



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Your Ref: :
Our Ref: 3027

Mr M Brown
Oakmere Homes
Natland
Kendal
Cumbria
LA9 7PS

Friday, 07 July 2017

Dear Mr Brown

RE: LAND AT CHATBURN ROAD CLITHEROE

Ecological surveys were undertaken at the above site in 2013 to support development of the site and outline planning consent was granted with conditions relating to ecology.

A change to the consented scheme is proposed and as such a new planning application is to be submitted.

Envirotech have re-visited the site in October 2015 and again in May 2017. The results of the report commissioned and submitted in 2013 have been reviewed.

The ecological conditions reported in 2013 remain current. The report from 2013 is appended.

In addition Envirotech have undertaken additional surveys in relation to Great Crested Newts, Otters, Watervole and invasive weed species as recommend by the 2013 survey report and planning conditions.

Proposals for the location of bird and bat boxes are also made. These are also appended.



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Client Oakmere Homes Ltd
Project Chatburn Road, Clitheroe
Scope Ecology
 Habitat and Protected Species Risk Assessment
Date April 2013
Status Client issue



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Client	Oakmere Homes		
Project	Chatburn Road, Clitheroe		
Document Title	Ecology - Habitat and Protected Species Risk Assessment		
Document Ref	2358 Chatburn Road~ Ecology Planning		
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0.0 Summary

This report, which was commissioned by Oakmere Homes Ltd, details the results of a Phase 1 Habitat Survey and Protected Species Risk Assessment of land off Chatburn Road, Clitheroe, Lancashire. The site is proposed for housing development.

0.1 Site Location and General Character

The site is located approximately 1.4km north east of the centre of Clitheroe and south of a cement works and a railway line. Chatburn Road forms the southern boundary of the site. The area is urban fringe with agricultural land east and south of the site as well as existing residential land to the west. The central grid reference of the site is GR: SD751430.

0.2 General Survey Methodology and Designated Sites

A Phase 1 habitat survey was undertaken of the site with the aim of characterising its biodiversity value. The survey aimed to record the presence/absence of key plant and animal species found in and around the site, and the communities and habitats they make up.

0.3 Designated Wildlife Sites

There are no statutory or non-statutory wildlife designations within the site. There are two geological SSSI's within a 2km search distance of the site – Coplow Quarry SSSI adjacent to the northern site boundary and Salthill and Bellmanpark Quarries SSSI approximately 250m to the south. No adverse impacts on these SSSI's are predicted as a consequence of development of the site. Salthill Quarry Local Nature Reserve is also located 250m south of the site. No direct impacts on the site are predicted and no significant indirect impacts, such as disturbance are anticipated.

0.4 Habitat Survey

Habitats Present within Site:

- Grassland (semi-improved)
- Grassland (unimproved)
- Marshy grassland
- Hedgerows and Trees
- Stream
- Drystone wall

Habitats Adjacent to Site:

- Fen
- Grassland (semi-improved)
- Urban (housing, gardens, roads)

Nature Conservation Status of the Habitats Present

Of the habitats present within the site, the stream habitat is a UK BAP priority habitat (rivers and streams) and whilst the hedgerow rows are species poor, the ground flora associated with them is diverse and would suggest that they are long-established. The site survey identified lowland fen vegetation adjacent to the eastern site boundary which is also a UK BAP priority habitat.

Recommendation:

It is recommended that the stream, fen and hedgerows habitats are protected from the direct and indirect impacts of development, including use:

- *of an appropriately sized and designed buffer zone around the habitats*
- *lighting design methods to avoid light spill into these habitats*
- *appropriate boundary treatment that aims to sustain the undeveloped character of these habitats*
- *an appropriately designed surface water management regime which prevents adverse changes in ground water and surface water quality and flows as a consequence of the proposed development.*

0.5 Nature Conservation Status of the Species Present

Protected Species

No species that are specially protected under the Conservation of Habitats and Species Regulations (Amendment) 2012 and/or the WCA (1981) have been recorded within the site, however, the potential for water vole and possibly otter within and adjacent to the site was identified, with a high risk of foraging bat and moderate potential for roosting bat and barn owl.

Recommendation:

Site specific surveys for water vole and otter are undertaken within the site and roost surveys for bats if any trees to be felled or tree surgery required as a consequence of the proposed development.

Breeding Birds

There is a high low risk of breeding birds being present within the site, in particular associated with trees, hedgerows and shrubs, and the stream and marshy grassland habitat.

Recommendation:

Breeding birds and their nests are afforded legal protection from harm and disturbance under the Wildlife and Countryside Act 1981 (as amended). Where feasible no vegetation clearance should be undertaken during the bird breeding season (typically 1st March – 31st August). If shrub or tree clearance during this time is required then pre-clearance checks should be undertaken by a suitably qualified and experienced ecologist to confirm that no breeding birds or their nests will be affected by the works.

BAP Priority Species

No UK BAP priority species were observed as present on the site during the site survey, however, there is a high risk of toads being present and potentially priority bird species such as dunnock, song thrush, yellowhammer and possibly wetland birds such as Northern lapwing associated with the marshy grassland.

Invasive Weeds

No plants listed on schedule 9 of Wildlife and Countryside Act 1981 were observed within the site.

1.0 Introduction

This report, which was commissioned by Oakmere Homes Ltd, details the results of a Phase 1 Habitat Survey and Protected Species Risk Assessment of land off Chatburn Road, Clitheroe, Lancashire. The site is proposed for housing development.

1.1 Site Location and General Character

The site is located approximately 1.4km north east of the centre of Clitheroe and south of a large cement works and a railway line. Chatburn Road forms the southern boundary of the site. The area is urban fringe with agricultural land east and south of the site as well as existing residential land to the west. The central grid reference of the site is GR: SD751430.

Figure 1.1 Survey Boundary



2.0 General Survey Methodology and Designated Sites

A Phase 1 habitat survey was undertaken of the site with the aim of characterising its biodiversity value. The survey aimed to record the presence/absence of key plant and animal species found in and around the site, and the communities and habitats they make up. Certain species and habitats are afforded protection through planning policies and legislation at a local, regional and national level. This report details:

- the presence of any designated sites of nature conservation value within a significant distance of the site
- the habitats and species found on the site and their ecological value
- the presence or potential for protected species or habitats
- legislation relating to these species and habitats.

2.1 Habitat Survey Method

A site walk over was conducted on the 18th April 2013 by Dr Rachel Penn (MCIEEM CEnv) during which habitats found were identified and mapped according to the Joint Nature Conservation Committee 1993 Phase 1 methodology.¹ Additional notes were made on species composition and structure where appropriate and are described in this report.

2.2 Protected Species Risk Assessment

During the site walk-over the potential for protected species and the need for further protected species surveys was assessed based on habitat suitability, existing datasets and site observation.

2.3 Desk Study

A search for designated wildlife sites and protected species records was carried out using the Natural England's 'Nature on the Map' website² and the NBN Gateway website³ which were accessed on the 15th April 2013.

2.4 Designated Sites

Certain areas of land are afforded statutory protection under the Wildlife and Countryside Act 1981 (as amended) and/or the National Parks and Access to the Countryside Act 1949 (as amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006). Land may also be given non-statutory designations, which may be afforded weight in the planning system e.g. Local Wildlife Sites. The Nature on the Map website identified the statutory designated wildlife sites listed in table 2.1 within a 2km search distance of the site boundaries and their location is shown on plan 2.1.

¹ Joint Nature Conservation Committee Handbook for Phase 1 Habitat Survey A technique for environmental audit 2003

² (<http://www.natureonthemap.naturalengland.org.uk>)

³ (<http://www.nbn.org.uk/>)

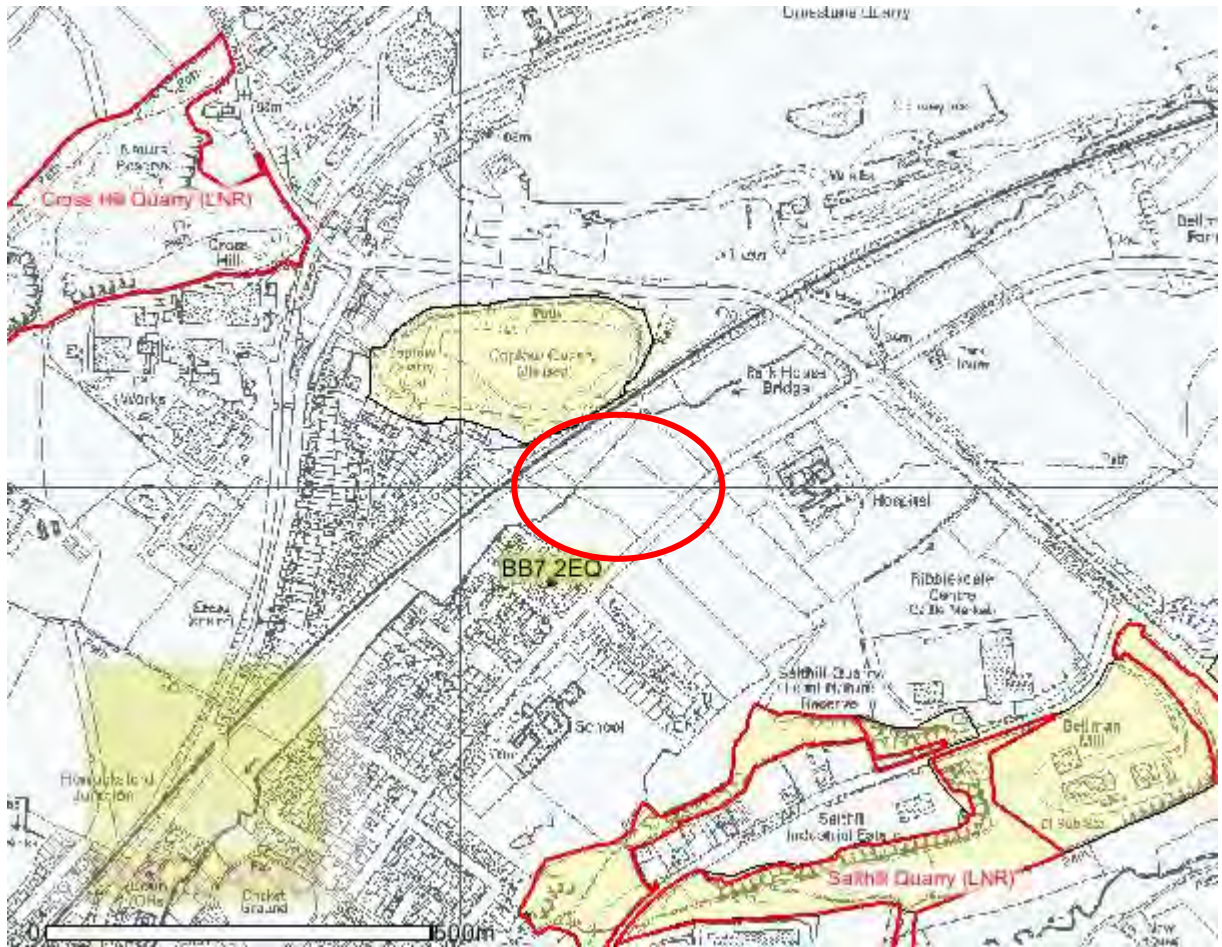
Table 2.1 Statutory and Non-statutory Designated Wildlife Sites within 2km Search Distance

Site Name	Summary of Interest	Distance from Site
Coplow Quarry SSSI (Geological)	Designated in 1951, Coplow Quarry is a disused limestone quarry situated just north of Clitheroe. The faces provide the best known exposures of a series of limestone layers, known as the Lower Coplow Knoll Series, originally formed in the Lower Carboniferous period of geological history, about 340 million years ago.	12m
Salthill and Bellmanpark Quarries SSSI (Geological)	This geological site straddles the A671 road immediately to the north-east of Clitheroe and is comprised of three adjacent disused quarries. The famous Carboniferous Limestone site is the type locality for the fossiliferous Salthill Bank Beds (Chadian) and the Salthill Cap Beds (Arundian) of the Clitheroe Limestone Complex. It provides the best sections through the Chadian and the Knoll Reefs of the Craven Basin, and some of the finest such sections in the English Lower Carboniferous	250m
Salthill Quarry LNR	The site is of botanical interest displaying a mixture of vegetation representing different stages of natural succession. The site includes areas of limestone grassland with Bee Orchid, Carlina Thistle, Milkwort and Autumn Gentian as well as Ash woodland. The site is also of ornithological and invertebrate interest.	250m
Cross Hill Quarry LNR	Abandoned as a working quarry in the early 1900's, Cross Hill contains species-rich calcareous grassland with Fairy Flax, the Lemon Flowered Mouse-ear Hawkweed, Lady's Bedstraw and wild herbs such as Wild Thyme and Marjoram. The flower-rich grasslands of the main quarry attract a number of butterflies including Common Blues, Orange Tips and Meadow Browns. Bird activity can be observed all year round with Willow Warbler, Chiffchaff, Grey Wagtails and Sand Martins very evident from April. The river provides feeding ground for birds such as Herons and Kingfishers.	420m
<p>Abbreviations SSSI: Site of Special Scientific Interest LNR: Local Nature Reserve LWS: Local Wildlife Site</p>		

Figure 2.1 Location of SSSI's within 2km Search Distance of Site



Figure 2.2 Location of Local Nature Reserves within 2km Search Distance of Site



2.6 Natural Area

The site is located within the Forest of Bowland Natural Area. The underlying rocks which are of Carboniferous age include hard Millstone Grits and limestone 'reef knolls' near Clitheroe. These have resulted in a diverse landscape rich in features of interest. The Forest of Bowland is dominated by a distinct, almost circular dome of heather moorland. The high Millstone Grit-capped summits of Bowland Fells and Pendle Hill, with their expansive areas of wild, open rolling heather moorland and blanket bog, are managed principally for grouse and sheep. Such areas provide a habitat for internationally important populations of red grouse, hen harrier, merlin, peregrine and golden plover.

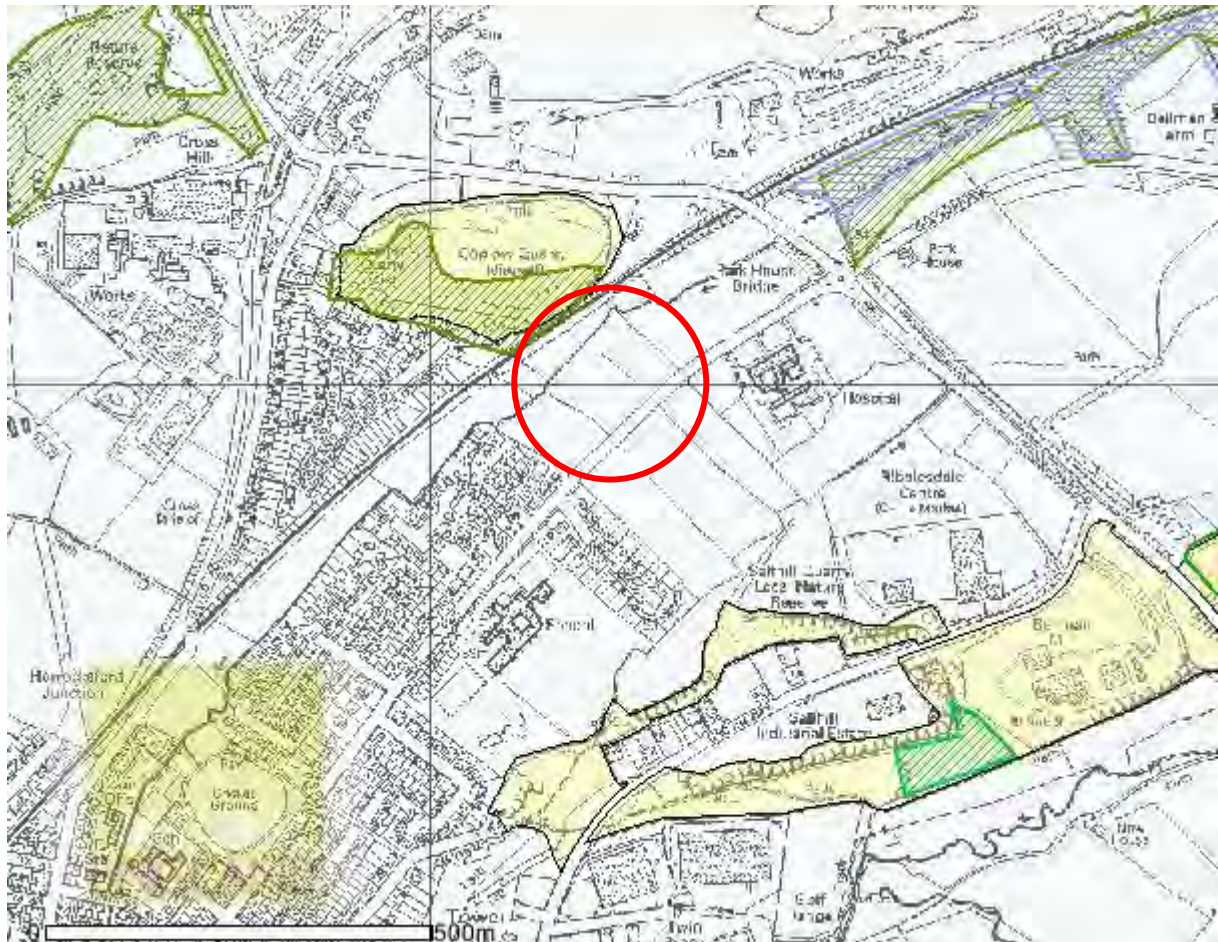
This dome of moorland is incised by steep, wooded river valleys and is surrounded by a soft, undulating landscape with a mosaic of rush-filled pastures, herb-rich hay meadows and broadleaved woodland, separated by lush agricultural grassland, parkland and water bodies, such as Stocks Reservoir. The area is traversed by many fast-flowing upland streams and rivers, including the Hindburn, Roeburn, Lune, Wyre, Brock, Calder, Ribble and Holder.

2.7 UK and Local Biodiversity Action Plan (BAP)

National and Local Government and Biodiversity Partnership habitat and species priorities are set out in the UK Biodiversity Action Plan and the Lancashire Biodiversity Action Plan.

Figure 2.4 shows the extent of UK Biodiversity Action Plan habitats within the vicinity of the site, as identified on the Nature on the Map website. There are no BAP priority habitats identified within the site but there are blocks of deciduous woodland north and east of the site (green hatch) with purple moor grass and rush pasture adjacent to the railway line (purple hatch).

Figure 2.4 Location of UK Biodiversity Action Plan Priority Habitats (BAP) within the vicinity of the Site



2.7 Limitations of Survey

One site visit was undertaken in mid-April at a time of year when many plant and animal species are becoming active and capable of identification. The nature of the habitats present was such that confidence could be given to the habitat classifications. There were no access constraints to the survey.

3.0 Habitat Survey

The habitats recorded within the survey area are described below and their location and extent is illustrated in Plan 1.

Habitats Present within Site:

- Grassland (semi-improved)
- Grassland (unimproved)
- Marshy grassland
- Hedgerows and Trees
- Stream
- Drystone wall

Habitats Adjacent to Site:

- Fen
- Grassland (semi-improved)
- Urban (housing, gardens, roads)

3.1 General Description

Habitats Present within Site

Grassland (semi-improved)



The majority of the site is semi-improved grassland dominated by common forbs. The species observed included perennial rye grass (*Lolium perenne*), common bent (*Agrostis stolonifera*), Yorkshire fog (*Dactylis glomerata*), daisy (*Bellis perennis*), dandelion (*Taraxicum officinale*), clover (*Trifolium repens*), buttercup (*Ranunculus repens*) and ribwort plantain (*Plantago lanceolata*).

Grassland (Unimproved)



Small patches of unimproved grassland were associated with the hedge lines with sheep's fescue (*Festuca ovina*), lesser celandine (*Ranunculus ficaria*), field woodrush (*Luzula campestris*) and sheep's sorrel (*Rumex acetosella*) present. Under some of the more mature trees plants were more typical of woodland ground flora such as lords and ladies (*Arum maculatum*).

Marshy Grassland



A band of marshy grassland was present along the stream which flows in a south westerly direction through the site. In addition to rush species (*Juncus effusus* and *J inflexus*) the grassland included abundant meadowsweet (*Filipendula ulmaria*), willowherb (*Epilobium sps*), opposite-leaved golden saxifrage (*Chrysosplenium oppositifolium*), reed sweet grass (*Phalaris arundinacea*) and valerian (*Valeriana sps*).

Hedgerows and Trees



The fields are divided by unmanaged hedgerows dominated by hawthorn (*Crataegus monogyna*) with occasional elder (*Sambucus nigra*) to a height of approximately 5m. Mature field trees are associated with most of the hedgerows with ash (*Fraxinus excelsior*) within the site and six mature sycamores (*Acer pseudoplatanus*) along the western site boundary.



A group of mature shrubs are present along the stream with an old hazel (*Corylus avellana*) coppice, mature alder (*Alnus glutinosa*), grey willow (*Salix cinerea*), ash and hawthorn.

Stream



A stream runs in a south westerly direction through the site with tributaries entering along the southern site boundary (virtually dry at the time of survey) and from the north. The stream channel was typically 1-3m wide and water depth 15cm deep at the time of survey with a relatively fast current. The water appeared to hold a high volume of suspended solids – possibly run off from industrial activity upstream of the site. Occasional aquatic and marginal plants were present including water mint (*Mentha aquatica*) and flote grass (*Glyceria fluitans*).

This stream joins with others to become Mearley Brook which flows through the centre of Clitheroe and ultimately into the River Ribble.

Stone Wall



The southern boundary of the site is defined by a dry-stone wall which supports ivy-leaved toadflax (*Cymbalaria muralis*) and maidenhair spleenwort (*Asplenium trichomanes*).

Habitats Adjacent to Site:

Fen



An extensive area of fen vegetation is present along the eastern site boundary to the north and south of the stream. On the northern boundary the fen is dominated by reed canary grass with abundant meadowsweet and other forbs such as opposite-leaved golden saxifrage, common figwort (*Scrophularia nodosa*) and on drier land raspberry (*Rubus idaeus*). To the south of the stream it is dominated by sedge species (*Carex riparia*?) The stream, which flows through the fen, is relatively unmodified in form with patches of scrub (hazel, hawthorn and blackthorn) with an understorey of dog's mercury (*Mercurialis perennis*) and wild garlic (*Allium ursinum*) indicating this is probably an area of remnant ancient woodland.



4.0 Protected and Invasive Species Risk Assessment

A number of plant and animal species are afforded special protection through legislation. This can make it illegal to undertake works that have the potential to harm or disturb these species, hence it is important that the status of these species on the site is fully understood. Where there is a risk of any of these species being present, it is advised that no development related works are undertaken without a sound understanding of the legal implications of such works on the client. A summary of relevant wildlife legislation is presented in Appendix 1 but it is the client's responsibility to take further advice on the implications of this legislation in the context of this site and their operations.

A desk-top study was undertaken to identify those plant and animal species that are afforded special statutory protection under the following legislation that have the potential to be present on site or within the wider area:

- Wildlife and Countryside Act 1981 (as amended)
- Conservation of Habitat and Species Regulations (Amendment) 2012
- Protection of Badger Act 1992.

Checking Surveys

Note that the results of the risk assessment and faunal surveys are applicable only at the time at which they are undertaken. The biodiversity status of a site changes with both the passage of time and site conditions. Therefore, should there be a change in site conditions or a significant lapse of time (say 1 year) prior to development starting then checking surveys for protected species may be required to confirm their status on site, and hence ensure compliance with relevant protected species legislation.

Invasive Species

Certain plant species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The Act states that *'if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence'*. Where any of species listed on Schedule 9 was observed on site during the site walk-over survey this is noted below.

Search Distance

The distance over which the presence of a species is significant in terms of the risk assessment varies from species to species depending upon a species typical home range, commuting and foraging distance etc. A distance of 500m is of particular significance for great crested newt, being the maximum distance this species is understood to range from its breeding ponds. This 500m radius from the site is shown on Figure 4.1 for reference purposes.

Figure 4.1 250 and 500m radii from Site



4.1 Species Survey Methodology adopted during Site Walk-over Surveys

Evidence of protected species was sought for during the habitat survey, with the following specific survey methods adopted

Bats: tree groups within the site were assessed for their potential to support roosting or hibernating bats using high powered binoculars from ground level. Observations regarding tree age, stature, girth, present of split limbs, scars and other wounds were noted. Where trees with a high risk of hosting hibernating or roosting bats are identified, this is highlighted within the report.

Badgers: evidence of badger activity within the site was sought through observation for badger tracks, snuffle holes and latrines, as well as the more obvious badger setts.

Great Crested Newt: The presence of ponds potentially suitable for breeding great crested newt either within the site or within 500m of the site where such land is accessible was recorded. However, great crested newts occupy terrestrial habitats outside the breeding season, with scrub, long grassland, stone and wood piles being favoured habitat. Where suitable terrestrial habitats are located within the site this is noted.

Red Squirrel: Evidence of red squirrels within the site is sought by visual observation for the species in woodland and scrub areas, evidence of dreys in the trees as well as feeding remains e.g. nuts, pine cones.

Reptiles: Evidence of reptiles was sought by direct observation in suitable habitats e.g. long grass, areas of bare soils and stones which can provide basking sites as well as by searching in suitable refugia (only during the summer months to avoid disturbance during hibernation). However, reptiles can be elusive and hence the risk assessment takes this factor into account.

Water Vole: Water vole typically are found within 5m of watercourses and ditches although they can move up to 15m from a watercourse in search of a mate, hence the absence of any suitable watercourse or ditch within the site is a good determinant of the risk of water vole being present. Where a watercourse or ditch is present then evidence of water vole in the form of grazing lawns, holes, foot prints and latrines as well as the sound of water vole entering the water is good evidence of water vole activity.

Otter: Otter are only likely to be resident within a site where there is a reasonably large water body that hosts fish. They may be present on a lake or river bank and move through suitable adjacent habitat some distance from the water. The presence of otter spraints, often on rocks, as well as otter foot prints as well as sightings are reliable indicators of otter activity.

Breeding Birds: The presence of breeding birds within a site is typically evidenced by breeding activity (courtship and mating) as well as by the presence of nest which may be located within trees, shrubs as well as on the ground in long grass, rushes etc.

4.2 Desk-top Study

Desktop data on the distribution of protected species was obtained from the NBN Gateway, which is the largest, widely accessible, biological dataset for the UK. It contains data from a wide range of historic and current data recording centres and atlas's. Reference was also made to the North East England Reptile Atlas (2008) and Amphibian Atlas 2008. Table 4.1 contains a summary of the information obtained from these datasets and a risk assessment for protected species based on the dataset records as well as the site survey and evaluation.

The absence of a record for a locality can be taken as confirmation that the species is not present; rather it may reflect lack of survey effort. It should also be noted that many of the data records are more than 10 years old. Hence whilst the results need to be interpreted in an informed manner, the dataset does provide valuable information regarding the general distribution of species within any given region.

Table 4.1 Status of Species afforded Special Legal Protection within 2km search distance of Site obtained from NBN Gateway.

Species	Conservation Status	Risk Assessment for Site	Summary Risk
Mammals			
Bat	EPS WCA (Sch 5)	Myotis records north west of site in woodland at West Bradford and west of Clitheroe on NBN dataset. Pipistrelle species recorded for 10km tetrad which covers the site and land to the north. High risk of foraging bats over the site and potential for small numbers of crevice dwelling bats to be associated with the mature trees within the site.	High risk of foraging bats, in particular over the stream and marshy grassland habitats and along the hedge lines. Moderate risk of roosting bats associated with mature trees.
European otter	EPS WCA (Sch 5)	Otter NBN record approximately 2km east of the south of Sawley and downstream, west of Clitheroe on the River Ribble. Fen vegetation east of site suitable laying up area.	Low risk of holts. Potential for otter to commute through the site to higher quality feeding ground. Otter survey advised.
Water Vole	WCA (Sch 5)	Water vole NBN record on the River Ribble approximately 1.5km downstream of the site, west of Clitheroe as well as upstream north of Sawley. Fen vegetation east of site high value potential habitat.	Potential for water vole to breed and feed within the site. Water vole survey advised.
Eurasian badger	Badger Act	No evidence of badger activity within the site, either in the form of track ways, dung heaps or setts etc. High potential for badgers to be present within vicinity of site.	No current evidence of badger within the site but likely to be present in near locality of site.
Red squirrel	EPS WCA (Sch 5)	No recent NBN records for red squirrel within 5km of site.	Negligible
Birds			
Barn owl	WCA (Sch 1)	Barn owl NBN record within 5km of site. Site of potential value for foraging barn owl with low potential for barn owl breeding in trees present on site	Low potential for breeding and moderate potential for foraging
Breeding birds	WCA	High risk of breeding birds present within the site, in particular in the trees, hedgerows and scrub associated with the stream and potentially ground nesting birds associated with the marshy grassland.	High
Herptiles			
Reptiles	WCA (Sch 5 partial)	No records for adder or grass snake within 10km of site with occasional records of slow worm and common lizard on upland in the Forest of Bowland over 5km from the site.	Negligible
Herptiles			
Great crested newt	EPS WCA (Sch 5)	No NBN records of great crested newts within 5km of the site with the closest records over 5km south of Whalley and on the eastern flanks of Pendle Hill. Stream habitat of low suitability for great crested	Low risk

		newts with no standing water within the site	
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EPS: European Protected Species (i.e. Species afforded legal protection under the Conservation of Habitats and Species Regulations 2010)

WCA (Sch 5): Species afforded protection under the Wildlife and Countryside Act 1981 (as amended). Relevant schedule number follows.

NBN Gateway Data: Reference is made to the NBN gateway data to provide general information of the distribution of species within the vicinity of the site. Where this indicates species are resident in the locality of the site, more detailed species surveys are recommended and/or sourcing data from the Local Biological Records Centre. The contribution of the data provider is kindly acknowledged as is the NBN Gateway (data.nbn.org.uk). Website accessed 15 April 2013.

Faunal Observations during Site Survey

Frogspawn was present within the stream which runs through the site.



5.0 Interpretation of Results and Recommendations

In this section, general guidance on the planning and legislative context for biodiversity is provided, along with a site specific interpretation of the value of the proposed development site, in the context of this guidance.

5.1 National and Regional Planning and Legislative Context

The UK Government's national approach to planning policy is set out in the National Planning Policy Framework (NPPF) (March 2012). The UK Government's Biodiversity 2020 Strategy, published by DEFRA in 2011, sets a context within which the NPPF should be viewed. Specifically Biodiversity 2020 aims to:

Para 8: Halt overall biodiversity loss, support healthy well functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.

This is consistent with the Government's Environment White Paper, The Natural Choice (June 2011) which aims to:

- *shifts emphasis from piecemeal conservation action towards a more integrated landscape-scale approach*
- *value the natural environment in decision making and thereby unlock growth in the green economy and reconnect people with nature.*

National Planning Policy Framework

The NPPF reflects the commitments set out above, stating that (Para 109) 'the planning system should contribute to and enhance the natural and local environment by:

- *Protecting and enhancing valued landscapes, geological conservation interest 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'.*

Natural Environment and Rural Communities Act 2006 (NERC)

Section 41(3) (a) and (b) of the NERC Act 2006 requires the Secretary of State to promote the taking of steps by others to further the conservation of habitats and species identified as priorities under Section 41 of the Act.

In addition to the above, Section 40(1) of the NERC Act 2006 introduced the 'biodiversity duty' which requires that;

'Every public authority [including Local Planning Authorities] must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

Relevant Protected Species Legislation

European and UK legislation affords protection to many plants and animals, with some species afforded a high level of protection from disturbance. A summary of relevant legislation is contained in Appendix 1.

UK and Local Biodiversity Action Plan (BAP) Habitats and Species

Certain habitats and species are identified as priorities for protection and nature conservation through their inclusion on the Biodiversity List, under the NERC Act 2006 (see above). The Biodiversity List is largely consistent with those habitats and species identified as priorities under the UK Biodiversity Action Plan (BAP) and Local BAP (the Tees Valley Local Action Plan).

5.2 Impact on Designated Sites

There are no statutory or non-statutory wildlife designations within the site. There are two geological SSSI's within a 2km search distance of the site – Coplow Quarry SSSI adjacent to the northern site boundary and Salthill and Bellmanpark Quarries SSSI approximately 250m to the south. No adverse impacts on these SSSI's are predicted as a consequence of development of the site. Salthill Quarry Local Nature Reserve is also located 250m south of the site. No direct impacts on the site are predicted and no significant indirect impacts, such as disturbance are anticipated.

5.3 Nature Conservation Status of the Habitats Present

Of the habitats present within the site, the stream habitat is a UK BAP priority habitat (rivers and streams) and whilst the hedgerows are species poor, the ground flora associated with them is relatively diverse and would suggest that they are long-established. The site survey also identified lowland fen vegetation adjacent to the eastern site boundary which is a UK BAP priority habitat.

Recommendation:

It is recommended that the stream, fen and hedgerows habitats are protected from the direct and indirect impacts of development, including use:

- *of an appropriately sized and designed buffer zone around the habitats*
- *lighting design methods to avoid light spill into these habitats*
- *appropriate boundary treatment that aims to sustain the undeveloped character of these habitats*
- *an appropriately designed surface water management regime which prevents adverse changes in ground water and surface water quality and flows as a consequence of the proposed development.*

5.4 Nature Conservation Status of the Species Present

Protected Species

No species that are specially protected under the Conservation of Habitats and Species Regulations (Amendment) 2012 and/or the WCA (1981) have been recorded within the site, however, the potential for water vole and possibly otter within and adjacent to the site was identified, with a high risk of foraging bat and moderate potential for roosting bat and barn owl.

Recommendation

Site specific surveys for water vole and otter are undertaken within the site and roost surveys for bats if any trees to be felled or tree surgery required as a consequence of the proposed development.

Breeding Birds

There is a high low risk of breeding birds being present within the site, in particular associated with trees, hedgerows and shrubs, and the stream and marshy grassland habitat.

Recommendation:

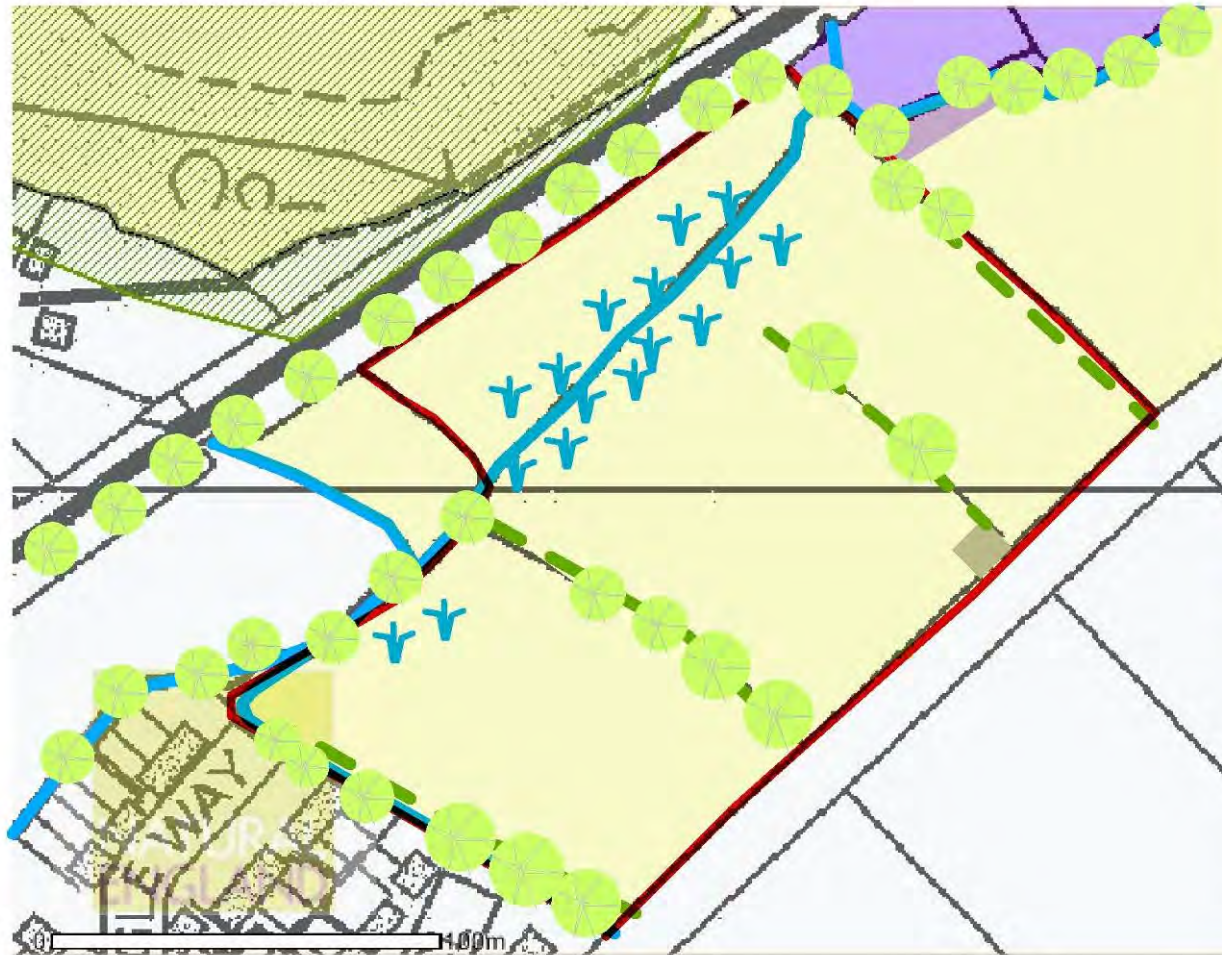
Breeding birds and their nests are afforded legal protection from harm and disturbance under the Wildlife and Countryside Act 1981 (as amended). Where feasible no vegetation clearance should be undertaken during the bird breeding season (typically 1st March – 31st August). If shrub or tree clearance during this time is required then pre-clearance checks should be undertaken by a suitably qualified and experienced ecologist to confirm that no breeding birds or their nests will be affected by the works.

BAP Priority Species

No UK BAP priority species were observed as present on the site during the site survey, however, there is a high risk of toads being present and potentially priority bird species such as dunnock, song thrush, yellowhammer and possibly wetland birds such as Northern lapwing associated with the marshy grassland.

Invasive Weeds

No plants listed on schedule 9 of Wildlife and Countryside Act 1981 were observed within the site.



-  Building/hard standing
-  Trees (size and location indicative)
-  Semi-improved grassland
-  Fen
-  Marshy grassland
-  Stream
-  Hedge (defunct)
-  Survey Boundary

Project: Chatburn Road,
Clitheroe
Client: Oakmere Homes Ltd
Title: Habitat Plan

Date: 22 April 13
Ref: 2358 Habitat

Appendix 1: Summary of Wildlife Legislation and Relevant Planning Legislation

Many species of British wildlife are legally protected or are afforded protection from the potentially harmful effects of some development through the planning system. The following section provides a brief overview of the protection afforded to species commonly encountered during development.

Birds

All wild birds are protected against killing or injury under the WCA 1981 (as amended). This protection extends to birds nests during the breeding season, which makes it an offence to:

- Kill, injure or take any wild bird (with certain exceptions for recognised game or pest species)
- Take, damage or destroy the nests of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

Birds that are listed on Schedule 1 of the Act receive additional protection against intentional or reckless disturbance during the breeding season. This makes it an offence to disturb these species at or near to their nesting site.

European Protected Species

All bats, great crested newts and otter are European Protected Species (EPS). The European legislation is implemented in England via The Conservation of Habitats and Species Regulations (amendment) 2012. A full list of EPS is provided in Schedule 2 of the Regulations.

In summary this legislation makes it an offence to:

- Intentionally/deliberately kill, disturb, injure or capture the species
- Intentionally or recklessly damage, destroy or obstruct access to any breeding site or resting place.
- Possess or control any live or dead specimen or anything derived from a European Protected Species.

If an activity is likely to result in any of the above offences, derogation from the legal protection can, under certain restricted circumstances, be issued in the form of a European Protected Species licence.

EPS licences will only be issued if the following if the application complies with the following tests:

- The consented operation must be for “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”;
- There must be “no satisfactory alternative”; and
- The action authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”

Protected Animals

Some British animals receive protection under the Wildlife and Countryside Act (WCA) 1981 (as amended) with species listed on Schedule 5 afforded special protection. For most species on Schedule 5, the Act makes it an offence to intentionally kill, injure, or take, possess, or trade in the species and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places.

Reptiles

Common lizard, slow worm, grass snake and adder are protected only from unlawful killing under the Wildlife and Countryside Act 1981 (as amended). The rarer reptiles, including smooth snake and sand lizard are fully protected and any works affecting them can only be carried out if a Natural England licence has been issued.

Badgers

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to:

- Kill, injure, take, possess or cruelly ill-treat a badger or to attempt to do so;
- Interfere with badger sett by damaging or destroying it;
- Obstruct access to or any entrance of a badger sett;
- Disturb a badger when it is occupying a sett

A badger sett is “any structure or place that displays signs indicating current use by a badger. Natural England, the Government’s statutory nature conservation body, classifies a sett as active if it has been occupied within the last 12 months.

Operations that might cause disturbance of an active sett entrance can be carried out under licence from Natural England.

Planning Legislation as it Relates to Protected Species

For activities requiring planning permission, the presence of protected species, such as those listed above, is a material consideration which must be fully considered by the Local Authority when granting planning permission. Local Authorities have been issued with ODPM Circular 06/2005 Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, which provides further guidance on the application of the law as it relates to planning and nature conservation in England.

UK and LBAP Species

Certain species are identified as priorities for protection and nature conservation through their inclusion on the Biodiversity List, under the Natural Environment and Rural Communities Act 2006. Public authorities have a duty to have regard to conserving biodiversity, under this Act, so far as is consistent with the proper exercise of its functions.

Hedgerow Regulations (1997)

The Hedgerow Regulations gives local planning authorities (LPA) the right to designate ‘important hedgerows’ provided they meet certain specified criteria. Removal of designated ‘important hedgerows’ is prohibited under the Act. The status of hedgerows within the site under these regulations has not been checked as part of this survey, but can be either done directly by the land owners with the LPA or by PAEL on request.

The Town and Country Planning (Tree Preservation) (England) Regulations 2012

Local planning authorities can place Tree Preservation Orders on trees and tree groups of high landscape and amenity value, which places restrictions upon tree works that an owner can legally undertake, including tree felling. The status of trees within the site under these regulations has not been checked as part of this survey, but can be either done directly by the land owners with the LPA or by PAEL on request.

The site was visited on the 12th October 2015 and 21st October 2015 by Matthew Thomas BSc GCIEEM and again on 7th May 2017 by Emma Wainwright BSc GCIEEM.

A search was made of the LERN dataset within 2km of the site.

WATER VOLE AND OTTER

Records:

There are no records of water vole or of otter within 2km of the site on the LERN dataset searched. There are however records of otter in the wider area and this species is known to be widely spread throughout the UK, often undetected.

Habitat:

A small stream with an average width of 350mm and depth of 100mm flows South west through the site. The banks of the stream are low (less than 400mm) and steep. The stream is lined with species such as pendulous sedge (*Carex pendula*), hard rush (*Juncus inflexus*), soft rush (*Juncus effuses*), meadowsweet (*Filipendula ulmaria*), Himalayan balsam (*Impatiens glandulifera*), silver weed (*Argentina anserine*), marsh valerian (*Valeriana dioica*)

Water quality appeared low both in both 2015 and 2017, with a high level of suspended sediments giving it an opaque, grey colour, presumably resulting from quarry or other earth moving activities upstream. This is reflected in the substrate which in many places is a fine grey mud. There are however areas of riffles which are clear of fine sediments and consist of small pebbles.

Survey:

The survey involved intensive searches whilst wading upstream where possible, and observing from the banks where not; looking for burrows and other signs of water vole including footprints, droppings, feeding piles and latrines. This was undertaken up to 5m from the water course. Searches for evidence of use by otter such as holts, prints and latrines were also undertaken.

Results:

The stream appeared to offer suitable habitat for water voles, having a good assemblage of grasses, rushes and sedges that would offer forage for the species as well as tussocks for cover. The banks were undercut and offer the necessary cover and structure for this species to dig burrows.

No signs of water vole were recorded within the stream or along its boundaries in the 2015 or 2017 surveys.

The stream would not offer suitable habitat for otters to habitually be present. It is highly unlikely, and there was no evidence of, fish being present sufficient for otters to forage; crayfish were also absent. The site is within 1km of the River Ribble (a prime habitat for otter) but does not connect with it for several kilometres.

No signs of otter were recorded within the stream or along its boundaries during 2015 or 2017 surveys.

Conclusions:

Superficially the site appears to offer suitable habitat for water voles; however three surveys over

several years failed to find any trace of the species on site. There are no records of the species locally. We consider this species to be absent from site and to have a negligible potential to be affected by development of the site.

Habitats at the site are not suitable to habitually support otters. There are very limited foraging opportunities for this species within the stream. Fish and crayfish are absent from stream within the bounds of the site. We consider this species will likely mostly be absent from site, with the exception of its unlikely, occasional transit through the site.

Recommendations:

There is no requirement for specific mitigation for either of these species due to their likely absence; however, in the unlikely event that signs of either species are observed, all work should stop and an ecologist should be contacted.

We consider that as with all sites the following generic working guidelines should be followed.

General working guidelines

- Contaminants should not be allowed to enter the stream during work. To this effect, spill kits should be provided on site;
- Re-fuelling of all plant and machinery should be undertaken away from open drains and water courses;
- Drip trays should be used under static machinery;
- All work must take place during daylight hours as otters are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised;
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure otters are not trapped during work;
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

GREAT CRESTED NEWTS

Records:

There are no records of great crested newts within 2km of the site on the LERN dataset searched, although great crested newts are known to be widespread in West Lancashire, they are known to occur at lower densities in East Lancashire.

Ponds:

There are no ponds within the proposed development site, there are ponds 280m to the South-east of the site, and 60m and 120m to the North of the site.



Figure 1 Ponds within proximity to the site (outlined red).

In accordance with Natural England guidelines, Ponds 1, 2 (a & b) and 3 were subject to closer investigation in order to gauge their potential for use by great crested newts.



Plate 1 Pond 1 is linear, with a shear rock face to the North and steep bank constructed from large rocks to the South.



Plate 2 Ponds 2a & 2b appear ephemeral in nature and may not hold water all year round. They may join together when water levels are high.



Plate 3 Pond 3 appears to be of good quality with macrophyte cover, trees and scrub growth around the edges.

Habitat:

Pond 1 is situated at the bottom of a deep excavation. Being linear, it effectively has two sides, one of which is near vertical and solid stone, whilst the other is steep and constructed from stone blocks roughly 1m³ each. There is no vegetation within Pond 1. There is high quality potential foraging, refuge and hibernation habitat for amphibians at the top of the excavation, with an abundance of dense scrub and young woodland however; it is highly doubtful amphibians could utilise this pond habitually due to the extreme access and egress conditions provided by the North and South banks.

Ponds 2a & 2b appear ephemeral but may join to become one pond at times of high rainfall. They are both situated at the base of deep excavations and have steep sides of either rock, spoil or of stone block construction similar to that of Pond 1. There is no aquatic vegetation in either Pond 2a or 2b. The habitat adjacent to the ponds is comprised of dense scrub and young deciduous woodland and would provide potential high quality foraging, refuge and hibernation habitat for amphibians.

Pond 3 is a purpose built SuDS (Sustainable urban Drainage System) less than 15 years old. There was a significant presence of emergent plants and wildfowl; however only a thin strip of potential foraging habitat is present on each side of the pond and this is of low quality. Although suitable for use by amphibians; the pond is isolated amongst industrial and commercial units, with roads and large areas of hardstanding on all four sides.

The site offers low-moderate foraging opportunities for amphibians. There are areas of rank grassland and tall ruderal cover which would be suitable for foraging by amphibians; however the

site is predominantly open and offers few refuge or hibernacula opportunities. It is considered amphibians would use the site if there were suitable ponds for amphibians to use in proximity to the site.

Pond reference	Pond 1	Pond 2a	Pond 2b	Pond 3
Location	0.5	0.5	0.5	0.5
Pond area	0.6	0.6	0.6	0.6
Pond drying	0.9	0.5	0.5	0.9
Water quality	1	0.67	0.67	0.67
Shade	1	1	1	1
Fowl	0.67	0.67	0.67	0.01
Fish	1	1	1	1
Ponds	1	1	1	1
Terrestrial habitat	1	1	1	0.01
Macrophytes	0.3	0.3	0.3	1
HSI	0.75	0.68	0.68	0.34
Pond Suitability	Good	Average	Average	Poor

Table 1 The Habitat Suitability Index from Oldham et al (2000) is used as a tool for initial suitability assessments of ponds¹.

Conclusions:

Ponds 1, 2a and 2b have high suitability for great crested newts according to the Habitat Suitability Index; however this tool overlooks the inaccessibility of these ponds and their use until recent years as an active quarry and landfill site.

It is considered that ponds 1, 2a and 2b have a negligible potential of supporting a breeding population of great crested newts.

Pond 3 has a very poor suitability for great crested newts due to its isolation and very limited terrestrial habitat. This pond was subject to full presence/absence surveys in 2008, carried out by ERAP². These surveys did not record the presence of great crested newts.

It is considered that pond 3 has negligible potential of supporting a breeding population of great crested newts.

Ponds were recorded to have changed very little between 2015 and 2017 surveys although water levels were reduced in 2017 surveys.

Given the poor suitability of the four ponds, landscape fragmentation and poor terrestrial habitat on the site; Envirotech consider that the risk of use of the site by great crested newts and other amphibian species, is negligible.

¹ Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.

² Robinson. B., (2012). *Clitheroe Hospital, Chatburn Road, Clitheroe, Updated Ecological Survey and Assessment*. Available: https://www.ribblevalley.gov.uk/planx_downloads/08_0878_ecological_survey.pdf. Last accessed 03/11/2015.

Recommendations:

With the following recommendations and the fact that habitat quality will be greatly improved post-development, the risk to amphibians can be further reduced.

Recommendations are as follows:

1. Store any materials used for construction on compacted ground/hard standing only;
2. Raise stored materials off the ground, e.g on pallets;
3. Backfill any excavation before nightfall or provide ramps to allow newts to exit easily;
4. Any piles of loose material (e.g. soil) which are to be left on site should be compacted i.e. tracked over by machinery, immediately, to reduce the risk of amphibians using the material as a shelter;
5. Construction traffic should not enter or leave the site during the hours of darkness;
6. The creation of garden and shrub borders in place of hard standing/yards and bare ground will provide an increase in structural diversity and will be likely to benefit any local great crested newts populations using this area;
7. Should great crested newts be found during work within the construction area all work should cease and the ecological consultant for this project should be consulted prior to work recommencing.

Summary:

The site and ponds surveyed and wider surrounding fields provide poor terrestrial and aquatic habitat for use by great crested newts and no great crested newts have been recorded in any of the ponds locally.

The risk to great crested newts at the site is therefore considered to be very low. Should great crested newts occur within the ponds locally, the risk of any offence being committed is very low.

Taking the above mitigation into account and the habitat improvement work which will result as a consequence of the development, we consider the risk to great crested newts is negligible. Work on the site under the above methods statement would not be licensable.

INVASIVE WEED SPECIES

Japanese knotweed was not identified within the site during either of these surveys. Although this species has previously been recorded in land South-east of Chatburn Road it does not occur on site. Details of its eradication are therefore not considered necessary.

Himalayan balsam occurs within the site along the watercourse in the North as well as a small amount around the current site access in the South. The approximate location of Himalayan balsam at the site is indicated on Figure 2. The extent of the growth on site is also shown on Figure 2 and 3.



Figure 2 Approximate location of Himalayan Balsam shown yellow, site outlines red

Himalayan Balsam Treatment

Treatment should be undertaken before development commences. Himalayan Balsam can be easily hand pulled as the species has very shallow roots growing to a depth of 10-15 cm. This method is particularly useful for smaller infestations. A gentle tug is usually enough to remove the entire root system.

Multiple plants can be pulled simultaneously. Gloves should be worn to avoid injury, including stings from nettles which are often found growing beside Himalayan Balsam.

Hand pulling should ideally commence in May/June when plants can be easily found/identified but have not yet set seed. However, it can be carried out sooner (although identification can be tricky) and there will typically be more plants, as numbers reduce with time due to competition.

Pulled plants should not be placed on soil or in damp areas as they can readily re-root.

The plants can be allowed to dry out or be composted. Once dried, the remains can be left on site as they reduce to small amounts, if fully desiccated and seedless, disposed of as inert waste, or burnt.



Plate 4 Early *Himalayan Balsam* growth in the South of the site 2017



Plate 5 Further progressed *Himalayan balsam* growth in the South of the site in 2015

Where immediate eradication is required, for example in a location that is shortly to be developed outside the period the plant is growing or where successive years of pulling is not possible, the most appropriate solution is excavation to a depth of 50cm.

Following excavation, if possible, contaminated soil should be retained onsite, e.g. stockpiled elsewhere on the site and regrowth treated as above. This stockpile area should be cordoned off from the rest of the site with appropriate signage put in place. Once control is achieved, the soil will be suitable for use as backfill or in landscaping

Arising can also be buried. As per Defra (2013) guidance, soil containing Himalayan Balsam seeds should be buried at a depth of at least one metre. Burial at this depth is sufficient to prevent regrowth. Prior to the burial of invasive plant waste the appropriate authority (e.g. the Environment Agency in England) must be contacted and approval granted. Himalayan Balsam seeds do not contain sufficient energy reserves to allow them to germinate and grow up through hard substrates; as such, burial immediately beneath hardstanding (e.g. poured concrete) is appropriate.

Where offsite disposal is unavoidable, you should: 'Try to minimise the amount of waste you generate that contains invasive plants, or their seeds and rhizomes' (Defra, 2013). The Environment Agency will accept the removal of soil as controlled waste from Himalayan Balsam infested areas less than the stated limits (6 metres from visible plants and down to 500 mm) if the methodology can be adequately justified. Any contaminated waste that is taken offsite must be taken by a licensed waste carrier and must go to a suitably authorised landfill site (as per the Environmental Protection Act)

On site control

In order to prevent the spread of the species off site, plant and machinery should be cleaned when leaving site such that contaminated soil/ seeds are not carried off site. Tracked machinery in particular should be washed of soil before leaving site.

Importation of materials

Any soil brought onto site should be from a known source which is free of non-native invasive species.

NESTING BIRDS

Envirotech has set out a comprehensive compensation and enhancement plan providing opportunities for those species with a dependence on buildings for nesting or roosting.

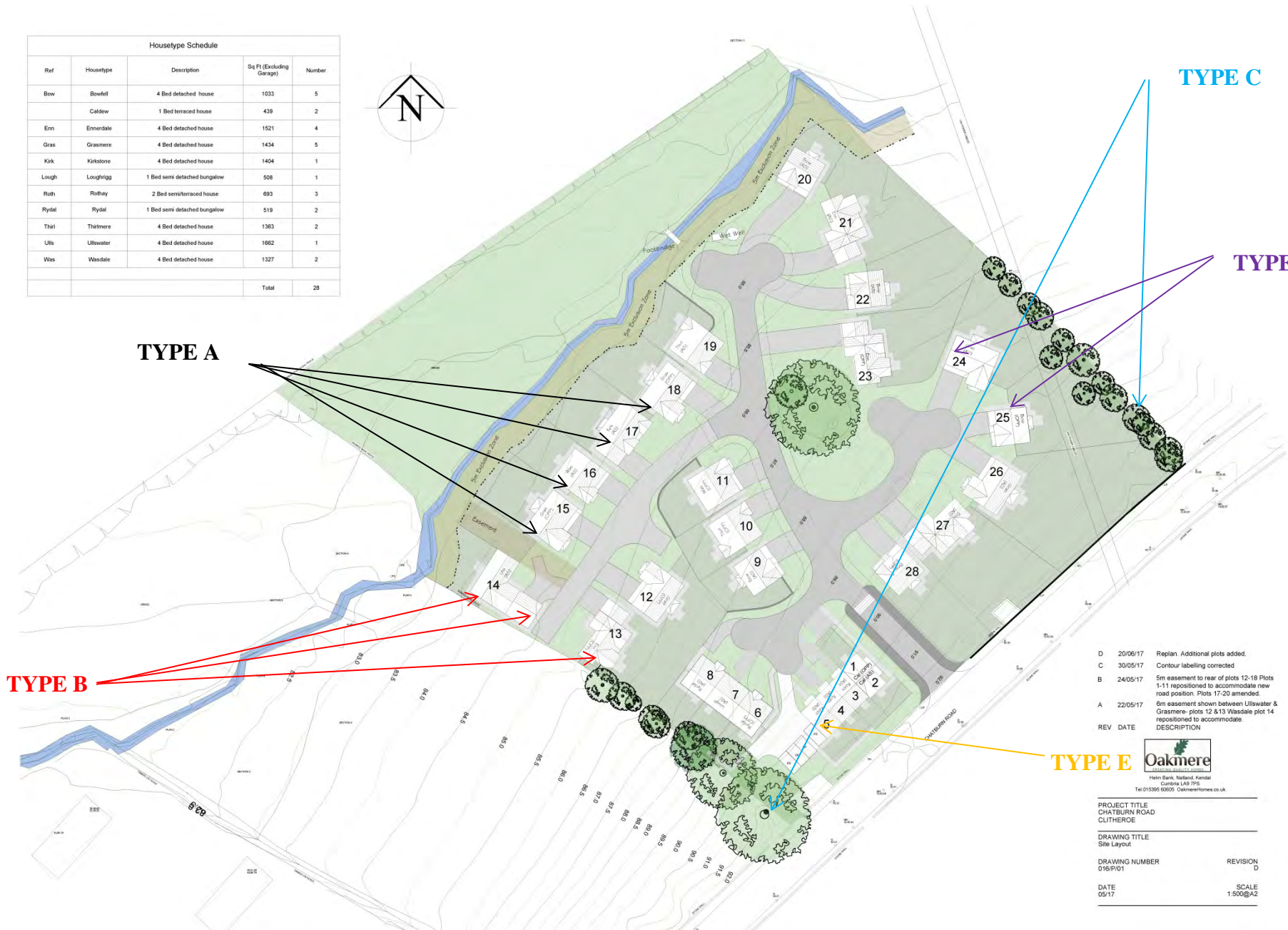
The compensation and enhancement measures include provisions for Lancashire Biodiversity Action Plan species, such as swifts, swallows, house martins, house sparrows and bats, all of which are largely dependant on buildings for nesting and roosting.

Where possible products that can be incorporated into the walls of houses during construction and then be painted or rendered in order to remain as discreet as possible were chosen over those that are retro mounted, externally. The chosen elevations are those that provide both the most ideal circumstances and conditions for a species, but also those that will cause least inconvenience to the human residents of the house, buy way of droppings, noise etc.

Boxes may be micro-sited on the building to avoid windows.

Also included are an additional 2 boxes to be mounted in trees . These boxes are not species specific and may offer any of a number of rarer bird species an opportunity to nest. Please see Figure 3 and Table 2 for full details.

House type Schedule				
Ref	House type	Description	Sq Ft (Excluding Garage)	Number
Bow	Bowfell	4 Bed detached house	1033	5
	Caldew	1 Bed terraced house	439	2
Enn	Ennerdale	4 Bed detached house	1521	4
Gras	Grasmere	4 Bed detached house	1434	5
Kirk	Kirkstone	4 Bed detached house	1404	1
Lough	Loughrigg	1 Bed semi detached bungalow	508	1
Roth	Rothay	2 Bed semi/terraced house	693	3
Rydal	Rydal	1 Bed semi detached bungalow	519	2
Thrl	Thirlmere	4 Bed detached house	1363	2
Ulls	Ullswater	4 Bed detached house	1662	1
Was	Wasdale	4 Bed detached house	1327	2
		Total		28






REV	DATE	DESCRIPTION
D	20/06/17	Replan. Additional plots added.
C	30/05/17	Contour labelling corrected
B	24/05/17	5m easement to rear of plots 12-18 Plots 1-11 repositioned to accommodate new road position. Plots 17-20 amended.
A	22/05/17	5m easement shown between Ullswater & Grasmere- plots 12 & 13 Wasdale plot 14 repositioned to accommodate.

TYPE E

PROJECT TITLE CHATBURN ROAD CLITHEROE	
DRAWING TITLE Site Layout	
DRAWING NUMBER 016/P/01	REVISION D
DATE 05/17	SCALE 1:500@A2

Figure 3 Proposed site layout and compensation plan.

Compensation Type	Plot & Elevation	Target Species	Model	Picture
TYPE A	Apex of gable walls 60mm under eaves	Swallow (<i>Hirundo rustica</i>)	Ceramic Swallow nest bowl Can be painted or rendered to match walls - <u>must</u> be positioned under eaves	
TYPE B	Apex of gable walls	Any cavity dwelling bats	1FR Schweglar Bat Tube To be incorporated into wall during construction, can be painted or rendered to match walls	
TYPE C	Mature trees on North-east boundary	Numerous small passerines	2GR Schweglar Nest Box Comes with choice of two entrance holes, one of each to be used	



<p>TYPE D</p>	<p>Apex of gable walls</p>	<p>Swift (<i>Apus apus</i>)</p>	<p>No. 17A Schweglar Swift Box Can be painted with air-permeable paint to match wall finish</p>	
<p>TYPE E</p>	<p>High on gable wall</p>	<p>House sparrow (<i>Passer domesticus</i>)</p>	<p>1SP Schweglar Sparrow Terrace To be incorporated into wall during construction, can be painted or rendered to match</p>	

Table 2 Details of the compensation and enhancement of nesting and roosting habitats to be included into the housing on site, with reference to Figure 1.

All of the measures outlined are available at relatively low cost online (www.nhbs.com). These features will provide a positive impact on the local populations of birds and bats post development.