

Channel View

Bat Survey Report

December 2020

Cardiff Council

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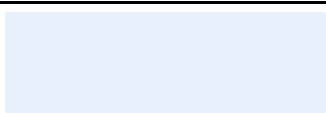
Channel View

Bat Survey Report

December 2020

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Executive Summary

Contents	Summary
Site Location	<p>The site is located south of Grangetown in Cardiff and is centred at Ordnance Survey National Grid Reference ST178741.</p> <p>The site covers circa 5.1 hectares and comprises public open space areas, residential properties, a 14 storey block of flats, and access roads.</p>
Proposals	<p>Hybrid planning application for mixed-use development. Outline planning permission is sought for: The redevelopment and extension of part of the existing Channel View Estate to provide up to 321 residential apartments and houses (Use Class C3), up to 285 sq.m of retail floorspace (Use Class A1), communal gardens incorporating allotments and picnic areas, formal and informal children's play space, landscaping, cyclepaths/footpaths, drainage infrastructure, roads and parking; The regeneration of the Marl public open space to include new/improved sports pitches, children's play space, a new 'beach', water features, landscaping, and cyclepaths/footpaths; The provision of a new bus/cycle/pedestrian link between Channel View Road and South Clive Street and a new cycle/pedestrian link between South Clive Street and Ferry Road; The provision of a new parking area; Together with associated works (all matters reserved for future consideration). Full planning permission is sought for a first phase of development comprising of a tower block (8-12 storeys) providing 79 elderly-persons (over 55s) accommodation units, a 115sq.m community cafe, communal gardens incorporating allotments and picnic areas, landscaping, drainage infrastructure, footpaths, roads, parking and associated works.</p>
Existing Site Information	<p>Tetra Tech (2020) Channel View Ecological Appraisal. Report produced for Cardiff Council December 2020.</p>
Scope of this Survey(s)	<p>The scope of these surveys was to;</p> <ul style="list-style-type: none"> undertake a BRA of the buildings on site to assess their suitability for roosting bat; carry out surveys (emergence/ re-entry surveys and backtracking surveys) to gain an understanding of bat species' usage of the site; <p>make an assessment of the effects of the proposed development of the site relating to bat species and make recommendations for mitigation and enhancement where necessary and/or possible.</p>
Results	<p>A total of three roosts were recorded during the surveys:</p> <ul style="list-style-type: none"> Soprano pipistrelle maternity roost up to six bats - South Clive Street 54;

	<ul style="list-style-type: none"> • Soprano pipistrelle maternity roost up to five bats - South Clive Street 60 • Common pipistrelle (non-breeding) day roost for a single bat - 121 South Clive Street. • No bats were seen emerging from or re-entering any of the other buildings surveyed.
Recommendations	<p>It is recommended following the receipt of full planning permission an EPSL application should be made to NRW.</p> <p>The EPSL will need to demonstrate how bats will be protected during any works with the potential to affect roosts. The EPSL will also need to demonstrate how any losses of roosts would be compensated for. This will be included within the Method Statement section of the EPSL and include measures such as sensitive timing of works and supervision of works by an ecologist.</p> <p>Prior to obtaining an EPSL, update bat surveys will be undertaken on 121 South Clive Street and Channel View houses / Flats during the optimal survey season May to August prior to the proposed demolition (see Phasing Plan), so that the survey information including the precautionary methods is considered sufficient to support EPSML.</p>

Glossary

Badger Act	Bat Conservation Trust
BRA	Bat Roost Assessment
BRM	Breathable roof membranes
CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
DEFRA	Department for Environment, Food and Rural Affairs
EPS	European Protected Species
Habitat Regulations	Conservation of Habitats and Species Regulations 2017
ILP	Institution of Lighting Professionals
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LPA	Local Planning Authority
MAGIC	Multi-Agency Geographic Information for the Countryside
NRW	Natural Resources Wales
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
OS	Ordnance Survey
PEA	Preliminary Ecological Appraisal
SEWBREC	South East Wales Biodiversity Records Centre
W&CA	Wildlife & Countryside Act 1981

1.0 Introduction

1.1 Background

- 1.1.1 Tetra Tech (formerly WYG) were commissioned by Cardiff Council in August 2020 to complete further bat surveys to inform the proposed development at Channel View Road, Grangetown, Cardiff. The bat surveys were recommended following an Ecological Appraisal completed by Tetra Tech in March 2020 (Tetra Tech, 2020) which determined that the site was considered to have suitability for roosting bats.
- 1.1.2 This report gives the findings of the bat surveys completed and was prepared by Tetra Tech Principal Ecologist Sarah Dillon BSc (Hons) MSc ACIEEM. The report conditions are given in Appendix A.

1.2 Site Location

- 1.2.1 The site is located south of Grangetown in Cardiff and is centred at Ordnance Survey National Grid Reference ST178741. The survey area, hereafter referred to as the 'site', is shown on Figure 1.
- 1.2.2 The site is located between Cardiff City centre and Cardiff Bay at Channel View Park and The Marl public open space, adjacent to the banks of the River Taff. The site covers circa 5.1 hectares and comprises public open space areas, residential properties, a 14 storey block of flats, and access roads.

1.3 Development Proposals

- 1.3.1 Hybrid planning application for mixed-use development. Outline planning permission is sought for: The redevelopment and extension of part of the existing Channel View Estate to provide up to 321 residential apartments and houses (Use Class C3), up to 285 sq.m of retail floorspace (Use Class A1), communal gardens incorporating allotments and picnic areas, formal and informal children's play space, landscaping, cyclepaths/footpaths, drainage infrastructure, roads and parking; The regeneration of the Marl public open space to include new/improved sports pitches, children's play space, a new 'beach', water features, landscaping, and cyclepaths/footpaths; The provision of a new bus/cycle/pedestrian link between Channel View Road and South Clive Street and a new cycle/pedestrian link between South Clive Street and Ferry Road; The provision of a new parking area; Together with associated works (all matters reserved for future consideration). Full planning permission is sought for a first phase of development comprising of a tower block (8-12 storeys) providing 79 elderly-persons (over 55s) accommodation units, a 115sq.m community cafe, communal gardens incorporating allotments and picnic areas, landscaping, drainage infrastructure, footpaths, roads, parking and associated works.

Refer to drawing 100 Rev. G for Masterplan.

1.4 Purpose of the Report

1.4.1 The ecological investigations for bats undertaken by Tetra Tech included the following objectives:

- Outline the legislative protection given to bats;
- Detail existing bat records and locally designated sites of relevance to bats;
- Summaries findings of the bat surveys and report on the presence or otherwise of bat species at the site; and
- Provide an assessment of the effects of the proposed development of the site relating to bat species and recommendations for mitigation and enhancement where necessary and/ or possible.

2.0 Methodology

2.1 Desk Study

Previous Reports

- 2.1.2 The Tetra Tech Ecological Appraisal produced for the site (Tetra Tech, 2020) was reviewed as part of this assessment.

Local Ecological Records Centre

- 2.1.3 Information was requested from South East Wales Biodiversity Records Centre (SEWBREC) as part of the Ecological Appraisal (Tetra Tech, 2020). The request included information on any nature conservation designations and protected or notable species records within 2km of the site including bats. Records made within the last 10 years were analysed.

2.2 Field Surveys

External Bat Roost Assessment

- 2.2.2 An external BRA was undertaken as part of the Ecological Appraisal (Tetra Tech, 2020) by licensed bat ecologists Dan Flew GradCIEEM (NRW Licence reference 80012:OTH:CSAB:2018) and Sean Flynn CEnv MCIEEM (NE Class 1 bat survey licence number 2020-45285-CLS-CLS-CLS-CLS) on 31st March 2020. The BRA was undertaken during suitable weather conditions (dry, overcast, strong breeze) with survey methodology based on current industry standard practice guidance *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016), hereafter referred to as BCT Guidelines.
- 2.2.3 The site was separated into areas characteristic of each building type. The location of the buildings within the site are shown in Figure 2. These were as follows:
- South Clive Street Houses 50 – 64;
 - South Clive Street Houses 117 – 127;
 - Channel View Road houses (to the east of Channel View Road);
 - Channel View Road Flats (in SE corner of site);
 - Channel View Multi-storey Flats.
- 2.2.4 Each building type was assessed in terms of its potential to support roosting bats in accordance with the BCT Guidelines. The assessment allocated a bat roost potential of high, moderate or low suitability for each building type instead of individual building descriptions. This was done because of the number of occupied houses and flats and it would not be practical to focus on each individual house/ flat, however any major or obvious feature which could impact suitability was recorded with the house/ flat number so that attention could be focussed on these areas during further surveys.

- 2.2.5 No internal assessment was carried out of the buildings due to safety concerns with the current Covid-19 pandemic.
- 2.2.6 The outcome of this survey was to categorise the buildings in accordance with the BCT Guidelines given in Table 1 below.

Table 1 Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions & surrounding habitat.

Bat Emergence / Re-entry Surveys - Buildings

2.2.7 The buildings onsite ranged from Low to High suitability and therefore further surveys were required of any buildings to be impacted directly or indirectly by the proposed development. A series of emergence/ re-entry surveys were carried out from 24th August to 22nd September 2020 with reference to the BCT Guidelines (Collins, 2016). The level of survey for each building suitability is detailed below:

- High suitability- Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey from May to September with at least two of the surveys between May and August.
- Moderate suitability- Two separate survey visits. One dusk emergence and a separate dawn re-entry survey from May to September with at least one of the surveys between May and August.
- Low suitability- One survey. One dusk emergence or dawn re-entry survey between May and August.

2.2.8 To enable the survey of the large number of buildings on Channel View Road (classified as Low suitability) these buildings were split into three areas; Block 1, Block 2 and Block 3 as shown in Figure 3. Five surveyors were positioned around Block 1 and six surveyors were positioned around Block 2 and 3 as detailed in Figure 3 with one emergence survey completed for each block in line with Low suitability methodology (Collins 2016). The survey included an element of emergence and backtracking survey with experienced surveyors making visual observations of bats commuting from their roosts and attempting to track back to the roost based on these observations. The methodology was originally

discussed with Matthew Harris Cardiff Council Ecologist on 1st June 2020 with amendments due to the later commission date agreed on 20th August 2020.

- 2.2.9 During the surveys, surveyors were positioned to enable all PRFs to be visible.
- 2.2.10 During the surveys, bat emergences and re-entries were recorded on survey sheets and their calls recorded using Elekon Batloggers. Bat Explorer software was subsequently used to analyse these calls. Temperature readings, cloud cover and wind conditions assessments were also recorded.
- 2.2.11 The dusk emergence surveys commenced 15 minutes before sunset and continued for at least 1.5 hours after sunset. The pre-dawn re-entry survey commenced 1.5 hours before sunrise and continued until 15 minutes after sunrise.
- 2.2.12 During the surveys, the areas identified as potential access and egress points were observed by the surveyors for any bats emerging from or returning to the roost. Incidental bat activity was also recorded. All of the surveyors are experienced in bat surveys.
- 2.2.13 Below is a list of the surveyors and with licence numbers as relevant:
- Tetra Tech Principal Ecologist Sean Flynn (NE Class 1 bat survey licence number 2020-45285-CLS-CLS-CLS-CLS);
 - Tetra Tech Ecologist Dan Flew (NRW Licence Number 80012:OTH:CSAB:2018 & NE Class 2 bat survey licence number 2015-10506-CLS-CLS);
 - Tetra Tech Senior Ecologist Luke Verall;
 - Tetra Tech Consultant Ecologist Nia Denman;
 - Tetra Tech Field Ecologist Hazel Cook;
 - Tetra Tech Field Ecologist Tom Hird;
 - Tetra Tech Field Ecologist Nia Howells;
 - Tetra Tech Field Ecologist Matthew Collins
 - Tetra Tech Field Ecologist Lily Sparey;
 - Tetra Tech Field Ecologist Tom Hird; and,
 - Tetra Tech Field Ecologist Marie Pugh.
- 2.2.14 Table 2 summarises the survey times and weather conditions of the dusk emergence / dawn re-entry surveys.
- 2.2.15 All bat surveys were completed during the period when bats are active, within the optimum survey season and within suitable weather conditions (above 10°C at start, dry and with calm winds).

Table 2 Date and Weather Conditions for Nocturnal Surveys

Date of survey	Sunrise/sunset	Start	Finish	Temp End (oC)	Rain	Beaufort	Cloud (%)	Buildings surveyed
24/08/20	Sunset 20.15	20.00	21.45	19°C	No	0-1	70%	117-127 South Clive Street
26/08/20	Sunset 20.11	19.56	20.41	18°C	No	0-1	30%	54-60 South Clive Street
08/09/20	Sunset 19.41	19.27	21.11	17°C	No	0-1	80%	Block 1 Channel View & 54-60 South Clive Street
09/09/20	Sunrise 06.36	05.06	06.51	17°C	No	0	70%	117-127 South Clive street
14/09/20	Sunset 19.28	19.13	21.00	22°C	No	0	30%	Block 2 Channel View
15/09/20	Sunset 19.26	19.13	20.58	23°C	No	0	40%	Block 3 Channel View
22/09/20	Sunrise 07.00	05.30	07.15	13°C	No	0	0%	54-60 South Clive Street

2.3 Survey Limitations

2.3.1 The bat surveys were completed with the assistance of bat detectors. Surveys using bat detectors have an advantage over other methodologies (such as radio tracking or trapping) in that they are 'non-intrusive', and will therefore not have an adverse effect on the conservation status or welfare of bats. All survey techniques are subject to bias, and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats *Plecotus auritus*. However, these biases were considered when interpreting the results. It is also of note that Batloggers are very effective at picking up quiet calls from brown long-eared bats and other species. Some bat calls are variable and extremely similar between species. Where identification to species level was not possible (for example in the *Myotis* bat group), bats were identified to family level (e.g. *Myotis* sp.).

2.3.2 Due to the number of houses within Channel View Road the houses were split into three blocks, Block 1, Block 2 and Block 3 and it was not possible to cover every aspect of all buildings. However, due to the Low Suitability of the houses and the positions of the surveyors to surround each block including elements of backtracking this is not considered to be a significant limitation and is suitable to identify the likely presence of significant roosts within the buildings.

2.3.3 Due to the late commissioning of the project, surveys were not spread across the optimum bat survey period (May to August) with High and Moderate suitability buildings surveyed once in August and twice/once in September respectively and all Channel View

houses/ flats surveyed in September. The concentration of the surveys at the end of August and September could mean maternity bat roosts had dispersed before the survey is conducted. However, nocturnal surveys in September can also identify important roosts such as those roosts of a more transient nature. The findings of the surveys are considered to adequately represent the status of roosting bats within the buildings in order to inform the planning application. However, prior to obtaining an EPSL further surveys are recommended as detailed in Section 5.

- 2.3.4 The third survey was not carried out on number 121 South Clive Street due to the late commission of surveys and time constraints of late season and unsuitable weather conditions. However, the findings of the surveys are considered to adequately represent the status of roosting bats within the building in order to inform the planning application. Prior to obtaining an EPSL update bat surveys are recommended as detailed in Section 5.
- 2.3.5 The details of this report will remain valid for a period of one bat seasons from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals upon which this report was based.

3.0 Baseline Conditions

3.1 Desk Study

Previous Report

3.1.2 An Ecological Appraisal undertaken in March 2020 (Tetra Tech, 2020) determined that the houses on site offer potential opportunities for roosting bats. In addition, some of the poplar trees in The Marl were assessed as having low suitability for roosting bats.

3.1.3 The edges of the gardens, the park, trees and scrub provide suitable commuting and foraging habitat for bats with access to the wider landscape along the River Taff. The habitats were assessed as having Moderate suitability for commuting and foraging bats (Tetra Tech, 2020).

Local Ecological Records Centre

3.1.4 As part of the Ecological Appraisal (Tetra Tech, 2020), information was requested from SEWBREC on protected or notable species records within 2km of the site.

3.1.5 SEWBREC returned 214 records of bats within 2km of the site, comprising brown long-eared, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, lesser horseshoe bat *Rhinolophus hipposideros* and noctule bat *Nyctalus noctule*. The closest record was for common pipistrelle recorded in 2010 close to the south eastern boundary of the site.

3.1.6 The data search also identified 18 bat roost(s) (for common, soprano, Nathusius' pipistrelle, long-eared bat roosts and lesser horseshoe) and three possible roosts for common and soprano pipistrelle within 2km of the site. Three of these confirmed roosts have since been demolished under licence, long-eared bat and common pipistrelle bat roosts. The closest roosts to the site is directly to the north east of the red line boundary which was for a common pipistrelle found hanging in a room of a building in 2011 and subsequently released; and approximately 0.1km south of the site for three common pipistrelle recorded in a block of flats in 2012 and 2013 directly to the south of South Clive Road.

3.1.7 No SAC designated for bats was recorded within 10km of the site.

3.2 Bat Roost Assessment

3.2.1 The site was separated into five areas characteristic of each building type. The five areas were assessed for their potential to support roosting bats. The buildings were categorised as follows:

- High
- Moderate
- Low
- Negligible

3.2.2 See Appendix B for photographs of buildings.

Table 3 Bat Roost Assessment Results

Buildings	Bat roosting suitability	Description	Potential bat roost features
South Clive Street 50 - 64	High	Terraced and semi-detached buildings pitched roofs. Estimated 1940s build. Tiles on all houses are flat slate/ asbestos. Ridge tiles have occasional vent tiles. Apex has over hangs and wooden fascia boards. Many of the houses have nesting birds such as sparrows. The rear of the houses could not be seen very well, but back onto a small woodland area and would be ideal for foraging bats of the area. Front gardens all well planted with shrubs and hedges. There was no access to back gardens which were only viewed from adjacent council owned alleyways.	Numerous features under fascia, holes in brick work, gaps in roof and ridge tiles. Woodland and unlit back gardens offer good connectivity for roosting bats.
South Clive Street Houses 117- 127	Moderate	Buildings same design and age as numbers 50 - 64. There was no access to back gardens which were only viewed from adjacent council owned alleyways.	Similar features to 50 – 64 however no access to optimal foraging habitat reduced and increased light levels.
Channel View Road – houses	Low	Red brick housing approximately 1970 estate. Very tight brick work, low pitched roofs with flat tiles and tight ridge tiles, some with vent tiles (however majority have mesh preventing access). Mixture of uPVC and wood fascia boards largely very tight against brick work however some buildings with damaged fascia boards. Largely very tight all round for features.	Small access points noted under roof ridge tiles, missing mortar and vent tile on some ridges missing mesh. Some missing/ damaged fascia boards.
Channel View Road Flats	Low	Red brick flats. Buildings very tight with features including very occasional small gaps in fascia boards. Eastern aspects of each building opens directly to the River Taff and extensive mosaic of habitats.	Presence of features small enough to support individual bats cannot at this stage be discounted due to number of buildings.
Channel View Multi-storey Flats	Negligible	High rise flats estimated to have been developed during the 1960/ 70s surround by gardens. Well sealed building with no gaps to cladding and expanding foam insulation around all windows.	None

3.3 Emergence/ Re-entry Surveys

3.3.1 Tables 4 to 6 below provide results of all buildings. The results with emergence and re-entry flight lines and surveyor locations are shown on Figures 3 to 5 with locations of confirmed roosts and photographs of emergence/ re-entry points on Figure 6. As a summary the following roosts were recorded:

- Maternity roost of soprano pipistrelle bats at 54 and 60 South Clive Street;
- Summer (non-breeding) day roost of common pipistrelle bat at 121 South Clive Street.

3.3.2 All other buildings had no confirmed emergence or re-entry during the surveys

Table 4 54-60 South Clive Street (High Suitability)

Dusk Emergence Survey 1	Dusk Emergence Survey 2	Dawn Re-entry Survey 3
26/08/2020	08/09/2020	22/09/2020
A total of three soprano pipistrelle bats emerged from the northern gable end of number 54 (under the end ridge tile and fascia board). A number of noctule bats were recorded flying in a easterly direction. Common pipistrelle bat passes were also recorded.	A total of eleven soprano pipistrelle bats emerged during the survey- six emerged from the southern gable end of number 60 and five from the northern gable end of number 54. A number of noctule bats were recorded flying in an easterly direction. Common pipistrelle bat passes were also recorded.	A total of six soprano pipistrelle re-entered at the southern gable at the end ridge tile and fascia board of number 60. No bats were recorded re-entering at the northern gable end of number 54. A number of noctule bats were recorded flying in a westerly direction.
Summary		
<p>The combined results from the BRA and dusk emergence and dawn re-entry surveys show that 54-60 South Clive Street supports:</p> <ul style="list-style-type: none"> • A soprano maternity roost of up to five bats (54 South Clive Street). • A soprano pipistrelle maternity roost up to six bats (60 South Clive Street). <p>It is assumed that these are two separate roosts and considered to be of County value (Wray, 2010). The majority of the emerged bats flew in a southerly direction using the line of trees along South Clive Street as cover and then veered through the houses around 117 South Clive Street onto Channel View/ The Marl.</p>		

Table 5 117-127 South Clive Street (Moderate Suitability)

Dusk Emergence Survey 1	Dawn Re-entry Survey 2	Dusk Emergence Survey 3
24/08/2020	09/09/2020	N/a
No bats were recorded emerging from any of the buildings during the survey. Activity comprised moderate numbers of common and pipistrelle bats commuting/	The last bat a single common pipistrelle was recorded re-entering number 121 South Clive Street under a fascia board at the rear of the building (eastern aspect).	Late season time restrictions and unsuitable weather conditions didn't allow for sufficient survey opportunity.

Dusk Emergence Survey 1	Dawn Re-entry Survey 2	Dusk Emergence Survey 3
24/08/2020	09/09/2020	N/a
foraging from the north down South Clive Street and east between 119 and 121 South Clive Street.		
Summary		
<p>The combined results from the BRA and dusk emergence and dawn return surveys show that 117-127 South Clive Street supports:</p> <ul style="list-style-type: none"> • Common pipistrelle (non-breeding) day roost for a single bat <p>This roost is considered to be of Local value (Wray, 2010)</p>		

Table 6 Blocks 1-3 Channel View Road (Low Suitability)

Dusk Emergence Survey (Block 1)	Dusk Emergence Survey (Block 2)	Dusk Emergence Survey (Block 3)
08/09/2020	14/09/2020	15/09/2020
<p>The first bat recorded was a noctule at 19.56 (15 minutes after sunset). The noctule was recorded to come from the west and forage over the field east of site. Soprano pipistrelles were also recorded coming from the west and foraging over the field. It was recorded as low activity on the roadside of the estate bar the bats passing over from west to east.</p> <p>No bats were recorded emerging from any of the buildings during the survey.</p>	<p>The first bat recorded was a noctule at 19.22 (6 minutes before sunset). Similar activity recorded to activity on the 08/09/2020 with noctules coming from the west and foraging over the field east of site. Soprano pipistrelles were also recorded coming from the west and foraging over the field. It was recorded as low activity on the roadside of the estate bar the bats passing over from west to east. Very little passes from common pipistrelle and a brief pass from a myotis on the field side of the estate.</p> <p>No bats were recorded emerging from any of the buildings during the survey.</p>	<p>The first bat recorded was a noctule at 19.36 (10 minutes after sunset). Activity much quieter at the southern end of site, with the predicted activity from the noctules and the soprano pipistrelles coming from the west to forage over the field. Very brief passes from common pipistrelle and over all very low activity.</p> <p>No bats were recorded emerging from any of the buildings during the survey.</p>
Summary		
<p>The combined results from the BRA and dusk emergence surveys show that the level of activity and recorded flight routes show that the buildings are unlikely to support any significant bat roosts in any of the Channel View Road properties.</p> <p>The recorded activity indicates pipistrelle bats are commuting from the west (potentially associated with the roosts recorded in South Clive Street) towards The Marl and River Taff to use these habitats for foraging/ commuting purposes. In addition noctules were recorded regularly flying from the west (beyond South Clive Street) to the east of the site.</p>		

4.0 Relevant Legislation

4.1.1 All British bat species are given special protection within the UK by their inclusion on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

4.1.2 As a result, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat's roosting place (even if bats are not occupying a roost at the time);
- Possess or advertise, sell or exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

4.1.3 With specific reference to the offence of disturbance, Regulation 41(1) of the Conservation of Habitats and Species Regulations 2017 states that a person commits an offence if they:

“...deliberately disturb wild animals of any such species [i.e. a European Protected Species] in such a way as to be likely significantly to affect:

(i) the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young; or

(ii) the local distribution or abundance of that species”.

4.1.4 Where development will result in damage to, or obstruct access to, any bat roost (whether occupied or not) or risks harming or significantly disturbing bats, a European Protected Species Licence (EPSL) is required from NRW to allow the development to proceed.

4.1.5 Bats are also afforded more general protection in Wales within Environment (Wales) Act 2016. Section 6 of the Act places a duty on public authorities to ‘seek to maintain and enhance biodiversity’ so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to ‘promote the resilience of ecosystems’. Consequently, attention should be given to dealing with the modification or development of an area if aspects of it are deemed important to bats, such as roosts, flight corridors and foraging areas.

4.1.6 Eight species of bats are listed as ‘Living organisms of principal importance’ for the purpose of maintaining and enhancing biodiversity in relation to Wales’ and are listed under Section 7 of the Environment (Wales) Act 2016. This interim list, which is exactly the same as the previous list under Section 42 of the NERC Act, is under review in consultation with NRW.

4.1.7 The eight species of bat listed under Section 7 of the Environment (Wales) Act 2016 are common pipistrelle, soprano pipistrelle, brown long-eared bat, greater horseshoe bat *Rhinolophus ferrumequinum*, lesser horseshoe bat, *Rhinolophus hipposideros* barbastelle *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii* and noctule.

5.0 Potential Impacts and Mitigation Strategy

5.1 Impact Assessment

5.1.1 Without appropriate mitigation, the proposed demolition of the buildings have the potential to have the following impacts on a day roost for common pipistrelle in addition to maternity roosts for soprano pipistrelle bats:

- Disturbance of bats when roosting;
- Killing or injury; and
- Destruction of roosts at 60 and 121 South Clive Road.

5.1.2 The demolition of 60 and 121 South Clive Street would therefore contravene relevant wildlife legislation and a European Protected Species Licence (EPSL) from NRW is required in order for the proposed works to proceed. The roost at 54 South Clive Street will be retained as part of the proposals however the demolition works are likely to disturb any bats present in this building and therefore the licence will cover this property. Buildings with identified roosts to be covered by the licence include:

- Maternity roosts of soprano pipistrelle bats at 54 and 60 South Clive Street (Demolition Phase F proposed late 2031);
- Summer (non-breeding) day roost of common pipistrelle bat at 121 South Clive Street (Demolition Phase B proposed late 2023).

5.1.3 The roosts have been identified to be impacted in Demolition Phase B (proposed late 2023) and Demolition Phase F (proposed late 2031) as detailed above which are covered by the outline planning application (see Powell Dobson Architects Phasing Plans). No roosts were recorded in the first phase covered by the full planning application.

5.1.4 The level of survey is considered suitable to support the hybrid planning application and detail the level of risk to impact bat populations, however due to the late commissioning of the project surveys were not spread across the optimum bat survey period (May to August) and a third survey of 121 South Clive Street was not possible (see Section 2.3). The concentration of the surveys at the end of August and September could mean maternity bat roosts had partially dispersed before the survey was conducted.

5.1.5 Therefore it is recommended update bat surveys are completed as part of the Reserved Matters application for future phases to inform the current status of roosting bats within the buildings onsite. This will enable further modification of the development design to reduce impacts on roosting bats. Further bat surveys are also likely to be required to inform any subsequent EPSL application.

5.1.6 Update surveys should be completed in line with the BCT Guidelines and completed within the previous survey season of the application.

5.2 Process for Obtaining an EPSL

- 5.2.1 As the future phases of the development (Demolition Phase B proposed late 2023 and Demolition Phase F proposed late 2031) will contravene relevant wildlife legislation a EPSL from NRW will be required to allow the proposed works to proceed. In order to obtain an EPSL, relevant permissions are required to be in place before an EPSL application can be processed. Once full planning permission is received and all planning conditions relevant to bats discharged a licence application can be made to NRW detailing how bats themselves will be protected during work from being injured or killed, and what alternative roosting locations will be provided as compensation. These are detailed in the method statement section of the licence application.
- 5.2.2 To determine the EPSL application, NRW require a minimum of 30 working days. Once the licence has been obtained, it will allow the demolition of the buildings to proceed which would otherwise be classed as an offence under the Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981) and Conservation of Habitats and Species Regulations 2017 (HMSO, 2017).

5.3 Derogation of EPS Licensing

- 5.3.1 The species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2017 (as amended) (HMSO, 2017), contain three “derogation tests” which must be applied by the LPA prior to granting planning permission and again by NRW when deciding whether to grant a licence to a person carrying out an activity which would harm a European Protected Species (such as bats). The three tests are that:

- the activity to be licenced must be for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest;
- there must be no satisfactory alternative; and
- the favourable conservation status of the species must be maintained.

Imperative Reasons of Overriding Public Interest

- 5.3.2 In order to meet the purpose of preserving public interest it would be expected that a clear benefit to the general public is demonstrated.
- 5.3.3 This criterion will be argued based on the proposed increase in properties, including council housing, to meet local housing supply requirements.

No Satisfactory Alternative

- 5.3.4 In order to qualify under this criterion, it will be necessary to provide a strong and robust argument that any other solution to the identified need is not satisfactory. It will be necessary to demonstrate the lack of alternative development sites and lack of alternative design. This argument should be proportionate to the impact (the destruction of low conservation status roosts for common pipistrelle (day roost) and medium conservation status roosts for soprano pipistrelle (maternity roosts)) (Mitchell-Jones, 2004).

- 5.3.5 The proposals will replace dated housing stock with new homes which are designed for modern living and to contemporary, environmentally efficient, standards with limited alternative sites available within the Cardiff urban area.

Favourable Conservation Status

- 5.3.6 A derogation of the Conservation of Habitats and Species Regulations 2017 (i.e. action permitted under an EPSL that would otherwise be unlawful) must not be detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range.
- 5.3.7 Without mitigation, the development will result in temporary disturbance impacts of a soprano pipistrelle maternity roost during demolition works and the permanent loss of a soprano pipistrelle maternity roost and common pipistrelle day roost. The loss of these roosts is unlikely to be significant to the favourable conservation status of these species. However, small roosts are still important (which is why they are protected as much as larger roosts) to bat conservation and population dynamics. Therefore appropriate mitigation has been recommended to provide alternative roosts during demolition and as a long term solution.

5.4 Protection Measures for Bats during Demolition Works

- 5.4.1 Prior to the commencement of any works (including buildings not to be covered by an EPSL), a toolbox talk will be given to contractors to include information on the bats roosting on site, bat signs and what to do if bats are found during works. This will also be clearly shown on the contractors site compound notice board with contact information for the ecologist. For buildings covered by an EPSL the method statement from the EPSL will be detailed to the contractor and discussed as required.
- 5.4.2 The majority of roosts recorded were located under fascia boards/ roof tiles and are considered to have negligible suitability for hibernating bats. Based on the type of roosts present demolition works are not to be conducted during the bat breeding season (May to September inclusive). Demolition works will be programmed such that buildings would be made unsuitable for use by bats between 1st October and 1st May e.g. ridge tiles and roof slates, fascia and soffits removed.
- 5.4.3 The removal of potential roosting features on all buildings with identified bat roosts will take place by hand or with hand tools under the supervision of a suitably experienced and licenced ecologist. Once all features with the potential to support roosting bats have been removed, the remaining demolition works should then take place.
- 5.4.4 Any bats found during works, if active (i.e. not torpid) and if temperatures are above 5°C, should be given a health check and relocated to one of the bat boxes put up on retained trees onsite (see Section 5.6). The bat boxes would be retained in perpetuity once the demolition is completed.

- 5.4.5 If the bats are injured, they will be taken to the nearest bat hospital. Should torpid bats be encountered they will be taken to an appropriate bat carer until a period of suitable weather conditions to be released on site.

5.5 Breathable Roof Membranes

- 5.5.1 Breathable roof membranes (BRM) should be avoided wherever possible. Instead, Type 1F bitumen and hessian under-felt should be used. Ongoing research has confirmed that no BRM are bat-friendly and all pose a risk to bats. As the membranes wear over time the fibres in the membrane become loose. Bats become entangled in the fibres and, unable to escape, dehydrate, and starve to death.
- 5.5.2 As well as posing a risk to bats, BRMs are also degraded by bats and the efficiency of the membrane is impaired (i.e. the use of BRMs in situations where bats are present is detrimental to the efficient functioning of the BRM as well as to bats). Further detail is provided in Waring *et al.* (2013).

5.6 Mitigation and Compensation

- 5.6.1 The proposed development will result in the loss of two roosts (maternity roost of soprano pipistrelle bats at 60 South Clive Street and summer (non-breeding) day roost of common pipistrelle bat at 121 South Clive Street) with additional disturbance of a maternity roost at 54 South Clive Street. Based on these impacts the below indicative mitigation will be required:

- 10 bat boxes will need to be installed on suitable retained trees within the site to relocate bats during works and provide suitable mitigation for the loss of roosts. These bat boxes will allow instant roost allocation and be in place before demolition works commence. The following bat boxes are recommended:
 - 6 Schwegler 2F;
 - 3 Schwegler 1FF;
 - 1 Schwegler 1FW bat hibernation box (or similar);
- A toolbox talk will be provided by a licenced bat worker to site contractors prior to demolition works detailing the method of working under the EPSL;
- All roosting features will need to be removed by hand under the supervision of a licenced bat worker;
- Any bats found will be given a health check by the licenced bat worker and relocated to one of the bat boxes installed on retained trees;
- Bitumastic (type 1F) roofing felt must be used instead of BRM on all properties covered by the EPSL;
- Bat access tiles and ridge access tiles will be installed to adjacent retained properties to 60 and 121 South Clive Street to allow enhanced access for roosting bats in a similar location as the existing access where possible. The numbers and types of access tiles to be used will be confirmed as part of the licence application.

5.7 Additional Mitigation and Enhancements

5.7.1 The following additional measures are recommended to help mitigate for the predicted impacts of the development proposals:

- Lighting scheme; and
- Roost enhancements.

Lighting Scheme

5.7.2 The Institution of Lighting Professionals (ILP) states that the impacts from artificial lighting on bats are likely to have significant impacts on some species, potentially affecting reproductive, foraging and roosting opportunities (ILP, 2018).

5.7.3 It is recommended that lighting on the development site comprise LED lamps, with a low colour correlated temperature – preferably below 3500K (warm white). Lighting should be directed groundward to avoid light spillage, with hoods / shields as necessary. Light spill on retained habitats, i.e. The Marl and The River Taff should be a maximum of 1 lux. The detailed lighting plan will be designed in consultation with an ecologist, taking into account the latest best practice guidance and latest survey information.

Habitat Enhancement and Creation

5.7.4 The Concept Landscape Strategy (Tetra Tech drawing A115866-1 201 Landscape Masterplan) includes a range of habitat creation including SuDS, tree and shrub planting and species rich grassland. All retained and created habitats should be subject to a site specific Habitat Management Plan (HMP) which seeks to enhance their biodiversity value in the long term. This will include enhancement for foraging and commuting bats.

Roost Enhancement

5.7.5 To provide an enhancement for roosting bats one bat access tile will be installed on a minimum of one in ten new buildings in suitable locations (not covered by the EPSL). Please note this is dependent on Type 1F bitumen and hessian under-felt being used on these properties (see Section 5.5).

5.7.6 The bat access tile will be installed on buildings with the location agreed with the project ecologist prior to installation.

6.0 Summary

- 6.1.1 A total of three roosts were identified on site during the emergence/ re-entry surveys:
- Maternity roost of soprano pipistrelle bats 54 South Clive Street;
 - Maternity roost of soprano pipistrelle bats 60 South Clive Street;
 - Summer (non-breeding) day roost of common pipistrelle at 121 South Clive Street.
- 6.1.2 The demolition works of 60 and 121 South Clive Street would therefore result the destruction to these bat roosts and potential disturbance of the roost within 54 South Clive Street without appropriate mitigation.
- 6.1.3 As the proposed development could result in adverse effects to bat roosts, an EPSL from NRW must be granted before any works to these properties can take place. It is recommended that mitigation includes the timing of works to minimise disturbance of roosting bats, and the inclusion of replacement roost. These mitigation measures must be retained in situ following the demolition works.
- 6.1.4 With the application of mitigation measures it is considered that there will not be any breaches of the legislation protecting bats and there will be no detrimental impact on the conservation status of the species affected by the development proposals.

7.0 References

- Collins, J. (ed.), (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 3rd edition, The Bat Conservation Trust: London.
- The Institution of Lighting Professionals (ILP) (2018) *Bats and Artificial Lighting in the UK Bats and the Built Environment series* Guidance Note 08/18
- Mitchell-Jones (2004) *Bat Mitigation Guidelines*. English Nature
- Waring, S. D., Essah, E. A., Gunnell, K., Bonser, R. H. C., (2013) Double jeopardy: The potential for problems when bats interact with breathable roofing membranes in the United Kingdom, *Architecture and environment*, 1(1):1-13.
- Wray, S., Wells, D., Long, E. & Mitchell-Jones, T., (2010) Valuing bats in ecological impact assessment, *In Practice*, No 70, pp 22-25.
- Tetra Tech, (2020) *Channel View Ecological Appraisal*, A115866-1, Report produced for Cardiff Council.

FIGURES

Figure 1 – Site Location Plan

Figure 2 – Bat Roost Assessment Results

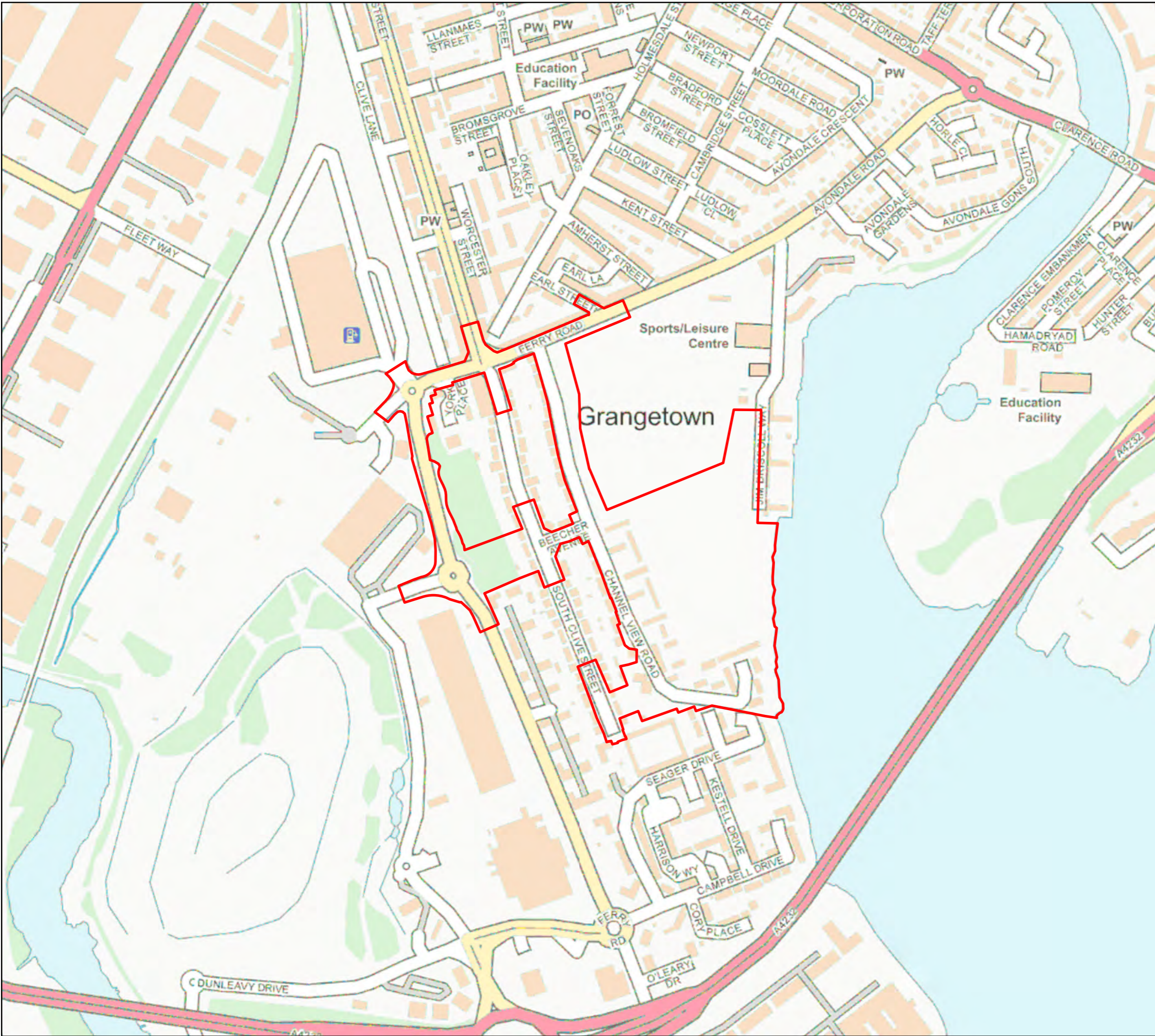
Figure 3 – Emergence / Re-entry Survey Results
Channel View Road

Figure 4 – Emergence / Re-entry Survey Results
South Clive Street (117 – 127)

Figure 5 – Emergence / Re-entry Survey Results
South Clive Street (54 – 60)

Figure 6 – Confirmed Roosts

Master Plan



Rev	Date	Notes
A	11/12/20	Initial map production

Legend

Site boundary



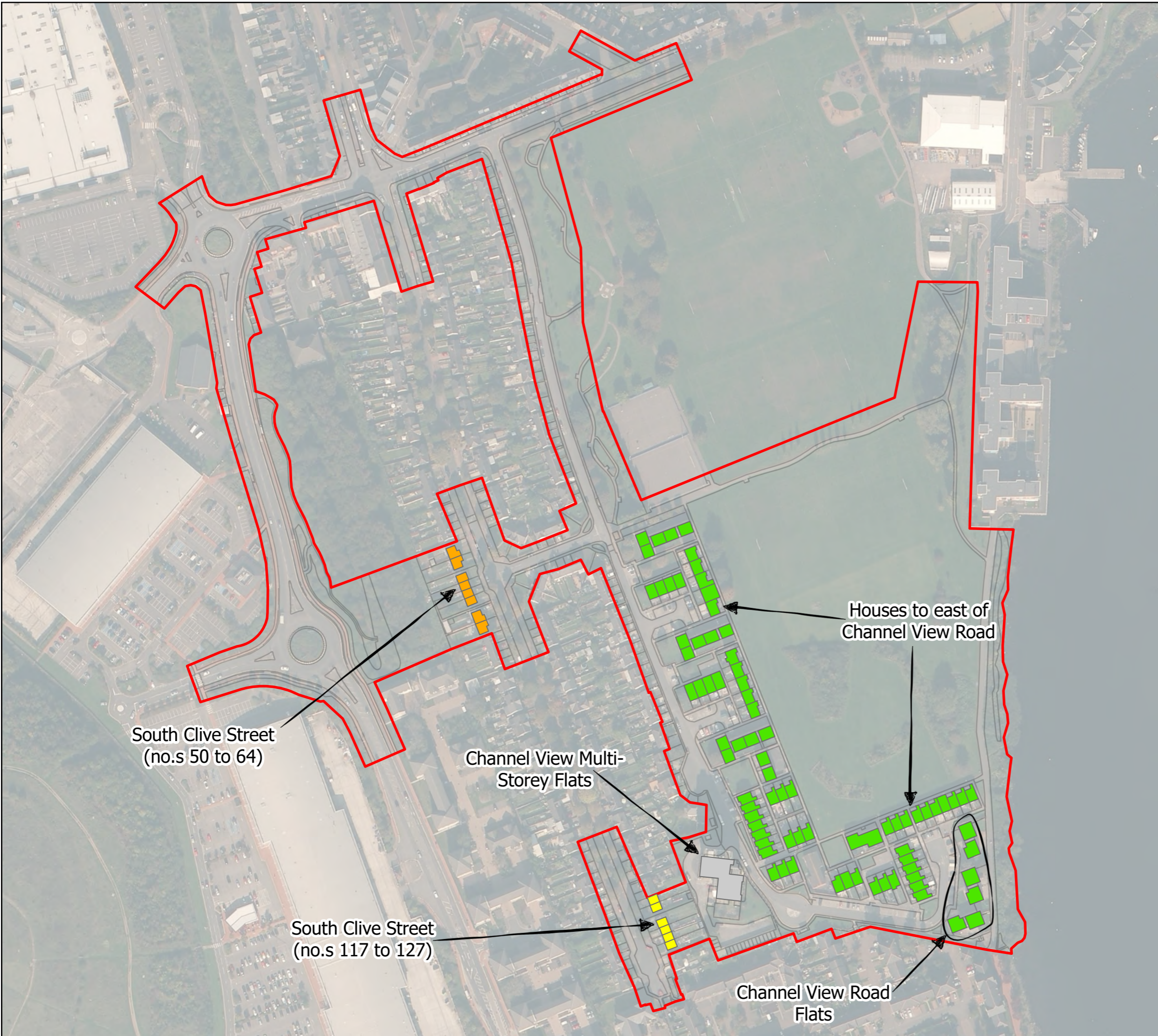
Site Location Plan

**Channel View
Cardiff Council**

Scale at A3: 1:5,000	Project No: A115866-1	Drawing No: Figure 1	Revision: A
Drawn by: Maddie Errington	Drawn date: 11/12/2020	Approved by: Daniel Flew	

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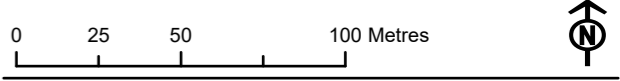
C:\temp\dm\am\p\W02009y_05_Proj\0111206 - Channel View\0111206-1_ChannelView.apx



Rev	Date	Notes
A	11/12/20	Initial map production

Legend

- Site boundary
- High
- Moderate
- Low
- Negligible



Bat Roost Assessment Results

**Channel View
Cardiff Council**

Scale at A3: 1:2,300	Project No: A115866-1	Drawing No: Figure 2	Revision: A
Drawn by: Ben Blowers	Drawn date: 11/12/2020	Approved by: Daniel Flew	

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Rev	Date	Notes
A	11/12/20	Initial map production

Legend

- Site boundary
- Building
- Channel View blocks
- Common pipistrelle flight line
- Soprano pipistrelle flight line
- Noctule flight line
- Surveyor location

0 12.5 25 50 Metres



**Emergence / Re-entry Survey Results
Channel View Road**

**Channel View
Cardiff Council**

Scale at A3: 1:1,100	Project No: A115866-1	Drawing No: Figure 3	Revision: A
Drawn by: Ben Blowers	Drawn date: 11/12/2020	Approved by: Daniel Flew	

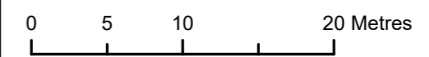
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Rev	Date	Notes
A	11/12/20	Initial map production

Legend

- Site boundary
- Buildings
- Common pipistrelle flight line
- Surveyor location



**Emergence / Re-entry Survey Results
South Clive Street (117 – 127)**

**Channel View
Cardiff Council**

Scale at A3: 1:500	Project No: A115866-1	Drawing No: Figure 4	Revision: A
Drawn by: Ben Blowers		Drawn date: 11/12/2020	Approved by: Daniel Flew

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No 54 Gable End No 54 Crevice

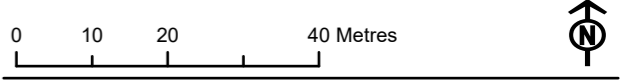


No 60 Gable End No 60 Ridge Tile

Rev	Date	Notes
A	11/12/20	Initial map production

Legend

- Site boundary
- Buildings
- ★ Roost location



Confirmed Roosts

**Channel View
Cardiff Council**

Scale at A3: 1:1,000	Project No: A115866-1	Drawing No: Figure 6	Revision: A
Drawn by: Ben Blowers	Drawn date: 11/12/2020	Approved by: Daniel Flew	

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APPENDICES

Appendix A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Cardiff Council (“the Client”) for the proposed uses stated in the report by WYG Environment Planning Transport Limited (“WYG”). WYG exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The 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. 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. 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 “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and 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.

Appendix B – Photographs



Plate 1- 50 to 64 South Clive Street



Plate 2- 117 to 127 South Clive Street



Plate 3- Channel View Road Flats



Plate 4- Channel View Road houses



Plate 5- Channel View Road houses



Plate 6- Channel View Road high rise flats



Plate 7- Channel View Road high rise flats cladding

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