

## Bat Survey at Distington Hall Crematorium, Workington, Cumbria, CA14 4QY

## 2019

**Report commissioned by:** 

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## **Quality Management**

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## **Executive Summary**

This report relates to a bat survey carried out at Distington Hall Crematorium, Workington, Cumbria, CA14 4QY - Nat. Grid Ref. NY 01832 23861 (See Figure 1).

Plans 'as existing' (See Figure 2) and 'as proposed' (See Figures 3 & 4) have been provided. The proposed works seek to 'redesign [...] the public, office and operational spaces within the crematorium to create additional floor space to enhance the customer experience and provide efficient and safe operational spaces' this will include the 'procurement and installation of a second cremator' (See - 'BEREAVEMENT SERVICES INVESTMENT: DISTINGTON HALL CREMATORIUM: PROJECT INITIATION DOCUMENT (PID). James Hunter, Copeland Borough Council, 10.04.2018').

This bat survey follows a 'Preliminary Ecological Appraisal (PEA)' (See - 'Preliminary Ecological Appraisal: Distington Hall Crematorium, Workington, Cumbria, CA14 4QY: 2019', Ref. No. ArP18SCO021, by Hesketh Ecology) which was completed in April 2019

The survey was conducted to confirm presence / likely absence of bat roosts within the building in line with Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)').

Bats have been identified roosting on the south western elevation in the area in which the proposed extensions will be constructed. However, the proposed canopies which will be constructed in these areas will tie in to the existing building at below wall-top height and will not necessitate the removal of the metal fascia. None of the identified roost locations will therefore be physically destroyed or damaged during the works.

In the absence of mitigation there is a risk that any bats using Roost 1 and Roost 4 could be disturbed by construction activities when the external canopies are constructed.

In order to avoid disturbing bats occupying Roosts 1 & 4, it is recommended that timing constraints are employed to ensure that no bats are present when potentially disturbing works take place. The metal fascia feature used by bats at Distington Hall Crematorium is highly unlikely to offer sufficient insulation to be used as a hibernation roost. Bats are therefore likely to vacate these roosts by November of any given year. Work to construct the external canopies on the south west elevation should be completed between November 1st and March 15th, thus occurring when bats are unlikely to be present and therefore avoiding disturbing bats during the works.

If completing the works during the hibernation season will not be possible, a European Protected Species Mitigation Licence (EPSML) must be obtained prior to works commencing so as to allow disturbance of bat roost contrary to The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

# Contents

1.	Introd	uction	4
	1.1.	Bats and their requirements	4
	1.2.	Bats and the law	4
	1.3.	Background to activity	5
	1.4.	Full details of proposed works on site	5
2.	Surve	y and site assessment	9
	2.1.	Pre-existing information on species at site	9
	2.2.	Status of species in the local/regional area	9
	2.3.	Objective of survey	11
	2.4.	Survey area	11
	2.5.	Habitat description	12
	2.6.	Current Site description	14
3.	Field s	survey	16
	3.1.	Methods	16
	3.2.	Equipment	16
	3.3.	Timing	17
	3.4.	Weather conditions	17
4.	Result	ts	18
6.	Photo	graphs	22
7.	Impac	t assessment	26
	7.1.	Pre- and mid- activity impacts	26
	7.2.	Long-term impacts	26
	7.3.	Post activity interference impacts	26
	7.4.	Other impacts	26
	7.5.	Summary of impacts at the site level	26
	7.6.	Summary of impacts in a wider context	26
8.	Mitiga	tion	27
	8.1.	Mitigation strategy	27
	8.2.	Enhancement Options	28
9.	Summ	hary	29
	9.1.	Summary of development and mitigation	29
10.	Refere	ences/Bibliography	30

## 1. Introduction

## 1.1. BATS AND THEIR REQUIREMENTS

In the UK there are eighteen species of bats, seventeen of which are known to be breeding. Each bat species utilises a variety of roost types and has certain ecological requirements. To determine which bat species are on site it is necessary to identify the species, are there bat roosts, the nature of the roost and how bats are using the site. This information will allow informed decision making on the potential impact to bats and provide a baseline for project planning, timing of works and potential mitigation/protection measures.

A bat roost is defined as "any place that a wild bat uses for shelter or protection" (The Wildlife and Countryside Act 1981; as amended). Bats usually choose roosts close to good feeding areas and these feeding areas are where there is a good abundance of 'prey' insects. All British bats are insectivorous and each bat species eats a range of insect species. Bats will fly some distance to forage the 'best' areas and this can sometimes create the situation where the roost is up to 1km or more from foraging areas. Bats are also affected by climatic conditions with poor weather affecting insects and their ability to hunt them.

### 1.2. BATS AND THE LAW

As population numbers have fallen, all bats and their roosts are protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. It is illegal to:

- deliberately capture (or take), injure or kill a bat;
- intentionally or recklessly disturb a group of bats; where the disturbance is likely to significantly affect the ability of any significant group of animals of that species to survive, breed or rear or nurture their young or likely to significantly affect the local distribution or abundance of the species, whether in a roost or not;
- damage or destroy the breeding or resting place (roost) of a bat;
- possess a bat (alive or dead), or any part of a bat;
- intentionally or recklessly obstruct access to a bat roost;
- sell (or offer for sale) or exchange bats (alive or dead), or parts of bats.

If the proposed works should result in the damage to or destruction of a roost or the disturbance of bats, then a licence must be acquired from Natural England (NE), to derogate from the Regulations. The licence must be applied for by a qualified ecological consultant. The licence is processed by NE and places conditions on the proposed development.

#### 1.3. BACKGROUND TO ACTIVITY

This report relates to a bat survey carried out at Distington Hall Crematorium, Workington, Cumbria, CA14 4QY - Nat. Grid Ref. NY 01832 23861 (See Figure 1).

Plans 'as existing' (See Figure 2) and 'as proposed' (See Figures 3 & 4) have been provided. The proposed works seek to 'redesign [...] the public, office and operational spaces within the crematorium to create additional floor space to enhance the customer experience and provide efficient and safe operational spaces' this will include the 'procurement and installation of a second cremator' (See - 'BEREAVEMENT SERVICES INVESTMENT: DISTING-TON HALL CREMATORIUM: PROJECT INITIATION DOCUMENT (PID). James Hunter, Copeland Borough Council, 10.04.2018').

This bat survey follows a 'Preliminary Ecological Appraisal (PEA)' (See - '*Preliminary Ecological Appraisal: Distington Hall Crematorium, Workington, Cumbria, CA14 4QY: 2019*', Ref. No. ArP18SCO021, by Hesketh Ecology) which was completed in April 2019 and concluded;

'Bat roosts have been confirmed in the building and the proposed works will unavoidably disturb these identified roost locations. Evidence of 3 distinct roost locations has been identified and potential exists along all elevations of the building. Further survey work must be completed to confirm the number and location of all roosts and egress points, the species of bat using the roosts, the number of bats using the roosts and the purpose for which they are using the roosts.'

Section 4.4, Pg.24

It is understood that a planning application for the proposed works (accompanied by the PEA report) was submitted to Copeland Borough Council in June 2019 and was subsequently validated. During the review of submitted documentation Copeland Borough Council identified that further bat survey work is required. This bat survey was then commissioned by Ms Louise Cleminson (Architects Plus (UK) Ltd). It is understood that this survey report will be used to inform the planning application process.

## 1.4. FULL DETAILS OF PROPOSED WORKS ON SITE

Plans 'as existing' (See Figure 2) and 'as proposed' (See Figures 3 & 4) have been provided. Originally a more extensive renovation scheme was proposed, but this has been scaled back to a degree. The majority of the proposed alterations are internal only and - being a modern, flat roofed building with no internal bat roost potential - are unlikely to impact upon bats. The elements of the scheme which have potential to disturb bats / bat roosts are the erection of 2no. external canopies over the entrance and exit of the building. These will be essentially free standing but will connect to the existing structure below wall-top height. The risk of the construction work physically affecting bat roosts is deemed to be negligible, but potential roost features, and one of the three confirmed roost locations, exist within close proximity of the proposed works and may therefore be disturbed by works whilst on-going.



Figure 1: Showing Distinction Hall Crematorium ('the site') outlined in red.

Page 7 of 31



**Figure 2:** Distington Hall Crematorium - Proposed Alterations; Floor Plan As Existing. Drawing No. 18056-03 by Architects Plus.



Figure 3: Distington Hall Crematorium - Proposed Alterations; 3D Sketch Exit. Drawing No. 18056-27 by Architects Plus.

Page 8 of 31



**Figure 4:** Distington Hall Crematorium - Proposed Alteration; 3D Sketch Main Entrance. Drawing No. 18056-28 by Architects Plus.

## 2. Survey and site assessment

### 2.1. PRE-EXISTING INFORMATION ON SPECIES AT SITE

A data search was commissioned from Cumbria Biodiversity Data Centre (CBDC) for this survey report, the results are presented in Section 4 (below).

A search using the MAGIC website (<u>https://magic.defra.gov.uk</u>) managed by Natural England for records of European Protected Species Mitigation Licensing (EPSML) was conducted but did not reveal any previous EPSML's for the site.

## 2.2. STATUS OF SPECIES IN THE LOCAL/REGIONAL AREA

Species	UK Popula- tion Estim- ate and Pro- portion of Bat Fauna	UK Status	Local Status	Habitat
Noctule Nyctalus noctula	50,000 / 1.02%	Uncommon but stable	Widespread but uncommon; mobile populations; breeding roosts recorded.	Tree dweller; predominantly in lowlands. Occupies wood- pecker and rot holes. Seldom in buildings. Will utilise bat boxes. Feeds over deciduous woodland, parkland, pasture, water and forest edges.
Daubenton's bat <i>Myotis</i> daubentonii	560,000 / 11.39%	Common and increas- ing	Widespread; hibernacula and breeding roosts recorded.	Bridges, tunnels, caves, mines, stone buildings and trees. Has been found hibern- ating underground at high altitude (550m). Feeds over rivers, canals and other water bodies. Will forage in riparian woodland.
Natterer's bat <i>Myotis nat-</i> <i>tereri</i>	148,000 / 3.01%	Common and increas- ing	Widespread; hibernacula and breeding roosts recorded. Less common than Daubenton's.	Similar to Daubenton's and can be found together; bridges, old buildings, barns, trees and underground sites. Feeds in woodland and park- land. Has recently been re- corded in some upland areas, mainly using riparian habitats.
Whiskered bat <i>Myotis mys-</i> tacinus	64,000 / 1.3%	Uncommon but stable	Widespread but uncommon; breeding roosts and hiber- nacula recorded.	Older, mainly stone buildings, churches, trees and often in bat boxes. Feeds mainly in deciduous woodland
Brandt's bat <i>Myotis</i> brandtii	30,000 / 0.61%	Uncommon but stable	Widespread but uncommon; hibernacula and breeding roosts recorded. "Swarming" sites recorded.	Similar to whiskered.

Species	UK Popula- tion Estim- ate and Pro- portion of Bat Fauna	UK Status	Local Status	Habitat
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Brandt's bat <i>Myotis</i> brandtii	30,000 / 0.61%	Uncommon but stable	Widespread but uncommon; hibernacula and breeding roosts recorded. "Swarming" sites recorded.	Similar to whiskered.
Brown long- eared bat <i>Plecotus</i> <i>auritus</i>	245,000 / 4.98%	Common and stable	Widespread and common; hibernacula and breeding roosts recorded.	Old buildings, churches, barns (often with trees close by), underground sites and trees. Often found in bat boxes. Feeds in deciduous and coni- ferous woodland often within the canopy; around parkland trees, gardens, along hedgerows.
Common pipistrelle <i>Pipistrellus</i> <i>pipistrellus</i> (45kHz)	2,430,000 / 49.41%	Common and increas- ing	Widespread and common; breeding roosts recorded but species recognition only re- cently recorded.	Wide age range of buildings; favours modern structures, trees occasionally and bat boxes. Feeds over diverse habitats; rural and urban gar- dens, woodland, farmland, or near water. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia board- ing and in gaps in wooden window frames, also hibern- ates in trees.

Species	UK Popula- tion Estim- ate and Pro- portion of Bat Fauna	UK Status	Local Status	Habitat
Soprano pipistrelle <i>Pipistrellus</i> <i>pygmaeus</i> (55kHz)	1,300,000 / 26.43%	Common and stable	Widespread and common; breeding roosts recorded but species recognition only re- cently recorded.	As common pipistrelle. Fa- vours riparian habitat, and roosts in larger maternity colonies than the common pipistrelle. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia board- ing and in gaps in wooden window frames, also hibern- ates in trees
Nathusius' pipistrelle Pipistrellus nathusii	16,000 / 0.33%	Uncommon and trend unknown	Rare. Three UK breeding sites known. A single bat-detector record of a night roost in Cum- bria, and several foraging re- cords.	Tree dweller; hollow trees, cracks, bat boxes and build- ings. Sometimes shares nurs- ery roost with pipistrelle or Brandt's bats. Feeds mainly around riparian and woodland edge habitats.
Leisler's bat Nyctalus leisleri	28,000 / 0.57%	Uncommon and trend unknown	Rare. Unconfirmed bat detector record for Cumbria. Present in adjacent counties (Yorkshire and Dumfries and Galloway).	Woodland bat, similar to noc- tule but will roost in buildings. Feeds in open deciduous and coniferous woodland, over water bodies, parkland and around street lamps in sub- urban areas.

 Table 2: Local status and habitat of Cumbrian bat species.

### 2.3. OBJECTIVE OF SURVEY

The objective of the survey was to identify presence / likely absence of bats / bat roosts, the species of bat present and the nature of the roost or the purpose for which they are using the site. The survey follows published survey guidelines ('*Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)*' - The Bat Conservation Trust, London. ISBN- 13 978-1-872745-96-1).

### 2.4. SURVEY AREA

The daytime site inspection - conducted as part of the PEA - was conducted to identify any potential for, or evidence of, bats. This involved a detailed inspection of all elevations, including all potentially suitable crevices within the structure of the building (internal and external) and the internal space using ladders, high powered torches and a video endoscope as appropriate. Surrounding habitat within the immediate vicinity was also assessed. The bat activity surveys, taking account of the reduced scope of the proposal, focused on the south western elevation of the building plus adjacent areas only (See Figure 5).

#### 2.5. HABITAT DESCRIPTION

The Preliminary Ecological Appraisal described the habitat as follows;

<sup>1</sup>Distington Hall Crematorium is on the site of the Distington Hall which was built between 1880 and 1899 and was the home of Charles Edward fisher Esq. and his wife Florence. At this time the grounds of Distington Hall included a walled garden (now Distington Walled Garden) and outbuildings on the footprint of the existing Crematorium. The house itself lay to the south west of the existing crematorium building in the area in which the Chapel building now sits. Charles and Florence Fisher separated in 1910 and by 1950 Distington Hall was a ruin although the walled garden and the outbuildings (on footprint of the crematorium) remained. At some time after 1967 the outbuildings were demolished and were replaced by the the existing Crematorium building which opened in 1974. Between (at least) 1867 and 1880 the site was completely undeveloped and appears to have consisted of enclosed agricultural fields with no woodland. Extensive woodland planting appears to have taken place during the construction of Distington Hall (1880 - 1899) and the location and extent of this woodland appears to have altered very little since this time. Similarly the areas of mown grassland appear to have remained broadly the same throughout this period.

The existing crematorium building is accessed and surrounded by a macadam road which is curbed on both sides. A car park lies to the south west of the crematorium between the crematorium and the chapel. An overflow carpark lies to the south west of the chapel within an area of semi-natural deciduous woodland. Immediately surrounding the crematorium building (beyond the enclosing macadam road) is mown amenity grassland with some small formal boarders planted with ornamental species. A number of small trees have been planted within the amenity grassland. Beyond the mown amenity grassland - and enclosing the site - is semi-natural deciduous woodland. This lies on the boundary of the site and contains large mature trees to the south west and north, smaller semi-mature trees to the north and east.

The amenity grassland which exists on site is routinely mown but is floristically diverse. The amenity grassland contains Yorkshire fog (Holcus lanatus), rye grass (Lolium perenne), marsh foxtail (Alopecurus geniculatus), sweet vernal grass (Anthoxanthum odoratum), field wood-rush (Luzula campestris), glaucous sedge (Carex flacca), creeping buttercup (Ranunculus repens), meadow buttercup (R. acris), daisy (Bellis perennis), ox-eye daisy (Leucanthemum vulgare), white clover (Trifolium repens), fox-and-cubs (Pilosella aurantiaca), lesser celandine (Ficaria verna), broad leaved dock (Rumex obtusifolius), curly dock (Rumex crispus), wood dock (Rumex sanguineus), ribwort plantain (Plantago lanceolata), greater plantain (Plantago major), foxglove (Digitalis purpurea), rosebay willow herb (Chamaenerion angustifoli-um), great willow herb (Epilobium hirsutum), marsh thistle (Cirsium palustre), common cleavers (Galium aparine), hairy bittercress (Cardamine hirsuta), ladies smock





(Cardamine pratensis), silverweed (Argentina anserina), herb Robert (Geranium robertianum), common sorrel (Rumex acetosa), Angelica (Angelica sylvestris) and common spotted orchid (Dactylorhiza fuchsii). The management regime of routine mowing maintains a short sward and the structure of the grassland is therefore very limited but despite this a range of woodland species (foxglove etc.) do occur.

The small trees which have been planted in the amenity grassland include sycamore (Acer pseudoplatanus), ash (Fraxinus excelsior var 'Pendula'), yew (Taxus baccata) and rowan (Sorbus aucuparia). Small self seeded Salix spp. have established in the formal plantings boarders adjacent the south western elevation of the building and ivy (Hedera helix) has grown up a discreet area of the building in the south east corner. Spanish bluebells (Hyacinthoides hispanica) and daffodils (Narcissus spp.) have been planted around the trees within the amenity grassland to the south west.

The woodland bounding the site is broadly natural, but has been supplemented with small trees. This woodland contains beech (Fagus sylvatica), common lime (Tilia x europaea), sycamore (Acer pseudoplatanus), ash (Fraxinus excelsior), alder (Alnus glutinosa), pedunculate oak (Quercus robur), silver birch (Betula pendula), hybrid black poplar (Populus x canadensis) and Salix spp.

No ponds or watercourses exist on site or immediately adjacent to the site. In the wider area (without the site boundary) the land comprises wet / marshy grassland to the north and drier improved grassland pasture to the south. Fields in the area are generally grazed by livestock - primarily sheep - and divided by hedgerows and stock fencing. To the north particularly connectivity to areas of scrub, woodland and brown-field sites to the south of the Lillyhall industrial estate is good. To the south the habitat is predominantly open agricultural land with poor connectivity to other semi-natural habitats in the vicinity.'

The surrounding habitat a can be considered as 'good' quality bat habitat.

#### 2.6. CURRENT SITE DESCRIPTION

The Preliminary Ecological Appraisal described the buildings on site as follows;

'The existing crematorium building was opened in 1974 and has seemingly undergone only minor alterations since this time. The building is constructed of brick with flat roofs throughout. Two external canopies exist on the northern and southern side respectively and these have a timber ceiling which is generally in a very good state of repair. Metal fascia capping has been retrofitted onto all wall-tops presumably to prevent water ingress. A translucent waterproofing treatment has been applied to sections of the southern elevation again presumably to prevent water ingress / penetrating damp. The external walls are all in good condition with only superficial cracks within the brickwork. The retrofitted metal fascia / capping applied to all wall-tops presents a gap between it and the external wall which extends around the entire building. This gap varies in extent but is suitably large to allow bats access across much of the building.

The structure of the original building offers very little opportunity for bats to roost. Being flat roofed, no internal roof voids exist and no slate / tile roof cladding exists on site. However the retrofitted metal fascia / capping does now offer some rather un-

Suitability	Roosting Habitat	Commuting / Foraging Habitat
Negligible	No - very few - or very sub-optimal - habitat features likely to be used by roosting bats.	No - very few - or very sub-optimal - habitat features likely to be used by commuting or foraging bats.
Low	A built structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these poten- tial 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 a larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as gaps hedgerows or unvegetated stream, but isolated, I.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A built structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (i.e. temperature, humidity, height above ground, light levels, level of disturbance) and sur- rounding 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 con- servation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grass- land or water.
High	A built structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, condi- tions and surrounding habitat.	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined water- courses and grazed parkland. Site is close to and connected to known roosts.

**Table 4:** Adapted from 'Table 4.1; Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement', Chapter 4, Pg. 35 - 'Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)'.

## 3. Field survey

### 3.1. METHODS

The building was surveyed for signs of bats using a high-powered torch (Clulite CB2, 1M candle power), video endoscope, extendable inspection mirrors and ladders as appropriate.

A systematic visual inspection of all external elevations and all internal roof voids was conducted so as to identify any evidence of bats. Signs of bats include: droppings, feeding remains (in association with droppings), wear marks or fur-oil staining on potential roost sites / egress points, clear areas in cobwebs, the smell of bats, audible signs of bats (squeaking noises) or the presence of bats (alive or dead). The external inspection included the grounds immediately surrounding the building, particularly focussing on areas beneath any potential bat egress points, but also including any window sills, window panes, walls, behind any peeling paint or blown render, any timber / plastic / slate / tile wall cladding, any signage attached to walls, eaves, soffits, bargeboards, fascias, lead flashing, gaps under felt, between overlapping metal or concrete profiled sheeting (i.e. corrugated metal) and beneath or between roof tiles / slates, coping stones and ridge tiles. Areas that were inaccessible but which had potential for bats were noted. Inaccessible areas were inspected using an Equinox HP 8x42 Binocular and an AG80 20x- 60x spotting scope (as appropriate).

The potential suitability of the buildings and the surrounding habitat for bats was assessed in line with relevant guidelines and allocated to one of the categories detailed within Table 4 (below).

The daytime site inspection was conducted on 18th April 2019. The daytime site inspection identified that the building offered 'moderate' bat roost potential and identified 3x roost locations and therefore - in line with published best practice guidelines - a total of three activity surveys are required to confirm presence / likely absence (see - 'Table 7.3 - Recommended minimum number of survey visits for presence / absence surveys to give confidence in a negative result for structures' - Pg. 52 of 'Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)').

## 3.2. EQUIPMENT

Equipment Item	Make / Model / Spec.
Optics	Equinox HP 8x42 Binocular RSPB AG80 20x- 60x Spotting Scope
Night Vision	Yukon Tracker NVG Night Vision Goggles
Camera	Canon EOS 1100D Digital SLR Camera
GPS	Garmin eTrex H GPS Receiver
Torches	Cluson / Clulite CB2 Clubman Rechargeable Spot-light Torch 1M Candle Power Petzl Tikka Plus 2 Head Torch: 50 LUMENS

Equipment Item	Make / Model / Spec.
Lux Meter	HoldPeak HP-881A Digital Lux Meter
Distance Estimator	Stanley 0-77-018 Intellimeasure Ultrasonic Distance Estimator
Endoscope	Video Inspection Borescope Endoscope 2.4 LCD Camera
Anemometer	Digital Anemometer Beaufort Scale / MPH
Thermometers; Air Surface	Bosmere Mercury free MAX/MIN Infrared DT-380 Thermometer (-50°C - 380°C)
Bat Detectors	Wildlife Acoustics EM3 Real Time Expansion Bat Detector Batbox Duet Heterodyne/Frequency Division Bat Detector Anabat Express Titley Scientific
Recording	Roland Edirol MP3 / WAV recorder
Software	Analook W

 Table 4: Equipment used during survey

## 3.3. TIMING

The site inspection was conducted on April 18th 2019 during the afternoon.

The activity surveys were conducted on July 1st 2019, between 21:30hrs and 23:45hrs (sunset = 21:52hrs) and July 12th 2019, between 03:00hrs and 04:50hrs (sunrise = 04:52hrs).

## 3.4. WEATHER CONDITIONS

Date	Activity	Weather conditions				
		Temp (°C)	Wind (Beaufort scale)	Cloud (%)	Precipitation	
18/04/19	Site inspection	14	0	50	None	
01/07/19	Emergence Survey 1	11	0	80	None	
12/07/19	Dawn Survey 1	12	0	100	None	

### Table 5: Weather Conditions

## 4. Results

Records obtained from Cumbria Biodiversity Data Centre include 8 records of bats from within 2km of the site. The only species previously recorded (and positively identified) is common pipistrelle (*Pipistrellus pipistrellus*) which are represented by only a single historic record - the remaining 7 records are of unidentified bat species. Of the 8 historic records, 6 relate to bat roosts of which 3 are identified as maternity roosts. All previously identified bat roosts within the search area are within residential properties in the village of Distington. No historic records of roosting bats or individual bats have been previously recorded on the site itself and the closest historic record of a bat is approximately 0.9km from the site.

The existing crematorium building was opened in 1974 and has seemingly undergone only minor alterations since this time. The building is constructed of brick with flat roofs throughout. Two external canopies exist on the northern and southern side respectively and these have a timber ceiling which is generally in a very good state of repair. Metal fascia capping has been retrofitted onto all wall-tops presumably to prevent water ingress. A translucent waterproofing treatment has been applied to sections of the southern elevation again presumably to prevent water ingress / penetrating damp. The external walls are all in good condition with only superficial cracks within the brickwork. The retrofitted metal fascia / capping applied to all wall-tops presents a gap between it and the external wall which extends around the entire building. This gap varies in extent but is suitably large to allow bats access across much of the building.

The structure of the original building offers very little opportunity for bats to roost. Being flat roofed, no internal roof voids exist and no slate / tile roof cladding exists on site. However the retrofitted metal fascia / capping does now offer some rather unusual bat roost potential. As the fascia / capping is metal, it is likely that the crevice behind has an extreme thermal range - getting very hot in the sun, but cooling down significantly at night. Ordinarily this may make this roost potential sub-optimal for bats, but as this fascia / capping extends around the entire building, it is likely that there will always be opportunity for any bats roosting beneath this feature to move to more suitable conditions during extremes of temperature. It is however unlikely to be sufficiently insulated for bats to use during the winter months.

During the site inspection three distinct accumulations of bat droppings were identified around the building. Two of these accumulations were identified on the flat roof of the ground floor areas, beneath gaps behind the retrofitted fascia above. One accumulation of droppings was found beneath the canopy adjoining the northern side of the building directly adjacent the main entrance. These accumulations of droppings all contained both old and fresh droppings and all droppings identified were small and typical of Pipistrelle sp. bats. Being early in the active season, it is quite possible that further potential roost locations were not identified during this site inspection as a result of historic evidence having been lost over winter.

During the dusk emergence survey (01/07/19) the first bat was recorded at 21:46hrs (15 mins after sunset), this was a soprano pipistrelle bat (Pipistrellus pygmaeus) which was observed approaching the crematorium building from the west. A small number of soprano pipistrelle bats were then observed foraging around trees within the amenity grassland to the south of the building and around trees to the north and south. At c.22:15hrs a single soprano pipistrelle bat was seen to repeatedly fly to and from gaps behind the retrofitted metal fascia on the southern elevation. This behaviour continued for a period of 10-15 minutes but the bat was not seen to enter any crevice and no bats were seen to emerge from this area. Bat activity was generally rather limited in the area immediately surrounding the building. Higher levels of activity were observed in and around the woodland which surrounds the site and bats were observed flying over the building. A small number of common pipistrelle calls were recorded throughout the survey. No bats were definitely seen to emerge from the building during the dusk survey. Bats emerging from a roost at dusk can be harder to identify than bats returning to a roost at dawn and considering the scope of the activity survey and the location of the surveyors (i.e. observing areas affected by the proposed external extensions only) it is possible that bats emerged from other areas of the building, however it can be confidently asserted that no bats emerged from 'Roost 1' (See Figure 5) during this dusk survey.

During the dawn survey bat activity on site was slightly greater than that recorded during the dusk survey. Common pipistrelle bats were recorded foraging along the eastern elevation from c.03:15hrs onwards, with soprano pipistrelle bats appearing slightly later. These bats were observed foraging around the building and between the building and the woodland which surrounds the site. At 03:31hrs a single brown long-eared bat was recorded flying along the eastern elevation of the building but this bat was not recorded again and was not seen nor suspected to have entered the building.



**Figure 6:** Showing short spectrogram of a brown long-eared bat recorded at 03:31 on 12 July 2019 at Distington Crematorium.

From 03:50hrs onwards soprano pipistrelle bats were seen repeatedly flying to and from gaps behind the metal fascia on the southern elevation. This behaviour was sustained for some time and gaps along the entire length of this elevation - on both the single storey and two storey height sections - were investigated. At 04:15hrs a single soprano pipistrelle was seen to enter a gap at the extreme western end of the single storey section, adjacent where the single storey section adjoins the two storey height section (See Roost 4 on Figure 9). This bat was then followed by a second soprano pipistrelle at 04:20hrs. At 04:22hrs a single soprano pipistrelle was seen to enter a gap on the northern elevation (See Roost 5 on Figure 9) of the building well away from the proposed works on the western elevation. At 04:25hrs 2 soprano pipistrelle bats re-emerged from Roost 4 and were seen flying between Roost 2 and Roost 4 above the single storey section. At 04:35hrs 3 soprano pipistrelles entered Roost 4 and did not re-emerge.

During the dawn survey no bats were seen to enter Roost 1 or Roost 2. A single soprano pipistrelle bat was seen to enter Roost 5 and 3 soprano pipistrelle bats were seen to enter Roost 4.



**Figure 7:** Showing spectrogram of a soprano pipistrelle bat recorded at 04:09 on 12 July 2019 at Distington Crematorium whilst flying to and from Roost 4.



**Figure 8:** Showing spectrogram of a soprano pipistrelle bat recorded at 04:29 on 12 July 2019 at Distington Crematorium whilst flying to and from Roost 4. NB - Loud social calls.

From the results of the daytime site inspection and two activity surveys it would appear that the Crematorium building contains numerous roost locations, all likely to be used by pipistrelle sp. bats. Bat were confirmed as roosting in 2 locations at the time of the surveys - but field evidence suggests that a variety of other locations are also used. As the feature used by roosting bats - the retrofitted metal fascia - is broadly identical throughout the building it is tempting to consider this as a single roost, however due to the spatially separated location of the identified roost sites they are treated as individual roosts for the purpose of this survey report.

From the small number of bats seen to be occupying these roosts in July (the maternity season) it is concluded that none of the identified roosts are maternity roosts. This is supported by the observations made of bats repeatedly prospecting along the southern elevation which is strongly suggestive of them not having dependant young in a roost. Instead it is concluded that the identified roosts are day roosts used by small numbers of bats. As bats were not seen to emerge from Roost 4 during the emergence survey - and as bats were seen to re-emerge from this roost and fly to Roost 2 for a short period - it is likely that the roosts on site are highly mobile and this may account for the accumulations of droppings found beneath Roosts 1, 2 and 3 despite no bats being seen to use these locations during either activity survey.



Figure 9: Survey Results Plan.

# 6. Photographs



Figure 10: Showing the south western elevation of the crematorium building.



Figure 11: Showing the south eastern elevation of the crematorium building.



Figure 12: Showing the north eastern elevation of the crematorium building - within the enclosed courtyard.



Figure 13: Showing the flat roof of the ground floor areas and internal courtyard.



**Figure 14:** Showing bat roost (Roost 1) identified beneath the canopy at the entrance to the crematorium with droppings adhering to the wall identified in red. See Figure 7.



**Figure 15:** Showing bat roost (Roost 2) identified above the flat roof on the south eastern elevation with droppings below identified in red on the inset and presumed roost location and extent identified in red on main photograph. See Figure 7.



**Figure 16:** Showing bat roost (Roost 3) identified above the flat roof on the south eastern elevation with roost location identified in red in the inset. See Figure 7.



**Figure 17:** Showing bat roost (Roost 4) identified during the dawn survey on 12/07/19. See Figure 9.

## 7. Impact assessment

### 7.1. PRE- AND MID- ACTIVITY IMPACTS

Bats have been identified roosting on the southern elevation in the area in which the proposed extensions will be constructed. However, the proposed canopies which will be constructed in these areas will tie in to the existing building at below wall-top height and will not necessitate the removal of the metal fascia. None of the identified roost locations will therefore be physically destroyed or damaged during the works.

In the absence of mitigation there is a risk that any bats using Roost 1 and Roost 4 could be disturbed by construction activities when the external canopies are constructed.

#### 7.2. LONG-TERM IMPACTS

Any disturbance to bats using Roosts 1 & 4 would be short term, i.e. for the duration of the construction activities only.

## 7.3. POST ACTIVITY INTERFERENCE IMPACTS

Provided that external lighting is kept to an absolute minimum and appropriately positioned so as not to spill on to surrounding habitat, no post activity interference is anticipated.

### 7.4. OTHER IMPACTS

None anticipated.

## 7.5. SUMMARY OF IMPACTS AT THE SITE LEVEL

Bat roosts (1x soprano pipistrelle day roost used by 3 bats; Roost 4, and one of unknown status; Roost 1) have been identified within 5m of the proposed external extensions. The roost locations themselves will be physically unaffected but due to the proximity of the proposed works to the identified roosts there is a risk that - in the absence of mitigation - bats using these roosts may be disturbed..

### 7.6. SUMMARY OF IMPACTS IN A WIDER CONTEXT

None.

## 8. Mitigation

### 8.1. MITIGATION STRATEGY

The following generic good working practices for built structures with bat potential outlined below will be followed at all times;

- This report will be made available to any contractor working on site.
- If bats are discovered at any time prior to or during works, all work must stop and the acting consultant contacted immediately. If this unlikely event does occur a European Protected Species licence will be sought.
- The work will be completed as quickly as possible once started. Any gaps created within stone work during the course of the works will be left open for the minimum possible period. Where possible gaps will not be left open over night to avoid the possibility of bats opportunistically roosting in gaps which will later be blocked.

Although no identified bat roost will be physically damaged / destroyed by the works, bat roosts have been identified within <5m of the proposed works and are therefore - in the absence of mitigation - likely to be disturbed. It is consequently necessary to put measures in place to avoid / minimise any potential impact. The roost locations themselves are day roosts only and are used by small numbers of soprano pipistrelle bats and will be retained throughout work. Should plans change - and any work to the metal fascia, wall top capping be proposed, the impact assessment and mitigation strategy sections of this report would need to be reconsidered and it is likely a European Protected Species Mitigation Licence (EPSML) would be required.

In order to avoid disturbing bats occupying Roosts 1 & 4, it is recommended that timing constraints are employed to ensure that no bats are present when potentially disturbing works take place. The metal fascia feature used by bats at Distington Hall Crematorium is highly unlikely to offer sufficient insulation to be used as a hibernation roost. Bats are therefore likely to vacate these roosts by November of any given year. Work to construct the external canopies on the south west elevation should be completed between November 1st and March 15th, thus occurring when bats are unlikely to be present and therefore avoiding disturbing bats during the works.

If completing the works during the hibernation season will not be possible, a European Protected Species Mitigation Licence (EPSML) must be obtained prior to works commencing so as to allow disturbance of bat roost contrary to The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

### 8.2. ENHANCEMENT OPTIONS

The proposed extension presents opportunities to enhance the site for bats. It is recommended that consideration be given to installing some or all of the following bat site enhancement features during the development. These are recommended as site enhancement options only and are not intended to represent mitigation or compensation features for which there is no legal requirement.

- Bat boxes could be erected on the exterior of the new external canopies using products such as the '1FFH Schwegler Universal Bat Box' (<u>http://www.nhbs.com/title/177932/1ffh-schwegler-universal-bat-box</u>) or the '1MF Bat and Swift Nest Box' (<u>http://www.nhbs.com/title/173247/1mf-bat-and-swift-nest-box</u>).
- Night scented plants such as honeysuckle (Lonicera sp.), jasmine (Jasminum sp.) and lilac (*Syringa vulgaris*) could be planted either in the ground or in pots so as to climb (or be tied into) the external walls of the property. These would attract moths and other night flying insects which would improve the foraging habitat for bats.
- External lighting on the property should be shielded so as to cast light onto the ground surrounding the entrance only and to prevent light spillage on to surrounding areas.

## 9. Summary

#### 9.1. SUMMARY OF DEVELOPMENT AND MITIGATION

This report relates to a bat survey carried out at Distington Hall Crematorium, Workington, Cumbria, CA14 4QY - Nat. Grid Ref. NY 01832 23861 (See Figure 1).

Plans 'as existing' (See Figure 2) and 'as proposed' (See Figures 3 & 4) have been provided. The proposed works seek to 'redesign [...] the public, office and operational spaces within the crematorium to create additional floor space to enhance the customer experience and provide efficient and safe operational spaces' this will include the 'procurement and installation of a second cremator' (See - 'BEREAVEMENT SERVICES INVESTMENT: DISTING-TON HALL CREMATORIUM: PROJECT INITIATION DOCUMENT (PID). James Hunter, Copeland Borough Council, 10.04.2018').

This bat survey follows a 'Preliminary Ecological Appraisal (PEA)' (See - 'Preliminary Ecological Appraisal: Distington Hall Crematorium, Workington, Cumbria, CA14 4QY: 2019', Ref. No. ArP18SC0021, by Hesketh Ecology) which was completed in April 2019

The survey was conducted to confirm presence / likely absence of bat roosts within the building in line with Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)').

Bats have been identified roosting on the south western elevation in the area in which the proposed extensions will be constructed. However, the proposed canopies which will be constructed in these areas will tie in to the existing building at below wall-top height and will not necessitate the removal of the metal fascia. None of the identified roost locations will therefore be physically destroyed or damaged during the works.

In the absence of mitigation there is a risk that any bats using Roost 1 and Roost 4 could be disturbed by construction activities when the external canopies are constructed.

In order to avoid disturbing bats occupying Roosts 1 & 4, it is recommended that timing constraints are employed to ensure that no bats are present when potentially disturbing works take place. The metal fascia feature used by bats at Distington Hall Crematorium is highly unlikely to offer sufficient insulation to be used as a hibernation roost. Bats are therefore likely to vacate these roosts by November of any given year. Work to construct the external canopies on the south west elevation should be completed between November 1st and March 15th, thus occurring when bats are unlikely to be present and therefore avoiding disturbing bats during the works.

If completing the works during the hibernation season will not be possible, a European Protected Species Mitigation Licence (EPSML) must be obtained prior to works commencing so as to allow disturbance of bat roost contrary to The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

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