

**Land at 3 Ingleby (former coal yard),
Lloyd's Lane, Chirk, LL14 5QB**

*Proposed change of use and construction of
dwellings*

Preliminary Ecological Appraisal and Bat Survey

For: Mr A. Roberts

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May 2017

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1.0 INTRODUCTION

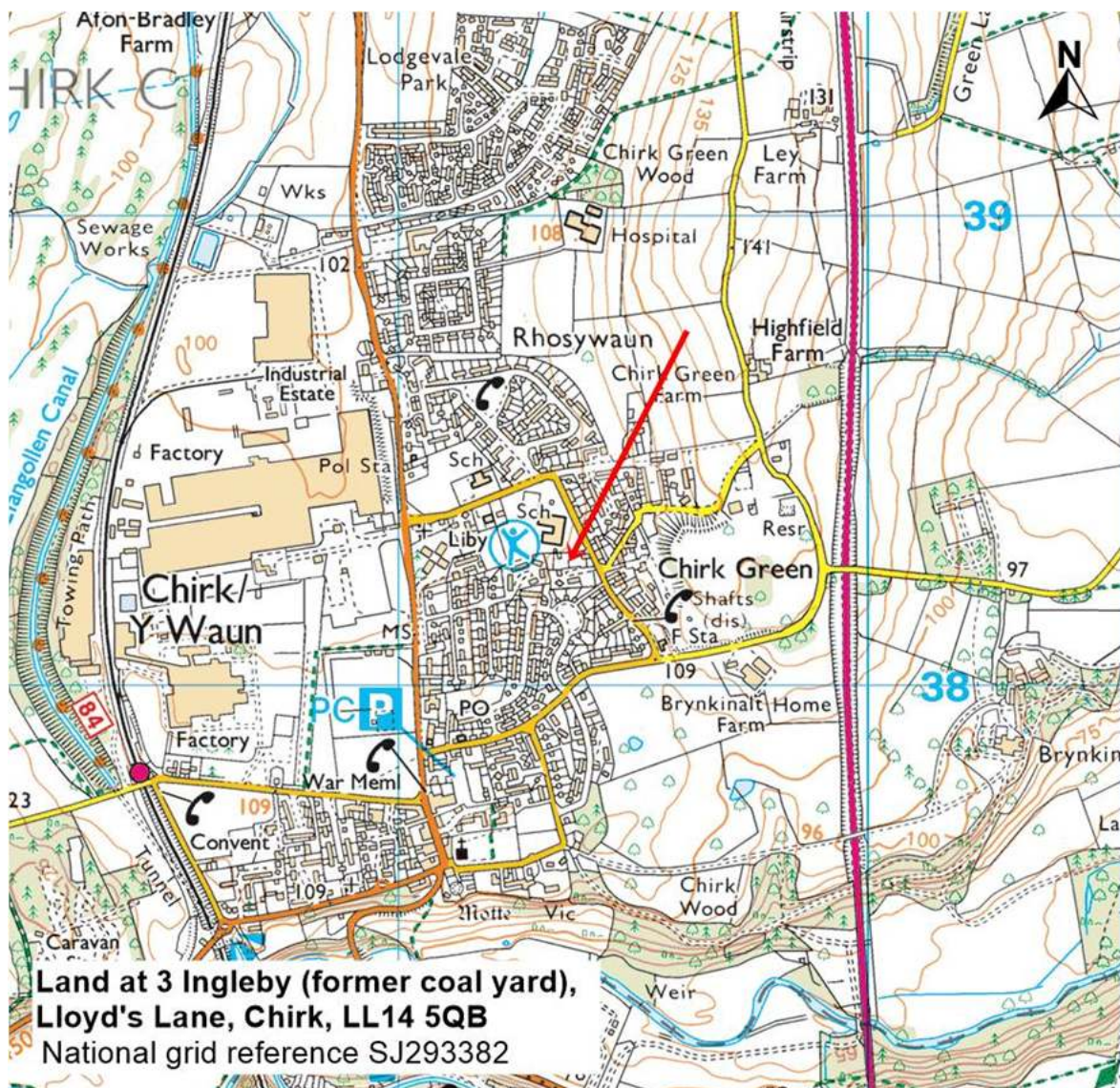
1.1 Background - Gerald Longley

Gerald Longley Ecological Consultants (GLEC Ltd) has been commissioned to undertake a Preliminary Ecological Appraisal and Bat Activity Survey for a proposed development on land at 3 Ingleby (former coal yard), Lloyd's Lane, Chirk, LL14 5QB (national grid reference SJ293382). Gerald Longley has two decades of experience of wildlife surveying and, prior to working as an independent ecological consultant, held posts as Conservation Officer with Montgomeryshire Wildlife Trust and Head of Shrewsbury Countryside Unit.

1.2 Background – This Survey

The applicant is seeking planning permission to develop the site for housing. The request for this work comes from their and the planning team's need to ensure that any valuable habitats at the site and the needs of any wildlife using the site and the nearby relevant locality are fully taken into account in the proposed development. Possibly relevant wildlife such as amphibians, birds, bats, and badgers are protected species or species of principal importance for conservation (previously biodiversity action plan species). A full citation of the law with regard to relevant protected or action plan wildlife is given in appendix 7.1.

1.3 Site location





**Land at 3 Ingleby (former coal yard),
Lloyd's Lane, Chirk, LL14 5QB**
Approximate site boundary in red

1.4 Aims of this Preliminary Ecological Appraisal and Bat Emergence Survey

- To identify existing sites designated for their nature conservation interest in the survey area, or relevantly close to it, and assess any potential impact.
- To identify any existing records of important species recorded in or relevantly close to the survey area and assess any potential impact.
- To identify and map habitat types and species in the survey area.
- To evaluate the nature conservation importance of recorded species and habitats.
- To identify possible ecological constraints on the proposed development and management of the survey area.
- To establish the actual or likely presence or absence of bat roosts and/or bat species in the buildings on the site.
- To establish the presence of any nesting birds in or on the buildings.
- To recommend any further survey work, required mitigation measures, compensation or enhancement for wildlife as part of the planning process.

1.5 Report Summary

Land at 3 Ingleby (former coal yard), Lloyd's Lane, Chirk, LL14 5QB

Proposed change of use and construction of dwellings

Preliminary Ecological Appraisal and Bat Survey

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Site surveys were undertaken by Mary Thornton and Gerald Longley on 16 May 2017. The approximately 0.3ha site was a former coal handling yard within the built up area of the large village of Chirk. A primary school and grounds bordered the site to the north and residential properties and gardens surrounded it to the east, south and west.

A 2km buffer desk study for sites and wildlife records was carried out. The main relevant findings were:

- Nearest SSSIs Chirk Castle and Parkland, approx. 1.3km east, and River Dee, approx. 850m south. River Dee also designated as a Special Area of Conservation (SAC).
- Nearest pond approx. 370m south. Nearest great crested newt records from this pond (1992).
- No records for reptiles in buffer.
- No bat records within 1km. Common and soprano pipistrelles, brown long-eared, Natterer's, whiskered, noctule, Daubenton's and lesser horseshoe bats recorded 1-5km from site.
- Nearest otter record approx. 1.2km south. No water vole records in buffer.
- No records for dormice in buffer.

No records of protected species, sites or habitats were found for the proposed development site itself.

The site was largely concrete hard standing with buildings, hoppers and bunkers associated with the former coal handling business. The main semi-natural habitats were trees and hedgerows on the site boundary.

Stretches of outgrown native species hedgerows on the south, north and west boundaries of the site provided breeding and feeding sites for small birds and insects and formed part of a network of hedges, trees, open spaces and gardens within the built up area of Chirk and out to the surrounding countryside. This was of ecological value and any further loss of the hedgerows would be negative.

The twin-stemmed oak on the south boundary of the site and mature silver birch and lime trees in the adjacent school ground close to the north boundary were significant trees in the local built up landscape and of ecological value. Although they had fences, a wall and hard standing immediately next to them these were considered unlikely to have deep foundations which would have negatively affected the trees. No heaving of ground or cracking of the wall in the vicinity of the trees was visible. Digging trenches, footings or foundations close to the trees would have a negative impact on them and deep excavation should not take place within their root protection areas, as defined by BS5837:2012.

The only pond within 500m was surrounded by extensive permanent pasture with mature trees and old hedgerows: all good terrestrial habitat for great crested newts. A second pond was approximately 570m from the site in the same area of parkland. In the direction of the site there was approximately 150m of good habitat and then roads and residential development. It was considered extremely unlikely that great crested newts from these ponds would travel from the ponds and surrounding good terrestrial habitat through the less
(continued)

(continued) Report summary

Land at 3 Ingleby (former coal yard), Lloyd's Lane, Chirk, LL14 5QB



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suitable habitat of the built up area to reach the limited refuges on the site itself and they were considered very unlikely to be present on the site.

The site did not offer good habitat for reptiles and they were not considered to be present.

The inspections of the buildings and evening bat activity survey confirmed that the buildings on the site were not being used by bats for roosting. A small number of bats were feeding in the sheltered area of the yard and foraging along the hedgerows and trees on the edges of the site.

The site did not contain suitable habitat for otter, water vole or dormouse and they were not considered to be using it.

See in particular **section 4.3 and Table 1** in the report where the effects on Ecological Receptors are considered.

The site itself was of low ecological value. Hedgerows and trees on the boundaries of the site were of ecological value and should be retained and protected during development.

It is recommended that:

1. Hedgerows on the south, north and west boundaries of the site are retained and protected during development and planting as part of the landscaping of the new development is of native tree and shrub species. Suitable species are in appendix 7.5.
2. The twin-stemmed oak in the hedge on the south boundary of the site and trees close to the north boundary in the adjacent school grounds are protected during the works and that no deep excavations take place in the root protection areas, as defined by BS5837:2012, of these trees and that these areas are protected during the works.
3. All works on site take into account the "Ecological principles to follow in this development" set out in appendix 7.3.

2.0 METHODOLOGY

2.1 Desk Study

The 1:25000 Ordnance Survey map covering the site, and aerial photos accessed from the internet, were scrutinised to initially assess the wildlife value of the proposed development site and surrounding habitat at a crude level. This looked for any semi-natural habitat that may be of value to wildlife, for example ponds, hedges, parkland, wetland, and woodland with interconnecting habitat links. Searches were made on MAGIC and the NBN Atlas for statutory designated sites coincident with or adjacent to the area of search and existing records of species within a 2km radius of the site, including UK Priority and nationally protected species and habitats, and sites of national and local nature conservation importance.

2.2 Site Surveys

The site surveys were undertaken by Gerald Longley (NRW bat survey licence 75004:OTH:CSAB:2017) and Mary Thornton (NRW bat survey licence 68382:OTH:CSAB:2015) on 16 May 2017.

The following site surveys were undertaken:

- An 'extended' Phase 1 habitat survey, as per JNCC (2010) of the site.
- An ecological tree and hedgerow assessment. Any large and mature trees were assessed for the presence of large bird nests and their suitability for bat roosting.
- An assessment of the site as potential habitat for reptiles and amphibians and a search for reptiles and amphibians under bricks, logs etc.
- A daytime inspection of the buildings on the site for signs of bats followed by an evening bat activity survey. Bat surveys were designed by Gerald Longley using standard techniques based on the guidance and information in the Bat Conservation Trust Bat Survey Guidelines (2016). See the appendices for a full list of equipment used. The evening activity survey looked for emergence from the buildings. The external and internal survey of the buildings included an assessment for potential for nesting birds and bats and a search for evidence, such as pellets, dead bats, prey remains, droppings, urine marks and staining. Close-focusing binoculars were used immediately below potential roost areas. Droppings around the bases of and/or stuck to walls, on shelves, wall plates, purlins, etc. were searched for with the aid of a high-powered torch. Holes and cracks in the walls, purlins, beams etc. and behind any cladding were inspected with a colour video endoscope where they could be safely reached.
- Incidental records of amphibians, reptiles, mammals, birds and other species were made during the survey.

3.0 RESULTS

3.1. Desk Study

A 2km buffer desk study for sites and wildlife records revealed that there were no coincident statutory wildlife sites or SSSIs. The nearest SSSIs were Chirk Castle and Parkland SSSI, approximately 1.3km east of the site at the nearest point, and the River Dee SSSI, approximately 850m south of the site at the nearest point. The River Dee is also designated as a Special Area of Conservation (SAC) for its riverine habitat.

One pond within 500m of the site was found on aerial photographs and maps, approximately 370m south of the site. The nearest great crested newt records found were from this pond and another approximately 560m southeast of the site (1992).

No records for reptiles were found in the 2km buffer.

No bat records were found within 1km of the site, mainly the built up area of Chirk. A range of species including common and soprano pipistrelles, brown long-eared, Natterer's, whiskered, noctule, Daubenton's and lesser horseshoe bats had been recorded 1-5km from the site. Chirk Castle is a known lesser horseshoe roost.

The nearest records for otter were approximately 1.2km south of the site, along the River Ceiriog (2010 and 2013). No records for water vole were found in the buffer.

No records for dormice were found in the buffer.

No badger records were found in the 2km buffer.

No specific records of protected species, sites or habitats were found for the proposed development site itself.

It should be noted that the lack of records for a particular species in a particular location does not confirm that the species is absent.

3.2 Site Surveys

16 May was a dry, largely cloudy evening after a wet morning. Access was given to all areas of the site required for the survey. See appendix 7.2 for a Phase 1 survey map.

The approximately 0.3ha site was a former coal handling yard within the built up area of the large village of Chirk. A primary school and grounds bordered the site to the north and residential properties and gardens surrounded it to the east, south and west.

Habitats on the site

The site was largely concrete hard standing with buildings, hoppers and bunkers associated with the former coal handling business. The main semi-natural habitats were trees and hedgerows on the site boundary.

Defunct native species hedge with trees (Phase 1 habitat code J3)

There were stretches of outgrown, native species hedgerows on parts of the north, south and west boundaries of the site. Species included hawthorn, holly, elm and elder.

Scattered broad-leaved trees (Phase 1 habitat code A3.1)

There was a young-mature, twin-stemmed oak in the hedge on the south boundary of the site. A group of self-sown goat willow and ash were in the southwest corner of the site. Trees on or close to, the north boundary of the site in the adjacent school grounds included two mature silver birch and a hybrid lime.

Intact coniferous hedge (Phase 1 habitat code J2.1.2)

In the southeast corner of the site a conifer hedge bordered the garden of 3 Ingleby.

Vegetation developing on abandoned areas

Vegetation including bramble, stinging nettle, tree saplings, dandelion and herb robert was developing around the edges of the site where the hard standing was beginning to crack and break up.

School wildlife area

A small part of the site, on the north side of the entrance, was outside the coal yard fence and was part of the adjacent school grounds. It was mainly bramble scrub and uncut grass, part of an informal wildlife area on the edge of a mown playing field.

Buildings and other structures

The main buildings on the site were numbered 1-8 (see phase 1 survey map in appendix 7.2) and are described below. In addition to these there were two storage containers in the southeast corner of the site, adjacent to the conifer hedge; three metal coal hoppers, previously used for bagging and weighing coal; and three sets of storage bunkers made of horizontal sleepers with steel posts or brick/block walls.

Building 1 was a brick-walled former garage with a pitched, timber framed, asbestos sheet roof. The roof ridge was orientated east-west. The internal walls and roof timbers had been painted white.

Building 2 was a shed with brick and sheet metal walls and a pitched tin roof supported by metal beams. At the south end was a single storey brick lean-to with a tin sheet roof. Barge boards on the south gable were missing, exposing gaps in the brickwork. The north end of the shed was covered with dense ivy.

Building 3 was a steel-framed machinery storage shed with metal sheet walls and a pitched roof.

Building 4 was a shed with vertical wood boarded walls and a wooden framed, pitched roof covered with felt with wooden boards beneath.

Building 5 was an open fronted, steel-framed metal shed with a single pitch roof, immediately adjacent to one of the coal hoppers.

Building 6 was a pre-fabricated, flat roofed unit that had been used as an office.

Building 7 was a small aluminium shed with a pitched roof and double wooden doors on the south side.

Building 8 was a small metal sheet shed with a single pitch roof.

Amphibians

There were no ponds on the site. There were some potential refuge sites for amphibians, including great crested newts, in piles of sleepers and pallets and under the many items

stored or dumped around the edges of the site and partly overgrown with brambles and other vegetation. No amphibians were found during the survey.

Under local ecological planning guidelines for assessing potential developments for possible effects on great crested newts, any pond within 500m should be investigated. One pond within 500m of the site was found, approximately 370m south of the site, and is shown on the aerial photograph below. A second pond, approximately 570m from the site is also shown. Both ponds were in parkland surrounded by permanent pasture and mature trees and separated from the site by over 200m of roads and built up residential area.

Access to the pond was not possible so no habitat suitability assessment for great crested newts was made. It was viewed from the road on the north side of the field.



Reptiles

The site did not offer very suitable habitat for reptiles. Piles of sleepers and old coal and other items that might have been possible refuges were mainly around the edges of the site and in the shade and there was little in the way of suitable foraging habitat for reptiles. No reptiles were found during the survey.

Bats

Buildings 1 and 2 offered some limited potential for bat roosting with gaps between bricks in both and a wooden roof frame in building 1. Other buildings on the site were not suitable for bat roosting. The yard itself was sheltered by the trees and outgrown hedges on its boundaries, creating a potentially good foraging space for bats, with vegetation links to the neighbouring school grounds and gardens.

Daytime Inspection

No bats or signs of bats were found on the outsides or the insides of any of the buildings.

Evening activity survey

20.36 to 21.45 (sunset 21.05 BST)

A warm, dry evening following a wet morning. 15°C. 7/8 oktas cloud cover. The two surveyors were placed so as to view buildings 1 and 2.

At 21.26 and 21.28 a common pipistrelle (*Pipistrellus pipistrellus*)(45KHz) made passes around both surveyors in the yard.

From 21.27 until 21.30 a soprano pipistrelle (*Pipistrellus pygmaeus*)(55KHz) made passes around both surveyors in the yard.

No bats emerged from either building 1 or building 2.

Otter and water vole

The site did not contain suitable habitat for otter or water vole and no signs of them were found during the survey.

Dormouse

The site did not contain suitable habitat for dormice and no signs of them were found during the survey.

Badger

No signs of badgers using the site were found during the survey.

Birds

No active bird nests were recorded on the outsides or insides of any of the buildings. Remains of a few old leafy, grassy and twiggy nests were found in buildings 1, 2, 4 and 5. These were considered most likely to have been robin, blackbird and pigeon or jackdaw nests.

Swift, blue tit, song thrush, house sparrow and dunnock were recorded on the site or overhead during the survey but no birds carrying food or other signs of breeding were recorded.

Invasive species

No invasive species, as defined by the Wildlife and Countryside Act 1981 (amended), were recorded on the site.

4.0 DISCUSSION AND INTERPRETATION

4.1 Appraisal - Development plans & ecology baseline

The proposal is to develop the site for housing.

4.2 Constraints of this survey

As with all wildlife surveys conducted, the data collected is only a representation of the habitats, species and species presence evidence found during the actual date/s of the survey/s. There are other seasons and many species are mobile or transitory. There were no major constraints. The date of the survey was within the ideal time period to conduct preliminary, extended Phase 1 appraisals: May to September, when many more species are active and non-woody plants are clearly more evident.

It was not possible to access the one pond within 500m, which was approximately 370m from the site, to carry out a habitat suitability assessment for great crested newt. The desk study found great crested newt records for this pond (1992) establishing that it was, at least in the past, suitable for them. It was not considered that access to the pond for this survey would have resulted in significantly different survey results or recommendations.

4.3 Potential effects on ecological receptors

Ecological receptors are habitats or species which may show some change in population levels at a site in response to the implementation of the desired change or development. Change/s may be neutral, minor, negligible, negative or strongly negative. They can also be positive. The more notable ecological receptors and any predicted impacts are summarised below in Table 1.

The site itself did not contain habitats of ecological value being mainly hard standing, buildings and other structures associated with the former coal yard business.

Stretches of outgrown native species hedgerows on the south, north and west boundaries of the site provided refuges, breeding and feeding sites for small birds and insects and formed part of a network of hedges, trees, open spaces and gardens within the built up area of Chirk and out to the surrounding countryside. This was of ecological value and any further loss of the hedgerows would be negative.

The twin-stemmed oak on the south boundary of the site and mature silver birch and lime trees in the adjacent school ground close to the north boundary were significant trees in the local built up landscape and although they had fences, a wall and hardstanding immediately next to them these were considered unlikely to have deep foundations which would have negatively affected the trees. No heaving of ground or cracking of the wall in the vicinity of the trees was visible. Digging trenches, footings or foundations close to the trees would have a negative impact on them and deep excavation should not take place within their root protection areas, as defined by BS5837:2012. This is the area in square metres formed by a circle of radius twelve times the stem diameter of the tree at 1.5m. This area represents the minimum area of soil that a tree requires to support a healthy and effective root-system and should be protected by fencing during the works.

Remaining hedgerows around the site should be retained and protected by appropriate fencing during development works and any works to cut, prune or fell trees, hedges and other vegetation, including clearing ivy growing on buildings, should be carried out in the

dormant season, October to February to avoid disturbance to nesting birds (see Ecological principles in appendix 7.3).

New planting as part of landscaping of the new development should be of native species of shrub and tree to maintain and enhance vegetation links within the village and to the surrounding area. Suitable species are in appendix 7.5.

Amphibians

No common amphibians (frogs, toads, smooth and palmate newts) were found during the survey although there were possible refuges for them on the site. If common amphibians are discovered during the works they should be relocated to a safe place in vegetation outside the site (see Ecological Principles in appendix 7.3).

Great crested newt

The only pond within 500m was surrounded by extensive permanent pasture with mature trees and old hedgerows: all good terrestrial habitat for great crested newts. A second pond was approximately 570m from the site in the same area of parkland. In the direction of the site there was approximately 150m of good habitat and then roads and residential development. The desk study found great crested newt records for both these ponds. It was considered extremely unlikely that great crested newts from these ponds would travel from the ponds and surrounding good terrestrial habitat through the less suitable habitat of the built up area to reach the limited refuges on the site itself and they were considered very unlikely to be present on the site. In the very unlikely event that great crested newts are discovered during works then Natural Resources Wales (NRW) or a suitably qualified ecologist should be contacted for advice. Works should cease and an EPS licence may be required to allow work to continue.

Reptiles

No reptiles were found during the survey. The site did not offer good habitat for them and they were not considered to be present.

Bats

The inspections of the buildings and evening bat activity survey confirmed that the buildings on the site were not being used by bats for roosting. A small number of bats were recorded feeding in the sheltered area of the yard and foraging along the hedgerows and trees on the edges of the site.

Planting native species trees and hedges as part of the new development would help maintain foraging habitat for bats in the area as well as providing vegetation links for them to follow through the built up area of the village.

Otter and water vole

No signs of otter or water vole were found during the survey. The site did not contain suitable habitat for them and they were not considered to be using it.

Dormouse

No signs of dormice were found during the survey. The site did not contain suitable habitat for them and they were not considered to be using it.

Badger

No signs of badger were found during the survey and they were not considered to be currently using the site.

Birds

Any trimming or removal work to hedgerows or trees should take place in the dormant season (October – February) to avoid possible disturbance to nesting birds (see Ecological Principles in appendix 7.3).

Invasive species

No invasive species were recorded and no constraints relating to invasive species are anticipated.

Table 1: Summary of potential effects on ecological receptors

Ecological Receptor	Ecological Value	Potential Effects/Impact	Proposed mitigation or ecological enhancement
Hedgerows	MODERATE	NEGATIVE Loss of feeding and nesting habitat for birds and insects. Loss of foraging habitat for bats. Loss of vegetation links within and beyond village.	Retain and protect remaining hedges on boundaries of site during development. Plant native species of tree and shrub in new development.
Trees	MODERATE (increasing with age)	NEGATIVE Loss of feeding and nesting habitat for birds and insects. Loss of foraging habitat for bats.	No deep excavation within root protection zone of twin-stemmed oak on south boundary ad silver birch and lime in school grounds to north of site.
Amphibians, including great crested newt	LOW	NEGLIGIBLE Considered very unlikely to be present	Follow Ecological Principles in appendix 7.3
Reptiles	LOW	NEGLIGIBLE Considered not present	Follow Ecological Principles in appendix 7.3
Bats	LOW	MINOR NEGATIVE Small loss of foraging space.	Retain hedgerows. Plant native species of tree and shrub in new development.
Water voles	LOW	NEGLIGIBLE Considered not present.	-
Otters	LOW	NEGLIGIBLE Considered not present	-
Dormice	LOW	NEGLIGIBLE Considered not present	-
Badgers	LOW	NEGLIGIBLE Considered not present	Follow Ecological Principles in appendix 7.3
Birds	LOW	NEGLIGIBLE No active nests found in buildings.	Follow Ecological Principles in appendix 7.3 for timing of any hedge or tree cutting works.
Insects/other species	LOW	NEGLIGIBLE	-
Invasive species	LOW	NEGLIGIBLE	-

The site itself was of low ecological value. Hedgerows and trees on the boundaries of the site were of ecological value and should be retained and protected during development.

4.4 Proposed preliminary mitigation and enhancement

No further preliminary mitigation or enhancement is proposed.

5.0 RECOMMENDATIONS

It is recommended that:

1. Hedgerows on the south, north and west boundaries of the site are retained and protected during development and planting as part of the landscaping of the new development is of native tree and shrub species. Suitable species are in appendix 7.5.
2. The twin-stemmed oak in the hedge on the south boundary of the site and trees close to the north boundary in the adjacent school grounds are protected during the works and that no deep excavations take place in the root protection area, as defined by BS5837:2012, of these trees and that these areas are protected during the works.
3. All works on site take into account the "Ecological principles to follow in this development" set out in appendix 7.3.

6.0 REFERENCES

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7.0 APPENDICES

7.1 Relevant species legislation

Birds - Legislation

Under Section 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally kill, injure, handle or remove any wild bird (with the exception of a few pest species); take or damage a nest whilst in use or being built; and take or destroy eggs. A person is not guilty of any offence if their action was the incidental result of a lawful activity and could not have been reasonably avoided.

A higher level of protection is afforded to those birds listed in Schedule 1 of the Act. It is an offence to disturb Schedule 1 species whilst it is building or sitting on a nest, in addition to damaging or destroying their nests or eggs.

It is not an offence to disturb non-Schedule 1 species whilst they are building a nest or sitting on it. However, an offence may be committed if the bird is driven away from a nest by prolonged disturbance which results in the failure of eggs or death of dependent young.

In essence, the relevance of this is that any tree, hedge or similar that could have birds nesting in it can only be removed in the period October to February (inclusive) unless subject to additional onsite survey immediately prior to its intended removal by a suitably qualified ecologist.

Amphibians and Reptiles - Legislation

All native amphibian and reptile species are protected in England and Wales by specific laws to varying degrees. Amphibians and reptiles fall into three groupings with differing levels of protection:

- Widespread amphibians
- Widespread reptiles
- European protected species

Widespread Amphibians

The palmate newt, smooth newt, common frog and common toad are listed on Schedule 5 of the Wildlife and Countryside Act 1981, but are protected by Section 9(5) only. This refers to trade in animals (prohibition of sale and advertising for sale, etc.). Hence these species are not legally protected from killing, injury or development, although other considerations may be taken into account (e.g. existing site designations, planning guidance and Biodiversity Action Planning).

Widespread Reptiles

Four reptile species, slow-worm, viviparous (or common) lizard, grass snake and adder have additional protection under the Wildlife and Countryside Act 1981. Their inclusion on Schedule 5 gives 'partial protection' via Section 9(1) from intentional killing & injuring.

Section 10(3) c of the Wildlife and Countryside Act 1981 offers a defence in situations where killing and injury are an incidental result a lawful action and could not reasonably have been avoided. Interpretation can be difficult, but courts have taken the view that activities, such as development, that lead to injuring or killing reptiles, can constitute an intentional act if insufficient care to avoid harm was taken.

European Protected Species

These are strictly protected species, great crested newt, natter jack toad, sand lizard and smooth snake, which are protected by a combination of both the Wildlife and Countryside Act 1981 (Schedule 5 - full protection) and the Conservation of Habitats and Species Regulations 2010 (listed on Schedule 2). The latter are domestic implementation of the European Commission's "Habitats Directive" 1992, hence the term.

Protection of these "European protected species" differs from that of the widespread reptiles in that not only are they protected from killing and injury, but also from disturbance and capture. Additionally, the habitat of European protected species is legally protected, from damage or destruction. The development of a site where European protected species occur can therefore go ahead only if licensed by Natural England/Natural Resources Wales.

Note that the natter jack toad, sand lizard and smooth snake are rare species, occurring in a few specific locations, so they only infrequently coincide with building development issues. In contrast, the great crested newt has a large range in England and is hence more likely to occur in areas subject to building development. The great crested newt's strict protection stems from a decline throughout its European range – England is a stronghold area for the species.

Bats – Legislation

All British bat species receive legal protection in the United Kingdom. The Wildlife and Countryside Act 1981 (WCA) (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The 1981 Act was amended by the Countryside and Rights of Way (CROW) Act 2000 and the more recent Conservation of Habitats and Species Regulations 2010. All British bat species are listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take a bat [Section 9(1)];
- Possess or control any live or dead specimen or anything derived from a bat [Section 9(2)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)];
- Intentionally or recklessly obstruct access to any structure or place which a bat uses for shelter or protection [Section 9(4)(c)]
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a bat [section 9(5)]

Bats are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2010. Regulation 39 makes it an offence to:

- Deliberately capture or kill a bat [Regulation 39(1)(a)];
- Deliberately disturb a bat in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR ii) the local distribution of that species. [Regulation 39(1)(b)];
- Damage or destroy a breeding site or resting place of a bat [Regulation 39(1)(d)].

Under the law, a roost may be any structure or place used for resting, shelter or protection. This could be any structure, for example any building or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats

tend to re-use the same roosts for generations, the roost may be protected whether the bats are present or not.

Otters - Legislation

Otter are a European protected species under **The Conservation of Habitats and Species Regulations 2010**

Regulation 39 (1) contains the following offences:

- (a) deliberately or recklessly to capture, injure or kill a wild animal of a European protected species;
- (b) deliberately or recklessly:
 - (i) to harass a wild animal or group of wild animals of a European protected species;
 - (ii) to disturb such a wild animal while it is occupying a structure or place which it uses for shelter or protection;
 - (iii) to disturb such an animal while it is rearing or otherwise caring for its young;
 - (iv) to obstruct access to a breeding site or resting place of such an animal, or otherwise to deny the animal use of the breeding site or resting place;
 - (v) to disturb such an animal in a manner that is, or in circumstances which are likely to significantly affect the local distribution or abundance of the species to which it belongs ;or
 - (vi) to disturb such an animal in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- (c) deliberately or recklessly to take or destroy the eggs of such an animal ;or
- (d) to damage or destroy a breeding site or resting place of such an animal

Importantly the regulations previously provided a defence for offences which were the incidental result of lawful operations (subject to certain conditions). This defence has now been removed.

There are provisions in the legislation to allow actions to take place under licence that would otherwise contravene the law. Licences may be given authorising activities involving European Protected Species which would otherwise be illegal under the Regulations. For a licence to be issued the following three tests must be satisfied:

That the development is 'in the interest of public health and safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

That there is 'no satisfactory alternative';

That the derogation (i.e. any permission/licence granted) is 'not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range'.

Dormice – Legislation

The dormouse was given partial protection under the **Wildlife and Countryside Act 1981**. Schedule 5 of this Act was amended in 1988 making it a fully protected species. Protection is also afforded by Schedule 2 of the **Conservation (Natural Habitats &c.) Regulations 2010**, making the dormouse a European protected species.

Dormice are listed on Schedule 5 of the 1981 Act (as amended), and are therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take a dormouse [Section 9(1)].
- Possess or control any live or dead specimen or anything derived from a dormouse [S 9(2)] (unless it can be shown to have been legally acquired).
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse [S 9(4)(a)].
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose [S 9(4)(b)].

The Conservation (Natural Habitats &c.) Regulations (known as the Habitats Regulations) transpose into 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'). Dormice are listed on Annex IV ('European protected species') of the Directive meaning that member states are required to put in place a system of strict protection as outlined in Article 12; this is done through inclusion on Schedule 2 of the Regulations. Regulation 39 makes it an offence to:

- Deliberately capture or kill a dormouse [Regulation 39(1)(a)].
- Deliberately disturb a dormouse [R. 39(1)(b)].
- Damage or destroy a breeding site or resting place of a dormouse [R. 39(1)(d)].
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse [R. 39(2)]

Water vole - Legislation

The water vole is fully protected under Schedule 5, **Section 9 of the Wildlife and Countryside Act 1981** (as amended), which makes it illegal to:

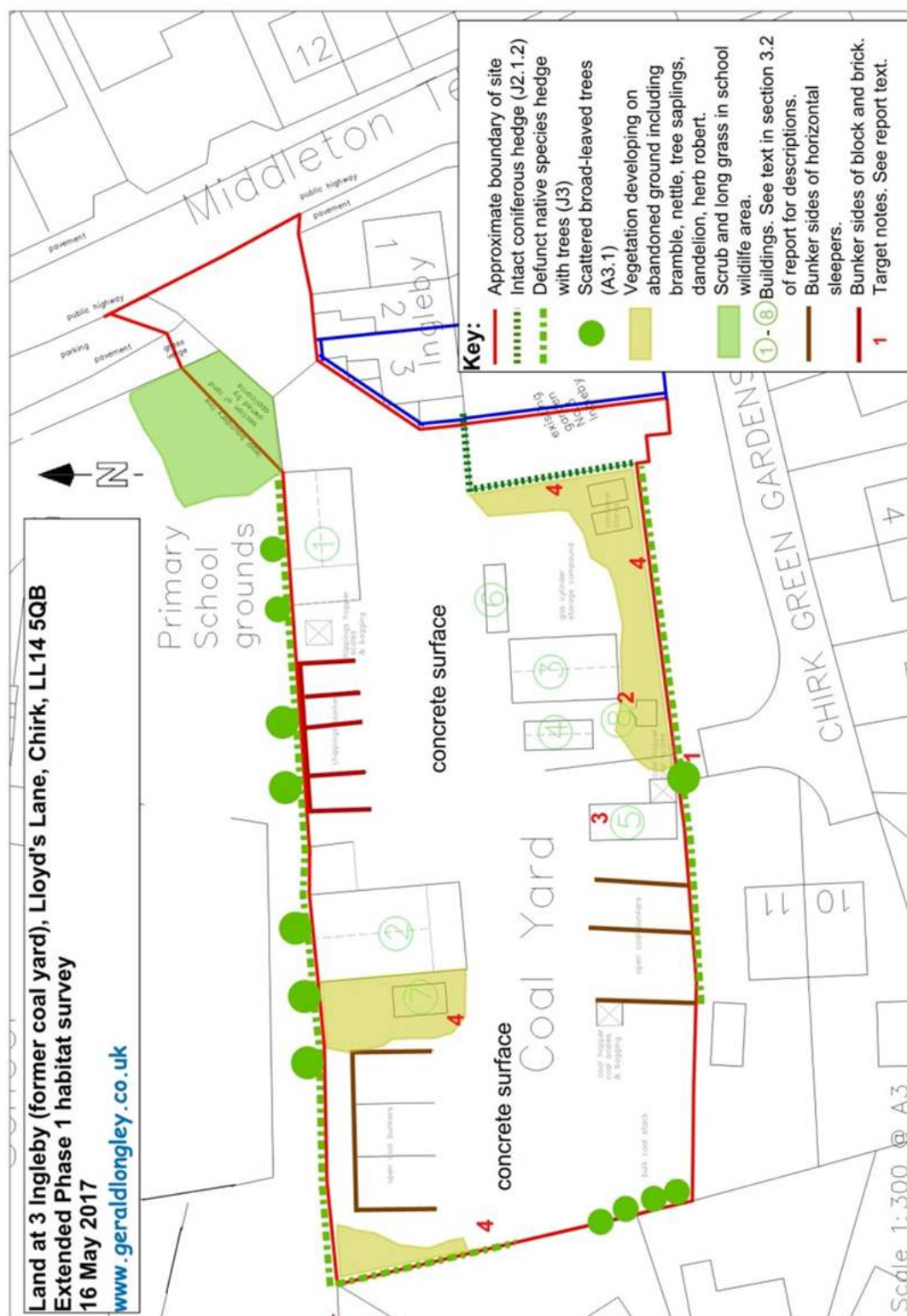
- Intentionally kill, injure or take (capture) a water vole;
- Possess or control a live or dead water vole, or any part of a water vole;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place; and
- Sell, offer for sale or advertise for live or dead water voles.

Badger – Legislation

The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury. It also contains restrictions that apply more widely and all the following are criminal offences:

- to wilfully kill, injure, take, possess or cruelly ill-treat a badger;
- to attempt to do so; or
- to intentionally or recklessly interfere with a sett. Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.
- to deliberately introduce a dog into a sett
- to bait or dog for badgers
- to possess, sell or offer for sale a live badger
- to possess or control a dead badger or parts of a badger (if unlawfully obtained)
- to mark or attach a device to a badger

7.2 Extended Phase 1 Survey



Target notes See phase 1 habitat map for locations

1	Twin-stemmed, young-mature oak in outgrown hedgerow on boundary of site.
2	Remains of mossy bird nest, probably robin, in hole in old boat.
3	Remains of two nests on roof frame of building. One twiggy nest, possibly pigeon, and one grassy, most likely blackbird.
4	Piles of old pallets, sleepers, wood and other items. Possible refuges for amphibians.

7.3 Ecological principles to follow in this development

By adhering to the following principles, the disturbance, either short-term or long term to species should be significantly reduced. However, it is still possible that during works, protected or other, not protected but vulnerable, species could be encountered. A prepared plan of action in this situation should be followed and should include:

- Construction workers and staff should be aware of the potential for protected species and should be fully briefed about their legal responsibilities towards them and how to proceed if discovered, as below.
- In the event that protected species are encountered during the construction phase then a suitably qualified ecologist should be contacted and all work cease until an assessment has been made.
- If common reptiles/amphibians (e.g. common frogs, common toads, slow worm, grass snake) are discovered they should be translocated to a close and safe area by an ecologist.
- If great crested newts are discovered then Natural England (NE) or a suitably qualified ecologist should be contacted for advice. Works should cease and an EPS licence may be required to allow work to continue.
- If active nests of common breeding birds are discovered during the works a suitably qualified ecologist must be contacted for advice, with probably a 25 metre stand-off/exclusion zone put in place (further for some species) until breeding has ended/birds fledged.
- All works to cut, prune or fell trees, hedges etc. and other vegetation should be carried out in the dormant season, October to February. If vegetation/tree work must be carried out in the bird breeding season, a comprehensive assessment of the area must be made by a suitably qualified ecologist immediately prior to the works, to ensure active nests are not present or disturbed.
- All final developed landscaped site and internal boundary structures (fences/walls etc.) should be designed and constructed so that they do not seal to the ground continuously and stop the movement and dispersal of wildlife, notably hedgehogs. Boundaries should have 130mm by 130mm square holes at ground level at least every 10m running length or should not seal to the ground at all between posts and have a 130mm gap from fence base to ground.
- A post-construction ecological survey is recommended to assess any potential effects or issues the development has had or is having.

7.4 Field equipment used for the bat survey

Escort mini temperature data logger
 Silva compass
 Leica 8 x 42 close-focusing binoculars
 Cluson Clubman 1 Million candle-power lamps
 Access Cam Pro-Sight colour video endoscope (1m probe).
 Telescopic mirror
 Suunto clinometer
 3.8-metre extendable ladder
 8m extendable ladder
 Anabat SD2 bat detectors with GPS and HP iPaq PDAs (active monitoring)
 AnalookW v3.7w (bat data analysis software)
 Anapocket v2.5b (bat data analysis software)
 Wildlife Acoustics EM3+ bat detector
 Kaleidoscope v1.12 (sound analysis software)
 Batbox Duet bat detector (frequency division and heterodyne bat detector)
 SSF Bat2 bat detector (frequency division and heterodyne bat detector)
 Two-way radios

7.5 List of native trees/shrubs/climbers to plant

Native Trees, Shrubs and Climbers		
www.geraldlongley.co.uk		
No. of Species	Scientific name	Common name
1	<i>Cornus sanguinea</i>	Dogwood
2	<i>Corylus avellana</i>	Hazel
3	<i>Crataegus monogyna</i>	Hawthorn
4	<i>Euonymus europaeus</i>	Spindle
5	<i>Frangula alnus</i>	Alder Buckthorn
6	<i>Ilex aquifolium</i>	Holly
7	<i>Ligustrum vulgare</i>	Wild Privet
8	<i>Lonicera periclymenum</i>	Honeysuckle
9	<i>Malus sylvestris</i>	Crab Apple
10	<i>Prunus padus</i>	Bird Cherry
11	<i>Prunus spinosa</i>	Blackthorn
12	<i>Rhamnus cathartica</i>	Buckthorn
13	<i>Salix cinerea</i>	Grey Willow
14	<i>Sambucus nigra</i>	Elder
15	<i>Viburnum opulus</i>	Guelder-rose
16	<i>Fraxinus excelsior</i>	Ash
17	<i>Quercus robur</i>	Oak

8.0 SITE PICTURES









