea) with other species including wood false-brome, dog’s mercury (Mercurialis perennis) and bracken (Pteridium aquilinum).

Habitat condition: Moderate – the tree canopy is dominated by native species; there is a reasonable diversity of tree age classes, although mature trees are generally absent. The ground flora is poor, as would be expected in woodland of relatively recent origin. Features such as dead wood are generally absent.

Scrub: The dominant scrub species are bramble and hawthorn, with smaller areas dominated by wild cherry suckers and one small patch of blackthorn (Prunus spinosa).

Habitat condition: Generally good – the dominant species are all native and the scrub is often dense, offering good habitat for birds. In places poor – where non-native species are frequent, or the habitat structure is poor.

Improved grassland / tall herb vegetation: Large areas of the more open habitat within the railway land consists of tall grassland dominated by false oat-grass (Arrhenatherum elatius) and cocksfoot (Dactylis glomerata). Herbs are not frequent but include hogweed (Heracleum sphondylium) and goosegrass. In places there are substantial patches of tall herb vegetation, which are dominated by rosebay willowherb (Chamaenerion angustifolium) and spear thistle (Cirsium vulgare).

Habitat condition: Poor – botanical diversity is low and there is also a lack of structural diversity.

Semi-improved grassland: Smaller areas of grassland are slightly more diverse, although the mix of grass species is similar, and support additional species including black knapweed (Centaura nigra) and ox-eye daisy (Leucanthemum vulgare).

Habitat condition: Poor – botanical diversity is low and there is also a lack of structural diversity. Habitat patches are small and scattered.

3.2 Birds and Insects

A range of common bird species was recorded, as set out in the appendices. An insect survey has not been carried out but widespread butterfly species such as meadow brown and ringlet were recorded during the June visits. Sparse grassland of the type favoured by grassland specialist butterflies such as chalkhill blue and small blue, which can be present along railways, is absent and foodplants for grassland butterflies of interest were not recorded. There are no features such as banks of bare soil or flushes that suggest that any of the habitats are likely to be of significant interest for invertebrates.

3.3 Protected Species

Badgers

Signs of badger activity were seen in several places along the route. There are several holes, which are all currently overgrown and abandoned, in both the field edge and the railway embankment at the location shown on map X. Although the holes are disused signs of recent activity were seen.

Reptiles

The data search (detailed in the appendices) did not reveal records of reptiles from the survey site, or from adjacent areas.

Most of the habitats are unsuitable for reptiles, either because they are intensively farmed or because they are heavily shaded by trees and scrub. However, there are patches of grassland within the railway fence that have been assessed to have low to moderate potential for widespread reptile species, particularly slow worm and common lizard. The habitat here, a combination of tall grassland and scrub with sparser grassland on nearby banks outside the survey site, appears suitable for reptiles but their potential is reduced by isolation from more extensive areas of suitable habitat.

Bats

The data search produced records of common pipistrelle and brown long-eared bat within 1km of the route; none was within 50m of the route.

The field survey identified four trees that are suitable for roosting bats. These are detailed in the reports attached as appendices. The route has been planned to avoid removal of these trees.

The corridors provided by the habitats along the railway and the tree belt along Mapridge Green Lane are likely to be of value for foraging and commuting bats.

Great Crested Newt

The data search produced three records of great crested newt within 1km of the route, in Great Missendon and Wendover, although none is within 200m of the route.

There are no potential breeding sites for this species within 50m of the route; a pond by the road in Great Missendon is now permanently dry. The railway corridor provides potentially suitable terrestrial habitat for this species.

NatureSpace, who administer district great crested newt licensing for the part of the area that falls within Aylesbury Vale District Council, have been contacted to provide an assessment of the potential of the route for this species. Most of the route falls
within either a white zone (low risk) or a green zone (moderate risk), with a small part within an orange zone indicating suitable habitat due to the presence of ponds in the surrounding area.

Map 1: Potential for great crested newt, Naturespace (note the assessment does not cover the southern part of the route).

In the area at the southern end of the route that falls within Chiltern District Council there are no extant ponds in the area surrounding the route and this section would also fall within a white zone.

**Dormouse**

There is a record of dormouse from Cockshoots Wood, dating from 1993. The nearest part of the wood is approximately 250m west of the route.

Some of the habitats within the railway corridor are potentially suitable for dormouse. They are too small to support a population of this species in isolation but might be used by dormouse if links to potential breeding sites were present. Potential breeding sites in the surrounding area are provided by: Concord Wood, approximately 600m to the east; Cockshoots Wood, approximately 250m to the west; and Sermon’s Wood approximately 200m to the west (this site is probably too small to support dormice, but is itself linked to a larger area of habitat at Hampdenleaf Wood).

Access for dormice between these woodlands and the survey route is largely prevented by agricultural management. To the east the A413 prevents any movement between Concord Wood and associated habitats and the survey site. To the west there are no continuous, or largely continuous, hedges between the woods and the survey site. Hedges are either absent or have been reduced by unsympathetic management to lines of trees separated by substantial gaps.

Map 2: Connectivity between the survey site and habitats to the west with potential for dormouse.

3.4 Surrounding Areas

There are three sites in the surrounding area with non-statutory nature conservation designations: Cockshoots Wood (beech woodland); Coney Hill (chalk grassland); and Gypsy Lane (historic hedge), of which the Mapridge Green Lane crossing described above forms part.

The land within the zone of influence consists almost entirely of intensively managed agricultural land, with some gardens and partially urbanised areas. Some of the arable land to the west of the survey site is managed under and agri-environment scheme. The stubbles here are species-rich, with plants including dwarf spurge (*Euphorbia exigua*), field pansy (*Viola arvensis*) and the liverworts *Riccia sorocarpa* and *Riccia glauca*. Brown hare and skylark were recorded here.

4 IMPACTS

4.1 Policy

Assessment of the scale of impacts has taken account of nature conservation policies in the Vale of Avebury District Plan (2013-33). The following, which are quoted in full in the appendices, are particularly relevant to this application:

Policy DM NP3 Natural – Biodiversity and Geodiversity – which includes a requirement to achieve net gain; a requirement for an appropriate survey; and a requirement that if significant damage to habitats or species of importance is caused...
it must be unavoidable and must be fully mitigated or, as a last resort, compensated for, resulting in a net gain for the site’s biodiversity.

Policy DM NP5 Natural – Trees and Woodlands – which requires that mitigation is provided to compensate for the loss of protected trees, including planting that contributes to the visual amenity and character of the area and either integrates with the existing green infrastructure or helps to join up areas of existing but separated green infrastructure.

4.2 Designated Sites

There would not be an impact on any site with a statutory nature conservation designation.

The only site with a non-statutory designation that would be affected is the Gypsy Lane Local Wildlife Site (LWS). The LWS is designated for its historic hedgerows. Although the tree lines that would be affected by this proposal are a continuation of these hedges they are of more recent origin, having developed on earthworks that were formed during railway construction. The affected areas therefore lack the special features for which the LWS is designated. The impact associated with the loss of a total of six small trees (one of them dead) and three small shrubs, together with associated ground flora of low diversity, would be slight.

The tree lines are of importance in contributing to ecological continuity along the LWS, although this is disrupted by the railway. The trail has been designed to avoid impacts on larger trees and in both locations where it would be breached connectivity of the tree canopy over the path would remain. Ecological continuity would therefore be little affected.

There would be no impact on the other designated sites in the surrounding area.

4.3 Habitat Loss

The table below shows the area of habitat lost and retained within the 8m strip of land that will form the trail. There is also a column for habitat modified: this reflects the fact that where the trail passes through the tree belt and most of the woodland the tree canopy will remain largely intact: the ground flora, which will be lost, is of a lower level of interest.

### Outside Railway Boundary

<table>
<thead>
<tr>
<th>Phase 1 Habitat Type</th>
<th>UK Habitat Description</th>
<th>Original Condition</th>
<th>Habitat Area</th>
<th>Baseline Area</th>
<th>Area Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable</td>
<td>Cropland – cereal crops</td>
<td>Poor</td>
<td>0.79Ha</td>
<td>0.30Ha</td>
<td></td>
</tr>
<tr>
<td>Sparse scrub</td>
<td>Heathland and scrub-bramble scrub</td>
<td>Poor</td>
<td>0.02Ha</td>
<td>0.01Ha</td>
<td></td>
</tr>
<tr>
<td>Tree Line</td>
<td>Boundary – tree line</td>
<td>Moderate</td>
<td>16m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species-poor hedge</td>
<td>Boundary - hedge</td>
<td>Poor</td>
<td>8m</td>
<td>3m</td>
<td></td>
</tr>
<tr>
<td>Neutral Grassland – improved</td>
<td>Grassland – other neutral grassland</td>
<td>Poor</td>
<td>0.04</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>Urban – bare ground</td>
<td>Poor</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

### Within Railway Boundary

<table>
<thead>
<tr>
<th>Phase 1 Habitat Type</th>
<th>UK Habitat Description</th>
<th>Original Habitat Condition</th>
<th>Baseline Area (Ha)</th>
<th>Area Lost (Ha)</th>
<th>Area Modified (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad-leaved woodland – semi natural</td>
<td>Woodland and forest – other woodland, broadleaved</td>
<td>Moderate</td>
<td>1.2</td>
<td>0.12</td>
<td>0.31</td>
</tr>
<tr>
<td>Dense scrub</td>
<td>Heathland and scrub - mixed scrub</td>
<td>Good</td>
<td>0.28</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>Dense scrub</td>
<td>Heathland and shrub - mixed scrub</td>
<td>Moderate</td>
<td>0.14</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>Neutral Grassland – semi-improved</td>
<td>Grassland – other neutral grassland</td>
<td>Poor</td>
<td>0.18</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Neutral Grassland – improved</td>
<td>Grassland neutral grassland</td>
<td>Poor</td>
<td>1.49</td>
<td>1.61</td>
<td></td>
</tr>
</tbody>
</table>

4.4 Protected Species

No impacts on protected species have at present been identified, but there several potential impacts.

4.4.1 Bats

Several trees with potential for roosting bats have been identified. If these were to be felled then a climbing inspection and/or an activity survey would be required in order to establish whether there would be an impact on bats.

The trail would not be lit.

There are potential impacts on commuting bats where the trail crosses the tree belt and where it passes through woodland within the railway land. There is sufficient width within the railway land, both within the planning application boundary and in land that will be retained by Network Rail, to ensure that connectivity along the railway corridor remains.

4.4.2 Badgers

Signs of badger activity were seen in several places and there is a currently disused sett close to the route.

Badgers would be potentially vulnerable to impacts during construction and there would be potential impacts if the sett becomes active again.

4.4.3 Reptiles

Due to the difficulty of accessing land in Network Rail management, due to health and safety requirements, it has not been possible to carry out a reptile survey, which would normally be completed before determination. In this instance the potential of the site for reptiles is low (although not negligible) and there is potential to mitigate any impacts, as outlined below. If reptiles are present this would impose a requirement for mitigation but would not result in the application having an unacceptable impact.
4.4.4 Nesting Birds
Scrub and secondary woodland along much of the route is likely to support nesting birds.

4.4.5 Great Crested Newt
There would be no impact on any breeding habitat for great crested newt but the route passes through potentially suitable terrestrial habitat and there are ponds in the vicinity of part of the route.

4.5 Other Species of Conservation Concern
The route is not of known importance for any rare species or for any priority species listed in Section 41 of the Natural Resources and Rural Economy (NERC) 2006 Act. It is likely that scrub and other habitats along the route are used by widespread species of bird and moth included in Section 41 due to population declines. There is however nothing to suggest that the survey site is likely to be of significant interest for any such species. There may be a minor loss of habitat for some of these species but the scale of any impact in a district context would be negligible.

There are records of brown hairstreak butterfly in the wider area, although not adjacent to the route. There is one small patch of blackthorn, the larval foodplant of this species, on the route. The habitat here is suboptimal, since the population of blackthorn is small and the butterfly prefers to lay eggs on twigs in full sunlight and the scrub here is shaded by nearby trees, a building and the railway embankment. However, the possibility of its presence cannot be entirely excluded.

5 MITIGATION
The proposal will have wider environmental benefits, which will include benefits to wildlife, although the scale of these is hard to quantify. These benefits are largely associated with reductions in vehicle emissions and also with possible reductions in wildlife road casualties.

5.1 Habitat Loss
None of the habitats that would be affected is of ancient origin or supports species that are dependent on highly specialised habitats. Mitigation through provision of replacement habitat should therefore be viable.

There is a possibility for the scheme to contribute to existing proposals for the enhancement of Rock Farm, close to the southern end of the scheme. Aims of the enhancement scheme include enhancing habitat for declining birds and other priority species and improving connectivity between existing blocks of habitat. These include connections between Cocksheats Wood LWS and smaller blocks of woodland to the south; these links currently consist of hedges that have been reduced to gappy tree lines. The table below summarises the enhancement proposals. Details of these proposals will be available as the scheme evolves.

The trail itself will have verges of approximately 3m width. These offer the opportunity to create and retain corridors of semi-improved grassland, by forming verges from nutrient-poor subsoils and managing these as tall grassland using rotational mowing.

<table>
<thead>
<tr>
<th>Existing Phase 1</th>
<th>UK Habitat Description</th>
<th>Original Habitat Condition</th>
<th>Enhancement Proposal</th>
<th>Length / Area created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable</td>
<td>Cropland – cereal crops</td>
<td>Poor</td>
<td>Species-rich mixed hedge</td>
<td>590m</td>
</tr>
<tr>
<td>Arable</td>
<td>Cropland – cereal crops</td>
<td>Poor</td>
<td>Semi-improved grassland</td>
<td>2955m²</td>
</tr>
</tbody>
</table>

5.2 Protected Species

5.2.1 Bats
The trees identified as having potential for roosting bats would all be retained.

Where the trail crosses the tree belt and where it passes through woodland within the railway land connectivity of the tree canopy would remain. This would avoid any impact on bat commuting routes.

5.2.2 Badgers
In order to avoid badgers becoming trapped any excavation over 500mm deep left overnight would be either covered or provided with an exit ramp. Any pipework of over 150mm diameter would be blanked off overnight. Badgers would be potentially vulnerable to impacts during construction and there would be potential impacts if the sett becomes active again.

5.2.3 Reptiles
The programme for reptile mitigation is governed by the need to fence the site off from the railway before the survey commences, which itself is constrained by the need to avoid destruction of active birds’ nests whilst constructing the fence.

It is therefore proposed that refugia be laid in survey locations in mid-August, so that they have bedded-in by the time the fence is in place. This will require Network Rail supervision. Checking of the refugia will then commence in early September. The mitigation measures undertaken will then depend on the findings of the reptile survey, as follows:
5.2.4 Nesting Birds

All vegetation removal will take place during the period 1st September to 28th February in order to avoid the destruction of occupied nests.

5.2.5 Great Crested Newt

Mitigation for great crested newt would be achieved through the district licensing route. Naturespace have confirmed that no measures such as fencing or trapping would be required.

5.3 Other Species of Concern

The habitat creation measures outlined above would provide replacement habitat for the Section 41 priority moth and bird species potentially affected.

The patch of blackthorn scrub would be surveyed for brown hairstreak eggs (which are relatively easy to find) in October. If eggs are found then the trail will be routed to avoid impacts on the plants supporting the eggs. If this is not possible the twigs with eggs will be translocated to bushes elsewhere in the patch and securely taped into a suitable position.

6 SUMMARY

The balance of habitats lost, modified and created is as follows:

<table>
<thead>
<tr>
<th>Phase 1 Habitat Type</th>
<th>Habitat Condition</th>
<th>Area Lost</th>
<th>Area Modified</th>
<th>Area Created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable</td>
<td>Poor</td>
<td>0.30Ha</td>
<td>0.31Ha</td>
<td></td>
</tr>
<tr>
<td>Semi-natural broadleaved woodland</td>
<td>Moderate</td>
<td>0.12Ha</td>
<td>0.12Ha</td>
<td></td>
</tr>
<tr>
<td>Dense scrub</td>
<td>Good/moderate</td>
<td>0.12Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparse scrub</td>
<td>Poor</td>
<td>0.01Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree Line</td>
<td>Moderate</td>
<td>0.06Ha</td>
<td>0.3Ha</td>
<td></td>
</tr>
<tr>
<td>Species-poor hedge</td>
<td>Poor</td>
<td>0.06Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species-rich hedge</td>
<td>Poor</td>
<td>0.01Ha</td>
<td>0.01Ha</td>
<td></td>
</tr>
<tr>
<td>Neutral grassland – semi-improved, tall</td>
<td>Poor</td>
<td>0.01Ha</td>
<td>0.3Ha</td>
<td></td>
</tr>
<tr>
<td>Neutral grassland – improved, tall</td>
<td>Moderate</td>
<td>0.12Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral Grassland – improved, short</td>
<td>Poor</td>
<td>0.01Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>Poor</td>
<td>0.01Ha</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this instance “modified” refers to areas of woodland where the ground layer will be lost but the tree canopy will remain intact, resulting in retention of much of the ecological interest of the existing habitat.

Further opportunities for habitat creation will be developed on Road Farm, resulting in creation of further significant hedgerow lengths. These proposals will be developed as the project progresses and are not reflected in the table above.

The route will not be lost and impacts on foraging bats will therefore be minor. Trees with potential for roosting bats will be retained. Where ecological connectivity for bats and other groups has been identified as being of importance, principally at the Gypsy Lane LWS, continuity of the tree canopy will be maintained.

No impact on great crested newts has been identified but, as there are ponds within 500m of part of the route, the district licensing process will be used.

Destruction of or disturbance to active birds’ nests will be avoided. Badger activity along the route will be monitored and suitable measures will be taken to avoid impacts on this species.

Surveys for reptiles and brown hairstreak will be carried out and, if necessary, appropriate mitigation measures will be implemented.

Rupert Higgins
Wessex Ecological Consultancy
11th December 2019