



East Lancashire Hospitals Trust

Clitheroe Community Hospital

Protected Species Surveys

December 16

Quay West, Trafford Wharf Road, Trafford Park, Salford Quays, Manchester, M17 1HH

Tel: 0161 874 8737

Email: ecology@wyg.com






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Prepared by:		Laura Holmes ACIEEM Senior Ecologist
Checked By:		Georgina Whittaker GradCIEEM Ecologist
Verified By:		Rachel Kerr MCIEEM CEnv Principal Ecologist

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Updated by:		Georgina Whittaker GradCIEEM Ecologist
Checked By:		Rachel Kerr MCIEEM CEnv Principal Ecologist

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Executive Summary

Contents	Summary
Site Location and Proposals	The site is located on Chatburn Road, Clitheroe, Lancashire, BB7 (Ordnance Survey Grid Reference: SD 75458 43012) and is approximately 2 hectares in size. Habitats present on-site include amenity grassland, poor semi-improved grassland, scrub, orchard, tall ruderal, bare ground, hedgerows and a spoil mound. Walls and fencing boundary features are present. Clitheroe Hospital is located within the centre of the site and includes a complex of eight buildings, some of which are internally connected, surrounded by areas of hard standing. The site has been selected for residential development. It is anticipated that all built structures will be demolished. Trees and hedgerows will be retained where possible.
Previous Reports / Surveys	<ul style="list-style-type: none"> • Ecological Survey and Assessment (including surveys for protected species) (ERAP, 2008) • Updated Ecological Survey and Assessment (ERAP, 2012) • Extended Phase 1 habitat survey report (WYG, December 2016)
This Survey(s)	<ul style="list-style-type: none"> • Great crested newt survey (May-June 2016) • Reptile survey (May- June 2016) • Bat emergence and re-entry survey (May- June 2016)
Results	<ul style="list-style-type: none"> • Great crested newt are not present within the site • Reptiles are not present within the site • Bats were confirmed to use two buildings within the site for roosting: <ul style="list-style-type: none"> ○ Confirmed common pipistrelle <i>Pipistrellus pipistrellus</i> maternity/ satellite roost used by up to 16 bats in Building 7 (boiler house). ○ Confirmed additional day roost used by up to 2 common pipistrelle and one brown long-eared bat in Building 3 (second hospital wing). ○ Suspected brown long-eared <i>Plecotus auritus</i> summer day roost used by a single bat in Building 7. <p>It is likely bats are moving between these buildings and other roosts in the surrounding area as weather conditions change.</p> <p>A historical (2008) bat roost also exists at Building 1.</p>
Recommendations	<p><i>Bats</i></p> <ul style="list-style-type: none"> • A European Protected Species mitigation licence will be required to allow demolition of Buildings 1, 3 and 7 to proceed lawfully. • Appropriate working methods will be detailed within the application such as seasonal restrictions to works and provision of alternative roosting features such as a double mount bat house and bat boxes / bat tubes / bat bricks (to be agreed with Natural England) will need to be provided. <p><i>Nesting Birds</i></p> <ul style="list-style-type: none"> • To ensure legal compliance it is recommended demolition works, tree felling and vegetation clearance are avoided during the bird nesting season (March to September inclusive) or, if necessary, preceded by a search for nesting birds by a suitably experienced and qualified ecologist. • Loss of nesting opportunities should be mitigated for by provision of suitable bird boxes.



	<p><i>Toad and Hedgehog</i></p> <p>Reasonable avoidance measures to protect common toad and West European hedgehog: Avoid disturbance of leaf litter and debris piles during the hibernation period (November to February). Check areas of low growing thorny shrubs (used to hold nesting material) for hedgehogs before clearance. When clearing these areas any animals found should be carefully moved to prevent any potential harm that may result from works. If this is not possible then the Ecological Clerk of Works should admit to a wildlife hospital or centre for relocation.</p>
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1.0 Introduction

1.1 Background

WYG were commissioned by East Lancashire Hospitals Trust in November 2015 to undertake an extended Phase 1 habitat survey and a daytime building inspection at the former Clitheroe Community Hospital (hereafter referred to as the 'site').

The extended Phase 1 habitat survey found habitats suitable for great crested newt *Triturus cristatus* and common reptiles to be present on site in addition to bat roost potential in six of the seven buildings within the site. Therefore further survey for protected species was recommended at the site and subsequently commissioned in April 2016.

This report was prepared by WYG Senior Ecologist and Class 2 licensed bat surveyor (licence reference number 2015-12292-CLS-CLS) Laura Holmes ACIEEM¹.

1.2 Site Location

The site is located on Chatburn Road, Clitheroe, Lancashire, BB7 (Ordnance Survey Grid Reference: SD 75458 43012) and is approximately 2 hectares in size.

Habitats present on-site include amenity grassland, poor semi-improved grassland, scrub, orchard, tall ruderal, bare ground, hedgerows and a spoil mound. Walls and fencing boundary features are present. Clitheroe Hospital is located within the centre of the site and includes a complex of seven buildings, some of which are internally connected, surrounded by areas of hard standing.

The site is bounded by Chatburn Road (A671) to the north and a hard standing car park to the east. To the immediate south of the site is a corrugated metal warehouse and land to the west is predominantly agricultural. In the wider area surrounding the site land to the south and west is predominantly residential and commercial development. The remaining land is dominated by agricultural fields.

An active railway track passes west-east approximately 150m north of the site, beyond this is Bankfield Quarry and the River Ribble. The town of Clitheroe is located to the south-west of the site and in the wider area the majority of the surrounding habitats are agricultural fields with scattered settlements.

¹ Associate Member of the Chartered Institute of Ecology and Environmental Management



A drawing showing the existing site layout and habitats is provided in Appendix A, Figure 1. A figure showing the layout of buildings on-site is provided in Appendix A, Figure 2.

1.3 Development Proposals

The site has been selected for residential development. The proposed site layout plan is provided in Appendix A (drawing no. A094939-01), which shows how the site can accommodate up to 50 dwellings with associated access and parking.

It is anticipated that all existing built structures will be demolished. Trees and hedgerows will be retained where possible.

1.4 Survey & Reporting Objectives

The purpose of the protected species surveys is to identify any potential ecological constraints to the proposed development at the earliest opportunity, to minimise future delays to the proposed works and provide advice as to how future development of the site will avoid breaching any UK or European nature conservation legislation.

The ecological investigations included the following objectives:

Great Crested Newt Survey

- Determine the presence or likely absence of great crested newts (GCN) in water bodies within 500m of the site;
- Determine the population size class of GCN if confirmed to be present;
- Provide an appraisal of the implications created by the potential presence of GCN at the site;
- Establish if any potential effects on GCN caused by the development are permissible;
- Ensure that the required level of survey work is conducted to apply for a licence within 12 months, should one be necessary; and
- Provide preliminary advice on mitigation strategies against any adverse affects on local GCN population(s) which may arise as a result of the proposed development.



Reptile Survey

- Determine the presence or likely absence of reptiles at the site;
- Provide an appraisal of the implications created by the presence of reptiles at the site;
- Establish if any potential effects on reptiles resulting from the development are permissible; and
- Provide preliminary advice on mitigation strategies against any adverse affects on local reptile population(s) which may arise as a result of the proposed development.

Bat emergence and re-entry surveys

- Determine the presence / likely absence of roosting bats;
- Identify any significant commuting routes or foraging habitats associated with the site;
- Ensure that the required level of survey work is conducted to apply for a European Protected Species mitigation licence within 12 months, should one be necessary; and
- Make recommendations for avoidance, mitigation and enhancements, as appropriate.



2.0 Planning Policy & Legislation

2.1 National Planning Policy

The National Planning Policy Framework (NPPF) was adopted in March 2012. Section 11 of the NPPF, Conserving and Enhancing the Natural Environment replaces Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation. However, government Circular 06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System, which relates to PPS9 remains valid and is referenced within Paragraph 113 of the NPPF.

ODPM Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. The NPPF also states that '*planning policies should promote the protection of priority species populations linked to national and local targets*'.

Furthermore, central and local government policy now points towards ecological enhancement on development sites. The NPPF considers enhancement in the statement '*The planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes....and minimising impacts on biodiversity and providing net gains in biodiversity*'.

2.2 Local Planning Policy

Clitheroe Community Hospital lies within the jurisdiction of Ribble Valley Borough Council and is therefore covered by the Ribble Valley Borough Council Core Strategy. Adopted in December 2014, this incorporates planning policy covering wildlife within Key Statements EN4 *Biodiversity and Geodiversity* and DME3 *Site and Species Protection and Conservation*.

Key Statement EN4: Biodiversity and Geodiversity states:

The Council will seek wherever possible to conserve and enhance the area's biodiversity and geodiversity and to avoid the fragmentation and isolation of natural habitats and help develop green corridors. Where appropriate, cross-Local Authority boundary working will continue to take place to achieve this.

Negative impacts on biodiversity through development proposals should be avoided. Development proposals that affect a site of recognised environmental or ecological importance will only be permitted where a developer can demonstrate that the negative effects of a proposed development can be mitigated, or as a last resort, compensated for. It will be the developer's responsibility to identify and agree an acceptable scheme, accompanied by appropriate survey information, before an application is determined. There should, as a principle be a net enhancement of biodiversity.



These sites are as follows:

- *Sites of Special Scientific Interest (SSSIs)*
- *Local Nature Reserves (LNRs)*
- *Local Biological Heritage sites (CBHs)*
- *Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)*
- *Local Geodiversity Heritage Sites*
- *Ancient Woodlands*
- *Lancashire Biodiversity Action Plan priority habitats and species*
- *European Directive on Protected Species and Habitats - Annexe 1 Habitats and Annexe II Species*
- *Habitats and Species of Principal Importance in England*

With respect to sites designated through European legislation the Authority will be bound by the provisions of the relevant Habitats Directives and Regulations.

For those sites that are not statutorily designated and compensation could be managed through a mechanism such as biodiversity off-setting via conservation credits.

Key Statement DME3: Site and Species Protection and Conservation

Development proposals that are likely to adversely affect the following will not be granted planning permission. Exceptions will only be made where it can be clearly demonstrated that the benefits of a development at a site outweigh both the local and the wider impacts. Planning conditions or agreements will be used to secure protection or, in the case of any exceptional development as defined above, to mitigate any harm, unless arrangements can be made through planning conditions or agreements to secure their protection:

1. *Wildlife species protected by law*
2. *SSSIs*
3. *Priority habitats or species identified in the Lancashire Biodiversity Action Plan*
4. *Local nature reserves*
5. *County biological heritage sites*
6. *Special areas of conservation (SACs)*
7. *Special protected areas (SPIs)*
8. *Any acknowledged nature conservation value of sites or species*



Developers are encouraged to consider incorporating measures to enhance biodiversity where appropriate that will complement priority habitats and species identified in the Lancashire BAP.

2.3 Legislation

2.3.1 Great crested newt

The GCN is afforded protection under the Conservation of Habitats & Species Regulations 2010 (as amended) which applies to all of its life stages.

The GCN is also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or take a great crested newt;
- Deliberately, intentionally or recklessly take or destroy great crested newt eggs;
- Posses or control any live or dead specimen or anything derived from a great crested newt;
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and
- Deliberately, intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.

This species is also protected by the Protection of Animals Act 1911, which prohibits any acts of cruelty or mistreatment.

2.3.2 Reptiles

All six species of reptiles native to the UK are protected under the Wildlife and Countryside Act (1981, as amended) and benefit from various levels of protection. The adder (*Vipera berus*), grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) receive partial or full protection under Section 9 of the Wildlife and Countryside Act (1981, as amended). This legislation makes it an offence to:

- Intentionally or recklessly kill or injure these animals; and
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell individual reptiles.



There is additional legislative protection for rare species of native reptile such as the smooth snake (*Coronella austriaca*) and (*Lacerta agilis*) sand lizard. The detailed legislation for these species is not provided here as their geographic range does not extend to Clitheroe.

2.3.3 Bats

All British bat species are fully protected through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and in Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended) as European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat, or disturb a bat while it is occupying a structure or place which it uses for that purpose.

2.4 Biodiversity Action Plans (BAP)/ Habitats and Species of Principal Importance in England

2.4.1 UK Post-2010 Biodiversity Framework

The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework' covers the period from 2011 to 2020.

Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats and Species of Principal Importance in England (listed under Section 41 (S41) of the NERC Act 2006). All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP.

Clitheroe is covered by the Lancashire BAP.



3.0 Methodology

3.1 Desk Study

3.1.1 Previous Reports

Previous ecological survey reports completed for the site/adjacent land have been reviewed and used to inform field survey effort, these include:

- Ecological Survey and Assessment (including surveys for protected species) by ERAP (2008)
- Updated Ecological Survey and Assessment by ERAP (2012)
- Extended Phase 1 habitat survey (WYG, December 2016)

3.1.2 Data Search

Information was gathered from Lancashire Environment Record Network (LERN), the biological records centre covering Clitheroe, as part of the extended Phase 1 habitat survey (WYG, December 2016). This information regarded the presence of nature conservation designations and protected and notable species within 2 km of the proposed development site. Records of bats within 5km were searched.

3.2 Field Surveys

3.2.1 Great crested newt

An assessment of the site and water bodies and watercourses within 500m of the site boundaries for potential to support GCN was carried out as part of the extended Phase 1 habitat survey (WYG, December 2016).

No ponds were found within the site however habitats were found on site with potential to provide GCN with terrestrial foraging opportunities, dispersal habitat and hibernating habitat.

Six ponds were shown on OS Maps within 500m of the site boundary. Three of the ponds are potentially connected to the site by likely suitable dispersal habitat. These ponds are located 85m east, 277 m south and 500 m west of the site hereafter referred to as Ponds 1-3 respectively. Pond 3 was later found to have dried up. The three remaining ponds are all separated from the site by roads considered to form barriers to GCN dispersal. Two of the ponds (Ponds 4 and 5) are located 392 m and 426 m north of the site and are separated from the site by Chatburn Road and the final pond (Pond 6) is located 425 m east of the site and is separated from the site by Pimlico Link Road. Ponds



4, 5 and 6 were therefore not considered further than the desk study stage of this assessment. A plan showing the location of all ponds within 500m of the site boundary is provided in Appendix B.

A Habitat Suitability Index (HSI) assessment was undertaken at Ponds 1 and 2 to calculate their suitability to support GCN during the extended Phase 1 habitat survey (WYG, December 2016). Both were assessed as having 'average' habitat suitability to support GCN and were therefore subject to further GCN aquatic survey. The HSI assessment is summarised in Table 1.

Table 1 Pond HSI assessment summary for great crested newts

Pond reference	HSI Score	Water body suitability	Distance from the site (m)	Direction from the site
1	0.643	Average	85 m	East
2	0.674	Average	277 m	South

GCN Aquatic Surveys

In accordance with English Nature's *Great Crested Newt Mitigation Guidelines* (2001) four presence / likely absence surveys were undertaken to determine the presence or likely absence of great crested newts within Ponds 1 and 2. Any pond found to support GCN during the four presence / likely absence surveys would be subject to two additional surveys to establish the size of any GCN population present.

The survey visits were undertaken between May and June 2016, with two out of the four presence / likely absence surveys undertaken during the peak period for GCN activity which is between mid-April to mid-May, while the remainder were completed within the appropriate months for newt surveying. All surveys were lead by licensed GCN surveyor Georgina Whittaker GCIEEM² (WYG Ecologist, licence reference number 2015-18565-CLS-CLS).

Three survey methods were performed on each survey in accordance with guidelines given in the *Great Crested Newt Mitigation Guidelines* (English Nature, 2001). Both ponds were subject to bottle trapping, egg searching and torchlight survey. These methods are described below.

² Graduate member of the Chartered Institute of Ecology and Environmental Management



Bottle Trapping

Plastic bottle traps were set around the margins of the waterbodies approximately every 2-3m where access allowed, shortly before dusk. The traps were left in-situ overnight and checked & removed the following morning before 10am. All surveys were undertaken when the predicted air temperature exceeded 5°C, when great crested newts are most active. Bottle traps were set on the evening before sunset and checked the following morning.

Torchlight Survey

This technique involves a visual search for individual newts inhabiting each water body. High-powered torches were used to search the waterbodies after nightfall. Pond perimeters were walked taking care to count all the individuals seen. To maximise the reliability of this technique, all torch surveys were conducted on evenings where the air temperature exceeded 5°C, when newts are generally considered being most active. Torchlight surveys were conducted after sunset.

Egg Search

GCN eggs were searched for among submerged, floating and other aquatic vegetation. When laying their eggs, this species folds leaves of aquatic plants around the egg, although dead leaves and a variety of artificial materials are also known to be used. This behaviour is exploited to demonstrate that GCN are breeding in a particular waterbody. However, egg numbers cannot be used to estimate population size due to predation and high mortality rates. Therefore, to limit disturbance, this method is ceased as soon as any eggs have been positively identified in a waterbody. Egg searches were undertaken the morning following deployment of bottle traps.

3.2.2 Reptiles

In accordance with the guidance outlined in the Herpetofauna Workers' Manual (Joint Nature Conservation Committee - JNCC, 2003), Advice Sheet 10 – Reptile Survey (Froglife, 1999) and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (Hill *et al.*, 2005) surveys were undertaken to establish the presence or absence of reptile species. This involved seven visits between the months of May and June 2016 in suitable weather conditions. The surveys were undertaken by Georgina Whittaker GCIEEM (WYG Consultant Ecologist) and Mike Brown (WYG Field Ecologist and NMARG³ Chairman), both of whom are experienced herpetofauna surveyors.

³ North Merseyside Amphibian and Reptile Group



Advice Sheet 10 – Reptile Survey (Froglife, 1999) states that for general survey purposes refugia should be laid out in suitable habitat at densities of minimum 5-10 refugia per ha. The site is approximately 2ha in size, in total, 35 clearly numbered artificial refugia (sections of bituminised roofing felt) were placed across the site in areas considered to have habitat suitable for reptiles therefore exceeding the minimum recommended number. See Appendix C for the locations of artificial refugia deployed. The refuges were then left undisturbed on the site for two weeks prior to survey; to allow for reptiles on the site to find and utilize.

As a guideline it is recommended that the optimal time to survey reptiles is between 8:30am to 11:00am and between 16:00pm and 18:30pm and when air temperature is between 9°C and 18°C. Surveys were carried out within these times when suitable but amended as weather conditions dictated. Strong rain and wind are deemed unsuitable (Froglife, 1999).

During each survey visit, each refuge was first checked for basking individuals from a distance before being slowly approached and searched for sheltering reptiles. Terrestrial habitat between artificial refugia was also searched for reptile species on each visit. The location of each reptile sighting was then recorded to allow for analysis of population distributions across the site.

As reptile activity is heavily dependent on weather conditions the following conditions were recorded during each survey: air temperature, wind levels, rain levels, and the cloud cover.

3.2.3 Bat surveys

Full details of the building inspections to assess the bat potential of the buildings within the site are given in the extended Phase 1 habitat survey report (WYG, December 2016). The building inspections were undertaken using survey methods based on those outlined in the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines 2nd edition* (Hundt, 2012). In early 2016 these guidelines were superseded by the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines 3rd edition* (Collins, 2016).

The techniques used for bat emergence and re-entry surveys at the various suitable access points identified on the six buildings during the external inspections followed the standard methodologies outlined in *Bat Surveys: Good Practice Guidelines* (Collins, 2016). For built structures the survey methodology is comparable between the two versions of the BCT Guidance.

During the 2015 WYG building inspections, six of the seven buildings were assessed as having bat roost potential or supporting a bat roost as follows:

- One building (Building 7) was found to support a **confirmed bat roost**;



- Two buildings (Buildings 1 and 3) were found to have **high bat roost potential**;
- Three buildings (Buildings 4, 5 and 6) had **moderate bat roost potential**; and.
- Building 2 had **negligible bat roost potential** (and thus was not subject to further survey).

In 2008 ERAP confirmed bat roosts at Buildings 1, 3 and 7.

The BCT Guidance (Collins, 2016) recommend minimum survey effort at a building rated as having moderate bat roost potential is two surveys to comprise one dusk (emergence) and one pre-dawn (re-entry) surveys while those with high bat roost potential or a confirmed bat roost should have an additional dusk or pre-dawn. Therefore all six buildings were subject to one dawn and one dusk survey but only buildings 1, 3 and 7 were covered by a second dusk survey.

The dusk emergence surveys were conducted from approximately quarter of an hour before sunset until up to two hours after sunset; the dawn survey was conducted from approximately ninety minutes before sunrise until fifteen minutes after sunrise. Surveyors were stationed at vantage positions around buildings selected to enable observation of all previously identified suitable roost features and remained in place monitoring general bat activity for the duration of each survey. Surveyor locations are given in Appendix D.

During the survey, the following details were noted:

- Frequency at which bats were detected;
- Location within the survey area / proximity to the building(s);
- Species of bats present;
- Number of bats present;
- Number of bats recorded entering/exiting the building(s);
- Whether bats appeared to be foraging or commuting; and,
- Weather and temperature.

The bat detectors used by surveyors were Pettersson D230 & D100s, an EMTouch and BatBox Duet heterodyne / frequency division detectors. The bat detectors allowed surveyors to passively scan different ultrasonic frequencies, whilst allowing specific species of bat to be actively detected. Bat echolocation calls were also recorded using MP3s for later sound analysis using specialised software (BatScan).



3.3 Limitations

All of the surveys were undertaken during the optimum season and under favorable weather conditions and therefore environmental constraints are not considered to be a major limitation to the effectiveness of the surveys.

A small number of the mats went missing during the survey period however these were recovered or replaced as soon as possible. Given that a larger number of mats were deployed than recommended in the guidelines, the loss of a small number of mats for part of the duration of the survey is not thought to have constrained the results.

The details of this report (concerning GCN and reptiles) will remain valid for a period of up to two years from the date of the first survey (i.e. 3rd May 2018). Beyond this period, if works have not yet been undertaken, it is recommended that a review of the ecological conditions is undertaken and surveys be updated as necessary.

The 2016 bat survey data only has a validity of one year from the date of the first bat survey (i.e. 12th May 2017) and therefore any licence applications undertaken after this time will require updated surveys prior to a licence submission.



4.0 Baseline Conditions

4.1 Designated Sites

The records identified by LERN and MAGIC are summarised below.

Five statutory sites were found within 2km of the site boundaries however none of these are designated for their GCN, reptile or bat populations.

Fifteen non-statutory sites were found, one of which (Cross Hill Quarry) has records of Daubenton's *Myotis daubentonii* and common pipistrelle *Pipistrellus pipistrellus*.

4.2 Great Crested Newt

The data search returned no records of GCN within 2 km of the site boundary. In 2008 ERAP Limited undertook a GCN survey presence/absence survey at Pond 1 (ERAP, 2008). No GCN were recorded however the survey was constrained because some areas of the banks were inaccessible due to their steepness thereby restricting the deployment of bottle traps. Netting was stated as the only other survey technique applied to the pond. GCN presence/absence data is not available for Pond 2 nor Pond 3.

WYG undertook further survey for GCN at each of the two ponds subject to HSI assessments (Ponds 1 and 2). **No GCN were recorded at either pond** and therefore only the four initial presence / likely absence surveys were undertaken. The dates of these surveys and the weather conditions are detailed in Table 2 below.

Table 2 GCN Survey dates

Survey number	Survey dates (evening / morning)		Peak period for activity	Weather
	PM	AM		
1	03.05.16	04.05.16	Y	10°C, dry and warm
2	09.05.16	10.05.16	Y	20°C, dry, sunny, gentle-moderate NE breeze
3	19.05.16	20.05.16	N	15°C, dry
4	31.05.16	01.06.16	N	10°C, dry, overcast. Mostly dry with some light rain.

During the survey a number of other amphibians were also recorded on site, Table 3 shows the numbers of other amphibians which were recorded during surveying i.e. smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus*, common toad *Bufo bufo* and common frog *Rana*



temporaria. This information is considered relevant as it provides further indication of the quality of the habitats for amphibians.

Table 3. Other amphibian record results

Pond	Smooth newt			Palmate newt			Common frog			Common toad		
	M	F	Egg	M	F	Egg	Adult	Tadpole	Spawn	Adult	Tadpole	Spawn
Survey 1: 03/05/2016 - 04/05/2016												
1	0	0	No	3	1	No	0	No	No	1	No	No
2	0	0	No	0	3	No	0	No	No	0	Yes	No
Survey 2: 09/05/2016 - 10/05/2016												
1	0	0	No	11	5	No	2	Yes	No	0	Yes	No
2	0	0	No	31	7	Yes	0	Yes	No	0	No	No
Survey 3: 19/05/2016 – 20/05/2016												
1	0	0	No	0	1	No	1	No	No	0	Yes	No
2	1	0	No	31	13	No	0	Yes	No	0	No	No
Survey 4: 31/05/2016 – 01/06/2016												
1	0	0	No	0	1	No	1	No	No	0	Yes	No
2	0	1	No	14	10	Yes	0	Yes	No	0	No	No

4.3 Reptiles

No records of reptiles were returned from the data search.

No reptiles were found during field survey. A low sized population of common frog and common toad were found using the reptile refuges on site on site during these surveys.

Survey dates and weather conditions during the reptile surveys are shown in Table 4 below.

Table 4 Weather conditions during reptile surveys

Survey	Date	Time	Air Temperature (°C)	Weather	Additional notes
1	04.05.16	09:15-10:00	12.5	Sunny, dry, warm, very gentle northeast breeze	Area containing mats 29-35 starting to become more densely vegetated.
2	10.05.16	09:15-10:00	15	Sunny, warm, dry, no wind	Mats 4, 5 and 6 found in pile near area of plant pots and re-deployed
3	20.05.16	09:00-10:00	13	Ground conditions were damp, after the overnight rain. Bright intervals	None
4	27.05.16	17:30-18:30	16	Intermittent sun and cloud. 60%	None



				cloud cover. Very gentle breeze. No rain. Damp ground	
5	01.06.16	08:35-09:35	13	Occasional sunny spells. 80% cloud cover, moderate breeze	Two new mats added to replace lost mats - 27 and 34
6	06.06.16	07:15-08:15	12	Clear sky, gentle breeze	None
7	24.07.16	10.30-12.00	12	Warm and mostly overcast (95% cloud), no wind, intermittent light/heavy rain spells and sunny spells.	Three mats missing – 6, 12 and 24.

4.4 Bats

The review of previous reports (ERAP, 2008) found records of historical bat roosts at Buildings 1, 3 and 7 as follows:

- 20-30 old bat droppings indicative of a Pipistrelle *Pipistrellus* spp. bat species found during building inspection at **Building 1** on 9th July 2008; and
- 15-20 fresh bat droppings indicative of a Pipistrelle *Pipistrellus* spp. bat species found during building inspection at **Building 3** on 9th July 2008
- A single common pipistrelle bat emerged from beneath a ridge tile on **Building 7** on 22nd July 2008 during emergence surveys.

Records of at least five species of bat within 5 km were returned from the data search. There may be more than five species because some records are given to the genus, e.g. Pipistrelle bat, or just as bat species. The nearest record of each is given in Table 5.

Table 5 Bat species within 5 km of the site

Latin name	English name	Distance & Direction	Date
Unidentified <i>Myotis</i> Bat	<i>Myotis</i> sp.	0.99; North-west	2010
Daubenton's Bat	<i>Myotis daubentonii</i>	0.97; North-west	2011
Noctule Bat	<i>Nyctalus noctula</i>	1.01; North-west	2010
Pipistrelle Bat species	<i>Pipistrellus</i> sp.	1.76; North	2012
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	0.34; North-west	2014
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1.01; North-west	2011
Brown Long-eared Bat	<i>Plecotus auritus</i>	1.28; Southwest	1992

Latin name	English name	Distance & Direction	Date
Unidentified Bat	<i>Chiroptera</i>	1.47; North	2013
Unidentified Bat	<i>Vespertilionidae</i>	1.28; South-west	2007

Full details of the updated building inspections and assessment of bat roost potential are given in the extended Phase 1 habitat survey report (WYG, December 2016).

The dates, buildings covered and weather conditions for each survey visit are summarised in Table 6. Survey results are summarised below. The location of confirmed / suspected bat roosts and the main foraging / commuting routes identified on site are shown in Appendix E. Full survey results are provided in Appendix F.

Table 6 Survey dates and conditions

Date	Dusk / Dawn	Sunrise / Sunset time	Survey start time	Survey finish time	Temperature (°C)	Cloud cover (%)	Other observations	Buildings covered
12.05.16	Dawn	05:10	03:40	05:25	13	15	5-10 mph wind. Temperature dropped to 10°C by end of survey.	Buildings 1, 3, 4, 5, 6 and 7
01.06.16	Dusk	21:30	21:15	23:30	10	10	5-15mph wind with intermittent stronger breeze	Buildings 1, 3, 4, 5, 6 and 7
15.06.16	Dusk	21:42	21:28	23:42	11	10	5-15mph wind	Buildings 1, 3 and 7

4.4.1 Dawn survey 12th May 2016

A faint common pipistrelle *Pipistrellus pipistrellus* call was heard at 03:44 by surveyors across the site. A soprano pipistrelle *Pipistrellus pygmaeus* was then heard foraging in the open area to the west of Building 1 at 03:45. Common and soprano pipistrelle were then seen and heard commuting and foraging over this area every few minutes until 04:29. A common pipistrelle was seen at 04:22 in the north east corner of the site flying over the roof of Building 1 and heading towards Chatburn Road. A



common pipistrelle was seen at 04:25 flying from the eastern gable end of Building 3 heading southward towards the tree line.

A brief noctule *Nyctalus noctula* pass was detected by a surveyor on the western side of the site at 04:08.

Two bats with calls characteristic of a *Myotis* species bat were seen and heard briefly by the surveyor on the western gable end of Building 1 at 04:31 heading westward.

The last bat detected was a common pipistrelle seen at 04:40 (half an hour before sunrise) foraging around the tree canopy and in the open area to the west of the buildings.

No bats were seen to enter any building within the site. Bat foraging and commuting was seen on the western and southern sides of the site with very little activity observed over the complex of buildings.

4.4.2 Dusk survey 1st June 2016

A common pipistrelle was seen emerging from the eastern side of the chimney on Building 7 (boiler house) at 21:36 (six minutes after sunset) and then flying eastward towards the new hospital. A further twelve common pipistrelle were then seen emerging from the eastern side of the chimney at 21:50 (twenty minutes after sunset) and also heading eastward. Two common pipistrelle then emerged from the northern side of the chimney at 21:52 before flying eastward. Another common pipistrelle emerged from the eastern side at 21:55 and flew southward. All sixteen bats appeared to emerge from under metal strips banded around the tower of the chimney (Photograph 1).

Photograph 1 Building 7 (boiler house) chimney with bat roost



Two common pipistrelle were seen foraging around the trees by the western gable end of Building 1 at 21:50. Common pipistrelle were also seen flying along the eastern side of Buildings 4 and 1 then circling over the front of Building 1 between 21:51 and 22:01, these may have been the bats seen emerging earlier. Common pipistrelle were also seen commuting over Buildings 5 and 6 at 21:52 but these bats were not seen to emerge from the buildings. Common pipistrelle foraging activity was heard behind Buildings 5 and 6 at 22:13.

A brown long-eared *Plecotus auritus* bat was suspected to have emerged from the northwest side of the chimney on Building 7 at 22:01 (thirty-one minutes after sunset) before flying north-eastward. It could not be ascertained which feature this bat emerged from.

A soprano pipistrelle was heard passing over the south-eastern corner of the site at 23:10.

A barn owl *Tyto alba* was observed making three passes along the eastern boundary of the site at 22:55. The barn owl was not seen using any buildings for roosting. An active swallow *Hirundo rustica* nest was noted in the entrance of the toilet block in Building 4.

In total sixteen common pipistrelle were confirmed to emerge from the chimney tower of Building 7. In addition a suspected emergence of a brown long-eared bat from this building was also noted.

4.4.3 Dusk survey 15th June 2016

The first bat detected was a common pipistrelle suspected to have emerged from the roof or upper floor level at the south of Building 3 (second hospital wing, Photograph 2) at 21:31 (eleven minutes

before sunset), this bat then foraged in the area for two minutes. A second common pipistrelle was seen emerging from the roof edge in the northern corner of the alcove on the southern side of Building 3 at 21:47 (five minutes after sunset). This bat then repeatedly returned to the emergence point while looping around the rear courtyard until 21:52. At 22:03 (twenty-one minutes after sunset) a bat emerged from the same area making no discernible echolocation calls, it was therefore concluded this was a brown long-eared bat.

Photograph 2: Rear of building 3



A common pipistrelle was suspected to have emerged from the chimney of Building 7 at 21:52 (ten minutes after sunset). A second common pipistrelle was seen in the same area at 22:10 but it was unclear if this bat had emerged from a building or flown into the area.

Foraging activity was seen around the trees at the front of Building 1, to the west of the building complex and to the rear of Buildings 3, 5 and 6. Activity levels were lower towards the centre of the building complex and other areas where artificial lighting is present.



Other bat species recorded over the site during the survey were noctule (at 23:09-23:10), *Myotis* sp. (at 22:32, 22:35 and 23:04), and soprano pipistrelle (at 22:22).

A hedgehog *Erinaceus europaeus* was observed foraging in the south east corner of the site at 22:05. The swallow nest in building 4 was observed to still be active. Nesting peregrine falcon *Falco peregrinus* were heard beyond the site boundaries to the southeast.

In total one common pipistrelle and one brown long-eared were confirmed to emerge from a feature on the southern side of Building 3. There was a further suspected common pipistrelle emergence from this building. In addition at least one common pipistrelle was suspected to have emerged from the chimney of Building 7.



5.0 Constraints & Opportunities

5.1 Great crested newt

Presence / likely absence surveys recorded no GCN to be present within either of the two ponds surveyed therefore no further survey, licensing or mitigation for this species is required.

Surveys did reveal four common amphibian species, namely smooth newt, palmate newt, common frog and common toad to be present across the ponds. The ponds do not lie within the development site and should not be affected by the proposed works however these species can disperse from the ponds into the site, as evidenced by the small population of common frog and common toad found on site during the reptile surveys.

The common toad in England is listed under Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006; therefore it is recognised as a 'Species of Principal Importance' for the conservation of biodiversity. Section 41 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. Reasonable avoidance measures should therefore be followed to prevent harm to these animals during demolition and vegetation clearance works.

5.2 Reptiles

Presence / likely absence surveys recorded no reptile species to be present within the site therefore no further survey or mitigation for these species is required.

5.3 Bats

All bats and their roosts receive full protection both under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended) as European Protected Species. The provisions of the NERC Act 2006 require local authorities to have due regard to protected species when determining planning applications, including bat species.

All bat species known to be present in Lancashire (common pipistrelle, soprano pipistrelle, brown long-eared, whiskered *Myotis mystacinus*, Brandt's *Myotis brandtii*, Natterer's *Myotis nattereri*, Daubenton's *Myotis daubentonii* and noctule) are listed within the Lancashire BAP.

Key Statement DME3 *Site and Species Protection and Conservation* from Ribble Valley Borough Council's Adopted Core Strategy states development proposals that are likely to adversely affect species protected by law and/or listed in the Lancashire BAP will not be granted planning permission



excepting “where it can be clearly demonstrated that the benefits of a development at a site outweigh both the local and the wider impacts.”. **This development will adversely affect bat species using the site unless appropriate licensing and mitigation measures as detailed below are followed.**

Bats have different roost types for different stages in their life cycle:

- **Maternity roosts** are where females give birth and raise their young to independence.
- **Satellite roosts** are an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.
- **Day roosts can be** used throughout the bats active season, April – September, as traditional resting sites. Males and non-breeding females will roost alone or in small groups. Bats may use a selection of **day roosts** on a regular basis switching between them on a daily basis or conversely occupying the same one for weeks at a time.

Up to 16 common pipistrelle were confirmed to use Building 7 (the boiler house) for roosting, along with a suspected day roost of a single brown long-eared bat. Small numbers of common pipistrelle and a single brown long-eared bat were also observed using Building 3 (second hospital wing) for roosting on one occasion. It is likely that these are the same local population of bats which move between building 3 and 7 according to the prevailing weather conditions.

Given the maximum number of bats observed emerging on one occasion from Building 7, it is concluded **Building 7** supports a **common pipistrelle maternity or satellite roost**. Common pipistrelle maternity colonies are extremely variable in number, ranging from 20 to over 1,000 bats, but small groups are known to split off from larger maternity colonies to form satellite roosts if weather conditions dictate. Common pipistrelle maternity colonies are more likely to move within roost sites than soprano pipistrelles, and have been shown to shift roosts between pregnancy and lactation.

Building 3 provides additional roosting options for **common pipistrelle and brown long-eared bats**, it is likely this building supports breeding females and males/non-breeding females.

A historical bat roost exists at **Building 1**. Although no bat(s) were recorded roosting at Building 1 during the updated bat surveys, it is considered highly likely that bat(s) continue to use this building as a satellite or day roost associated with the roosts consistently recorded in Buildings 3 and 7 (i.e. in 2008 and 2016). As such Building 1 is a confirmed bat roost.



A European Protected Species (EPS) development licence from Natural England will be required to legally proceed with works which will destroy, modify or disturb the bat roosts in Buildings 1, 3 and 7. All bat roosts are protected even if a bat is not currently in residence.

5.3.1 Licensing

The species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2010 (as amended), contain three "derogation tests" which must be applied by the LPA prior to granting planning permission and again by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm a EPS such as bats. For development activities this licence is normally obtained after planning permission has been obtained. The three tests are that:

- The activity to be licensed must be for imperative reasons of overriding public interest;
- There must be no satisfactory alternative; and
- The favourable conservation status of the species must be maintained.

Imperative Reason of Overriding Public Interest

The 'imperative reason of overriding public interest' in this case is considered to be that the development will deliver a range of socio-economic benefits to the community through provision of residential accommodation on a previously developed site.

No Satisfactory Alternative

Similarly for the 'no satisfactory alternative' test there is a requirement to show that the residential development requires the demolition of the existing buildings supporting bat roosts as they cannot be retained within the proposed plans.

Favourable Conservation Status

It must be shown under a development licence that a derogation (i.e. action permitted under an EPS licence that would otherwise be unlawful) of the Conservation of Habitats and Species Regulations 2010 (as amended) must not be "detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range" (European Commission 2007) and details given of processes and procedures to be undertaken to ensure no bats are harmed during the works and suitable mitigation is provided.



Without mitigation, the loss of the roost sites due to demolition of Buildings 3 and 7 would result in the loss of a maternity/satellite roost site used by a small population of a common bat species (common pipistrelle) and loss of a day roost used by a single individual of a common bat species (brown long-eared).

Under the Bat Mitigation Guidelines 2004 a maternity roost of a common bat species such as common pipistrelle is of **moderate conservation significance** whereas a day roost site for an individual of a common bat species such as brown long-eared is of **low conservation significance**. Mitigation will be required to reduce the risk of contributing to wider scale cumulative impacts to the conservation status of common pipistrelle and brown long-eared bats in Lancashire caused by the loss of these roosts.

With the provision of appropriate mitigation and enhancement (as outlined in the following sections), it is anticipated that the bat population as observed during the surveys would remain constant. In terms of long term mitigation and enhancement, it is considered that good quality mitigation would allow for an increased number of bats to use the area and therefore the conservation status of this species in the wider area could be enhanced.

5.3.2 Recommended Further Survey

No further surveys of the buildings are recommended prior to the submission of an application for an EPS development licence within the next 12 months. However, should conditions of the buildings significantly change then further survey may be required to ascertain if the bats have changed their use of the building, should this occur then advice should be sought from a licensed bat ecologist. The results of this survey will remain valid for one year from the commencement of bat surveys, i.e. 12th May 2017. Should a licence application be delayed beyond this time then further survey will be required.

5.3.3 Recommended Mitigation and Enhancement Measures

Potential mitigation and enhancement options will be finalised within a detailed Method Statement to support an EPS licence application and will likely include:

- Seasonal restrictions, the timing of demolition works to avoid the sensitive maternity period (works should be undertaken between October and May).
- Sensitive soft-strip of roost features under supervision of a licensed bat ecologist under Natural England EPS licence. This should include all features on the buildings with bat roost potential such as soffits, fascias, lead flashing, metal banding around the chimney and tiles.



- The provision of alternative roosting facilities, such as bat boxes / bat bricks / bat tubes (to be confirmed through consultation with Natural England) to replace the roosts to be destroyed. **This should include a double mount bat house suitable for use by a maternity colony of common pipistrelle.** Suggestions for suitable options for installation on or within buildings are given in Appendix G.
- Replacement roosts should be orientated along current flight paths and not be subject to direct artificial lighting on roost entrances.
- Any alternative roosting facilities provided should be 'seeded', if possible, with bat droppings from the current roost to encourage use.
- Prior to any works starting, all contractors will be made aware (by means of a tool box talk) of the risk of bats being present within working areas, of their legally protected status, of the working methods to be adhered to, and the appropriate course of action to be taken if bats are found in an unexpected location.
- Prior to removal of fascia/soffit/tiles, any gaps must be inspected by the licensed bat worker (using a torch or endoscope where necessary) to ensure that no bats are present.
- Linear habitat features of value for foraging and / or commuting bats should be retained where possible or alternative provision made within the soft landscaping plan.
- Areas of value for foraging bats (such as the areas north, south and west of the buildings) should be retained where possible or alternative provision made within the soft landscaping plan. A list of plant species to enhance bat foraging potential is given in Appendix H.
- A sensitive lighting scheme should be produced to minimise any impact of lighting upon the site boundaries.
- New areas of soft landscaping should be planted with native, nursery grown species of local genetic provenance which are bat friendly.

Given that bats are also active in the general area it is recommended that enhancements be made on site to increase the sites general suitability to support both foraging and roosting bats such as provision of ten additional bat boxes / bat bricks / bat tubes on new buildings where suitable. Advice should be sought from a suitably experienced ecologist to ensure that an appropriate model is installed and that suitable locations are chosen - i.e. avoiding direct illumination and disturbance, as far as practicable.



5.4 Other Notable Species

Common toad (and other amphibians)

Common toad were recorded on site during the reptile presence/likely absence survey. Any toads found should be carefully placed (where capture is possible and humane) in a ventilated box using gloved hands and released into suitable nearby vegetation that will be unaffected by the proposed works. Toads should not be touched using non-gloved hands as they secrete a toxin through their skin and they should not be handled for longer than is necessary.

Note that toads are most vulnerable to harm during the hibernation period, considered to be November to February inclusive. Site preparation works carried out during this sensitive period (between November – February) should take into account the potential presence of hibernating animals within areas of dense vegetation, particularly within bramble and other thorny shrubs.

Hedgehog

West European hedgehogs were observed foraging within the site during bat survey. West European Hedgehog is listed under Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006; therefore it is recognised as a 'Species of Principal Importance' for the conservation of biodiversity. Section 41 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Reasonable avoidance measures proposed to avoid harm to common toad (section 5.1) will also protect West European Hedgehog. Namely, any hedgehogs found should be carefully placed (where capture is possible and humane) in a ventilated box using gloved hands and released into suitable nearby vegetation that will be unaffected by the proposed works. Hedgehogs should not be touched using non-gloved hands as they can carry ticks and should not be handled for longer than is necessary. Wash hands immediately after handling these species. Vegetation clearance of the low level thorny shrubs, such as the bramble *Rubus fruticosus agg.* in the northwest corner, should be preceded by a visual check for the presence of hedgehog as they are likely to have nests in these areas. Hedgehogs are not territorial and will all share suitable nesting habitat if it is limited in wider area so multiple hedgehogs will nest close together. They are not typically aggressive towards each other and don't defend territories.

Breeding Birds

All breeding wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) against intentional disturbance, damage and destruction during the nesting season



(generally considered to be March to September inclusive although some species are known to breed throughout the year). Additional legal protection under Schedule 1 of this act extends beyond that afforded to all nesting birds and prohibits disturbance not only whilst nesting but to all individuals whilst dependent young are present. Schedule 1 bird species also receive additional protection in that reckless disturbance, damage and destruction are also offences. Bird species were observed during the bat surveys to be using the site for nesting and foraging:

- A barn owl was observed foraging along the western side of the site. Barn owl are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). This bird was not seen to enter or leave any buildings or trees on site and therefore is not thought to be nesting or roosting within the site.
- Peregrine falcons were heard nesting beyond the south-eastern boundary of the site. Peregrines are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition, the peregrine is listed within Annex 1 of the EU 'Birds' Directive (1979) which warrants special conservation. The actual nesting location is unknown but is considered to be suitably distant from the proposed works area that no disturbance should occur.
- An active swallow nest was noted in the entrance to the toilet block of building 4. Other buildings, trees and vegetation within the site also offer potential nesting opportunities.

To prevent a breach in UK or European wildlife legislation it is recommended that any future works that will likely disturb, damage or destroy an active nest be avoided during the bird breeding season (i.e. March to September inclusive). If restricting works to outside the bird nesting season is not possible, it is recommended that an Ecological Clerk of Works (ECoW) conducts a check for the nesting birds within the site in advance of any works commencing. Once complete, a five day window will allow for site works to commence should no active nests be identified. Should works cease for more than five days then an additional check for breeding birds should be repeated. If a nesting bird is identified, the ECoW will advise on suitable working methods and exclusion zones to restrict works on site. Measures recommended will depend on the nature of the works in that area as well as any bird species identified to be nesting. Note that suitable working methods may result in delay(s) to undertaking site works within specific areas of site until the ECoW has advised that all the chicks have fledged.

Demolition of Building 4 will result in the loss of nesting opportunities for swallow therefore it is recommended that suitable artificial nesting boxes are provided, such as at least one set (x 10 cups) of No.10 Schwegler Swallow Nests (or equivalent) to replace swallow nesting habitat lost. It is



recommended that the cups be installed at the eaves of the retained frontage (northern aspect) of Building 1.

The site could further be enhanced for nesting birds by provision of other types of nesting boxes installed on retained trees and the new buildings. A minimum of 20 bird boxes are recommended. It is recommended that the following bird box types are purchased and installed on site:

- At least ten 1B Schwegler Nest Box (or equivalent) with 32mm entrance holes to attract small-medium crevice nesting species such as tree sparrow *Passer montanus*, great tit *Parus major* and blue tit *Cyanistes caeruleus*.
- At least five 1B Schwegler Nest Box (or equivalent) with 26mm entrance holes to attract small crevice nesting species such as coal tit, blue tit and wren.
- At least two 2H Schwegler Nest Box (or equivalent) with open front to attract robin *Erithacus rubecula* and spotted flycatcher *Muscicapa striata*.
- At least two ISP Schwegler Sparrow Terraces (or equivalent) to attract house sparrows.
- At least one additional set of No.10 Schwegler Swallow Nests (or equivalent) to attract swallow as they are known to use the site for nesting



6.0 Conclusions

6.1 Great crested newt

- No further survey or mitigation required for these species.

6.2 Reptiles

- No further survey or mitigation required for these species.

6.3 Bats

Building 1, 3 and Building 7

- Building 1 is a historical bat roost. demolition of this building will require an EPS mitigation licence.
- Building 3 (second hospital wing) provides additional roosting for common pipistrelle and brown long-eared bat. These roosts would be destroyed by the demolition of the building as proposed. An EPS mitigation licence will therefore be required to allow these works to proceed lawfully.
- Building 7 (boiler house) was found to support a maternity/satellite maternity roost of common pipistrelle and a day roost for a single brown long-eared bat. These roosts would be destroyed by the demolition of the building as proposed. An EPS mitigation licence will therefore be required to allow these works to proceed lawfully.
- Suitable mitigation for loss of the roost would be provision of a double mount bat house plus bat 10 boxes / bat tubes / bat bricks suitable for use by crevice dwelling species such as common pipistrelle. Suggestions for suitable options are given in Appendix G.
- Loss of the surrounding foraging areas can be mitigated by provision of sheltered areas planted with bat friendly native plant species within the soft landscaping plan (a list of suitable species in provided in Appendix H). A sympathetic lighting scheme should be designed to prevent disturbance to foraging and commuting bats.

6.4 Other Notable Species

- **Common toad and hedgehog:** Any toads and hedgehogs found should be carefully captured using gloved hands and placed (where capture is possible and humane) in a ventilated box and released into suitable nearby vegetation that will be unaffected by the proposed works.



- **Nesting birds:** To ensure legal compliance, it is recommended that tree works and any works to the buildings and vegetation with nesting bird potential are avoided during the bird nesting season (March to September inclusive) or, if necessary, preceded by a search for nesting birds by a suitably experienced and qualified ecologist.

Loss of nesting opportunities through building demolition and vegetation clearance should be mitigated for by provision of suitable bird boxes, in particular for swallow (known to be nesting in Building 4). It is suggested the following provision is made:

- At least ten 1B Schwegler Nest Box (or equivalent) with 32mm entrance holes to attract small-medium crevice nesting species such as tree sparrow *Passer montanus*, great tit *Parus major* and blue tit *Cyanistes caeruleus*.
- At least five 1B Schwegler Nest Box (or equivalent) with 26mm entrance holes to attract small crevice nesting species such as coal tit, blue tit and wren.
- At least two 2H Schwegler Nest Box (or equivalent) with open front to attract robin *Erithacus rubecula* and spotted flycatcher *Muscicapa striata*.
- At least two ISP Schwegler Sparrow Terraces (or equivalent) to attract house sparrows.
- At least two sets of No.10 Schwegler Swallow Nests (or equivalent) to attract swallow as they are known to use the site for nesting.



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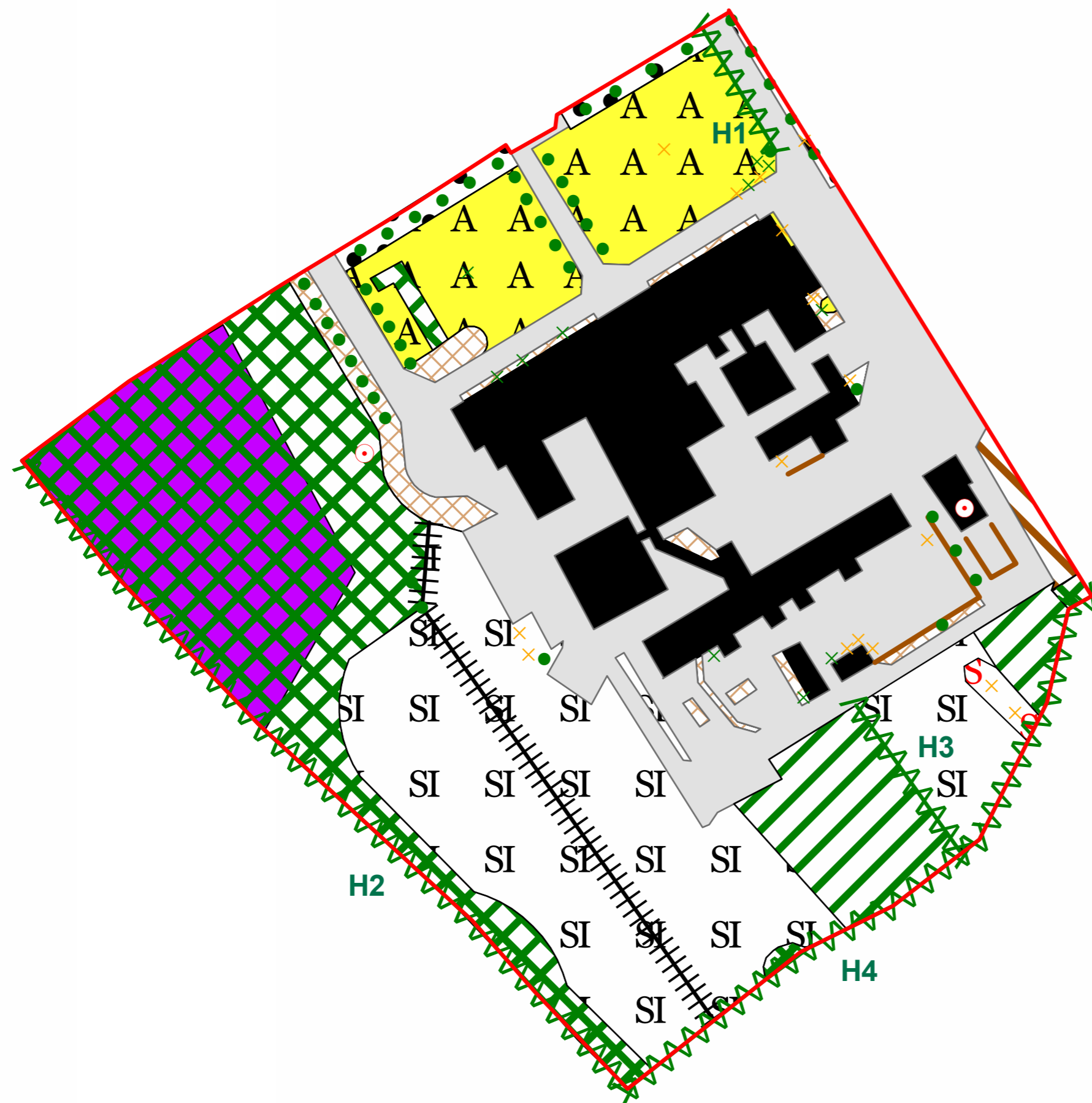
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WYG (December, 2016) *Extended Phase 1 Habitat Survey*. Clitheroe Community Hospital. Project code: A094939



APPENDIX A – FIGURE 1



Legend

- Site boundary
- Plantation woodland - orchard
- Scattered tree
- Hard standing
- × Scattered scrub
- Dense scrub
- Poor semi-improved grassland
- Tall ruderal
- Spoil mound
- Amenity grassland
- × Scattered introduced shrub
- Introduced shrub/ornamental planting bed
- Building
- Bare ground
- Wall
- Hedgerow
- H1-4 Hedgerow reference
- ||||| Fence
- Target note
- Inaccessible area of the site
- due to density of scrub

Quay West at MediaCityUK
 Trafford Wharf Road
 Trafford Park
 Manchester
 M17 1HH
 Tel: 0161 872 3223
 Fax: 0161 872 3193
 manchester.ecology@wyg.com



Environment

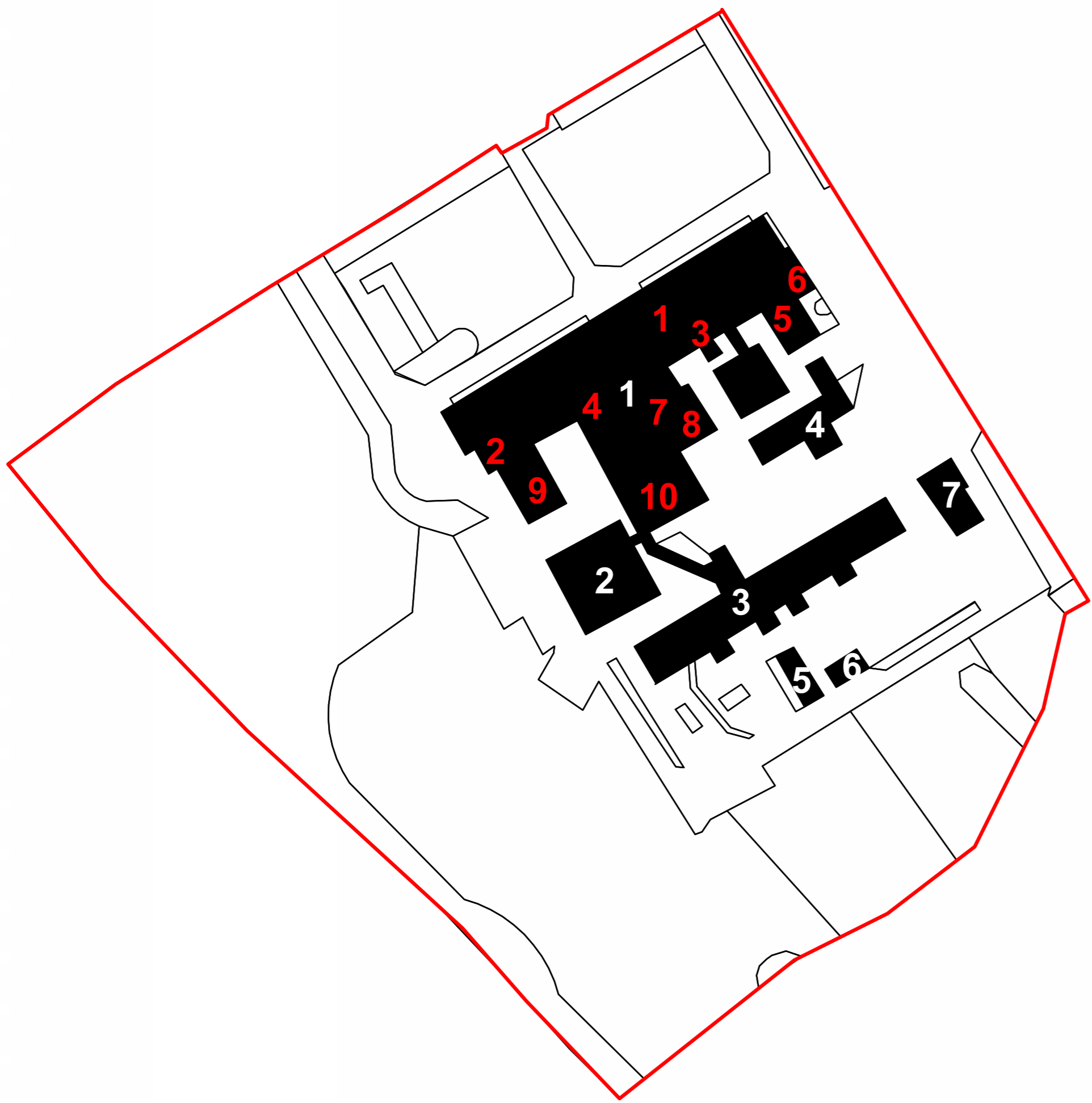
Project
 Cliteroe Community Hospital

Drawing Title:
 Extended Phase 1 Habitat Survey

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	04.12.15	VT	08.01.15	RK	13.01.15
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 1		



APPENDIX A – FIGURE 2



Legend

- Site boundary
- Building
- 1-7 Building reference
 - 1 Main hospital building (with cellar)
 - 2 Outpatients building
 - 3 Second hospital wind
 - 4 Outbuilding
 - 5 Derelict building 1
 - 6 Derelict building 2
 - 7 Boiler house
- 1-10 Roof sections of Building 1

Quay West at MediaCityUK
Trafford Wharf Road
Trafford Park
Manchester
M17 1HH
Tel: 0161 872 3223
Fax: 0161 872 3193
manchester.ecology@wyg.com



Environment

Project
Cliteroe Community Hospital

Drawing Title:

Building locations

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	04.12.15	VT	08.01.15	RK	13.01.15
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 2		



APPENDIX A – FIGURE 3



Chatburn Road

HOUSING MIX

2 bed:	12 (24%)
3 bed:	20 (40%)
4 bed:	14 (28%)
5 bed:	4 (8%)
Total:	50

KEY

	Indicative housing		Tarmacked private drive
	Existing trees		Adoptable road
	New tree planting		Block paving
	New 1m hedge		

NHS Property Services Ltd

Land South of Chatburn Road, Clitheroe

Built Form Masterplan

DATE: 06.12.2016

SCALE: 1:1250 @ A4

DRAWN BY / REVIEWED BY: MC / LW

PROJECT NO:

DRAWING NO:

REVISION:

A094939

A094939-01

WYG Group

creative minds safe hands



WYG

Rowe House, 10 East Parade, Harrogate, HG1 5LT

Tel: +44 (0)1423 857 510

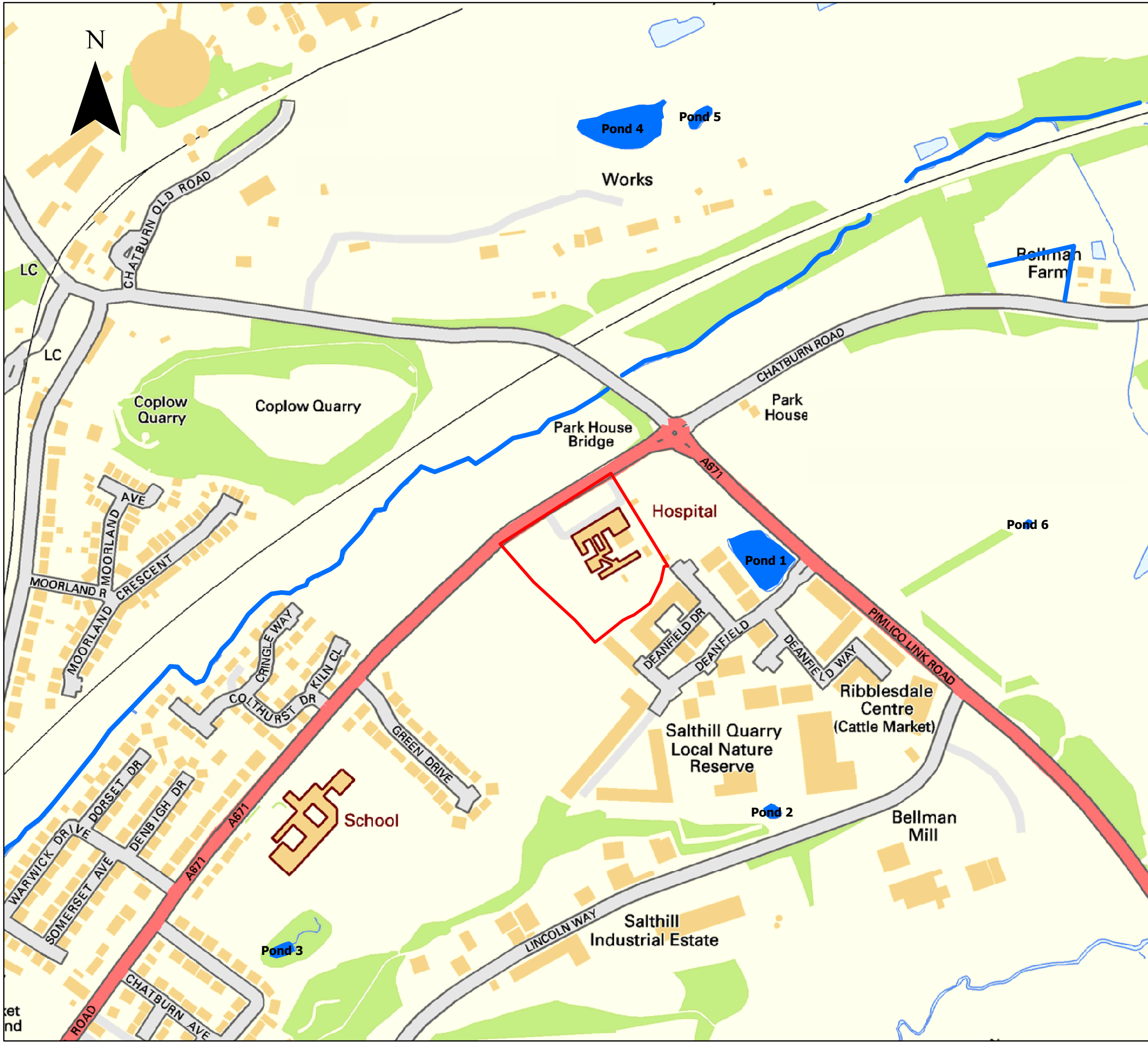
Email: info@wyg.com www.wyg.com

- DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWING IS TO BE CHECKED WITH ALL OTHER RELEVANT DRAWINGS.
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- DRAWING TO BE USED FOR PURPOSES OF THE TITLE AND NOTED ON PLAN.

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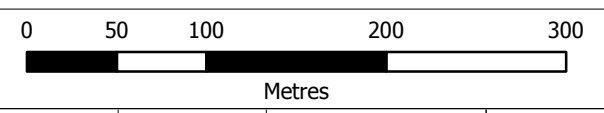


APPENDIX B – POND LOCATIONS



Legend

- Site Boundary
- Ponds
- Water Courses



Created: IS	Checked: GW	Date: 15.01.2016	Version: V1.
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Sheet Size: **A3** Scale of Original: **1:4,203**

Client:
East Lancashire Hospitals Trust

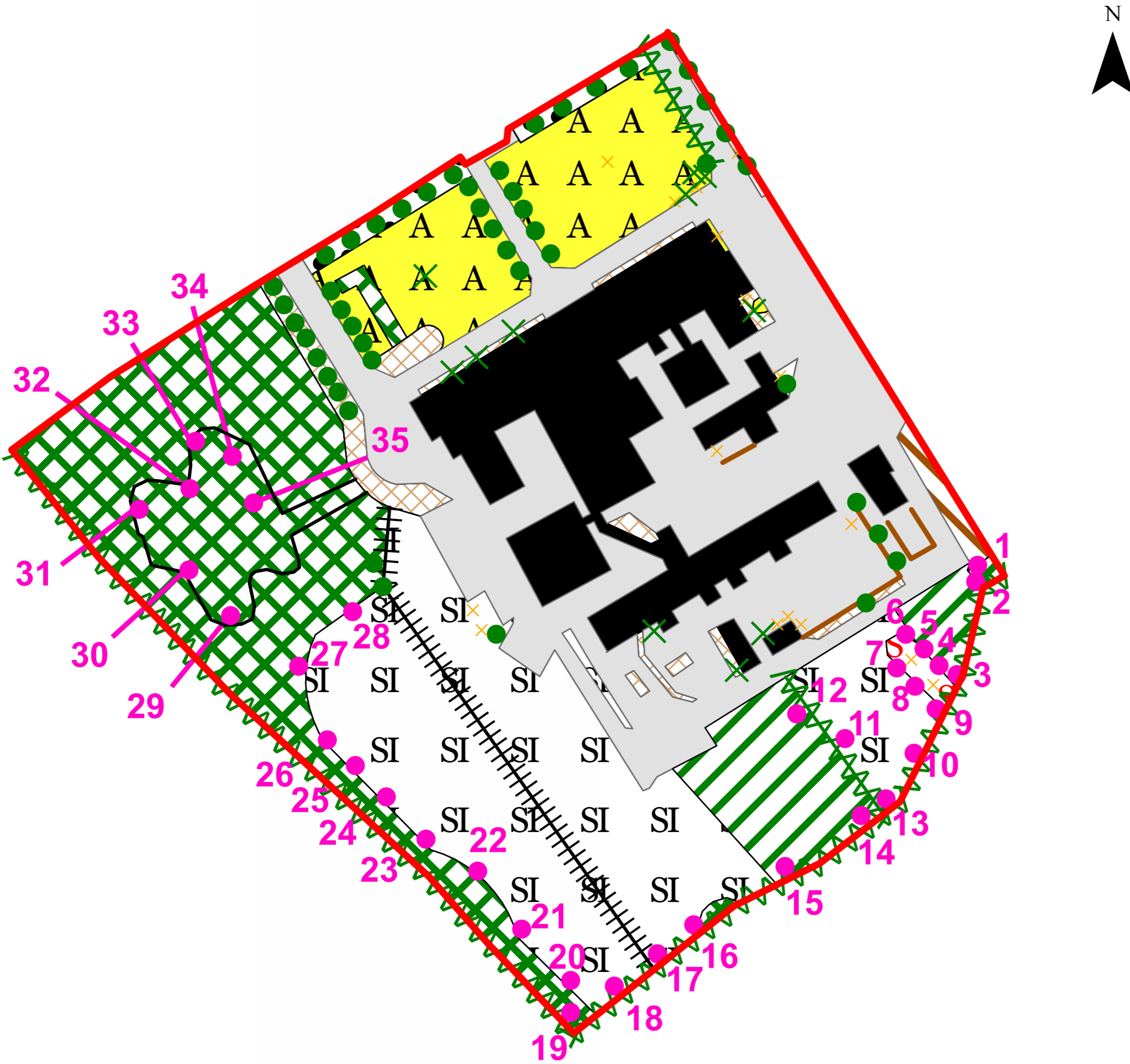
Project:
Clitheroe Community Hospital

Title:
Pond Location Plan

Office: 4594	Project No: A094939	Figure No: Figure 1
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APPENDIX C – REPTILE MAT LOCATIONS



Legend

- Site boundary
- Reptile refugia
- 1-35 Reptile refugia reference

Quay West at MediaCityUK
 Trafford Wharf Road
 Trafford Park
 Manchester
 M17 1HH
 Tel: 0161 872 3223
 Fax: 0161 872 3193
 manchester.ecology@wyg.com



Environment

Project
 Cliteroe Community Hospital

Drawing Title:
 Reptile refugia locations

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	25.04.16	LH	01.06.16	RK	01.06.16
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 1		



APPENDIX D – BAT SURVEYOR LOCATIONS



Legend

- Site boundary
- + Surveyor location

Quay West at MediaCityUK
Trafford Wharf Road
Manchester
M17 1HH
Tel: 0161 872 3223
Fax: 0161 872 3193
manchester.ecology@wyg.com



Environment

Project
Clitheroe Community Hospital

Drawing Title:
Bat Surveyor Locations

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	24.06.16	LH	27.06.16	RK	28.06.16
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 1		



APPENDIX E – BAT FLIGHT PATHS



Legend

- Site boundary
- Common pipistrelle
- Myotis sp.
- Soprano pipistrelle



Quay West at MediaCityUK
Trafford Wharf Road
Trafford Park
Manchester
M17 1HH
Tel: 0161 872 3223
Fax: 0161 872 3193
manchester.ecology@wyg.com



Environment

Project
Clitheroe Community Hospital

Drawing Title:

Bat flight paths - 12th May 2016

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
24.06.16	GWI	27.06.16	LH	28.06.16	RK
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 1		



Legend

- Site boundary
- Brown long-eared
- Common pipistrelle
- Common pipistrelle / brown long-eared roost

Quay West at MediaCityUK
 Trafford Wharf Road
 Trafford Park
 Manchester
 M17 1HH
 Tel: 0161 872 3223
 Fax: 0161 872 3193
 manchester.ecology@wyg.com



Environment

Project
 Clitheroe Community Hospital

Drawing Title:

Bat flight paths - 1st June 2016

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	24.06.16	LH	27.06.16	RK	28.06.16
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 2		



Legend

- Site boundary
- Brown long-eared
- Common pipistrelle
- Common pipistrelle / brown long-eared roost

Quay West at MediaCityUK
 Trafford Wharf Road
 Trafford Park
 Manchester
 M17 1HH
 Tel: 0161 872 3223
 Fax: 0161 872 3193
 manchester.ecology@wyg.com



Environment

Project
 Clitheroe Community Hospital

Drawing Title:
 Bat flight paths - 15th June 2016

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	24.06.16	LH	27.06.16	RK	28.06.16
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 3		



Legend

- Site boundary
- ↔ Barn owl hunting
- Nesting peregrines heard off site to Southeast
- ▲ Hedgehog foraging
- ★ Swallow nest

Quay West at MediaCityUK
 Trafford Wharf Road
 Trafford Park
 Manchester
 M17 1HH
 Tel: 0161 872 3223
 Fax: 0161 872 3193
 manchester.ecology@wyg.com



Environment

Project
 Clitheroe Community Hospital

Drawing Title:

Other species

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	24.06.16	LH	27.06.16	RK	28.06.16
Project No:	Office	Type	Drawing No.	Revision:	
A094939	45	94	Figure 4		



APPENDIX F – BAT RESULTS

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	AB		Survey type	Dawn re-entry
Surveyor position	NE corner of building 1		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions		Temp	Cloud cover	Wind
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:				
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
03:47	-	45	CPip	Heard, not seen. Very distant pass.
04:22	1	45	CPip	Flew around the corner of B1, over grassed area and towards Chatburn road.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	AC		Survey type	Dawn re-entry
Surveyor position	S of building 3		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions		Temp	Cloud cover	Wind
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:				
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
03:47	-	45	P45	Heard, not seen.
03:58	-	45	P45	Heard, not seen. Heard very briefly
04:00	-	45	P45	Heard, not seen.
04:08	-	45	P45	Heard, not seen. 3 short passes
04:18	-	45	P45	Brief call. Heard, not seen.
04:19	-	45	P45	Brief call. Heard, not seen.
04:22	-	45	P45	Heard, not seen. Faint contact
04:25	-	45	P45	Heard, not seen.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	AT		Survey type	Dawn re-entry
Surveyor	S of Building 3		Survey	03.40

position		start time	
Sunset/ sunrise	05:10	Survey finish time	05.25
Weather conditions	Temp	Cloud cover	Wind
	Start	13°C	15%
	Finish	10°C	15%
Additional Notes:			
Time	obs	Frequency (kHz)	Bat Species
			Behaviour and direction of flight
04:00	-	43	CP45
04:07	-	45	CP45
04:13	-	39	CP45?
04:18	1	N/A	CP45?
04:36	2	47	CP45

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	BC		Survey type	Dawn re-entry
Surveyor position	Adjacent to Chatburn Road		Survey start time	03.40
Sunset/ sunrise	05:10		Survey finish time	05.25
Weather conditions	Temp	Cloud cover	Wind	
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:	No bats observed entering or exiting building. Tawny owl heard off site			
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
03:44	-	45	CPip	Brief call (possibly commuting) – heard, not seen
03:47	-	45	CPip	Brief call (possibly commuting) – heard, not seen
03:56	-	50	?	Heard, not seen – brief call
04:08	-	45	CPip	Heard, not seen – brief call
04:11	-	45	CPip	Heard, not seen
04:22	1	55	SPip	Foraging (offsite location)
04:31	2	50	Possibly Myotis X2	Commuting. Onsite - offsite
04:37	-	50	?	Heard, not seen.
04:40	1& 2	45	CPip	Foraging from onsite to offsite in a loop. Single bat.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	GQ-B		Survey type	Dawn re-entry
Surveyor	NW corner of Building 3		Survey	03.40

position		start time	
Sunset/sunrise	05:10	Survey finish time	05.25
Weather conditions	Temp	Cloud cover	Wind
	Start	13°C	15%
	Finish	10°C	15%
Additional Notes:	Cannot see full roof – only edge & gable end. Kestrel hunting over rough grassland		
Time	obs	Frequency (kHz)	Bat Species
			Behaviour and direction of flight
03:47	-	50	Pp sp
			Heard, not seen. Brief call. Species not determined.
04:08	-	20	Noctule
			Heard, not seen. Brief pass.
04:21	-	45	P45
			Heard, not seen. Brief pass.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	GWI		Survey type	Dawn re-entry
Surveyor position	SE corner of building 1		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions	Temp	Cloud cover	Wind	
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:	Dry. Couple of Diptera observed (but in hard standing area with only scattered weeds)			
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
03:47	-	45	CPip	Too faint & brief to tell. Heard, not seen. 2 sec max. May not have been a bat.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	KA		Survey type	Dawn re-entry
Surveyor position	NE corner of building 3		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions	Temp	Cloud cover	Wind	
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:				
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight

03:47	-	45	CPip	Heard, not seen. Very faint call.
-------	---	----	------	-----------------------------------

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	LH		Survey type	Dawn re-entry
Surveyor position	E of building 7		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions		Temp	Cloud cover	Wind
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:	Security light on side & front (motion triggered)			
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
04:00	-	45	CPip	Heard, not seen
04:14	-	45	CPip	Heard, not seen

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	MB		Survey type	Dawn re-entry
Surveyor position	S of buildings 5 & 6		Survey start time	03.40
Sunset/sunrise	05:10		Survey finish time	05.25
Weather conditions		Temp	Cloud cover	Wind
	Start	13°C	15%	5-10
	Finish	10°C	15%	5-10
Additional Notes:				
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight
03:47	-	45	P45	Heard, not seen. Heard very briefly
03:59	-	45	P45	Heard, not seen. Heard very briefly
04:08	-	45	P45	Brief call. Heard, not seen.
04:13	-	45	P45	Heard, not seen. Heard very briefly
04:18	-	45	P45	Brief call. Heard, not seen.
04:25	-	45	P45	Brief call. Heard, not seen.

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	12.5.2016
Surveyor	SA		Survey type	Dawn re-entry
Surveyor	SW corner of building 1		Survey	03.40

position				start time	
Sunset/sunrise		05:10		Survey finish time	05.25
Weather conditions			Temp	Cloud cover	Wind
		Start	13°C	15%	5-10
		Finish	10°C	15%	5-10
Additional Notes:					
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight	
03:45	1	55	PPY	Foraging, flew NE past gable end.	
03:38	2	45	Pip sp.	Brief, faint call. Heard, not seen.	
03:56	3	45	Pp	Brief call. Heard, not seen.	
04:08	4	55	Ppy	Foraging. Heard, not seen.	
04:14	5	45	Pp	Very faint, distant call. Heard, not seen	
04:15	6	45	Pp	Foraging nearby. Heard, not seen	
04:19	7	45	Pp	Foraging. Heard not seen.	
04:29	8	45	Pip sp.	Brief distant calls. Heard, not seen.	

Bat Activity Survey Record Sheet					
Project		Clitheroe		Date	12.5.2016
Surveyor		TK		Survey type	Dawn re-entry
Surveyor position		Courtyard between buildings 1 & 3		Survey start time	03.40
Sunset/sunrise		05:10		Survey finish time	05.25
Weather conditions			Temp	Cloud cover	Wind
		Start	13°C	15%	5-10
		Finish	10°C	15%	5-10
Additional Notes:					
Time	obs	Frequency (kHz)	Bat Species	Behaviour and direction of flight	
No activity recorded					

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AB		Survey type	Dusk emergence
Surveyor position	NE corner of Building 1		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:51	1	45	CPip	Two pips flew southward from alongside new hospital around front of hospital
21:54	2	45	CPip	Quick circle around trees in front of building

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AC		Survey type	Dusk emergence
Surveyor position	SE corner of Building 3		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	1	45	CPip	Flew from trees to rear
21:52	2	45	CPip	Flew from trees to rear
21:54	3	45	CPip	Flew over building 7
22:13	4	45	CPip	Foraging in trees at rear

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AT		Survey type	Dusk emergence
Surveyor position	N of Building 7		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather		Temp	Cloud cover	Wind

conditions	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:36	-	45	CPip	Heard not seen, brief, may still be in roost
21:52	1	45	CPip	Two bats emerged from chimney area, flew northeast (possible emergence from other sides of chimney too)
22:01	2	-	BLE?	Possible emergence northwest side of chimney, didn't see feature it exited, flew northeast
23:10	-	55	SPip	Heard not seen, brief pass

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AT		Survey type	Dusk emergence
Surveyor position	S of Buildings 5 and 6		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	1	45	CPip	Pass, seen and heard

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	CM		Survey type	Dusk emergence
Surveyor position	E of Building 3		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:36	1	45	CPip	1 bat emerged and flew east towards new hospital, emerged from chimney top

21:50	2	45	CPip	12 bats emerged from chimney
21:55	3	45	CPip	1 bat emerged from chimney
23:10	4	45	CPip	Heard not seen

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	DK		Survey type	Dusk emergence
Surveyor position	NW corner of Building 1		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:	Some vegetation constraining visibility of front facade			
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:50	1	45	CPip	Two bats foraging in trees at front of property
21:58	2	45	CPip	One bat flew south over single storey structure
22:13	-	45	Unknown	Heard not seen, faint
22:37	-	45	CPip	Heard not seen, brief call
23:08	-	45	CPip	Heard not seen, faint
23:26	-	45	CPip	Heard not seen, brief call

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	GQB		Survey type	Dusk emergence
Surveyor position	SW corner of Building 1		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	1	45	CPip	Two bats commuting towards trees
22:01	-	45	CPip	Commuting

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	JL		Survey	Dusk emergence

			type	
Surveyor position	SW corner of Building 3		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:	Barn owl 22:55 along edge of trees at side of property, went up and down three times			
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	1	45	CPip	Commuting
21:53	2	45	CPip	Commuting as before
22:01	3	45	CPip	Commuting as before
23:19	-	45	CPip?	Heard not seen, commuting

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	MW		Survey type	Dusk emergence
Surveyor position	SE corner of Building 1		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:	Active swallow nest in entrance to toilet block of building 4			
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:53	1	45	CPip	Commuting along eastern side of building 1
21:54	2	45	CPip	Commuting along eastern side of buildings 4 and 1
23:11	-	45	CPip	Heard not seen, faint call

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	MB		Survey type	Dusk emergence
Surveyor position	S of Building 3		Survey start time	21:15
Sunset/sunrise	21:30		Survey finish time	23:30
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph

Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	1	45	CPip	Two bats flew westward along rear of building 3
22:13	2	45	CPip	Foraging over area behind building 6

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AB		Survey type	Dusk emergence
Surveyor position	NE corner of Building 1		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
22:38	-	45	CPip	Heard not seen, brief faint pass
23:09	-	20	Noc	Heard not seen, brief faint pass
23:38	1	45	CPip	Foraging along trees continuously for one minute
23:40	-	45	CPip	Heard not seen, brief

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	AH		Survey type	Dusk emergence
Surveyor position	SW corner of Building 1		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
22:49	-	45	CPip	Heard not seen, faint pass

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	DF		Survey type	Dusk emergence
Surveyor position	S of Building 5 and 6		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph

Additional Notes:		Nesting peregrine falcons heard to the SE of site		
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:31	1	45	CPip	Appeared to emerge from building roof/
21:47	2	45	CPip	Emerged from beneath gutters/roof edge in the northern corner of alcove, began to repeatedly return to emergence point on multiple occasions until 21:52
22:03	3	-	BLE?	Emergence, no call, appeared from same area as above, flew straight out
22:10	4	45	CPip	Either emerged from trees or building 7, looped back towards same area
22:13	5	45	CPip	Seen and heard foraging
22:28	6	45	CPip	Seen and heard foraging
22:32	7	49	Myotis	Seen and heard commuting, not seen to emerge
22:35	8	49	Myotis	Heard not seen, brief call
22:55	-	45	CPip	Heard not seen, pass
23:02	9	45	CPip	Seen and heard foraging
23:04	-	48	Myotis	Heard not seen foraging
23:05-23:07	-	45	CPip	Heard not seen foraging

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	DK		Survey type	Dusk emergence
Surveyor position	NW corner of Building 1		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:56	1	45	CPip	Foraging around trees to front
22:07	2	45	CPip	Either over roof or from roof of two storey main building heading northwest
23:07	-	45	Unknown	Heard not seen, brief call
23:09	-	20/45	Unknown	Heard not seen, possible noctule pass

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	GWI		Survey type	Dusk emergence

Surveyor position	S of Building 4		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:51	1	45	CPip	Possible emergence, first seen in front of tree. Could have come from building 3 or 7 or tree
22:27	2	45	CPip	Commuting from eastern boundary through gap between building 3 and 7 then continued south
23:01-23:05	-	45	CPip	Heard not seen, distant, foraging
23:10	-	21	Noc	Heard not seen, foraging

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	JL		Survey type	Dusk emergence
Surveyor position	NW corner of Building 3		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:31	1	-	CPip	Seen not heard, foraging
22:45	-	45	CPip	Heard not seen, foraging
23:04	-	45	CPip	Heard not seen, commuting
23:06	-	45	CPip	Heard not seen, commuting
23:22	-	45	CPip	Heard not seen, commuting
23:27	-	45	CPip	Heard not seen, commuting
23:28	-	45	CPip	Heard not seen, commuting
23:30	-	45	CPip	Heard not seen, commuting
23:33	-	45	CPip	Heard not seen, commuting
23:41	-	45	CPip	Heard not seen, commuting

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	MP		Survey	Dusk emergence

			type	
Surveyor position	S of Building 3		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:	Hedgehog foraging amongst ground ivy 22:05 Good moth activity from 22:20 onwards			
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:47	1	45	CPip	Foraging, following the same route from emergence point until 21:52
22:04	2	-	BLE?	Flew from emergence point, no sound
22:10	3	45	CPip	Looped over trees and returned in same direction
22:13-22:22	4	45	CPip	Foraging over hedgerow
22:27	5	45	CPip	Foraging over hedgerow
22:55	-	45	CPip	Heard not seen, pass
23:04-23:07	-	47	Myotis	Heard not seen, foraging
23:05	6	47	CPip	Foraging over and around building 3
23:12	-	45	CPip	Heard not seen, pass
23:15	7	45	CPip	Pass over courtyard
23:17	-	45	CPip	Heard not seen, foraging
23:24	-	45	CPip	Heard not seen, foraging
23:32	8	45	CPip	Foraging over hedgerow

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	MB		Survey type	Dusk emergence
Surveyor position	N of Building 3		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:52	-	45	CPip	Heard not seen
23:10	-	45	CPip	Heard not seen

Bat Activity Survey Record Sheet

Project	Clitheroe		Date	01.06.16
Surveyor	MW		Survey type	Dusk emergence
Surveyor position	SE corner of Building 1		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:38	1	46	CPip	Commuting out of building complex towards Chatburn Road
21:51	2	45	CPip	Circling by east of building 4

Bat Activity Survey Record Sheet				
Project	Clitheroe		Date	01.06.16
Surveyor	PK		Survey type	Dusk emergence
Surveyor position	E of Building 7		Survey start time	21:28
Sunset/sunrise	21:43		Survey finish time	23:43
Weather conditions		Temp	Cloud cover	Wind
	Start	11°C	10%	5-10mph
	Finish	10°C	10%	10-15mph
Additional Notes:				
Time	Ob	Frequency (kHz)	Bat Species	Behaviour and direction of flight
21:47	-	45	CPip	Heard not seen, pass
21:52	1	45	CPip	Two bats passing fast, possible emergence from chimney
22:12	-	45	CPip	Heard not seen, pass
22:19	-	45	CPip	Heard not seen, pass
22:22	-	55	SPip	Heard not seen, pass
22:28	2	45	CPip	From trees behind chimney
22:30	-	45	CPip	Heard not seen, pass
22:33	-	45	BLE	Heard not seen, pass
23:23	-	45	CPip	Heard not seen, pass
23:26	-	45	CPip	Heard not seen, pass



APPENDIX G – BAT BOXES



Introduction

The information in this appendix relates to bat boxes that can be easily incorporated into building and landscape plans. The information provided is not exhaustive and provides examples of some of the types of boxes available.

Including bat boxes throughout the development site has a number of benefits:

- Any roosting or resting places lost as a result of the work will be replaced;
- The ecological value of the site will be enhanced;
- Priority species within the local Biodiversity Action Plans (BAPs) will be encouraged.

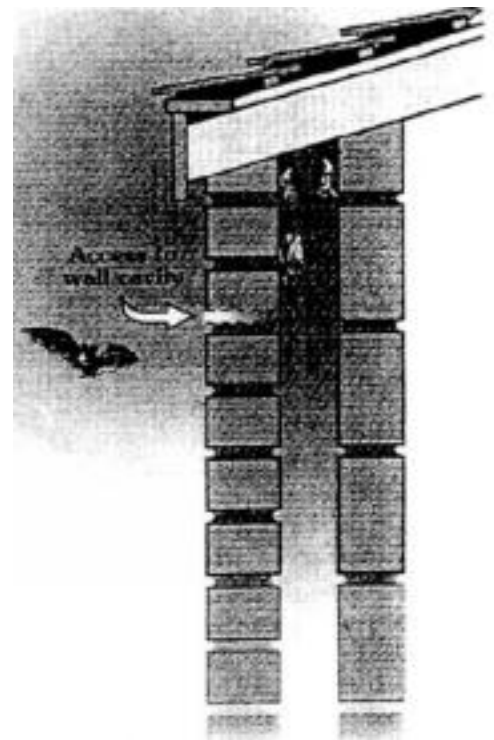
For Buildings

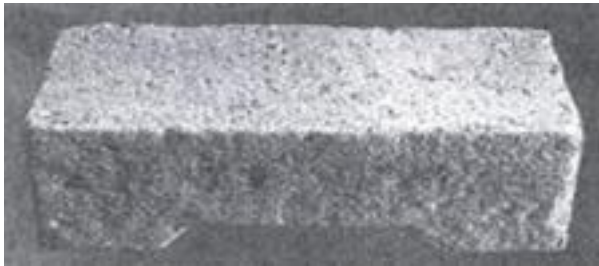
The inclusion of a variety of bat bricks, tubes and boxes for buildings is recommended to encourage a diversity of bat species. Bat bricks and tubes require no maintenance.

Bat Access and Roost Bricks

Source: Marshalls Clay Products (approved by the Bat Conservation Trust)

'... Marshall Clay Products have been producing a Bat Access Brick specially designed to help the country's badly depleted bat population by provided access to wall cavities or roof spaces where most bat colonies tend to be (see diagram). In recent years bats have been declining at an alarming rate. Nearly all colonies tend to be on the outside of houses, in wall cavities, under slates, flashing or tiles, etc. ... Contrary to popular opinion, bats do not make pests and do absolutely no damage to buildings or roof timbers, indeed many people encourage bat colonies in their area because of the large number of insect pests, woodworm, et c. which they eat. Most colonises will use a house for only a few weeks in summer before dispersing in autumn.'





Marshall's Bat Access Brick, which is now also available in stone.

A Bat Brick should ideally be placed as high as possible at the gable apex or close to the soffit.

Marshalls Clay Products - Quarry Lane,
Howley Park, Woodkirk, Dewsbury, West
Yorkshire, WF12 7JJ – Tel: (01132) 203535,
Fax: (01132) 203555.

Bat Tube

Brick bat tubes are designed for buildings, or underneath bridges, arches or tunnels, where conditions are relatively humid. They are particularly useful for new buildings or bridges to attract bats, or to provide new roost sites where existing buildings with bats are being renovated.

This long box can be installed within brick masonry, beneath plasterwork or wood panelling, or incorporated into concrete structures such as factory buildings or bridges. Inside it contains a woodcrete surface, a roughened wood board, and a metal mesh, providing a choice of roosting areas depending on the weather conditions and the bats' habits. This box is maintenance-free as the entrance slit is at the bottom.

No painting required, but if painting is necessary a natural breathable paint should be used.

Width: 20cm; Height: 47.5cm; Depth: 12.5cm; Entrance Width: 15cm; Entrance Depth: 2cm; Weight: 13kg





Bat Box

This type of box is made of woodcrete and is expected to last approximately 25 years. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats. Woodcrete (75% wood sawdust, concrete and clay mixture).

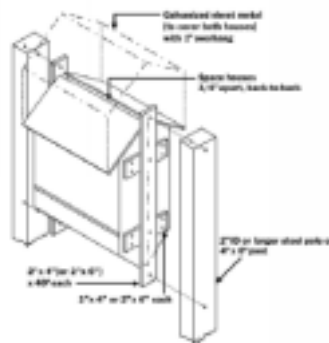
Width: 27cm; Height: 43cm; Weight: 8.3kg.



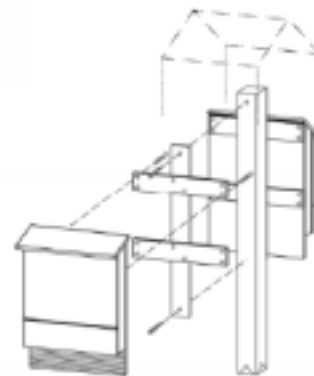
Mounted bat houses



Mounted Bat House



Double Post Mount



Single Post Mount

Images from Bat Conservation International



APPENDIX H – BAT FRIENDLY PLANTING



Gardening for bats

Aim at having flowers in bloom throughout the year, including both annuals and herbaceous perennials. Below are some suggestions, but this is not an exhaustive list. Flowering times are approximate, varying dependent on region. Regular dead-heading extends flowering period in many flowers.

A=annual, HA= hardy, annual, HHA=half-hardy annual, P=perennial, W=wild flower.

Flowers for borders			
St. John's Wort	<i>Hypericum</i>	P	March
Marigolds	<i>Calendula</i>	H/A	March-October
Aubrietia	<i>Aubrietia deltoidea</i>	P	March-June
Honesty	<i>Lunaria rediviva</i>	HB	March
Forget-me-not	<i>Myosotis sp.</i>	A/P	March-May
Elephant ears	<i>Bergenia</i>	P	April
Wallflowers	<i>Erysimum</i>	B	April-June
Cranesbills	<i>Geranium sp.</i>	P	May-September
Yarrow	<i>Achillea</i>	P	May-
Poppies	<i>Papaver sp.</i>	A	May- July
Dames violet	<i>Hesperis matronalis</i>	P	May-August
Red Valerian	<i>Centranthus ruber</i>	P	May-Sept
Poached egg plant	<i>Limnanthes</i>	HA	June-August
Knapweed	<i>Centaurea nigra</i>	P	June-September
Phacelia		HA	June-September
Ox-eye daisy	<i>Leucanthemum vulgare</i>	P	June-August
Evening primrose	<i>Oenothera biennis</i>	B	June-September
Candytuft	<i>Iberis umbellate</i>	HA	June-September
Sweet William	<i>Dianthus barbatus</i>	B	June-July
Blanket flowers	<i>Gaillardia</i>	P	June -
Verbena	<i>Verbena bonariensis</i>	HHA	June-October
Scabious	<i>Knautia arvensis</i>	P	July-August
Night-scented stock	<i>Mattiola bicornia</i>	HA	July-August
Pincushion flower	<i>Scabious sp.</i>	A/P	July-September
Cherry pie	<i>Heliotrope</i>	HHA	July-October
Mexican aster	<i>Cosmos sp.</i>	A/P	July-October
Cone flower	<i>Rudbeckia sp.</i>	A/P	August-November
Mallow	<i>Lavatera sp.</i>	P	August-October
Michaelmas daisy	<i>Aster sp.</i>	P	August-September
Ice plant 'Pink lady'	<i>Sedum spectabile</i>	P	September
Herbs – both leaves and flowers are fragrant			
Fennel	<i>Foeniculum vulgare</i>		July-September
Bergamont	<i>Monarda didyma</i>		June-September
Sweet Cicely	<i>Myrrhis odorata</i>		April-June
Hyssop	<i>Hyssopus officinalis</i>		July-September
Feverfew	<i>Tanacetum parthenium</i>		June-September
Borage	<i>Borago officinalis</i>		May-September
Rosemary	<i>Rosmarinus officinalis</i>		March-May
Lemon balm	<i>Melissa officinalis</i>		
Coriander	<i>Coprianrum sativum</i>		June-August



Lavenders	<i>Lavendula sp.</i>		
Marjoram	<i>Origanum sp.</i>		
Trees, shrubs and climbers important to insects			
Oak	<i>Quercus sp.</i>	large gardens only	
Silver birch	<i>Betula pendula</i>		
Common alder	<i>Alnus glutinosa</i>	Suitable for coppicing	
Hazel	<i>Corylus avellana</i>	Suitable for coppicing	
Elder	<i>Sambucus nigra</i>	Small	
Goat willow	<i>Salix caprea</i>	Suitable for coppicing	
Hawthorn	<i>Crataegus monogyna</i>	Suitable for coppicing	
Honeysuckle	<i>Lonicera sp.</i>	Grow a variety for succession	
Dog rose	<i>Rosa canina</i>	Climber	
Bramble	<i>Rubus fruticosus</i>	Climber	
Ivy	<i>Hedera helix</i>	Climber	
Buddleia	<i>Buddleija davidii</i>	Shrub	
Guelder rose	<i>Viburnum opulus</i>	Shrub	
Gorse	<i>Ulex sp.</i>	Shrub	
Plants for pond edges and marshy areas			
Purple loosestrife	<i>Lythrum salicaria</i>	W	June-August
Meadow sweet	<i>Filipendula ulmaria</i>	W	June-September
Lady's smock	<i>Cardamine pratensis</i>	W	April-June
Water mint	<i>Mentha aquatica</i>	W	July-September
Angelica	<i>Angelica sylvestris</i>	W	July-September
Hemp agrimony	<i>Eupatorium cannabinum</i>	W	March-May
Marsh marigold	<i>Caltha palustris</i>	W	June-September
Creeping Jenny	<i>Lysimachia nummularium</i>	W	May-August
Fringed water lily	<i>Nymphoides peltata</i>	W	June-September
Water forget-me-not	<i>Myosotis scorpioides</i>	W	June-September

Allow part lawns to grow long in summer and cut in autumn, removing the clippings. Avoid using fertilisers. Compost heaps are food producers of insects too.

(Source: 'Gardening for bats', Bat Conservation Trust, 2004)



APPENDIX I – REPORT CONDITIONS



Report Conditions

Clitheroe Community Hospital – Bat Survey

This report is produced solely for the benefit of the East Lancashire Hospitals Trust, and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYG Environment. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of WYG using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to WYG Environment by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used



by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties. The performance of environmental protection measures, e.g. of buildings and other structures in relation to acoustics, vibration, noise mitigation, and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.

December 2016