

Habitat Survey &
Protected Species Assessment
Land off Ruthin Road,
Wrexham
REVISION C

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1.0 INTRODUCTION

Smeeden Foreman Limited has been commissioned by Optimisation Developments Limited to undertake an ecological assessment of land off Ruthin Road in Wrexham (grid reference SJ 326501, see figure 1 below). Proposals include the development of a supermarket.

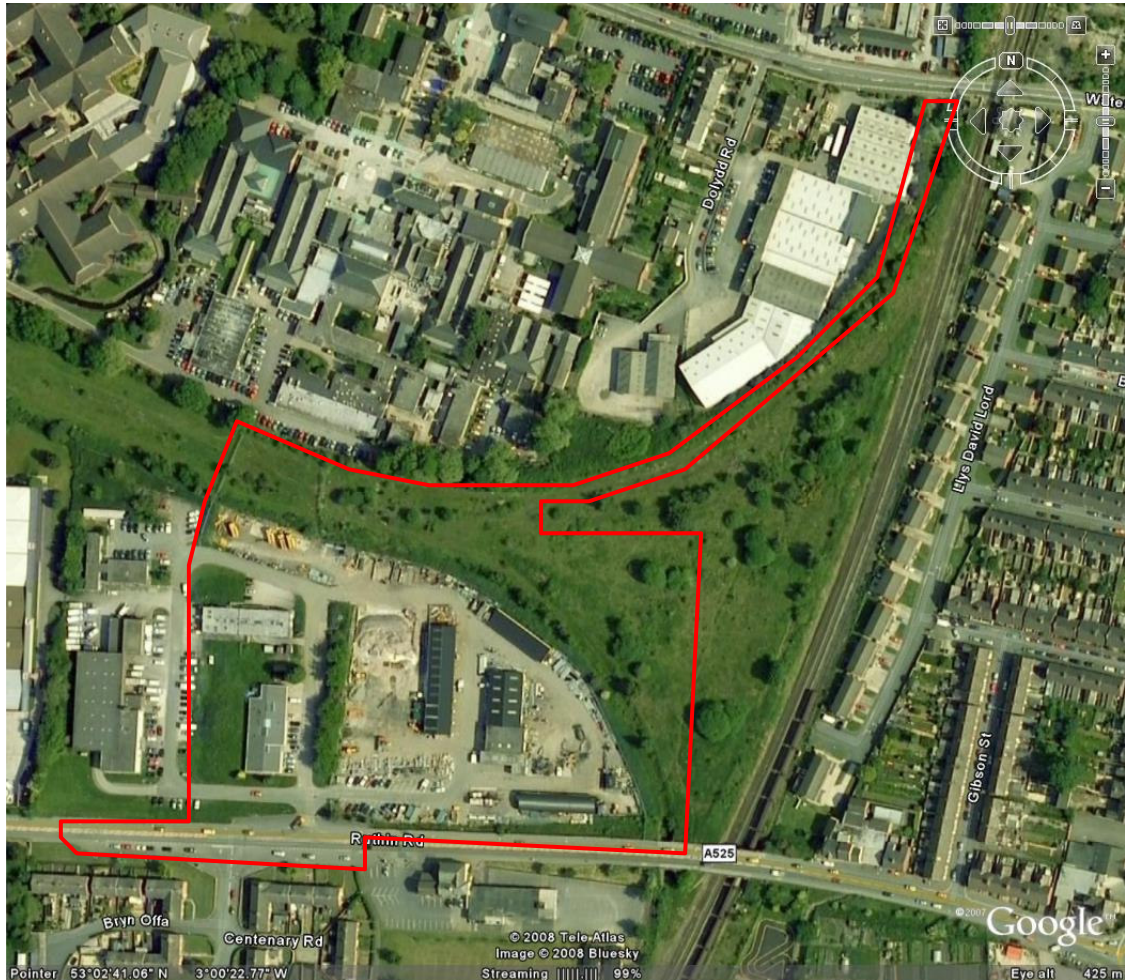


Figure 1: Aerial photograph showing the habitats within and immediately surrounding the site

A habitat survey using the standard Phase 1 methodology was carried out, as well as an assessment of potential for protected species. Consultation has also been undertaken with relevant local record centres and groups. The survey was undertaken on 7th August 2008 with a botanical survey of grassland habitats to the north and east of the site being undertaken in August 2009. The botanical assessment was carried out from recommendations made following the initial walkover survey.

Protected species surveys were also recommended following the initial survey to assess the presence/absence of roosting bats within buildings to the western section of the site and badgers and reptiles within semi-natural habitats to the north and east of the site. Results of these surveys are provided within a separate report issued by Smeeden Foreman Limited (Protected Species Assessment, Land off Ruthin Road, Wrexham: 1540, December 2009).

2.0 SITE DESCRIPTION

The site is situated to the west of Wrexham centre, to the north of Ruthin Road (A525) and west of a railway line, running north to south. Wrexham Maelor Hospital is located adjacent to the north and areas of residential development and pastoral habitat is on the opposite side of the road to the south.

The site itself comprises industrial and office buildings with areas of hardstanding to the south-western section. This section also comprises areas of amenity grassland, which have become unmanaged, and immature tree planting. The northern and eastern section of the site comprises part of a dismantled railway line and junction (Croesnewydd West Junction). Due to the underlying artificial substrate within this area, the grassland shows a calcareous influence with a number of indicator species recorded. Areas of tall ruderal vegetation, dense scrub and broadleaved trees are also frequent within this section of the site, with Japanese knotweed *Fallopia japonica* recorded to the northern boundary. This will have to be removed as hazardous waste or treated on site, prior to development works commencing, as the species is covered under Section 14(2) of the Wildlife Countryside Act 1981 (WCA 1981). This states that “if any person plants, or otherwise causes, to grow in the wild any plant which is included in Part II of the Schedule 9, he shall be guilty of an offence”. Japanese knotweed is one of the plants listed on the schedule. Further information on the legislation and the removal of this species is provided in the Environment Agency’s The Knotweed Code of Practice.

3.0 BASELINE INFORMATION

3.1 Methodology

The ecological interest of the site has been investigated by a combination of desk study, consultation and field survey.

Information was requested from the following organisations :-

- Countryside Council for Wales – provided maps displaying locations of SSSI’s and records of protected species within 2km of the proposed development site
- Confod (North Wales Environmental Information Centre) – provided information on protected species within the 2km search area.

The following sources of information were consulted :-

- Countryside Council for Wales – Protected site maps (Interactive maps)
- Wrexham Biodiversity Action Plan
- National Biodiversity Network (NBN) Gateway
- Aerial photographs

3.2 Nature Conservation Designated Sites

Statutory designations

There are two statutorily designated sites within 2km of the site, these being Gatewen Marsh Site of Special Scientific Interest (SSSI*) and Sontley Marsh SSSI. Gatewen Marsh SSSI is approximately 1km to the north-west of the site and Sontely Marsh SSSI is located 2km to the south-east.

* **Sites of Special Scientific Interest (SSSI)** are nationally important statutory designated site, designated for their national importance for wildlife and natural heritage value. They are designated by English Nature, following evaluation against published guidelines, under the Wildlife and Countryside Act 1981.

Non-statutory designations

No information on non-statutory sites or areas of ancient woodland was provided within the consultation.

3.3 Existing Species Records

Consultation response from Confod and the Countryside Council for Wales provided records of protected species within the 2km search area. These include:

Species	Grid reference/ location	Date	Comments	Approximate distance and direction from site
Bats				
Chiroptera	SJ 3250 (Estimated from map)	05/09/2002	Comments withheld	550 m west
Common pipistrelle	SJ 3249 (Estimated from map)	25/08/1999	Comments withheld	1.15 m south-west
Common Pipistrelle	SJ 3249 (Estimated from map)	16/07/1997	Comments withheld	1.15 m south-west
Chiroptera	SJ 3249 (Estimated from map)	12/07/1994	Comments withheld	1.15 m south-west
Common pipistrelle	SJ 3249 (Estimated from map)	26/06/2003	Comments withheld	1.15 m south-west
Chiroptera	SJ 3350 (Estimated from map)	12/07/1999	Comments withheld	450 m east
Chiroptera	SJ 3350 (Estimated from map)	03/10/1990	Comments withheld	450 m east
Chiroptera	SJ 3350 (Estimated from map)	01/10/1998	Comments withheld	450 m east
Common Pipistrelle	SJ 3251 (Estimated from map)	14/10/1999	Comments withheld	1.1 km north-west
Common pipistrelle	SJ 3349 (Estimated from map)	31/08/1999	Comments withheld	1.15 km south-east
Common pipistrelle	SJ 3248 (Estimated from map)	03/06/1993	Comments withheld	2.15 km south-west
Chiroptera	SJ 3248 (Estimated from map)	2 records on 31/05/1996 and 28/07/1999	Comments withheld	2.15 km south-west
Chiroptera	SJ 3349 (Estimated from map)	12/07/1982	Comments withheld	1.15 km south-east
Chiroptera	SJ 3348 (Estimated from map)	14/01/2002	Comments withheld	1.1 km south-east
Common pipistrelle	SJ 3148 (Estimated from map)	26/06/1989	Comments withheld	2.6 km south-west
Plecotus bat	SJ 313493	1987	None	1.45 km south-west
Brown long-eared bat	SJ 3149 (Estimated from map)	21/08/1987	Comments withheld	1.85 km south-west
Common pipistrelle	SJ 3151 (Estimated from map)	2 records, in 1988 and 24/05/1989	Comments withheld	1.75 km north-west
Chiroptera	SJ 3449 (Estimated from map)	14/08/1986	Comments withheld	1.75 km south-east
Brown long-eared	SJ 3150 (Estimated	13/09/1999	Comments withheld	1.55 km west

bat	from map)			
Chiroptera	SJ 3449 (Estimated from map)	30/12/1999	Comments withheld	1.75 km south-east
Common pipistrelle	SJ 3248 (Estimated from map)	02/09/1987	Comments withheld	2.15 km south-west
Brown long-eared bat	SJ 3248 (Estimated from map)	30/12/1999	Comments withheld	2.15 km south-west
Common pipistrelle	SJ 3148 (Estimated from map)	20/07/1988	Comments withheld	2.6 km south-west
Common pipistrelle	SJ 3449 (Estimated from map)	12/07/1999	Comments withheld	1.75 km south-east
Chiroptera	SJ 3148 (Estimated from map)	03/07/1986	Comments withheld	2.6 km south-west
Chiroptera	SJ 3449 (Estimated from map)	04/07/1988	Comments withheld	1.75 km south-east
Plecotus bat	SJ 3149	1987	None	1.85 km south-west
Birds				
Common kingfisher	SJ 33425013 (Estimated)	March 1996	None	850 km east
Otter				
European otter	SJ 319503	Spring 2007	1 male otter killed by dumper truck in this area, where road crosses River Gwenfro. Also an otter killed here on a separate occasion. Both otters from River Gwenfro.	650 km north-west
Reptiles				
Common lizard	SJ 327502 Wrexham	2004	100+ on railway triangle site	Within site boundary
Slow-worm	SJ 324496 Railway track / Wrexham	2 records, both in 1990	None	450 m south
Slow-worm	SJ 326495 Cemetery, Wrexham	2 records, both in 1990	None	550 m south
Slow-worm	SJ 3349 Wrexham	1883 - 1903	None	1.15 km south-east
Common lizard	SJ 3349 Wrexham	1883 - 1903	None	1.15 km south-east
Grass snake	SJ 324496 Railway track, Wrexham	2 records, both in 1990	None	450 m south
Grass snake	SJ 326495 Cemetery, Wrexham	2 records, both in 1990	None	550 m south
Grass snake	SJ 325494 Felin Puleston	2 records, both in 1990	None	625 m south
Grass snake	SJ 324492 Felin Puleston	22/05/1995	None	900 m south
Amphibians				
Great crested newt	SJ 328483	Unknown	Record within Erddig Country Park	1.6km south

Badger are also known to occur within the surrounding area.

Refer to the figure 03 showing the location of protected species within the search area.

The NBN Gateway 10km grid square SJ35, in which the site lies, contains post 1970s records for common lizards (*Zootoca vivipara*), grass snakes (*Natrix natrix*) and slow worms (*Anguis fragilis*). Great crested newts (*Triturus cristatus*) are also found within the grid square although the precise grid reference is not stated. The proximity of great crested

newts to the site cannot therefore be accurately determined. Evidence of pipistrelle bats (*Pipistrellus pipistrellus*), Daubenton's bats (*Myotis daubentonii*), whiskered (*Myotis mystacinus*) and brown long-eared bats (*Plecotus auritus*) have been recorded within 5 km of the site. Sightings of *Chiroptera* within this grid square are generally widespread. Both Natterer's bat (*myotis nattereri*) and European otters (*Lutra lutra*) have also been recorded within 7 km of the site using this database.

3.4 Site Habitat Survey

An initial site walk over survey was undertaken in August 2008. Habitat types and key species were noted and are presented in the Phase I Habitat format (see Figure 02: Phase I Habitat Map) proposed by the Joint Nature Conservation Committee (1993).

The site comprises two separate sections. The south-western area consists of office and industrial buildings and hardstanding, with areas of former amenity grassland, which have become unmanaged, and immature amenity tree planting. The northern and eastern sections consist of a dismantled railway line and railway junction. Here the habitats are representative of the underlying artificial substrate with the grassland supporting a number of calcareous and wasteland indicators. Tall ruderal vegetation, scrub and broadleaved trees occur frequently throughout this section.

Semi-improved calcareous grassland

To the north and eastern section of the site, the dominant habitat consists of semi-improved calcareous grassland (**Target note 5**). This is where the dismantled railway line and junction are located and species recorded within this area show a calcareous influence due to the underlying substrate. The grassland is very close-cropped in areas, which is likely to be due to rabbit grazing, with rabbits noted on site during the surveys undertaken. This grassland habitat was subject to further botanical assessment undertaken in August 2009. Grass species recorded include creeping bent *Agrostis stolonifera*, cock's-foot *Dactylis glomerata*, false oat-grass *Arrhenatherium elatius* and Yorkshire fog *Holcus lanatus*. Calicoles within the grassland include abundant perforated st. john's wort *Hypericum perforatum*, with common centaury *Centaurea erythraea*, eyebright *Euphrasia* sp., fairy flax *Linum catharticum*, wild carrot *Daucus carota* greater knapweed *Centaurea scabiosa*, rough hawkbit *Leontodon hispidus* and field scabious *Knautia arvensis*. Other species recorded within the grassland include species typical of semi-improved grassland habitat and wasteland such as common figwort *Scrophularia nodosa*, broad-leaved willowherb *Epilobium montanum*, great willowherb *E. hirsutum*, creeping cinquefoil *Potentilla reptans*, common ragwort *Senecio jacobaea*, great mullein *Verbascum thapsus*, creeping thistle *Cirsium arvense*, self-heal *Prunella vulgaris*, common bird's-foot-trefoil *Lotus corniculatus*, common nettle *Urtica dioica*, wood sage *Teucrium scorodonia*, lesser burdock *Arctium minus*, ribwort plantain *Plantago lanceolata*, weld *Reseda luteola*, prickly sow-thistle *Soncus asper*, common stork's-bill *Erodium cicutarium*, common mouse-ear *Cerastium fontanum*, ox-eye daisy *Leucanthemum vulgare*, mouse-ear hawkweed *Pilosella officinarum*, black medick *Medicago lupulina*, yarrow *Achillea millefolium*, mugwort *Artemisa*



vulgaris, common knapweed *C. nigra*, canadian fleabane *Conyza canadensis*, red bartsia *Odontites vernus*, false oat-grass *Arrhenatherum elatius*, bindweed *Convolvulus* sp., smooth tare *Vicia tetrasperma*, Canadian goldenrod *Solidago virgaurea*, changing forget-me-not *Myosotis discolor*, rosebay willowherb *Chamerion angustifolium*, spear thistle *C. vulgare*, red clover *Trifolium pratense*, common vetch *V. sativa*, wood avens *Geum urbanum*, meadow vetchling *Lathyrus pratensis*, common toadflax *Linaria vulgaris*, hogweed *Heracleum sphondylium*, broad-leaved dock *Rumex obtusifolius*, meadow buttercup *Ranunculus acris*, white campion *Silene latifolia*, bristly oxtongue *Picris echioides* and red valerian *Centranthus ruber*.

This grassland habitat could potentially represent the NVC community CG2 *Festuca ovina* – *Avenula pratensis* grassland which is a grassland typically comprising a mixture of grasses and forb species. This grassland is also known to occur in some artificial habitats, such as on ancient earthworks, abandoned quarry workings and road verges. From the botanical survey undertaken, it is considered that the grassland is of relative conservation value, though forb species typical of calcareous habitats were found to be more occasionally recorded than grass species which are abundant within the habitat.

Course grassland

Within the south-western section of the site adjacent to office buildings are areas of former amenity grasslands which have become unmanaged. Species which are dominant within the grassland include common ragwort and creeping thistle, with other species recorded including weld, ribwort plantain, broad-leaved willowherb, creeping buttercup, spear thistle, self-heal, common mouse-ear, lesser burdock, false oat-grass, yorkshire fog, rosebay willowherb, broad-leaved dock, hogweed, meadow vetchling, cock's-foot, sweet vernal-grass *Anthoxanthum odoratum*, common knapweed, creeping cinquefoil, common nettle, tufted vetch *V. cracca*, creeping bent and common bird's-foot-trefoil. This habitat is considered to be of low conservation value, comprising common species and is likely to be widely replicated within the surrounding area.



At the southern boundary, adjacent to the areas of hardstanding of the industrial site, is a bank of coarse grassland habitat (**Target note 10**). This is dominated by false oat-grass, with occasional forb species present including broad-leaved dock, common ragwort, rosebay willowherb, common nettle, creeping cinquefoil, hogweed and scattered hawthorn *Crataegus monogyna* bushes.

Tall ruderals

Within the dismantled railway junction are frequent patches of tall ruderal vegetation. These include dense areas of rosebay willowherb, common nettle and japanese knotweed. The latter species is found to the northern boundary of the site (**Target note 11**) and should be removed as hazardous waste or treated on site prior to development works as previously advised.



Broadleaved trees and scrub

Tree species within the dismantled railway junction predominantly include silver birch *Betula pendula*, with occasionally to rarely recorded apple *Malus* sp., sycamore *Acer pseudo-platanus*, ash *Fraxinus excelsior* and wych elm *Ulmus glabra*. Amenity tree planting adjacent to the office buildings at the south-western section of the site comprise immature cherry *Prunus* sp. trees. Trees within the site are largely immature and intact. Areas of dense and scattered scrub were frequently recorded across the railway junction and comprise species such as hawthorn, gorse *Ulex europaeus*, silver birch, willow *Salix* sp., ash, poplar *Populus* sp., dog rose *Rosa canina*, dogwood *Cornus sanguinea*, elder *Sambucus nigra*, honeysuckle *Lonicera periclymen*, garden privet *Ligustrum ovalifolium*, bramble *Rubus fruticosus* and raspberry *R. idaeus*.



3.5 Building Assessment

Built structures within the site include a number of industrial and office buildings (**Target notes 1, 6, 7, 8, 9**). These are predominantly considered to have a negligible to low risk of supporting roosting bats, being of metal construction (see photo right) and offering few potential roosting sites. Buildings which were considered to have a low to moderate risk of supporting roosting bats include two brick-built structures to the western boundary of the site. These buildings were subject to further assessment in terms of roosting bats within surveys undertaken in August and September 2009. The surveys included external and internal building assessment and activity surveys carried out at dusk and dawn. The results of these surveys are included within a separate Protected Species Assessment report issued by Smeeden Foreman Limited.



3.6 Local Biodiversity Action Plan

Habitat types for which action plans have been prepared for Wrexham (Local Biodiversity Action Plan):

- Derelict and Industrial land
- Garden
- Linear aquatic habitats (rivers, streams, canals)
- Ponds
- Upland moorland
- Woodland
- Lowland raised bog
- Lowland woodland-pasture and parkland
- Wet woodland

Part of the site is likely to fall under the category of derelict and industrial land, as it comprises a dismantled railway and railway junction.

Species included within the Wrexham Biodiversity Action Plan:

- Great crested newt
- Barn owl
- Song thrush
- Badger
- Otter
- Lesser horseshoe bat
- Black poplar

There are no areas of standing water within the site to support great crested newts and from consulting an OS base of the surrounding area there are no ponds within 500m of the site. It is therefore considered that the site is unlikely to support great crested newt.

There is also considered to be a low risk of otter, barn owl and lesser horseshoe bat occurring within the site due to lack of suitable habitat within and immediately outwith the site. No black poplars were recorded during the initial site survey.

From consultation with the local records centre, records of badger were provided within the surrounding area to the site.

The site is considered to offer suitable breeding habitat for song thrush with frequent scrub bushes and trees available.

4.0 IMPLICATIONS / RECOMMENDATIONS

4.1 Nature Conservation Designated Sites

Due to the distance of the site from statutory sites, it is not anticipated that there will be any impacts as a result of the development of the site.

4.2 Habitats

Grassland

Grassland habitats to the north and eastern sections of the site are considered to be of botanical interest, comprising species typical of calcareous grasslands. However, these species were found to be recorded at lower frequencies than grasses and species representative of semi-improved grasslands. Sections of this grassland habitat present to the north and east of the site will be lost, with a larger section of the disused railway junction outwith the site boundary to be unaffected by the proposed supermarket development.

To mitigate for the loss of sections of this grassland it is recommended that wildflower grassland is seeded within the proposed development site. The recommended seed mix would be representative of the National Vegetation Classification (NVC) type CG2 *Festuca ovina* – *Avenula pratensis* grassland. This grassland is widely distributed over southern lowland limestone and is also known to occur in artificial habitats. Species recommended for planting include glaucous sedge *Carex flacca*, salad burnet *Sanguisorba*

minor, crested hair-grass *Koeleria macrantha*, quaking grass *Briza media*, common bird's-foot-trefoil, meadow oat-grass *Avenula pratensis*, small scabious *Scabiosa columbaria*, wild thyme *Thymus polytrichus*, hoary plantain *Plantago media*, autumn gentian *Gentianella amarella*, betony *Stachys officinalis*, burnet saxifrage *Pimpinella saxifraga*, lady's-bedstraw *Galium verum*, dropwort *Fillipendula vulgaris*, cowslip *Primula veris*, greater knapweed *Centaurea scabiosa* and carline thistle *Carlina vulgaris*. This habitat is traditionally managed by sheep and rabbits. Grazing by rabbits within this area was noted during the initial survey and this is likely to continue after development. However, a late-summer cut is recommended to ensure a diverse grassland is maintained. The monitoring and removal of scrub should also be undertaken within the management scheme of the grassland.

Sections where this grassland is recommended include areas to the north of the proposed supermarket, including a strip adjacent to an access road and to the northern boundary which runs adjacent to a proposed footpath.

The majority of the grassland habitat present within the disused railway junction is to be unaffected by the proposed supermarket development. However, this may be lost to future development proposed by the local council. It is recommended that once proposals have been made that an appropriately qualified ecologist is consulted to ensure loss of this grassland habitat is considered and mitigated for within the future development.

Trees and scrub

To mitigate for the loss of scrubby vegetation within the north and eastern sections of the site it is recommended that native hedgerows are planted to the boundaries of the site. Species recommended include field maple *Acer campestre*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, hazel *Corylus avellana*, dogwood *Cornus sanguinea*, guelder rose *Viburnum opulus*, wild privet *Ligustrum vulgare*, spindle *Euonymus europaeus* and wayfaring tree *Viburnum lantana*. This mix includes a range of fruit-bearing and flowering varieties which will benefit a range of local wildlife, including foraging birds and invertebrates which will in-turn attract foraging bats. The hedgerows will also provide suitable nesting habitat to a number of bird species.

Species should preferably be sourced from local provenance.

4.3 Species

Please refer to Appendix 01, which details the legal status of the species mentioned below.

Great Crested Newts

There are no areas of standing water within the site to support breeding amphibians. However, areas of unintensively managed grassland, scrub and rock piles scattered within the railway junction provide suitable terrestrial habitat for foraging and hibernating amphibians, when out of their breeding ponds. From consulting an OS base of the surrounding area, there are no ponds within 500m of the proposed development site and the surrounding built-up environment also severs the site from the wider countryside. From consultation with the local records centre, there are no records of great crested newts within 500m of the site. It is therefore considered that no adverse impact upon this species is anticipated within the proposed development.

Bat species

Built structures within the site are largely considered to have a negligible to low risk of supporting roosting bats, being constructed from corrugated metal and offering very few suitable roosting sites. Buildings to the western section of the site considered to have a low to moderate risk of supporting roosting bats during the initial ecological assessment were subject to further assessment in August and September 2009, with external and internal building assessments and activity surveys undertaken. The results of these surveys are included within a Protected Species Assessment report compiled by Smeeden Foreman Limited.

Broadleaved trees scattered within the site are immature to semi-mature in age and are intact with few areas of aerial dead wood or suitable roosting crevices. Trees within the site are therefore considered to have a low risk of supporting roosting bats, and with regards to bat species, can be felled without constraint.

Habitats present within the railway junction of the site are considered to offer good quality foraging opportunities for bats occurring within the local area. Hedgerow planting is recommended to the boundaries of the site to mitigate for the loss of potential foraging habitat within the north and eastern section.

To enhance the site in terms of roosting bats, bat boxes can be erected on retained trees to the northern boundary. These will include various box-types, suitable for the various life-stages of bat species, such as hibernation and maternity boxes.

Low wattage lighting should be used, where possible within areas potentially utilised by foraging and commuting bats, such as along the northern boundary of the site and where hedgerows are proposed to the boundaries. Further information on lighting in regards to bats can be obtained from the Bat Conservation Trust publication *Bats and Lighting in the UK*.

Badgers

No sign of badgers was recorded during the initial survey. The sites grassland habitats offer foraging opportunities for the species, but no setts were noted within the site. From consultation with the local records centre, badger have been recorded within the surrounding area. Further survey for this species was recommended following the initial ecological assessment undertaken at the site and was carried out in September 2009. Results of the survey are included within a Protected Species Assessment report compiled by Smeeden Foreman Limited.

Breeding birds

Bird species recorded during the survey include willow warbler, blue tit, magpie, blackbird, green woodpecker, robin, wood pigeon and long-tailed tit. Habitats within the site, such as the scattered scrub and trees, particularly of the railway junction, are considered to offer suitable breeding habitat for these species and a number of other bird species which will utilise scrubby habitats.

Mitigation recommendations for breeding birds include the erection of nest boxes on retained trees to the northern boundary. These should consist of a number of box types, suitable for a range of species, such as terraced nest boxes for house sparrows and boxes suitable for starling and woodpecker.

To mitigate for the loss of trees and scrub within the north and eastern section of the site, it is recommended that landscaping proposals include hedgerow planting to the site boundaries. Such planting will continue to provide nesting habitat for bird species which favour scrubby habitats. Fruiting species recommended such as hawthorn, blackthorn, guelder rose and wayfaring tree will also offer a food resource for certain bird species during the winter period.

It should also be noted that any scrub removal will be undertaken outwith the breeding bird season (March-August inclusive), unless checks by an appropriately qualified ecologist have found active nests to be absent immediately prior to works.

Reptiles

Habitats within the railway junction of the site are considered to offer good quality habitat for reptile species, with short grassland, suitable for basking and areas of scrub and rock piles offering suitable cover and hibernation sites. From consultation with the local records centre, a recent record of common lizard was provided within the disused railway junction. Specialist reptiles surveys have been undertaken following recommendations made within the initial ecological report. Results of these surveys are provided within a separate Protected Species Assessment report compiled by Smeeden Foreman Limited.

Other species

There are no habitats within or immediately adjacent to the site which would support protected species such as water vole, otter or white-clawed crayfish.

5.0 SUMMARY

The south-western section of the site is considered to be of low conservation value, largely consisting of hardstanding and industrial development. Habitats present within the dismantled railway and railway junction, to the north and east are considered to be of higher conservation value, comprising areas of grassland habitat, with species recorded indicative of a calcareous substrate, with scattered scrub and immature to semi-mature broadleaved trees. Japanese knotweed was detected to the northern boundary of the site, and this will be removed or treated on site prior to development, being an invasive species listed within Schedule 9 of the Wildlife & Countryside Act (1981).

Mitigation recommendations include the planting of a native hedgerow to the boundaries of the site to mitigate for the loss of scrubby vegetation within the north and eastern sections of the site and the seeding of wildflower grassland to the north of the proposed development site. Species recommended are included within section 4.2 of the report.

No areas of standing water are present within the site to support breeding amphibians. However, terrestrial habitats such as unintensively managed grasslands, scattered scrub and rubble piles are considered to offer suitable foraging and hibernation areas to such species when out of their breeding ponds. From consulting an OS base of the surrounding area no ponds are present within 500m of the site. No adverse impact on great crested newts is therefore anticipated.

Two buildings to the western boundary of the proposed development site were considered to have a low to moderate risk of supporting bats, with features such as wooden eaves and missing mortar between brickwork which provide potential roosting opportunities. Further assessment of these buildings in terms of roosting bats was undertaken within August and September 2009 and results are included within a separate Protected Species Assessment report.

Recommendations including the planting of native hedgerows within the site will mitigate for the loss of vegetation to the north and eastern sections of the site for foraging bats occurring within the local area. Further recommendations, including the erection of bat boxes on retained trees to the northern boundary will also increase roosting opportunities within the site.

No sign of badger was detected within the site, though the grassland habitat is considered to offer foraging habitat for the species. Consultation with the local records centre provided records of badger within the surrounding area of the site. A survey to assess the presence/absence of badger was undertaken within the site and suitable habitats within 30m of the site boundary during September 2009. Results of this survey are included within a separate Protected Species Assessment report.

The site is considered to offer suitable breeding habitat to a range of common bird species which favour scrubby habitat in which to nest. Mitigation recommendations, such as the erection of nest boxes (including types designed for specific species) and the planting of native hedgerows will help to enhance the site in terms of breeding and foraging birds.

It should also be noted that no vegetation clearance works will take place within the bird breeding season (March-August inclusive) unless checks by an appropriately qualified ecologist have found no active nests to be present immediately prior to clearance works commencing.

Habitats within the dismantled railway and railway junction are considered to offer suitable habitat for reptile species. A recent record of common lizard occurring within the disused railway junction was provided within the consultation held with the local records centre. Reptile surveys were undertaken within the site and suitable adjacent habitats to assess the presence/absence of such species. Results of this survey are included within a separate Protected Species Assessment report.

There is no suitable habitat within or immediately adjacent to the site to support protected species such as water vole, otter or white-clawed crayfish.

In summary mitigation for the proposed development could include:

- Erection of nest boxes and bat boxes to enhance the site for breeding birds and roosting bats respectively;
- The planting of native hedgerows to the boundaries of the site;
- The creation of diverse wildflower grassland to the north of the site;
- The sympathetic use of lighting along features potentially utilised by local wildlife, including retained trees to the northern boundary and the proposed hedgerows. Low wattage lighting should be used where possible;
- Timings of vegetation clearance to avoid the breeding bird season.

FIGURES

FIGURE 01: Aerial Photograph (included within the report)

FIGURE 02: Phase I Habitat Map

FIGURE 03: Protected Species Records

APPENDIX

APPENDIX 01: Legal Status of Protected Species

APPENDIX 01: LEGAL STATUS OF PROTECTED SPECIES

Great Crested Newt

The Wildlife and Countryside Act 1981 (as amended) transposes into UK law and the Convention on the Conservation of European and Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). The 1981 Act was amended by the Countryside and Rights of Way ['CRoW'] Act 2000. The great crested newt is listed on Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9 (1)]
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9 (2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt [Section 9 (4)(a)]
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose [Section 9(4)(b)]

The Conservation (Natural Habitats &c.) Regulations 1994 (the Habitats Regulations) transpose into the UK law Council Directive 92/43/EEC of 21st May 1992 on the conservation of Natural Habitats and of Wild Fauna and Flora (often referred to as the 'Habitats [and Species] Directive'). The great crested newt is listed on Annex II and Annex IV of the Directive. The former Annex relates to the designation of Special Areas of Conservation (SACs) for this species; even where great crested newts occur outside SACs, the inclusion on Annex II serves to underline their conservation significance. Inclusion of the Annex IV ('European Protected Species') means that member states are required to put in place a system of strict protection as outlined in Article 12, and this is done through inclusion on Schedule 2 of the Regulations. Regulation 39 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 39 (1)(a)]
- Deliberately disturb a great crested newt [Regulation 39(1)(b)]
- Deliberately take or destroy the eggs of a great crested newt [Regulation 39 (1)(c)]
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 39(1)(d)]

The legislation applies to all life stages of great crested newts.

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. The Conservation (Natural Habitats & c.) Regulations 1994 (as amended, 2007) transpose the Habitats Directive into UK law, making it an offence to-

- deliberately disturb a bat
- deliberately kill, injure or capture a bat
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to

- intentionally kill, injure or take a bat
- damage, destroy or obstruct a bat roost *,
- disturb a bat at a roost *

- possess or control a bat or any part thereof
- sell, offer for sale, possess or transport for sale any bat or part thereof
- set traps for catching, killing or injuring bats
- possess articles for the purposes of committing offences against bats

[*= intentional and reckless offences covered]

This protection applies whether bats are present within the roost at the time or not.

Badgers

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under this act it is illegal to: (1) wilfully kill, injure, take a badger or attempt to do so, (2) cruelly ill-treat a badger or (3) interfere with a sett, including disturbing a badger while occupying a sett.

Breeding Birds

The Wildlife and Countryside Act 1981 (as amended) gives protection to all wild nesting birds, which makes it an offence to intentionally kill, injure, or take any wild bird or their eggs or nests. This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependant young is provided for birds included on Schedule 1.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.