Whitcher Wildlife Ltd.
Wildlife Consultants.

BRIERLEY QUARRY.

PROTECTED FAUNA SURVEY.

Ref No:- **110315**

Date:- **15th March 2011.**

Cliff Edge, Cliff Road, Darfield, Barnsley, S73 9HR.
Tel. 01226 753271. Fax. 01226 270993.
info@whitcher-wildlife.co.uk www.whitcher-wildlife.co.uk
Company No. 4401613.

TABLE OF CONTENTS.

	Page Number
1. INTRODUCTION.	**3**
2. SURVEY METHODOLOGY.	**4**
3. SURVEY RESULTS.	**6**
4. EVALUATION OF FINDINGS.	**11**
5. RECOMMENDATIONS.	**12**
Appendix I. BAT INFORMATION.	**13**
Appendix II. NESTING BIRD INFORMATION.	**14**
Appendix III. REPTILES. LIZARD INFORMATION.	**15**
Appendix IV. REPTILES - SNAKE INFORMATION.	**17.**
Appendix V. EXAMPLE BAT BRICK.	**19.**

1. INTRODUCTION.

1.1. Oligra Town Planning Services has submitted a planning application to build six dwellings within a disused quarry in the Barnsley Borough of Brierley.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a protected fauna survey of the site to establish whether there are any issues that may affect the proposed works.

1.3. This survey was carried out on 15th March 2011 and this report outlines the findings of that survey and makes appropriate recommendations.

1.4. Appendices I to IV of this report provide additional information on specific species and are designed to assist the reader to understand the contents of this report.

****

2. SURVEY METHODOLOGY.

2.1. Prior to visiting the site the survey area was cross referenced to maps and aerial photographs to give a general idea of the habitats within the area and to identify potential access and walking routes.

2.2. The survey area was thoroughly searched for evidence of badger (Meles meles) activity by looking for the following signs:-

* Badger setts.
* Badger latrines or dung pits.
* Badger snuffle holes and evidence of foraging.
* Badger paths.
* Badger prints in areas of soft mud.
* Badger hairs caught on fencing.

2.5. All mature trees and derelict buildings were checked for potential bat roosting sites by looking for the following signs:-

* Holes, cracks or crevices.
* Bat Droppings.

2.6. The land adjacent to the survey area was assessed for bat roosting and foraging potential including connective routes and flight lines.

2.7. The area within 500m of the survey site was cross referenced to maps to highlight all ponds close to the site. Where possible the ponds were accessed using agreed access or public rights of way to assess the potential for great crested newts (*Triturus cristatus*) to be present.

2.9. The survey area was thoroughly searched for the presence of reptiles or suitable reptile habitats.

****

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1.

3.2. Site Description.

3.2.1. The site is contained within a disused quarry in the Barnsley Borough of Brierley, and sits off Common Road.

3.2.2. The quarry walls surround the site on the Northern, Eastern and Western sides and rise to approximately 9m above the site base. There are cracks within these walls, potentially making them suitable to be used as bat hibernation roosts.

3.2.3. A number of semi mature trees are scattered throughout the site. Ash, sycamore and several species of fruit tree are common. These are all in generally good condition as there are very few cracks, holes and fissures present that would provide potential bat roosting opportunities.

3.2.4. A number of bird’s nests were found within these trees, suggesting that this is an active site during nesting bird season.

3.2.4. A small number of semi-mature trees are growing from the tops of the quarry walls. These are amongst the largest trees on the site but there is very little potential for roosting bats.

3.2.5. A large proportion of the site base is devoid of vegetation. Due to this lack of re-growth, it is likely that vegetation clearance took place within the last six months.

3.3. Survey Results.

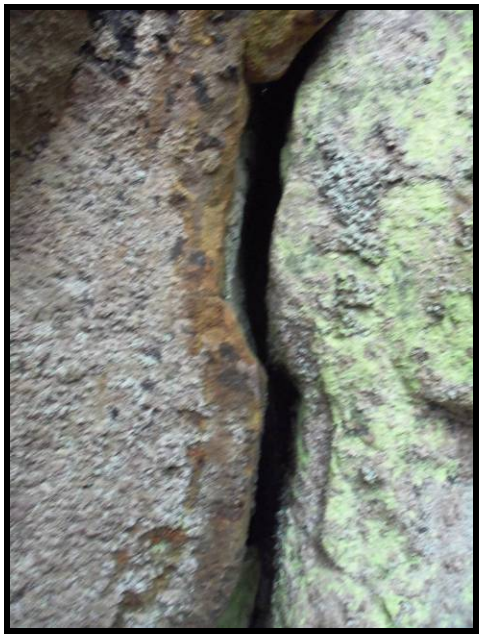
3.3.1. Photograph 1-3.

These photographs show a stone built depository which is located to the west of the site. There is mortar missing from the brick work and the depository itself extends back for approximately 2m. There is potential that bats will use this as a hibernation site.

3.3.2. Photograph 4.

This photograph shows the stone quarry wall which marks the site's northern boundary. This stone is in a generally solid condition. There are few crevices and cracks and there is little obvious potential that bats will be roosting or hibernating within this part of the site.

3.3.3. Photograph 5-7.



These photographs show some of the crevices within the stone which marks the site’s western boundary. There are a large number of these and they extend deep into the stone. Almost all are suitable for hibernating bats. These were inspected with a bright torch and were found to lead deep into the rock face, too far to be effectively inspected with an endoscope. No bats or bat field signs were identified but there is a high potential that bats will hibernate within this part of the site.

3.3.4. Photographs 8-9.

These photographs show some of the trees which are growing from the top of the quarry walls. These are semi mature and hang over the quarry edge. The roots from these trees are part exposed.

3.3.5. Photograph 10.

This photograph shows a good sized bird's nest in a tree within the centre of the site; obvious signs such as this show that this site is being used during the bird nesting season.

3.3.6. Photograph 11.

This photograph shows an area of vegetation clearance within the centre of the site. This lack of vegetation reduces the suitability of this site for ground nesting birds. There are however still areas of ground vegetation which could be utilised.

3.3.7. No badger field signs were identified during this survey.

3.3.8. No ponds or watercourses were discovered during this survey, making this site unsuitable for newt, water vole, crayfish and otter.

3.3.9. No reptiles were discovered during the survey and the general lack of refugia means that there is little potential that they will be present.

****

4. EVALUATION OF FINDINGS.

4.1. There is potential for bats to roost within the quarry site. The numerous cracks within the quarry walls and the spaces between exposed tree roots provide suitable conditions for a range of bat species particularly for winter hibernation deep in the rock face. It was very difficult to survey for hibernating bats as the voids in the face have small entrances that make it impossible to gain access and the depth of the voids make it impossible to inspect with an endoscope. However, the quarry faces will not be directly affected by the development and the houses will be set some distance away from the quarry faces.

4.2. There are very few opportunities for bats to roost in trees growing within the quarry base. This is because the trunks and braches of these appear to be solid.

4.3. A number of bird's nests were discovered in trees within the quarry base, showing that this is an active bird nesting site during the nesting season.

4.4. The absence of badger field signs means that their presence is very unlikely. Badger signs are conspicuous and overlooking them is unlikely.

4.5. The absence of suitable aquatic habitat means that water vole, crayfish and otter will not be present at the site.

4.6. No ponds were identified within 500m of the site on the Ordnance Survey Map or during the site survey. There is therefore no great crested newt issue to address.

4.7. This site has recently been cleared of fly-tipping, much of which could be used as reptile refugia. Some manmade materials are still present at the site, but these are small in number. It is most unlikely that reptiles will be using this site.

****

5. RECOMMENDATIONS.

5.1. No bats or bat field signs were identified during the site survey although a high potential for hibernating bats was identified in the quarry faces, particularly at the western end of the site.

5.2. No further bat surveys are recommended as the presence of hibernating bats can be extremely difficult to establish. It is therefore recommended that bats are assumed to present and therefore that works to the quarry faces are maintained at a minimum and are undertaken during the summer months.

5.3. It is recommended that the soil be removed from the entrance of the stone built depository and that this is permanently blocked with a stone wall with a100mm by 50mm opening to create additional bat hibernacula opportunities.

5.4. It is recommended that all on site lighting be designed to avoid illumination of the quarry faces.

5.5. It is recommended that the trees around the top of the quarry face be retained to provide bat foraging opportunities.

5.6. With these measures in place, no further bat surveys are recommended and no Natural England licence will be required.

5.7. Any vegetation clearance should take place outside of the bird nesting season. This period extends from March to September. Any vegetation clearance within the nesting season should be preceded by a nesting bird survey by a suitably experienced person and any active nests found must be left undisturbed until the young have fledged.

5.8. It is recommended that all personnel working on the worksite are briefed as to the potential presence of reptiles and how to identify them. In the unlikely event that any reptiles are identified during the work, they should either be allowed to move off the site of their own accord, or they should be carefully moved to a place of refuge outside the worksite. If reptiles are discovered in large numbers, a wildlife professional should be contacted.

5.9. In order to enhance the biodiversity of the site in line with the requirements of PPS9, it is recommended that two bat bricks be installed in the two end gables of the houses on site to provide additional summer roosting opportunities for bats.

5.10. It is also recommended that to further enhance the biodiversity of the site, six bird boxes be erected on the trees around the top edge of the quarry.

****

Michael Sims.

Natural England Barn Owl Survey Licence Number: - 20104393
Natural England Bat Survey Licence Number: - 20103930

15.03.2011.

Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Over 15 species of bat have been recorded in Britain. These fall into two families, the horseshoe bats and the 'ordinary bats'. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man made structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, The Habitats Regulations 1994 and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix II. NESTING BIRD INFORMATION.

It is necessary to understand a little about the legal protection offered to nesting birds in order to evaluate the findings of this report.

Part 1.-(1) Of the Wildlife and Countryside Act 1981states that:-

If any person intentionally:-

(a) kills, injures or takes any wild bird;
(b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
(c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.

Part 1.-(5) of the Act states that:-

If any person intentionally:-

(a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or
(b) disturbs dependant young of such a bird,

he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September.

It is also worth remembering that some birds nest in trees and scrub but others are ground nesting.

The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Appendix III. REPTILES - LIZARD INFORMATION.

The common or viviparous lizard (*Lacerta vivipara*) is one of three species of lizard that occur in the UK. They have a dry scaly skin and are variable in colour ranging from brown or yellow-brown to almost green with varying patterns of spots or stripes. The typical length of an adult is 150mm, including the tail.

Common lizards hibernate over the winter, emerging from February onwards depending upon the weather. They begin to mate in April and May and the young are born in late July or August. The lizard gives birth to live young, hence the term viviparous, meaning live bearing.

The lizards draw their body warmth from the sun and consequently spend long periods basking in the sun. They are commonly seen on road and railway embankments and on walls where they sit for long periods soaking up the heat of the sun before going to find food.

They occupy a wide range of habitats including woodland, marshes, heathland, moors, sand dunes, hedgerows and bogs.

Common lizards hunt insects, spiders, snails and earthworms. They stun their prey by shaking it and then swallow it whole.

At night, and when startled, they will shelter beneath logs or stones or under other refuges that may be available.

Common lizards are protected under schedule 5 of the Wildlife and Countryside Act 1981. They received greater protection following reviews of the schedules published in 1988 and 1991. This means they are protected against intentional or recklessly killing and injuring and against sale or transporting for sale.

Common lizards should not be confused with the somewhat larger sand lizard (*Lacerta agilis*). These are typically 190mm long and stockier than the common lizard. Their marking are distinctly different being considerably more colourful. Sand lizards are confined to moorland and coastal sand dunes where they lay their eggs in the warm sand. The range of the sand lizard in the UK is therefore very limited. Sand lizards are a European protected species.

The third species of lizard is the slow worm *(Anguis fragilis)*, which is frequently mis-identified as a snake. The firm body of the slow worm is distinctly cylindrical in shape and the tiny smooth scales result in a very smooth, shiny appearance. Colouration is typically a uniform grey to brown although there is a wide variation from straw coloured to almost black and some animals have very fine stripes or a zig-zag along the centre of the back. The typical length of an adult is 400mm.

Slow worms can be found in a wide variety of habitats throughout Britain and is the most likely reptile to be found in urban and suburban environments.

Slow worms hibernate over the winter, emerging from March onwards depending upon the weather. They begin to mate in April and May and six to twelve young are born in August or September.

Their favourite food is slugs but they will also eat insects and spiders.

Slow worms are hard to find. They will bask in the sun but they quickly and quietly move into cover when disturbed and do not generally attract attention as they retreat from a basking spot.

Slow worms are also protected under schedule 5 of the Wildlife and Countryside Act 1981. They received greater protection following reviews of the schedules published in 1988 and 1991. This means they are protected against intentional or recklessly killing and injuring and against sale or transporting for sale.

Appendix IV. REPTILES - GRASS SNAKE AND ADDER INFORMATION.

The grass snake (*Natrix natrix*) and the adder (*Vipera berus*) are the two most common snakes to be found in the UK. Adders are found all over Britain while the grass snake becomes rarer towards the north and are rarely found in Scotland.

The grass snake is usually around 120cm long, live in a variety of rough habitats and lay their eggs in warm rotting vegetation. The background colour is dark green and the body is marked with vertical black bars and spots that run along its sides. There is generally a dark collar marking.

The adder is the only native species that is venomous but this is rarely harmful to humans. Adult adders are generally up to 66cm long. Background colouration is a light shade of grey or brown with a black zigzag marking along the length of the back. As with all reptiles, colouration varies and becomes duller as sloughing (skin shedding) approaches.

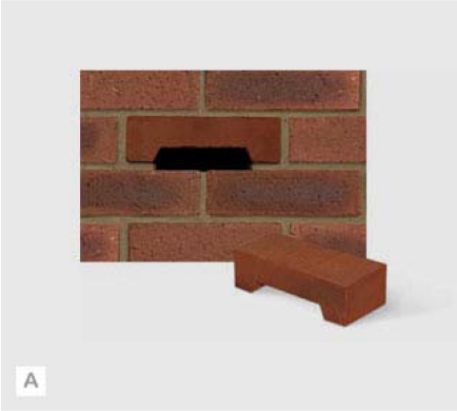
Both snakes hibernate, spending the winter in burrows or under logs protected from the cold and predators. Maintaining the right body temperature is vital to reptiles' survival. In the morning, they find a warm basking site to heat up their bodies, then later they may move back into the shade because they do not sweat and have to be careful not to overheat. During hot summers, adders will try to move to damper, cooler sites.

Both snakes are protected under schedule 5 of the Wildlife and Countryside Act 1981. They received greater protection following reviews of the schedules published in 1988 and 1991. This means they are protected against intentional or recklessly killing and injuring and against sale or transporting for sale.

Appendix V. EXAMPLE BAT BRICK.

Eco-habitats for bats

In the UK there are 17 species of bats, all of which are protected by law. Our range of bat boxes helps to encourage safe habitats for these remarkable mammals, allowing them to live in harmony with people.



Free Access Bat Box A

Discrete single bat brick
Easy to install
Allows bats to create a natural home habitat within the cavity of the building

Enclosed Bat Box B

Designed specifically for the pipistrelle bat
Available in all brick types
Attractive motif (option C only)
Discrete home for bats
Various sizes
Several roosting zones are created inside the box
Bats are contained within the bat box itself
Maintenance free with entrance at the base
Ideal for new build & conservation work