Land at Newbridge Road, Bath

Updated Ecological Appraisal

April 2019

on behalf of **London Road Nottingham Ltd**

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Report Contents

1 Introduction

1.1 Site Description

The land at Newbridge Road (referred to as the 'site' for the purpose of this report) is located the south of Newbridge Road in Bath and situated on the western side of the city at Ordnance Survey grid reference ST 72544 65100 (see Figure 1).

The site comprises a car showroom, garages and industrial units used for the motor trade. A car showroom with forecourt and parking is located at the frontage of the site, behind which are adjoining offices and garages that are part of the business premises. An access road through the site leads around the buildings and provides access to a separate industrial unit at the rear of the site, used by Hanson UK.

There is a steep incline as level of the ground drops down to the rear (south) of the study site. The industrial unit at the rear is a large, steel structured building with breezeblock and metal sheeting walls and a metal sheet covering on the roof. The land around the building is predominantly a gravel surface car parking area used for the storage of vehicles. There is a small grass bank along the tarmac access road and very sparse patchy grassland within the gravel parking area.

The study site extends to the east under the Osborne Road along a disused railway line; a large brick arch bridge carries the road. There is scrub and a narrow strip of woodland along the railway line and residential properties along the Newbridge Road and Avondale Court back onto the disused railway.

1.2 Background

The site was the subject of previous extended Phase 1 Habitat Surveys and building inspection surveys undertaken in July 2012, August 2012, March 2013 and March 2014 by Windrush Ecology Ltd. The main focus of the surveys was to identify whether the buildings were being used by roosting bats and to assess the habitats present within the site for their potential to support protected species.

This updated report presents the results of a revised ecology survey undertaken in November 2018. The aim of the revised survey was to assess any changes in habitat type and value since the previous survey was undertaken in 2014 and to re-assess the potential ecological impacts.

1.3 Aims of the Study

The aims of this study are to re-evaluate the habitats present within the site and to re-assess the potential for the site to support protected or notable species since the previous ecology survey was undertaken in 2014. This report discusses the likely impacts of development on the ecology of the site and the local area and makes recommendations for appropriate mitigation measures and habitat enhancement in this regard.

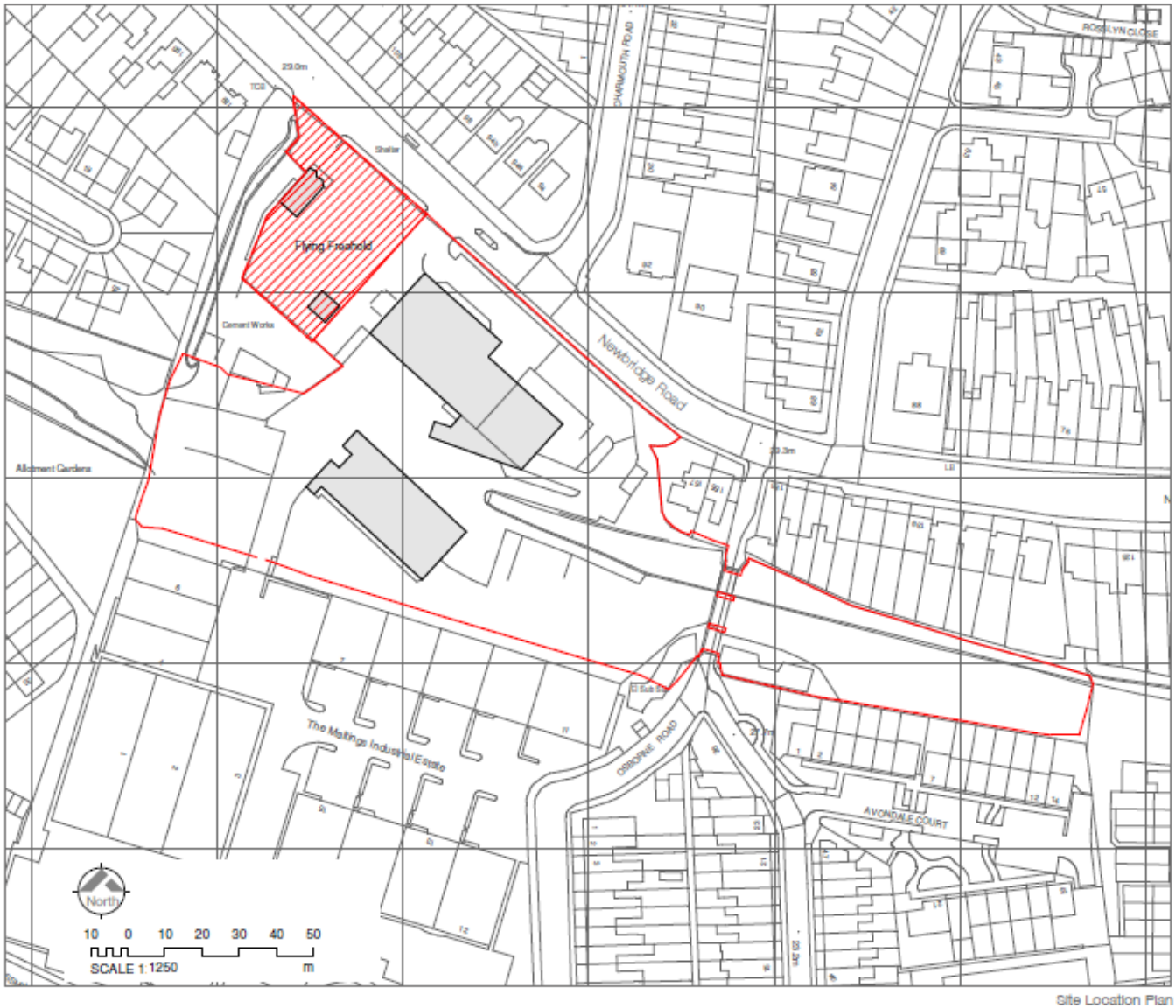


Figure 1. Existing site plan. The red line boundary shows the extent of the site.

2 Methodology

2.1 Desk Study

The Bristol Regional Environmental Records Centre (BRERC) was contacted in July 2012 for records that it holds for protected and notable species within the study site and a 0.5 km radius of the site. Data were also requested from the BRERC on statutory and non-statutory sites of nature conservation importance (including European sites, Sites of Special Scientific Interest (SSSI's), Sites of Nature Conservation Interest (SNCIs)) from within the same search radius.

Internet resources were also interrogated as part of the desk study. The Multi-Agency Geographic Information for the Countryside (www.magic.gov.uk) website was searched for information regarding internationally protected sites (e.g. Special Areas of Conservation) within 5km of the site and statutory sites of nature conservation importance (e.g. SSSIs) within 1km of the site. Other internet resources interrogated as part of the desk study include:

- The Ordnance Survey - www.ordnancesurvey.co.uk
- Google Earth
- Bing Maps – www.bing.com/maps

2.2 Field Survey 2012

Anton Kattan *BSc MSc MCIEEM*, an experienced professional ecologist with eleven years consultancy experience, undertook field surveys on the 9th July and 21st August 2012. Anton is also a licenced bat ecologist and has held a bat licence from Natural England for over six years (licence number 20121451). The habitats present within the site were recorded using standard Phase 1 Habitat Survey categories (JNCC 2010) to describe the habitat types; the survey on the 21st August 2012 covered areas of the disused railway line which were not surveyed during the visit on the 9th July 2012.

Consideration was given to the presence of protected species or habitats that may support protected species. The survey looked for obvious field signs that indicate a species may occur within the site. A survey of the wooded areas and scrub at the boundary was undertaken for signs of badger activity and for badger setts. Evidence of badgers that was looked for include well-used track-ways, footprints, signs of foraging (snuffle holes), faeces and latrines. Any badger setts found were surveyed for signs of activity and breeding such as fresh spoil, fresh footprints, badger hairs and fresh bedding.

A survey of trees within the site and at the site boundary was undertaken in order to assess the potential of the trees to support roosting bats. Trees were assessed as either having high, medium, low or no potential to shelter roosting bats according to the criteria shown in Table 1.

Table 1. Criteria for the assessment of trees for roosting bats (after Cowan 2003)

Potential	Features of tree
No	No loose bark, ivy, splits, cracks or holes.
Low	Sparse ivy covering, minor branch splits, small sections of loose or flaking bark.
Medium	Dense ivy, more significant branch splits, downward developing holes, small cavities.
High	Upward developing holes and/or deep splits and cracks, dense ivy, woodpecker holes, lifting bark or multiple features in the same tree.

A survey of the buildings to assess their potential for bat roosts was undertaken on the 9th July. An external survey of all the buildings was undertaken in order to look for bats and/or evidence of bats and to assess the potential of the buildings to support roosting bats; there were no suitable internal spaces in which bats could shelter and therefore a detailed inspection of the interior of the buildings was not considered necessary.

A Clulite torch with a 500m spot beam and close-focussing binoculars were used to carry out detailed inspections of any potential roosting sites within exterior features of the buildings. 'Clean' gaps and crevices within the fabric of the buildings were looked for, as this can indicate where bats have gained access to the fabric of a building. The bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Hundt 2012).

2.3 Field Survey 2013

An additional field survey was undertaken on 19th March 2013 by Anton Kattan *MCIEEM*. The aim of this survey was to look at a badger sett that had become exposed during vegetation clearance works. The badger sett was noted along the northern bank of the disused railway line, approximately 40m to the west of Osbourne Bridge. The survey recorded evidence of badger activity at the sett.

2.4 Field Survey 2014

An updated survey of the site, following the above protocol, was undertaken on 11th March 2014 by Tracy Gray *BSc GradCIEEM*. A re-survey of the site was conducted and a description of habitats was prepared using standard Phase 1 habitat survey methodology (JNCC 2010). Target notes were also prepared on features of particular ecological interest and an assessment was made of the sites potential to support protected and/or notable species (such as species listed within Section 41 of the NERC Act 2006).

The updated bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Hundt 2012) and the *Bat Workers Manual* (JNCC 2012). The badger sett was re-surveyed and notes were made on fresh evidence of badger activity since March 2013.

2.5 Field Survey 2018

An updated survey of the site was undertaken by Jan-Piet Stuursma on 26th November 2018. The survey followed standard Phase 1 habitat survey methodology (JNCC 2010) as in the previous studies. As before target notes were also prepared on features of particular ecological interest and an assessment was made of the sites potential to support protected and/or notable species. The badger sett was re-surveyed and notes were made on fresh evidence of badger activity since March 2014.

Since the most recent survey in 2014, updated best practice guidance for surveying buildings and trees for bats has been published (Collins 2016). The 2018 study at Newbridge Road followed this updated methodology.

A detailed external survey of the buildings within the site was also undertaken by Mr Stuursma on 26th November 2018 in order to look for bats and/or evidence of bats and to assess the potential of the buildings to support roosting bats. Mr Stuursma holds a licence from Natural England to survey for bats within all counties of England (licence number: 2018-37063-CLS-CLS).

The external elevations of the buildings were inspected for bat droppings, urine stains, feeding remains (such as moth wings) and characteristic fur staining around access points. Notes were made on the relative freshness, shape and size of bat droppings and the location and quantity of any feeding remains. 'Clean' gaps and crevices within the structure of the buildings were looked for as this can indicate where bats may have gained access to the fabric of the walls/roof.

The study also takes into account the structure and ecological context of the buildings, including the following factors which may increase the likelihood of roosting bats being present:

- Age of the building (pre-20th Century or early 20th Century construction)
- Nature of construction; traditional brick, stone or timber construction
- Large and complicated roof void with unobstructed flying spaces
- Large (>20 cm) roof timbers with mortice/tenon joints, cracks and holes
- Entrances and gaps for bats to fly and crawl through

- Poorly maintained fabric providing ready access points for bats into roofs, walls; but at the same time not being too draughty and cool.
- Roof warmed by the sun, south-facing roofs in particular
- Weatherboarding and/or hanging tiles with gaps
- Undisturbed roof voids
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year
- Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting.

Trees within the site were also assessed for their bat roost potential. A survey of trees was undertaken from ground level in order to look for evidence of bats (such as droppings, staining and scratch marks) and to assess the potential of the trees to support roosting bats within an undetected roost site.

Potential roost features (PRFs) in trees that may be used by bats include (Collins, 2016):

- woodpecker holes;
- rot holes;
- hazard beams;
- other vertical or horizontal cracks and splits (such as frost cracks) in stems or branches;
- partially detached bark;
- knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- man-made holes (e.g. cavities that have developed from flush cuts) or cavities created by branches tearing out from parent stems;
- cankers (caused by localised bark death) in which cavities have developed;
- other hollows or cavities, including butt-rots;
- double leaders forming compression forks with included bark and potential cavities;
- gaps between overlapping stems or branches;
- partially detached ivy with stem diameters in excess of 50mm; and bat, bird or dormouse boxes.

The following criteria are used for as guidelines for assessing the potential suitability of buildings and trees for bats (Collins 2016):

Table 2. Criteria for the assessment of buildings and trees for roosting bats (Collins 2016).

Suitability	**Description of Roosting Habitats**
Negligible	Negligible habitat features likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after the presence is confirmed).

Suitability	Description of Roosting Habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.

Confirmed presence of roosting bats is where evidence is found to show that a building or structure is used by bats, this includes:

- bats seen roosting or observed flying from a roost or freely in the habitat;
- droppings, carcasses, feeding remains etc. found and/or
- bats heard 'chattering' inside a roost on a warm day or at dusk.

In addition to the bat survey, the buildings were checked for evidence of nesting birds including old birds' nests, bird droppings, feathers and eggs.

3 Results

3.1 Desk Study

Details of the desk study results can be found in Appendix 2.

3.1.1 Statutory Sites of Nature Conservation Importance

There are no internationally important statutory sites of nature conservation importance (for example SACs & SPAs) within 2km of the site and no nationally important sites within 1km of the site.

Carrs Wood Local Nature Reserve (LNR) is situated on the edge of Twerton, Bath and lies approximately 270m south-west of the site. Carrs Wood is an area of broadleaved woodland and limestone pasture, and there is a brook running through the LNR. Carrs Wood LNR is also designated as a SNCI (see Section 3.1.2 below).

3.1.2 Non-statutory Sites of Nature Conservation Importance

Sites of Nature Conservation Interest (SNCI) within 0.5km of the site are shown on the BRERC map in Appendix 2 and summarized in Table 3 below; the code in column 1 of Table 3 is the BRERC identification number given to SNCIs, as shown on the SNCI map (Appendix 2).

Table 3. Summary of Biological Notification Sites within 1km of the site

Code	Site	Broad Habitat	Features of the site	Distance from Application Site
BN227	Carrs Wood	Broadleaved Woodland. Diverse, Sycamore with Beech/ Ash regeneration. Wych elm in shrub layer. Diverse flora.	Ground flora possibly includes Bath Asparagus.	270m
BN91	Locksbrook Cemetery	Unimproved and semi-improved calcareous grassland	Diverse limestone flora	450m
BN292	River Avon	Running water (river) with associated marginal habitats.	Otter Odonata – including red-eyed damselfly, brown hawker, emerald damselfly, four spotted chaser Plants -greater dodder, Loddon pondweed etc.	160m

3.1.3 Protected Species

The list of protected and notable species from the BRERC data request is presented in Appendix 2. A summary and description of records of protected species considered most relevant to the site is given in Table 4.

Table 4. Summary of protected species records considered most relevant to the site

Species	**Data**	**Distance to Application Site (km)**	**Description**
Bats			
Whiskered Bat (*Myotis mystacinus)*	2004	0.6	Two bats recorded near Carr Woods
Common Pipistrelle bat (*Pipistrellus pipistrellus*)	2008	0.6	A roost with an unspecified number of bats at a property in Lower Weston, Bath
Unidentified bat species	2001-2008	0.6	Up to 11 bats (including juveniles) recorded at a property in Lower Weston, Bath. Possibly the same address as the common pipistrelle roost above
Daubenton's bat (*Myotis daubentonii*)	2000	0.32	Single female recorded from the Newbridge area of Bath
Otter (*Lutra lutra)*			
Otter	2007	0.3	On the River Avon
Otter	2003	0.4	Juvenile on the River Avon
Otter	2003	0.4	Adult female on the River Avon
Otter	2005	0.56	2 animals recorded on the River Avon
Otter	2005	0.5	On the River Avon
Otter	2010	0.54	Adult on the River Avon
Otter	2004	0.58	Adult on the River Avon
Otter	2005	0.76	Adult on the River Avon
Water vole (*Arvicola amphibius*)			
Water vole	2011	0.4	1 animal recorded on River Avon
Water vole	1998	0.6	Recorded as present on a stretch of the River Avon
Water vole	2010	/	Present on the Kennet and Avon Canal in Bath
Badger (*Meles meles)*			
Badger	2006	0.26	2 animals recorded from a residential road in Newbridge
Badger	2003	0.71	Present in an urban area
Badger	2007	0.63	Present- no further information available
Badger	2008	0.7	1 animal recorded on several occasions from a residential garden
Reptiles			
Slow worm (*Anguis fragilis)*	2008	0.1	Recorded on the disused railway line at the back of Newbridge Road that connects to the application site
Slow worm	2010	0.1	1 animal recorded from a nearby garden
Slow worm	2007	0.41	Recorded on the disused railway line at the back of Newbridge Road that connects to the application site
Slow worm	2007	0.69	Recorded from a nearby garden
Grass snake (*Natrix natrix*)	2003 and 2007	0.69	Recorded from a nearby garden (one animal)
Slow worm	2003-2065	0.69	Slow worm recorded on an annual basis with up to 11 animals recorded, including juveniles.

Hedgehog (*Erinaceus europaeus,*), has been recorded from Ashley Avenue, Lower Weston (2007), which is approximately 0.7km from the site.

Common Toad (*Bufo bufo*), has been recorded from Carrs Wood (2001) and Ashley Avenue, Lower Weston (2007).

The list of notable bird species recorded from the surrounding suburban areas is presented in Appendix 2. House sparrow (*Passer domesticus*), swift (*Apus apus*) and goldcrest (*Regulus regulus*) have been recorded from the disused railway line that connects to the site.

Invertebrate recording on the disused railway line that forms part of the study site has turned up notable insect species that are on the local Biodiversity Action Plan. This includes Dotted Bee-fly (*Bombylius discolour*) and the long-winged conehead grasshopper (*Conocephalus discolour*).

3.2 Field Survey 2012

3.2.1 Habitats

The following habitat descriptions should be read with reference to the plan in Figure 2 and photographs of the site from 2012 are shown in Appendix 3 and from 2014 in Appendix 4.

3.2.1.1 Buildings

The front of the site is dominated by a large building complex (Building 1) associated with the car showroom and motor trade facilities (Photograph 1 and 7). At the front, is the showroom area which is housed by a large single storey building with glass frontage, a flat roof and brick walls. Adjacent to the showroom is parking, with a covered area on the south-east side and forecourt to the north-west. The forecourt is on the roof of a large lower level garage (that is accessed from the rear of the building) and small roof access/office buildings are on the roof.

Offices at the rear of the building are on several levels and are up to four storeys high (Photograph 2 and 8). The office building has a flat roof and breeze block walls with a concrete structure. On the ground floor are garage/workshop areas.

At the rear of the site is a large industrial unit (Building 2, Photograph 3 and 9). The building has a steel structure and metal sheeting covers the majority, including the roof. The building has a shallow single pitched roof and there are large flumes on top. Around the base of the building are low breeze block walls.

3.2.1.2 Hard Standing and Parking

The areas around the buildings are used for parking and storage of vehicles. At the front of the site the area is tarmacked for customer parking and the forecourt area of the showroom. A small access road leads around the building and provides vehicle access to the rear of the site, including the large industrial unit. Elsewhere, the ground has gravel covering for the car parking areas, with patchy grassland and sparse ruderal vegetation in areas that are not regularly used (Photograph 4 and 10). The majority of the disused railway also has a gravelled base with sparse grassland, although there is a remnant area of tarmac at the eastern end of the site (approximately 25m long).

3.2.1.3 Landscape Planting

There is very little ornamental planting within the application site because the majority of the area is not landscaped. At the front of the site is a narrow ornamental bed with a line of small cherry trees *Prunus sp.* (with a diameter at breast height (dbh) of between 20-25cm) and other planted ornamental shrubs. Elsewhere, boundary areas of the site support scrub or woodland, the majority of which is self-seeded.

3.2.1.4 Grassland

The majority of the grassland within the site is the result of self-seeded grasses establishing a sparse covering within gravelled car parking areas or along the disused railway line and it has not

established a well-developed sward (Photo 4, 5, 10 and 11). Dominant grasses are false oat-grass *Arrhenatherum elatius*, Yorkshire fog grass *Holcus lanatus* and perennial rye grass *Lolium perenne*. Species such as rough meadow grass *Poa trivialis* and cocksfoot grass *Dactylis glomerata* were also noted as being frequent and other species such as timothy *Phleum pratense* and soft brome *Bromus hordeaceus* are occasional. White clover *Trifolium repens* is abundant in the swards and common herbs such as ribwort plantain *Plantago lanceolata*, common fleabane *Pulicaria dysenterica*, ragwort *Senecio jacobaea*, dandelion *Taraxacum officinale* and herb Robert *Geranium robertianum* were also regularly recorded.

The only well-established areas of grassland are small areas at the periphery of the site; notably, a grass bank on the verge of the access road at the rear of Building 1 (Photo 6 and 12). The grassland is dominated by false oat grass with cocksfoot grass, perennial rye grass, barren brome grass and meadow grasses *Poa sp.* also being regular. Broad-leaved forbs include shepherd's purse *Capsella bursa-pastoris*, common fleabane, red clover *Trifolium pratense*, creeping buttercup *Ranunculus repens*, black medic *Medicago lupulina* and herb Robert. The grassland is unmanaged and taller species such as common nettle *Urtica dioica*, teasel *Dipsacus fullonum* and ragwort were noted and are an indication of a possible disturbed habitat.

3.2.1.5 Trees and Scrub

There is very limited tree cover at the site. The tree and woodland resource is at the boundary of the site. A large notable oak tree *Quercus robur* was recorded in the south west corner of the site (T1, Figure 2). The tree is on the boundary and forms part of a very small, narrow strip of woodland at the edge of the site that contains mature ash trees *Fraxinus excelsior*. The oak tree has a dbh of around 90cm and is approximately 15m tall and there are three mature ash trees with a dbh of 40-60cm and height of 12m adjacent to it. This small area of woodland has an understory of sycamore *Acer pseudoplatanus*, hawthorn Crataegus *monogyna* and elder *Sambucus nigra*.

On the eastern side of the site there is woodland along the banks of the disused railway line and on the boundary up to the Newbridge Road. Many areas of woodland are predominantly semi-mature sycamore trees that have self-set. In the north-east corner of the site mature sycamore trees were noted. On the southern bank of the railway line the canopy of the woodland is predominantly ash, with several mature trees over 12m high. There is a sparse understory to this woodland with occasional bramble *Rubus fruticosus* and hawthorn and ivy *Hedera helix* covers the ground. There is dumped rubbish (such as old trolleys and mattresses) in the woodland, and piles of concrete, spoil and garden refuse.

On the northern side of the railway line the banks that lead up to the residential properties are covered in scrub, most of which is buddleia interspersed with patches of elder and sycamore trees. Bramble, bindweed, a large Russian vine *Fallopia baldschuanica* and garden escapes were also noted in the scrub.

3.2.2 Species

3.2.2.1 Badgers

No badger setts were found during the field survey in 2012, which included a search of woodland and scrub within the site. Most of the site is unsuitable for setts and the opportunity for badgers to build setts is largely confined to the banks of the railway line. A badger dung pit (marked on Figure 2) was found close to the railway line and is an indication that they move through the site. The dung pit contained a single pile of droppings and is not considered to be a regular territory marker. A badger sett was noted in March 2013, following scrub clearance works along the embankment to the north side of the disused railway line (see Section 3.3).

3.2.2.2 Bats

No evidence of bats was found during the daytime survey and the buildings within the site are considered to have negligible potential for bats. This is because the buildings do not have any enclosed spaces (such as attics or cellars) and the building structures do not contain any

architectural features, concealed areas or crevices which would allow bats to shelter in the fabric of the building. The construction style and building material used are generally unfavourable for bat roosts. Furthermore, there is limited tree cover around the buildings and therefore the immediate surrounding environment is not considered to be favourable for bats. Consequently, the likelihood of bats seeking shelter in the buildings is considered to be low.

An inspection of the brick arch bridge that carries Osborne Road over the disused railway line is in a sound state of repair (with well-pointed brickwork) and there are no crevices or cavities in the structure that could provide shelter for bats.

The mature trees within the site do not appear to have developed any substantial veteran tree features, such as damage or woodpecker holes that could provide shelter for bats. The mature oak tree in the south-west corner of the site (T1, Figure 2) has a few small cracks and crevices in large branches, but this is only likely to offer shelter for solitary or very low numbers of bats and the tree is assessed as having low bat roost potential.

Two of the ash trees within this area have developed features such as rot holes and a hollow base. The first of these trees has a two large rot holes; one of which does not appear to extend any deeper than approximately 3cm, with the second hole approximately 4cm in diameter and at approximately 2m height. The second ash tree has a hollow base; a large crack in the boughs if the tree extends up to approximately 30cm. These trees are assessed as having medium bat roost potential and are marked on Figure 2.

A few of the mature ash trees on the southern bank of the railway have sparse ivy cover, which could offer shelter for solitary bats in summer. The ash trees with ivy are assessed as having low bat roost potential. The trees with low bat roost potential are marked on Figure 2.

3.2.2.3 Reptiles

No reptiles were seen during the field survey and there is very limited potential for them at the site. Most areas of the site have insufficient vegetation cover for reptiles because they are part of the working area used for the current motor vehicle business.

The disused railway line is less disturbed, and supports grassland and scrub, but the habitat structure is very poor for reptiles. The scrub is dense and there are no open habitat mosaics or transitional zones between the woodland and grassland. Much of the scrub is introduced, with fast growing species such as buddleia dominating and shading out areas. The south facing bank on the railway line is also heavily shaded by woodland that has a closed canopy. Slow worms are known to occur along the disused railway line (see Section 3.1.3), and although the possibility of finding very low numbers of animals within the site cannot be discounted, the habitats are not considered to be suitable to support a viable reptile population.

3.2.2.4 Birds

The woodland and scrub at the periphery of the site and on the disused railway line are considered suitable for nesting birds, and several bird species which favour these types of habitats for nesting and foraging were observed during the survey including blackbird *Turdus merula*, robin *Erithacus rubecula*, dunnock *Prunella modularis*, blue tit *Cyanistes caeruleus*, chiffchaff *Phylloscopus collybita*, great tit *Parus major* and wood pigeon *Columba palumbus*.

3.2.2.5 Invertebrates

There are no important habitats within the site for invertebrates.

3.2.2.6 Other species

The woodland and scrub habitat is considered to have the potential to support hedgehogs *Erinaceus europaeus*. This mammal is known to use garden habitats, such as those adjacent to the disused railway line, for foraging and shelter and the dense cover on the banks of the railway line are likely to offer suitable foraging, sheltering and nesting sites for this species.

3.3 Field Survey 2013

3.3.1 Badgers

The field survey in March 2013 focussed on badgers, and was undertaken after a badger sett was revealed following scrub clearance. In March 2013 the sett appeared to be active because of fresh digging, a badger print in soft mud and a fresh latrine (at the eastern end of the embankment).

The majority of the sett entrances were on the upper part of the embankment, with a couple of the holes on the upper fence line where badgers are tunnelling under the gardens of the properties along Newbridge Road. The sett was assessed as being a main sett (with 6 entrance holes); a further two holes are evidence at the eastern end of the embankment (possible subsidiary sett).

3.4 Field Survey 2014

3.4.1 Habitats

The updated ecology survey undertaken in March 2014 found that there has been no significant change with regard to the ecology of the site since the previous survey was undertaken in 2012 (see Figure 2). The habitats present within the site remain unchanged since the survey was undertaken in 2012 and the site has a similar value with regard to protected/notable species.

3.4.2 Species

The badger sett was again noted along the northern bank of the disused railway line, approximately 40m to the east of Osbourne Bridge. The sett extends approximately 30m beyond this point in a easterly direction.

Four active entrances were noted in 2014, however there a large Russian vine is growing over the whole of this area partially obscuring the view, so it is possible more entrances are present beneath the heavy vegetation. Well-worn paths extend from the sett north into the gardens of properties along Newbridge Road and east along the disused railway line and out of the site. Along the northern bank a number of fresh and older latrines were noted as well as a fresh dung pit located to the west of Osbourne Bridge. The majority of the rest of the site is considered unsuitable for badger setts.

No bats or fresh evidence of bats were found during the updated survey and the buildings are considered to unsuitable for roosting bats. This is due to the lack of opportunities that are created for roosting bats within the modern buildings.

A similar bird species assemblage was noted at the time of the re-survey in 2014 and included great tit, blue tit, wood pigeon, magpie *Pica pica,* goldfinch, carrion crow *Corvus corone* and wren *Troglodytes troglodytes*.

No evidence of other protected species was noted during the updated survey.

3.5 Field Survey 2018

3.5.1 Habitats

The updated ecology survey undertaken in November 2018 found that there has been no significant change with regard to the ecology of the site since the previous survey was undertaken in 2014 (see Figure 2). The habitats present within the site remain unchanged since the survey was undertaken in 2014 and the site has a similar value with regard to protected/notable species.

3.5.2 Species

The badger sett was again noted along the northern bank of the disused railway line as in the previous studies. Two active sett entrances were noted in 2018, however dense vegetation is partially obscuring the view, so it is possible more entrances are present beneath this thicket.

Further evidence of badger activity within the site includes areas of foraging/digging to the south of the disused railway line and a fresh dung pit to the south-west of Osbourne Bridge. A well-worn badger pathway runs along the southern boundary of the site, with an additional path at the western site boundary leading into neighbouring properties.

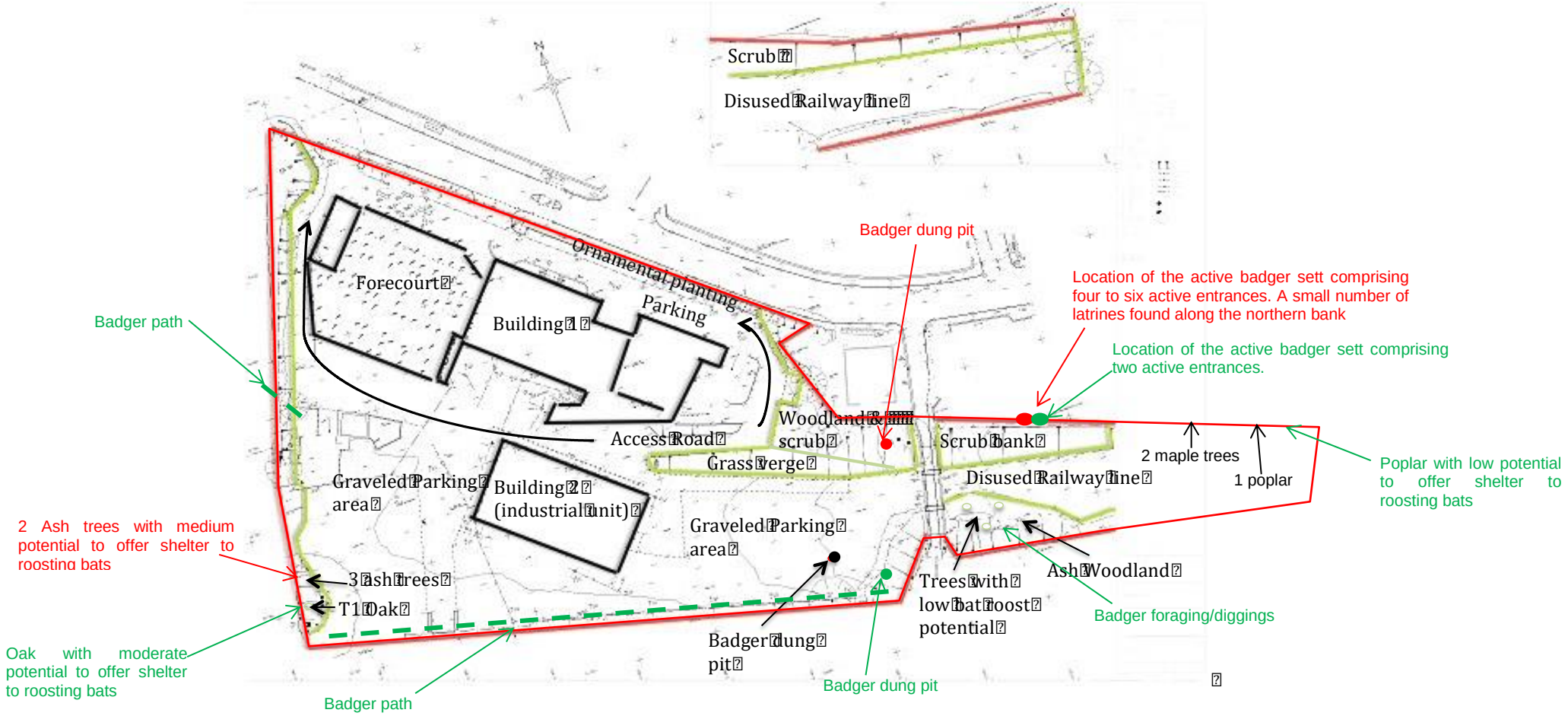
The buildings within the site are assessed as having ‘negligible’ bat roost potential under the most recent guidance (Collins 2016).

Two ash trees at the site’s south-western corner were assessed as having ‘moderate’ bat roost potential (previously assessed as ‘medium’ potential under Hundt, 2012). The single oak at the south-western corner of the site was assessed as having ‘low’ bat roost potential under the most recent guidance (Collins 2016).

Three ash trees to the immediate south-west of the Osbourne Bridge, and a single poplar *Populus* sp. at the north-eastern corner of the site were all assessed as having ‘low’ bat roost potential under the most recent guidance (Collins 2016).

There are considered to have been no other changes in the site’s suitability for other notable/protected species.

Figure 2. Ecology Survey Plan.



Black text indicates 2012 survey results	Red text indicates new (additional) information from the survey undertaken in 2013/2014	Green text indicates new (additional) information from the survey undertaken in 2018

4 Discussion

4.1 Constraints on Study Information

There are considered to be no constraints to this study and all parts of the site were surveyed and inspected in detail. The ecology surveys cover: 2012, 2013, 2014 and 2018 and document any changes that may have occurred during this period.

4.2 Assessment/Evaluation of Results

4.2.1 Habitats

4.2.1.1 Buildings and Hard Standing

The buildings and hard standing within the site (including the gravelled parking areas) are of negligible interest for wildlife. The modern commercial and industrial nature of the site, and current land use, does not provide any opportunities for wildlife that are considered to be important for protected species or consequential for nature conservation.

4.2.1.2 Landscape Planting

There is minimal landscape planting within the site. The small ornamental plots that have been provided contain a low diversity of plant species and are made up of young trees and shrubs. Consequently, the landscape planting has no meaningful interest for wildlife because of the lack of structural diversity, flowering plants and habitat maturity.

4.2.1.3 Grassland

The grassland resource within the site is very limited. It is generally associated with small verges (mainly at the periphery of the site) or is self-seeded and has established on the gravel substrate of the disused railway line and parking lots.

The grassland does not qualify as a priority habitat (as listed on Section 41 of the NERC Act 2006) or as local Biodiversity Action Plan habitat and does not represent a meaningful resource for wildlife, although it does contribute to the mosaic of habitats on the disused railway line (see Section 4.2.1.5) and does provide a resource for invertebrates.

4.2.1.4 Trees and Scrub

The woodland habitat along the railway line and mature trees at the periphery of the site are considered to be important at a site level. The mature oak tree in the south-west corner of the site is considered to be of ecological value because of its age and potential to support birds, bats and invertebrates. The mature ash and sycamore trees are important components of the small woodland areas within the site and represent some of the oldest ecological resources.

Broad-leaved woodland is included in the Bath and North East Somerset Biodiversity Action Plan, although the woodland resource is probably better represented as a component of the Post-Industrial Sites Local Biodiversity Action Plan (which includes disused railway lines, as discussed in Section 4.2.1.5).

4.2.1.5 Disused Railway Line

The disused railway line supports a mosaic of woodland, scrub and grassland. These habitats have been individually discussed, but it is also important to consider them as part of the disused railway line, which comes under the Bath and North East Somerset Post Industrial Sites Biodiversity Action Plan.

Although the intrinsic ecological value of the railway line within the site is limited, because habitats have been degraded by previous land use resulting in poor species and low structural diversity (with species such as buddleia and sycamore trees dominating), the woodland and scrub does

form part of a more extensive green corridor that links through the site and local residential areas. The disused railway line is therefore considered to be important at a neighbourhood level as it provides dispersal routes and corridors for movement by wildlife.

4.2.2 Species

4.2.2.1 Badgers

Badgers are present along the disused railway line and within adjacent properties, with a badger sett located to the northern embankment of the site. The sett is considered to be a main sett with at least two active entrances (observed in 2018), with four and six active entrances in 2014 and 2013 respectively.

Strong, well-worn paths lead along the southern boundary, and to offsite areas to the north and west of the site, with a number of latrines found along the northern bank of the disused railway line. This indicates that the animals are using the disused railway line for movement; and the disused railway is a dispersal route for the species.

4.2.2.2 Bats

The trees, buildings and structures within the site do not offer any significant shelter for bats because they are not a resource that could support a local bat colony, for example. Small features in trees, such as ivy cover and rot holes, could be used by solitary bats but this is not considered have any meaningful conservation importance.

The disused railway line and vegetation at the boundary of the site provide foraging habitats that are considered to be important at a site level. The vegetation is not considered to be of high conservation value as a foraging resource for bats because there is limited woodland cover and the mosaic of habitats is poor (and does not include any wetland habitats) and consequently the insect biomass associated with the habitats that bats prey on is likely to be low. The disused railway line does however provide linear habitats that are likely to provide linkages between roosts and foraging areas and is considered to be potentially important as a commuting route within the neighbourhood.

4.2.2.3 Reptiles

The disused railway line is known to support slow worm, but an assessment of the habitats within the site concluded that the study area has no inherent value for local reptile populations. This is due to the poor nature of the habitats within the site and the resultant lack of shelter for reptiles.

Although there is no foreseeable likelihood of a reptile population being present within the site, the possibility of individual animals finding their way on to the site from neighbouring areas (including residential gardens) cannot be discounted. Whilst the scheme is not considered likely to have an impact on the conservation status of reptiles, care should be taken to ensure that straying animals from nearby areas are not accidentally injured during site clearance/development operations. All species of reptile are protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended) and are priority species for conservation as listed on Section 41 of the NERC Act 2006.

4.2.2.4 Birds

The scrub and trees at the site boundaries are considered suitable for nesting birds. Several common and widespread species were observed during the survey and it is likely that birds nest within these habitats. Many of the species using the scrub and trees are likely to be common and widespread.

However, species such as song thrush, linnet and dunnock may also breed at the site; all of which nest and forage in thickets, woodland and hedges. All of these species are listed as priorities for conservation as listed on Section 41 of the NERC Act 2006 due to their recent population declines. The species are also listed within the Red and Amber Lists of Birds of Conservation Concern

compiled by the RSPB and the British Trust for Ornithology in recognition of these declines and the unknown reasons for them.

4.2.2.5 Other species

The scrub and woodland are considered suitable foraging and nesting habitats for hedgehogs (a priority species listed within Section 41 of the NERC Act 2006).

4.3 Legislation and Policy Guidance

4.3.1 Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. The term 'badger sett' is normally understood to mean the system of tunnels and chambers, in which badgers live, and their entrances and immediate surrounds. The 1992 Act specifically defines a sett as "any structure or place which displays signs indicating current use by a badger". Interference with a sett includes blocking tunnels, infilling of the sett and/or damaging the sett in any way.

There is, however, provision within the legislation to permit activities affecting badgers or their setts where there is suitable justification and a problem cannot be resolved by alternative means. Such activities are authorised under licences issued by Natural England.

4.3.2 Bats

Bats are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and under The Conservation of Habitats and Species Regulations 2010. Taken together, these make it an offence to:

(a) Deliberately capture or intentionally take a bat
(b) Deliberately or intentionally kill or injure a bat
(c) To be in possession or control of any live or dead wild bat or any part of, or anything derived from a wild bat
(d) Damage or destroy a breeding site or resting place of such an animal or intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection
(e) Intentionally or recklessly disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection.
(f) Deliberately disturb bats, in particular any disturbance which is likely
- to impair their ability;
(i) to survive, breed, reproduce or to rear or nurture their young; or
(ii) in the case of hibernating or migratory species, to hibernate or migrate; or
- to affect significantly the local distribution or abundance of the species to which they belong

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.

Although the law provides strict protection to bats, it also allows this protection to be set aside (derogation) under The Conservation of Habitats and Species Regulations 2010 through the issuing of licences. Natural England (NE) currently determines these licences in England for development works.

4.3.3 Nesting Birds

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The nesting season for most species is between March and August inclusive.

4.3.4 Reptiles

All species of British reptile are protected by the Wildlife and Countryside Act 1981. Part of Section 9(1) and all of Section 9(5) apply. This means they are protected against intentional killing and injuring (but not taking).

4.3.5 The Natural Environment and Rural Communities Act 2006

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity. It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. This is important in the context of planning decisions as the National Planning Policy Framework (paragraph 117) affords planning policy protection to the habitats of species listed by virtue of Section 41.

There are no habitats listed within Section 41 of the NERC Act 2006 that are considered to be relevant, or potentially relevant, to the site.

Species listed within Section 41 of the NERC Act 2006 that are considered to be relevant, or potentially relevant, to the site include:

- Certain bird species, such as dunnock (trees and shrubs offer potential nesting habitat)
- Certain bat species, such as brown long-eared bat and soprano pipistrelle (adjacent habitats along the disused railway line offer potential movement and dispersal routes)
- Hedgehog (scrub offers potential shelter)

4.3.1 The Nation Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) was revised in 2018 and this new document forms a key part of the Government's reforms to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF states that the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Local planning authorities should set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;
- identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- aim to prevent harm to geological conservation interests; and
- where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
    - ❖ potential Special Protection Areas and possible Special Areas of Conservation;
    - ❖ listed or proposed Ramsar sites; and
    - ❖ sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites

4.3.2 Bath and North East Somerset Core Strategy

The Bath and North East Somerset Core Strategy was adopted in July 2014. The Strategy includes Policy CP6 and Policy CP7 which are considered to be of relevance in this instance.

CP6 Environmental Quality

The quality, extent and robustness of protected sites and valued habitats will be enhanced, and networks of valued habitat will be restored or created, by measures which:

a: Improve the quality and/or increase the size of current sites and valued habitat.
b: Enhance connections between, or join up, sites and valued habitats.
c: Create new sites and valued habitats.
d: Reduce the pressures on wildlife by improving the wider environment

New Development will protect and enhance international, national and local sites and existing networks of valued habitats; facilitate migration and dispersal though the natural and built environment; and seek to reduce fragmentation of existing habitats. The Council will promote the management, conservation, enhancement or restoration of environmental assets. Sustainable opportunities for improved access to and enjoyment of these assets will be promoted where it does not compromise the integrity of the asset.

CP7 Green Infrastructure

The integrity, multi-functionality, quality and connectivity of the strategic Green Infrastructure (GI) network will be maintained, protected and enhanced. Opportunities will be taken to connect with, improve and extend the network. Existing and new GI must be planned, delivered and managed as an integral part of creating sustainable communities.

4.4 Impact Assessment

The following impact assessment is based on the proposed site plan shown in Appendix 1.

4.4.1 Designated Sites

No impacts on statutory or non-statutory sites of nature conservation importance are considered likely as a result of the development proposals. This is due to their distance from the site and the nature of the development proposals, which are unlikely to have any direct or indirect effects on neighbouring terrestrial habitats beyond the site boundaries.

4.4.2 Habitats

The proposed development is on a commercial/industrial site and consequently there are no foreseeable impacts on habitats of importance for nature conservation. Moreover, the landscape design proposed for the residential development will provide opportunities to increase the amount of green areas within the site. The proposed layout of the development incorporates the majority of the existing mature trees, which are at the periphery of the site, including the large oak tree and 3 mature ash trees in the south west corner of the site. The disused railway line is predominantly scrub (dominated by buddleia and young sycamore trees) that has rapidly established on previously disturbed land; this area will remain unaffected by the proposals to develop the site (see Appendix 1 for proposals plan).

The impact of the proposed development will affect habitats of low ecological value and the development will not affect the habitats on the eastern side of the site (a disused railway line) which is covered by a local Biodiversity Action Plan habitat. However, it should be recognised that the value of habitats on disused railways varies greatly and the section of disused railway line within the site has low intrinsic value. To ensure no net loss of biodiversity the landscape design of the development should be sympathetic to the ecological functionality of the disused railway line as a green corridor for wildlife. This is discussed further in Section 5.2.

4.4.3 Species

4.4.3.1 Badger

The active badger sett was noted within the northern bank of the disused railway line. However, this sett will remain unaffected by the development, and all major construction works, such as foundations for buildings, will be over 30m from the edge of the active sett. There are no foreseeable impacts of sett damage or destruction, or disturbance to badgers whilst they are occupying the sett.

The area proposed for development does not offer any substantial foraging habitat for badgers and therefore it is considered that there will be no significant impacts on badgers using the site as a result of the proposals. Furthermore, the proposed pedestrian access route and residential gardens within the proposed development will enable badgers to pass through the site and therefore there are no impacts predicted on dispersal routes used by the local badger population. Residential areas surround the site and therefore local badger social groups will almost certainly be habituated to living in suburban environments such as those proposed in the development.

4.4.3.2 Bats

There are no predicted impacts on bats. There are no roosts within the site and no known large roosts close to the site. The landscape design of the proposed development will provide corridors for movement for bats through residential gardens.

4.4.3.3 Reptiles

The habitats within the site are not considered to be favourable for reptiles and therefore no net loss of reptile habitat is predicted. Furthermore, the risk of killing or injuring animals is accordingly low, although the possibility of animals (particularly slow worm) straying on to the site cannot be ruled out. However, if the site clearance is carried out sensitively, allowing animals to escape/disperse to the periphery of the site when vegetation is cut, the foreseeable risk of harm or injury to animals is considered negligible.

Landscape planting associated with the scheme provides an opportunity to create habitat for reptile species such as slow worm, which are often found in gardens (see Section 5.2).

4.4.3.4 Birds

The clearance of scrub and trees will impact bird nesting habitats. However, these impacts are unlikely to be significant since neighbouring residential areas and the disused railway line (inside and outside the site) provide alternative habitats within the locality.

5 Recommendations

5.1 Further Survey

No further ecological survey is considered necessary to assess the impacts of the proposed development.

5.2 Mitigation and Enhancement

The following general mitigation and enhancement recommendations have been proposed for inclusion in the landscape design of the scheme.

5.2.1 Habitats

It is recommended that the proposed new landscape planting includes native trees and shrubs, and that consideration should be given to a landscape design that creates connectivity between habitats, particularly with linear east-west linkages along the southern boundary of the site (along the route of the disused railway line). Suitable native scrub and tree species include:

- Hazel
- Hawthorn
- Blackthorn
- Field maple
- Rowan
- Crab apple
- Wild Cherry
- Oak
- Hornbeam
- Yew

Given the urban nature of the scheme, non-native (garden) species that are also of value for wildlife could be used more widely throughout the site. The following species are examples of shrubs and herbaceous plants that can benefit wildlife:

- Hebe
- Rosemary
- Lavender
- Honeysuckle
- Flowering currant
- Lilac
- Mexican orange blossom

Garden planting should aim to provide ground cover for animals such as hedgehogs and invertebrates, and so low-growing ground cover should be encouraged. Native species such as bugle, ivy and periwinkle could be used for this purpose, or ornamental species such as lady's mantle, elephant's ears or perennial geraniums may also be suitable for formal areas of ornamental planting. A diversity of structure should also be encouraged through the planting of small trees, with shrubs and herbaceous plants below. Appendix 6 provides a list of plant species that are considered suitable for 'wildlife-friendly' garden planting.

5.2.2 Badgers

All contractors and site personnel should be informed of the presence of the badger sett and the sett should be clearly marked with a visual and physical barrier, in order to prevent any inadvertent disturbance to the animals. In addition, the following measures should be adopted:

- If disturbance to the sett is anticipated, a Badger Licence will be required to allow for the works to proceed.
- A buffer zone should be established around the badger sett. Within this zone, all excavation, digging and vehicular movement will be prevented. The buffer zone should be 30m if possible.
- Excavation work and heavy machinery should be kept well away from where it could result in damage to the sett or disturbance to any badger occupying the sett.
- Fires and chemicals should not be used within 20 metres of the sett.
- Trees should be felled so that they fall away from active setts and badger paths should be cleared of felled timber and scrub wherever possible.
- Disturbances, such as loud noise or vibrations, that might agitate badgers occupying a sett should be avoided or limited to areas well away from the sett.
- Deep excavations, trenches, foundations etc. will be covered at night to prevent pit-fall hazards to badgers.

5.2.3 Bats

The lighting strategy should consider providing a dark corridor for movement through the site, with particular consideration to maintaining an east-west corridor for bats along the alignment of the disused railway line. The aim should be to provide a vegetated corridor for bats that is protected from light pollution (from streetlights).

In addition to lighting, it is recommended that the landscape scheme provides enhanced habitat connectivity for bats through the site. The existing areas of hard-standing and buildings are considered to be poor with regard to hat habitat connectivity, and native planting that provides linear connectivity through existing areas of hard-standing is recommended. This will provide an enhancement for bats, and facilitate potential movement between habitats to the west and east, along the disused railway line.

The proposed development presents an opportunity to provide roost opportunities for bats within the site. It is recommended that bat boxes are erected on mature trees that are being retained along the disused railway line and under the Osborne Road Bridge. General purpose bat boxes, such as Schwegler 2F boxes or conventional wooden bat boxes, should be placed in sets of three with boxes orientated on the north, southeast and southwest aspect of the trees (to create a range of roost environments with varying degrees of insolation from the sun). There are several bat boxes that are also suitable for walls, and could be installed under the bridge. These include Schwegler 1FF or 1WI (suitable as a summer and winter bat box).

5.2.4 Birds

Avoid clearing scrub vegetation at the site in the main bird breeding season, which is generally considered to be between March and September. This will help ensure breeding birds are not disturbed, and minimises the risk of delays to the construction programme due to nesting birds.

Bird nest boxes for house sparrows, swifts and other (garden) bird species should be erected on houses and in gardens of the proposed development.

5.2.5 Reptiles

Scrub vegetation should be cleared using handheld strimming and cutting equipment so that the progressive clearance of the vegetation is slow. Cutting vegetation by hand also helps operators see reptiles whilst carrying out the work. The vegetation should be cut to a height of 5-10cm at first, thereby allow animals to disperse from the working area before a second cut to ground level. Vegetation clearance should progress towards the edge of the site, encouraging animals to move to the edge of the site where their habitat will be retained.

Creating small piles of rubble and/or log piles in boundary habitats of the site will provide potential areas of refuge for reptiles. Log piles will also attract invertebrate prey for reptiles.

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7 Appendix 1. Proposed Site Layout

Quantum of development:

Total Residential = 104 homes
24 x 1B1P
40 x 1B2P
5 x 2B3P
35 x 2B4P

Student living
Total of 186 student bed spaces
- 157 beds in cluster flats
- 29 x 1 bed studios

Flexible commercial unit = 148m2

Car Parking:
Total across site = 117 spaces

Suggested allocation:
Commercial unit = 3 spaces
Student living = 0 spaces
Residential living = 113 spaces
Car club = 1 space

4 x car parking spaces to be wheelchair accessible. In addition to the above 2 no. motorcycle parking spaces will be allocated on site.

Secure Cycle storage:
Residential = 208 spaces
Student Living = 72 spaces

Visitor cycle parking = 12 stands. (external sheffield stands)

To be read alongside the Landscaping GA plan by NPA.

North

inspired environments

Newbridge Road
Bath

Proposed Site Plan

Scale	Sheet	Drawn	Checked	Date
1 : 500	A1	SW	GM	14.05.19

Status	Project No.
PLANNING	4014
Drawing Reference	Drawing No. / Revision
AWW - A - DWG - NEW	0110 / P4

8 Appendix 2. Desk Study Results

Data search results provided by Bristol and North East Somerset Biological Records Centre.

Protected and Notable Species Records (excluding birds)

Scientific Name	Common Name	Place	Date of Record	Year	Abundance	Sex/ Stage	Record Type	Comments
Myotis mystacinus	Whiskered Bat	Carr's Woodland near Carr Home	17/05/2004	2004	1	adult	field record	
Myotis mystacinus	Whiskered Bat	Bath, Carrs Woodland	17/05/2004	2004	1	Dead adult	dead	Found dead on path, probable whiskered but possible Brandt's
Bufo bufo	Common Toad	Carrswood Centre, Cleeve Green, Twerton	2001	2001	Present	Present	Field Record	
Bufo bufo	Common Toad	Inner courtyard Carrswood Centre, Cleeve Green, Twerton	2001	2001	Present	Present	Field Record	
Myotis daubentonii	Daubenton's Bat	Combe Park, Newbridge	29/30 August 2000	2000	1	female	field record	female in tree over R. Avon, other bats present also
Lutra lutra	Otter	Bath, River Avon Bank BA2 9ES	20/03/2007	2007	present	present	field record	sat on flood defence bund eating a fish
Lutra lutra	Otter	Twerton, in pool above the weir	2003	2003	1	Juvenile	field record	feeding in pool above the weir
Lutra lutra	Otter	Twerton, near weir	2003	2003	2	Adult Female	field record	Mother and cub near weir
Anguis fragilis	Slow-worm	Large green area (disused railway) behind Rudmore Park, Bath.	14/05/2008	2008	1	present	field record	Seen in garden
Chiroptera sp.	a bat (unidentified)	Large green area (disused railway) behind Rudmore Park, Bath.	14/05/2008	2008	6	present	field record	At dusk in flight, possible roost in oak tree.
Meles meles	Badger	Kelston Road and Partis Way, junction of	January 1995	1995	present	dead (unknown sex/stage)	field record	
Anguis fragilis	Slow-worm	Newbridge, Bath (garden)	13/06/2010	2010	1	juvenile	field record	About 10cm long.
Meles meles	Badger	Rosslyn Road, Newbridge, Bath	26/10/2006	2006	2	present	field record	
Lutra lutra	Otter	Eastern end of Weston Island, River Avon	08/06/2005	2005	2	present	field record	
Anguis fragilis	Slow-worm	on disused railway track behind Newbridge Road , Lower Weston, Bath	Aug 2007	2007	present	present	field record	
Lutra lutra	Otter	River Avon Bath	20/05/2005	2005	1	present	field record	Swimming
Meles meles	Badger	Lower Bristol Road, Bath	01/11/2003	2003	present	present	field record	
Meles meles	Badger	Jew's Lane, Bath (small	Nov 1996	1996	present	present	field record	

		copse near railway)						
Arvicola amphibius	Water Vole	River Avon - ST720655 to ST743648	1998	1998	Present	present	field record	
Lutra lutra	Otter	Bath, River Avon, Herman Miller Bridge, about 100m upstream of Weston Lock	19/11/2010	2010	1	Adult	Field record	Watched otter swim downstream, diving/foraging occasionally, towards Weston Lock, staying close to the vegetated northern bank, for about 5 minutes .
Lutra lutra	Otter	Locksbrook Road, Bath (behind Rotork)	04/03/2004	2004	1	adult	field record	Appeared to be carrying young otter in its mouth. Seen behind Rotork.
Bombylius discolor	Dotted Bee-fly	Disused railway path by Station Road	12/04/2008	2008	1	adult	field record	Hovering over footpath close to nesting aggregation of solitary bees
Conocephalus discolor	Long-winged Conehead	beside former railway, Station Road, Lower Weston, Bath	16/08/2006	2006	5	adult	netted	in long grass beside former railway track. Adult males and females present. Netted.
Anguis fragilis	Slow-worm	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	
Bufo bufo	Common Toad	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	
Erinaceus europaeus	Hedgehog	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	
Meles meles	Badger	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	
Natrix natrix	Grass Snake	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	
Natrix natrix	Grass Snake	Ashley Avenue (on rocks to rear of garden), Lower Weston, Bath	Aug 2003	2003	1	present	field record	
Anguis fragilis	Slow-worm	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2005	2005	1	adult female	breeding (not sensitive record)	
Anguis fragilis	Slow-worm	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2005	2005	11	immature	field record	
Bufo bufo	Common Toad	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	02/07/2007	2007	2	present	field record	Under shed and in long grass
Chiroptera sp.	a bat (unidentified)	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	09/02/2008	2008	2	present	field record	

Chiroptera sp.	a bat (unidentified)	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2005	2005	11	immature	field record	
Chiroptera sp.	a bat (unidentified)	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	2001-2008	2008	4	present	field record	
Erinaceus europaeus	Hedgehog	Ashley Avenue (wooded area to side of garden), Lower Weston, Bath	Aug 2007	2007	2	juvenile	field record	
Meles meles	Badger	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	12/06/2008	2008	1	present	field record	
Meles meles	Badger	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	19/04/2008	2008	1	present	field record	
Meles meles	Badger	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	2002-2008	2008	1	present	field record	
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle (45kHz)	Ashley Avenue (garden), Lower Weston. BA1 3DS	Summer 2008	2008	several	present	field record	Hunting in garden and wood
Anguis fragilis	Slow-worm	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	July 2004	2004	1	adult male	field record	Under large rock at back of lawn
Anguis fragilis	Slow-worm	Ashley Avenue (by garage blocks), Lower Weston, Bath	Aug 2003	2003	3	present	field record	1 dead 2 live
Anguis fragilis	Slow-worm	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	Aug 2005	2005	10	juvenile	field record	Injured female gave birth whilst recovering. Released back into undergrowth at rear of garden
Anguis fragilis	Slow-worm	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	Aug 2005	2005	1	adult female	breeding (not sensitive record)	Found injured on road
Anguis fragilis	Slow-worm	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	Jul 2006	2006	2	present	field record	
Alcedo atthis	Kingfisher	River Avon, near Locksbrook Rd Bath BA1	March 2005	2005	1	adult	field record	Seen 10-12 times
Lutra lutra	Otter	River Avon	30/03/2005	2005	1	adult	field record	Seen twice

Notable Bird Species Records

Data sorted by Easting, Northing, then Scientific Name

Scientific Name	Common Name	Grid Ref	Place	Date of Record	Year	Abundance	Sex/ Stage	Record Type	BRERC Area Status	National Status	Biodiversity Action Plans	RSPB
Erithacus rubecula	Robin	ST7227 6539	Newbridge Road, Bath	March 2008	2008	present	present	field record	Proposed BRERC Notable 2009 as protected			
Passer domesticus	House Sparrow	ST7227 6539	Newbridge Road, Bath	January 2008	2008	5	present	field record	Proposed BRERC Notable 2004 as nationally notable	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: red	UKAP AvonBAP	Red list
Passer domesticus	House Sparrow	ST7227 6539	Newbridge Road, Bath	February 2008	2008	3	present	field record	Proposed BRERC Notable 2004 as nationally notable	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: red	UKAP AvonBAP	Red list
Prunella modularis	Dunnock	ST7227 6539	Newbridge Road, Bath	March 2008	2008	present	present	field record	Abundant		UKAP AvonBAP	Amber list
Troglodytes troglodytes	Wren	ST7227 6539	Newbridge Road, Bath	March 2008	2008	present	present	field record	Proposed BRERC Notable 2009 as protected			
Troglodytes troglodytes	Wren	ST7227 6539	Newbridge Road, Bath	January 2008	2008	1	present	field record	Proposed BRERC Notable 2009 as protected			
Troglodytes troglodytes	Wren	ST7227 6539	Newbridge Road, Bath	December 2007	2007	1	present	field record	Proposed BRERC Notable 2009 as protected			
Alcedo atthis	Kingfisher	ST7236 49	River Avon	mid April to July 1997	1997	present	present	field record	Uncommon		BNESBAP	Amber list
Apus apus	Swift	ST7236 49	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Proposed BRERC Notable 2009 as Amber listed	Unknown	AvonBAP	Amber list
Cygnus olor	Mute Swan	ST7236 49	River Avon, Twerton, Bath	31/07/2009	2009	2	present	field record	Fairly common			Amber list
Egretta garzetta	Little Egret	ST7236 49	Bath, near Weston Lock, adjacent to River Avon	20/07/2009	2009	1	present	field record	Scarce			Amber list
Erithacus rubecula	Robin	ST7236 49	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Proposed BRERC Notable 2009 as protected			
Larus argentatus	Herring Gull	ST7236 49	River Avon	mid April to July 1997	1997	present	present	field record	Common / Declining		SWAP	Red list
Larus fuscus	Lesser Black-	ST7236 49	River Avon	mid April to	1997	present	pres	recor	Common			Amber list

	backed Gull			July 1997			ent	d				
Passer domesticus	House Sparrow	ST723649	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Proposed BRERC Notable 2004 as nationally notable	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: red	UKAP AvonBAP	Red list
Phalacrocorax carbo	Cormorant	ST723649	River Avon	mid April to July 1997	1997	present	present	field record	Common	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: amber		Amber list
Prunella modularis	Dunnock	ST723649	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Abundant		UKAP AvonBAP	Amber list
Troglodytes troglodytes	Wren	ST723649	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Proposed BRERC Notable 2009 as protected			
Turdus philomelos	Song Thrush	ST723649	River Avon - Bath	mid April to July 1997	1997	present	present	field record	Uncommon	Red list	UKAP AvonBAP BNESBAP SGLOSBAP	Red list
Passer domesticus	House Sparrow	ST724651	Large green area (disused railway) behind Rudmore Park, Bath	12/05/2008	2008	3	present	field record	Proposed BRERC Notable 2004 as nationally notable	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: red	UKAP AvonBAP	Red list
Alcedo atthis	Kingfisher	ST725648	River Avon, Twerton, Bath	17/09/2009	2009	present	present	field record	Uncommon		BNESBAP	Amber list
Alcedo atthis	Kingfisher	ST726648	Bath, Brassmill Lane, Weston Cut of River Avon	27/12/2009	2009	1	present	field record	Uncommon		BNESBAP	Amber list
Aythya ferina	Pochard	ST726648	Twerton, Bath, River Avon	08/01/1997	1997	28	present	field record	Fairly common	RDB	AvonBAP BNESBAP	Amber list
Tyto alba	Barn Owl	ST726648	Bath, island in the River Avon	Sept to Oct 2006	2006	present	adult	field record	Uncommon / Increasing	RDB	AvonBAP BNESBAP SGLOSBAP	Amber list
Tyto alba	Barn Owl	ST726649	Bath, River Avon banks near Brass Mill lane and end of Avondale Road.	Sept to Oct 2006	2006	present	adult	field record	Uncommon / Increasing	RDB	AvonBAP BNESBAP SGLOSBAP	Amber list
Tachybaptus ruficollis	Little Grebe	ST727648	Bath, Brassmill Lane, Weston Cut of River Avon	27/12/2009	2009	1	present	field record	Proposed BRERC Notable 2009 as Amber listed		AvonBAP	Amber list
Apus apus	Swift	ST727650	Public green lane (disused railway), Lower Weston, Bath.	12/05/2008	2008	6	present	field record	Proposed BRERC Notable 2009 as Amber listed	Unknown	AvonBAP	Amber list

Regulus regulus	Goldcrest	ST727650	Public green lane (disused railway), Lower Weston, Bath.	12/05/2008	2008	1	adult male	singing	Common			Amber list
Phalacrocorax carbo	Cormorant	ST729648	Twerton, River Avon, on island	October / November 1997	1997	14-17	present	roost (birds not sensitive record)	Common	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: amber		Amber list
Phalacrocorax carbo	Cormorant	ST729648	Twerton, River Avon, on island	April / May 1997	1997	5-7	present	roost (birds not sensitive record)	Common	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: amber		Amber list
Alcedo atthis	Kingfisher	ST731648	Twerton R. Avon	29/08/1997	1997	1	present	field record	Uncommon		BNESBAP	Amber list
Emberiza citrinella	Yellowhammer	ST731649	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	Uncommon, has declined	Red list	UKAP AvonBAP BNESBAP	Red list
Erithacus rubecula	Robin	ST731649	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	Proposed BRERC Notable 2009 as protected			
Prunella modularis	Dunnock	ST731649	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	Abundant		UKAP AvonBAP	Amber list
Turdus philomelos	Song Thrush	ST731649	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	field record	Uncommon	Red list	UKAP AvonBAP BNESBAP SGLOSBAP	Red list
Tyto alba	Barn Owl	ST731649	Ashley Avenue, Lower Weston, Bath, BA1 3DS	2007	2007	present	present	heard	Uncommon / Increasing	RDB	AvonBAP BNESBAP SGLOSBAP	Amber list
Apus apus	Swift	ST731650	Ashley Avenue (garden), Lower Weston. BA1 3DS	May 2008	2008	6+	present	field record	Proposed BRERC Notable 2009 as Amber listed	Unknown	AvonBAP	Amber list
Phylloscopus trochilus	Willow Warbler	ST731650	Wooded area/embankment, Lower Weston, Bath.	12/05/2008	2008	1	present	field record	Common	Red/Amber list - birds (not based on IUCN criteria) - Bird Population Status: amber	AvonBAP	Amber list
Prunella modularis	Dunnock	ST731650	Wooded area/embankment, Lower Weston, Bath.	12/05/2008	2008	3	present	field record	Abundant		UKAP AvonBAP	Amber list
Sturnus vulgaris	Starling	ST731650	Ashley Avenue (garden),	May 2008	2008	5+	present	field record	Abundant / Declining	Red list	UKAP AvonBAP	Red list

			Lower Weston. BA1 3DS									
Turdus philomelos	Song Thrush	ST731650	Ashley Avenue (garden), Lower Weston. BA1 3DS	Feb 2008	2008	1	adult male	singing	Uncommon	Red list	UKAP AvonBAP BNESBAP SGLOSBAP	Red list
Tyto alba	Barn Owl	ST731650	Ashley Avenue (garden), Lower Weston, Bath BA1 3DS	Oct 2007	2007	1	present	heard	Uncommon / Increasing	RDB	AvonBAP BNESBAP SGLOSBAP	Amber list
Tyto alba	Barn Owl	ST731650	Ashley Avenue (garden), Lower Weston. BA1 3DS	Apr 2008	2008	1	present	field record	Uncommon / Increasing	RDB	AvonBAP BNESBAP SGLOSBAP	Amber list
Alcedo atthis	Kingfisher	ST732648	River Avon, near Locksbrook Rd Bath BA1	March 2005	2005	1	adult	field record	Uncommon		BNESBAP	Amber list

Enq 2050

Land at Newbridge Road, Bath

SNCI

0.5km Buffer

Compiled by BRERC on 18/07/2012

BRERC
Third Floor
Bristol Central Library
College Green
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9 Appendix 3. Photographs 2012

Photograph 1. Car showroom and forecourt

Photograph 2. View of building 1 from the rear showing the offices and undercover parking (RHS)

Photograph 3. Building 2 at the rear of the site

Photograph 4. Gravelled car parking area

Photograph 5. Grassland on the disused railway line

Photograph 6. Grass bank on access road verge

10 Appendix 4. Photographs 2014

Photograph 7. Car showroom and forecourt


Photograph 8. View of building 1 from the rear showing the offices and undercover parking (RHS)


Photograph 9. Building 2 at the rear of the site


Photograph 10. Gravelled car parking area


Photograph 11. Grassland on the disused railway line


Photograph 12. Grass bank on access road verge

Photograph 13. An active entrance to the badger sett along the northern bank of the disused railway line.

Photograph 14. Area along which the badger sett was found (beneath the large Russian vine along the northern bank of the disused railway).

11 Appendix 5. Photographs 2018

Photograph 15. Building 1 (right) and Building 2 (left) set within tarmacked hard-standing at the Hartwell Site, Newbridge Road.

Photograph 16. A view from the eastern edge of the site, looking west through Osbourne Bridge.

Photograph 17. The embankment to the north of the disused train line which contains an active badger sett.

Photograph 18. Badger diggings to the south of the disused train line.

Photograph 19. Badger hair caught in barbed wire at the western edge of the site.

12 Appendix 6. Species for 'Wildlife' Landscape/Garden Planting

Common Name	Botanical Name
Trees	
Field maple*	*Acer campestre*
Beech*	*Fagus sylvatica*
Hornbeam*	*Carpinus betulus*
Willow*	*Salix sp.*
Silver birch*	*Betula pendula*
Downy birch*	*Betula alba*
Rowan*	*Sorbus aucuparia*
Whitebeam*	*Sorbus aria*
Wild cherry*	*Prunus avium*
Flowering cherry	*Prunus sp.*
Flowering pear	*Pyrus calleryana*
Crab apple*	*Malus sylvestris*
Fruiting apple	*Malus sp.*
English oak*	*Quercus robur*
Sessile oak*	*Quercus petraea*
Aspen*	*Populus tremula*
Maple	*Acer sp.*
Poplars*	*Populus sp.*
Elm*	*Ulmus sp.*
Shrubs	
Holly*	*Ilex aquifolium*
Hazel*	*Corylus avellana*
Wayfaring tree*	*Viburnum lantana*
Wild service tree*	*Sorbus torminalis*
Guelder rose*	*Viburnum opulus*
Hawthorn*	*Crataegus monogyna*
Hebe	*Hebe sp.*
Rosemary	*Rosmarinus*
Ceanothus	*Ceanothus sp.*
Weigela	*Weigela sp.*
Dogwood*	*Cornus sanguina/alba*
Rose (single flowered varieties)	*Rosa sp.*
Lilac	*Syringa vulgaris*
Escallonia	*Escallonia sp.*
Lavender	*Lavandula sp.*
Flowering currant	*Ribes sp.*
Honeysuckle*	*Lonicera periclymenum*
Mexican orange blossom	*Choisya sp.*
Spiraea	*Spiraea sp.*
Amelanchier	*Amelanchier lamarckii*
Cotoneaster	*Cotoneaster sp.*
Yew*	*Taxus baccata*
Broom	*Cytisus sp.*
Rose of Sharon	*Hypericum calycinum*
Butterfly bush	*Buddleia davidii*

Common Name	Botanical Name
Perennials	
Primrose*	*Primula veris*
Elephant's ears	*Bergenia cordifolia*
Sage	*Salvia sp.*
Lamb's ears	*Stachys byzantia*
Periwinkle*	*Vinca major & Vinca minor*
Ivy*	*Hedera helix*
Bugle*	*Ajuga reptans*
Lady's mantle	*Alchemilla mollis*
Geraniums	*Geranium sp.*
Globe thistle	*Echinops ritro*
Monk's hood	*Aconitum sp.*
Yarrow*	*Achillea millefolium*
Teasel*	*Dipsacus fullonum*
Oriental poppy	*Papaver orientalis*
Michaelmas daisy	*Aster sp.*
Bear's breeches	*Acanthus spinosus*
Montbretia	*Crocosmia sp.*
Purple coneflower	*Echinacea purpurea*
Catmint	*Nepeta sp.*
Verbena	*Verbena sp., Verbena bonariensis, Verbena rigida*
Marjoram	*Origanum majorana*
Thyme	*Thymus sp.*
Betony*	*Stachys officinalis*
Yellow archangel*	*Galeobdolon inteum*
Scabious*	*Knautia sp.*
Greater knapweed*	*Centaurea scabiosa*
Red campion*	*Silene dioica*
White campion*	*Silene alba*
Purple loosestrife*	*Lythrum salicaria*
Yellow loosestrife*	*Lysimachia punctata*
Cowslip*	*Primula vulgaris*
Teasel*	*Dipsacus fullonum*
Heliotrope	*Heliotropium arborescens*
Honesty	*Lunaria annua*
Iceplant	*Sedum spectabile*
White jasmine	*Jasminum officinale*
Soapwort*	*Saponaria officinalis*
Sweet rocket	*Hesperis matronalis*
Nottingham catchfly*	*Silene nutans*
Night-scented stock	*Matthiola bicornis*
Bulbs	
Daffodil	*Narcissus sp.*
Crocus	*Crocus sp.*
Winter aconite	*Eranthis sp.*
Snowdrop	*Galanthus sp.*
Tulip	*Tulipa sp.*
Ornamental onion	*Allium sp.*
**indicates native species*	