



**envirotech**

Ecological Consultants  
Environmental and Rural Chartered Surveyors

Your Ref: :  
Our Ref: 3027

Mr M Brown  
Oakmere Homes  
Natland  
Kendal  
Cumbria  
LA9 7PS

Wednesday, 31 January 2018

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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The site was visited on the 12<sup>th</sup> October 2015 and 21<sup>st</sup> October 2015 by Matthew Thomas BSc GCIEEM and again on 7<sup>th</sup> 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 1m<sup>3</sup> 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 ponds<sup>1</sup>.

### 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 ERAP<sup>2</sup>. 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.

<sup>1</sup> 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.

<sup>2</sup> 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](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
Enn	Ennerdale	4 Bed detached house	1521	2
Gras	Graemere	4 Bed detached house	1434	3
Griz	Grizedale	2 Bed semi detached bungalow	712	4
Kirk	Kirkstone	4 Bed detached house	1404	2
Low	Lowther	3 Bed semi detached house	788	2
Roth	Rothray	2 Bed semi/terraced house	693	3
Thirl	Thirlmere	4 Bed detached house	1363	4
Was	Wasdale	4 Bed detached house	1327	5
Total				30

Gross Site Area 1.857 Ha






REV	DATE	DESCRIPTION
G	31/01/18	Plot 17 house type amended
F	25/01/18	Full site replan following inhouse discussion and LPA requirements.
E	15/08/17	Turning head adjacent to plot 12 extended and repositioned
D	20/05/17	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	6m easement shown between Ullswater & Graemere- 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 G
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	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](http://www.nhbs.com)). These features will provide a positive impact on the local populations of birds and bats post development.