

NON-TECHNICAL SUMMARY OF DRAFT EPSL BAT LICENCE FOR BUILDINGS B2, B6 AND B24

The works requiring licensing are part of an extensive demolition and redevelopment programme for an area of central Manchester known as 'Mayfield'. The site contains a number of large buildings and the demolition itself has been phased. Current phases (1 and 2) affect three buildings containing bat roosts as follows:

- Removal of the Depot Ramp on B2 - steel ramp structure is attached to the Depot at the western end and at points along the south elevation, and is associated with a summer day roost for up to four common pipistrelles, which could be disturbed and may be destroyed (exact roost location is unclear). The Depot will be retained as part of future plans for the site;
- Demolition of B6 to ground level resulting in destruction of a summer day roost for one common pipistrelle roost in the river-facing elevation; and
- Demolition of the buildings above the culvert (B24) in which there is a summer day roost for approximately five common pipistrelle bats that may be disturbed during works. The culvert will be demolished in a later phase of works not included within this licence.

The works are required because the buildings and structures affected are no longer needed in central Manchester and are disused, becoming derelict. They need removal to eliminate risks to public health and safety, and to make way for future proposals for the area in line with the local plan.

The proposed works involve activities which will permanently destroy bat roosts, may temporarily damage or disturb bats or bat roosts and may also possibly involve the exclusion or capture and release of bats. There is also potential for bats to be harmed during works. The total number of roosts affected is three.

Bat roost surveys have been completed on the buildings between 24th November 2016 and 8th August 2018, including building inspections and bat activity surveys undertaken at dusk and dawn. In addition, walked transects and automated monitoring has been undertaken. All surveys have been completed in line with best practice (Collins 2016¹) by suitably licensed and experienced ecologists.

The bat roosts are all of common pipistrelle bats, which were the only species recorded on site. The three roosts are used in daytime in summer only and are for small numbers, not breeding. Therefore, the disturbance and roost destruction impacts can be appropriately mitigated for through timing and methodological measures as follows:

- Timing - works to take place when bats likely to be absent i.e. during autumn, winter and early spring. This is because day roosts such as these are generally used by bats in summer;
- A tool-box talk will be given to contractors to notify them of the presence of bats, their protected status and the timings and methods to be employed to protect bats from disturbance and injury where possible during the works;
- Any bats found will be captured by hand and released at dusk using a purpose-mounted bat box on or in the vicinity of B2 (SJ 85240 97623). Any injured bats will be conveyed to a nearby veterinary practice;

¹ Collins J. (ed.) 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust

- Two no. permanent durable bat boxes will be erected on or in the vicinity of B2 (SJ 85240 97623) prior to any works commencing on the bat roosts;
- Pre-demolition inspection (if possible to safely access the general area where the roosts are located) using endoscope to examine potential roost cracks and crevices at ramp level;
- Exclusion where bats are found using a feature that will be destroyed as part of operations. Exclusion to follow standard methods, e.g. Mitchell-Jones and McLeish (2004²);
- Watched demolition of any features identified as hosting the bat roost or having high potential for roosting that are to be destroyed during the works; and
- Retention and protection of roost features if found and not needing to be destroyed as part of the works.

² Mitchell-Jones, A.J. and McLeish, A.P. (eds), 2004. *Bat Workers' Manual. Third Edition. Joint Nature Conservation Committee*

Bats – Method Statement template to support a licence application

The Method Statement will be used to determine the impact of the proposal on the favourable conservation status (FCS) of the species concerned (Regulation 55(9)(b)).

You are strongly advised to refer to the Bat Mitigation Guidelines.

Please use recent photographs to support your application.

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Important advice:

The format below must be used. Please enter text below each heading keeping information as concise as possible.

All maps/figures that will become part of any annexed licence granted must be submitted as separate documents (with the site name and date included on the map/figure. See section I for list – all others may be included within the Method Statement document (e.g. survey maps/figures) if preferred).

A separate work schedule must also be submitted on form WML-A13a-E5a&b to accompany the Method Statement.

A Executive summary

Provide an overview (no more than 1 side of A4) of what works are proposed and how the impacts identified will be addressed in order to ensure no detriment to the maintenance of the population at a favourable conservation status.

The works are part of an extensive demolition and redevelopment programme for an area of central Manchester known as 'Mayfield'. The site contains a number of large buildings and the demolition itself has been phased (see ANNEX 1 Demolition Tender Documents). The demolition works relevant to this application fall within demolition Phases 1 and 2, and affect 3 buildings containing bat roosts as follows:

- Removal of the Depot Ramp on B2 - steel ramp structure is attached to the Depot at the western end and at points along the south elevation, and is associated with a summer day roost for up to 4 common pipistrelles, which could be disturbed and may be destroyed (exact roost location is unclear). The Depot will be retained as part of future plans for the site.
- Demolition of B6 (referred to as 'unit 9' in demolition drawings) to ground level resulting in destruction of a summer day roost for 1 common pipistrelle roost in the river-facing elevation;
- Demolition of the buildings ('units 4 & 9') above the culvert (B24) in which there is a summer day roost for approximately 5 common pipistrelle bats that may be disturbed during works. The culvert will be demolished in a later phase of works not included within this licence.

The works are required because the buildings and structures affected are no longer needed in central Manchester and are disused, becoming derelict. They need removal to eliminate risks to public health and safety, and to make way for future proposals for the area in line with the local plan.

The bat roosts are all of common pipistrelle bats, which were the only species recorded on site. The three roosts are used in daytime in summer only and are for small numbers, not breeding. Therefore the disturbance and roost destruction impacts can be appropriately mitigated for through timing and methodological measures.

Compensation will be provided in the short term (under this licence) as bat boxes attached to the Depot structure after removal of the ramp. In the longer term, compensation will be extensive, through additional roost provision within the site and better commuting and foraging environments provided by Mayfield Park proposals and the 'daylighting' of the River Medlock, coupled with sensitive lighting. These latter elements should form part of the planning consent application and conditions, and be devised in conjunction with an appropriately experienced ecologist with specific knowledge of the habits and requirements of (urban) bats.

B Introduction

B1 Background to activity/development:

Include a brief summary of:

- Why the activity and a licence are necessary (*e.g. bridge structure repairs are required and will affect a known maternity roost of Daubenton's bats, which will be temporarily lost whilst works are being undertaken; renovation works to an office building will result in the permanent loss of three day roosts of common pipistrelle bats; demolition of an existing hospital to be replaced with flats will result in the loss of a brown-long eared bat maternity roost*).

Works comprise:

- Demolition of B6 (referred to as 'unit 9' in demolition drawings) to ground level resulting in destruction of a summer non-breeding day roost for 1 common pipistrelle roost in the river-facing elevation;
- Demolition of the buildings ('units 4 & 9') above the culvert (B24) in which there is a non-breeding summer day roost for approximately 5 common pipistrelle bats that may be disturbed during works;
- Removal of the Depot Ramp on B2 - steel ramp structure is attached to the Depot at the western end and at points along the south elevation, and is associated with a non-breeding summer day roost for up to 4 common pipistrelles, which may be destroyed (exact roost location is unclear). The Depot will be retained as part of future plans for the site.

- Include current status of planning permission (if applicable) *e.g. full planning permission with all relevant wildlife conditions discharged; permitted development; demolition with prior notification of demolition issues resolved*. If the proposal is for demolition only of a structure supporting a bat roost/s, please confirm whether there are plans to develop the site in the future and if so when.

Consent for Demolition Phases 1 and 2 prior to site redevelopment.

B2 Relationship with other nearby development and cumulative impacts

B2.1 Is the current application part of a larger development project? For example, is it part of a phased or multi-plot housing development that will require more than one bat licence? Enter Yes, No or N/A in the text box below. If yes, note a separate [master plan](#) document will be required.

Yes – see Figure B2.1

Important Advice: If yes to the above, please note that sections in [this](#) Method Statement on impact assessment and mitigation measures must explicitly relate *only* to impacts from the works currently proposed.

A project-wide master plan must detail the overall impact assessment and mitigation and explain where, and why, each of the bat licences will be required. The master plan must be included as a separate document to this application: see http://www.naturalengland.org.uk/Images/WML-G11_tcm6-9930.pdf for details that are to be included in this separate document. The separate master plan is expected to take due regard of the overall project to ensure that in-combination effects are considered, and mitigation and compensation measures are both sufficient and coherent.

If the current development is part of a larger development project, summarise very briefly here how the current application relates to the larger project and how the in-combination effects are considered and mitigation/compensation is sufficient.

The vision for Mayfield is set out in the Strategic Regeneration Framework (SRF) (see ANNEX 2). The full project aims to deliver a world class, transformational, distinctive and imaginative commercially led neighbourhood, anchored by Mayfield Park, which will become a powerhouse of socio-economic productivity. The Mayfield Partnership proposes to capitalise on the site's existing assets: the Mayfield Depot; the River Medlock; and its gateway location at the heart of an extensive transport network, to become a destination for work, play and living for all. The SRF has been prepared in order to guide the future comprehensive regeneration of the Mayfield area of Manchester city centre. The proposals have been updated and are in line with the City Council's strategic objectives and the current context of the site. Mayfield will deliver a series of significant regeneration benefits, which in turn will help drive wider economic growth within Manchester city centre and adjacent neighbourhoods, including Ardwick and the communities of East Manchester, as well as improving connectivity to these areas. In addition to new workplaces, jobs and homes, the proposals include creation of a new 2.6ha city centre park and an additional 2.6ha of public realm, restoring the River Medlock and increasing biodiversity and public access to green space.

The larger project will involve retention of the Depot and removal (demolition) of all other buildings prior to redevelopment of the site. All bat roosts have been shown to be of common pipistrelle bats, in non-breeding summer use, and only to contain small numbers. With appropriate timing and methods the direct impacts upon

bats of disturbance and roost destruction can be minimised and the roosts can be adequately compensated with alternative new roost sites, e.g. on the Depot.

In the longer term, the removal of the River Medlock culvert (B24) will open up the river and provide additional benefits to bats and other wildlife which far outweigh the loss of a suite of small non-breeding roosts for a common bat species. The outline proposals for the site include new habitats which will also provide good foraging areas for bats and potential new roost sites as trees mature. There is also opportunity for enhancement of the site via new bat roost features which could be incorporated into new build. These long-term benefits should be designed with input from a qualified ecologist and form part of detailed planning applications.

Important Advice: to accompany this Method Statement also include Figure. B2.1 for a Master plan overview - and see section I "Map checklist" at the end of this document.

B2.2 Apart from any mention in B2.1, please inform us of any past or future development or other projects (in the last 5 years or next 5 years) in the vicinity which may have significantly impacted or are likely to significantly impact on the same population/s of bats as this application (e.g. loss of maternity or hibernation roosts). You must make reasonable efforts to establish this, including discussions with your client and the Local Planning Authority – stating below what you undertook. A brief summary of the project/s should be provided including the site name and location, dates and if known the licence reference number(s).

Please note we are not expecting details of every licence/planning permission issued within the vicinity of the site – we are only concerned with projects that have the potential to significantly impact or have impacted on same population of bats (maternity and hibernation roosts). Note: Natural England is aiming to make available licensing records from the last 5 years publically available.

The website www.magic.gov.uk (accessed 5/11/18) shows the following 6 records of granted EPS mitigation licence for common pipistrelle bats (all) within 1.25km of site, since 2013:

- 0.5 km from site, near Aytoun St SJ84529801, NW of site – no information
- 0.75 km, Brunswick St SJ85119690, S of site - damage to resting place (2014-4400-EPS-MIT)
- 0.75km, Ancoats SJ85109860, N of site – destruction of resting place (2014-3531-EPS-MIT)
- 1km, off Oldham Rd SJ84779872, N of site– destruction of resting place (2013-5644-EPS-MIT)
- 1km, off Oldham Rd SJ84919869, N of site– destruction of resting place (2016-24504-EPS-MIT)
- 1.25km, near Grafton St SJ85099649, S of site– destruction of resting place (2015-15766-EPS-MIT)

All sites for which there was information were non-breeding resting places for common pipistrelle bats. None were on the site or immediately adjacent.

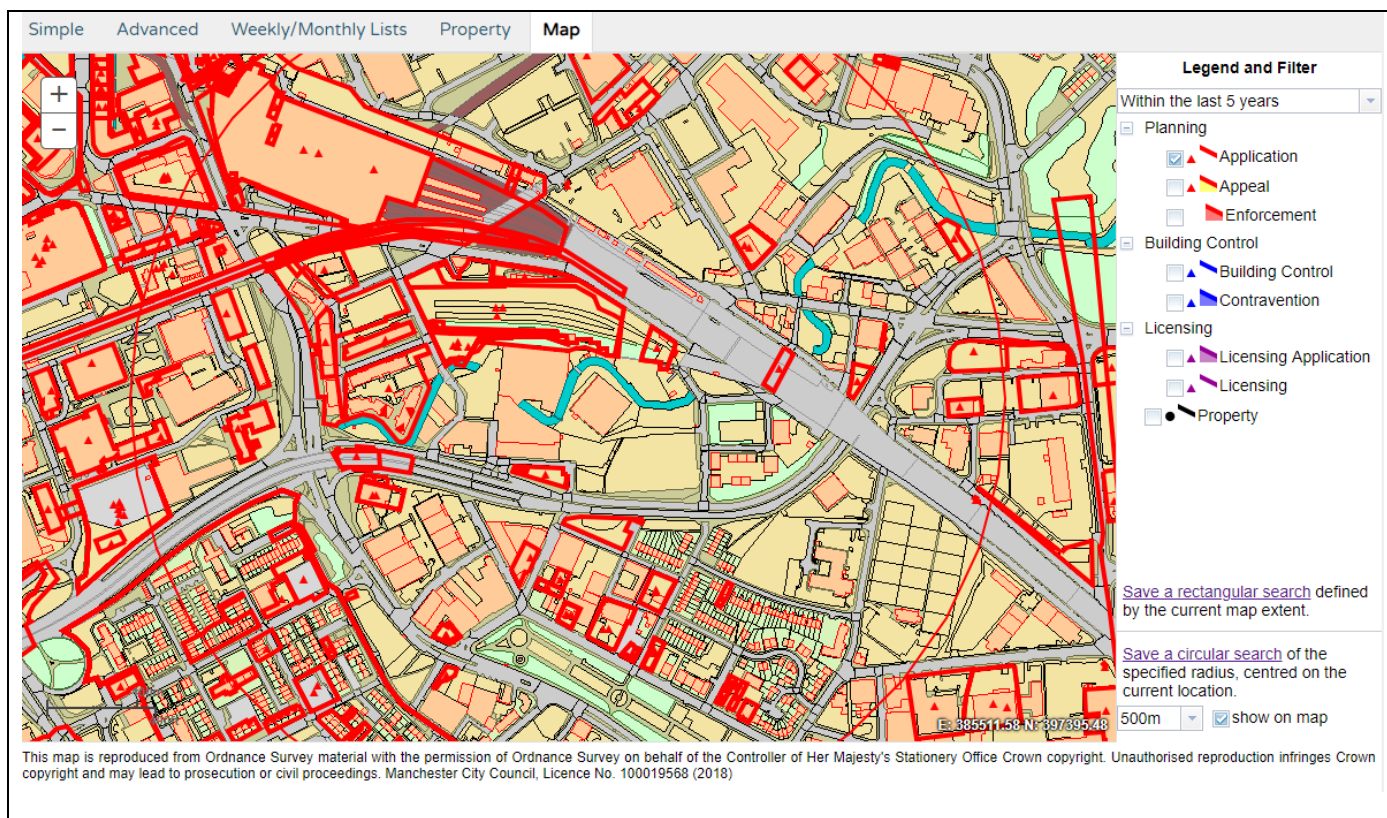
The planning portal <https://pa.manchester.gov.uk> (accessed 6/11/18) for postcode M12 6HW showed a total of 14 applications for a 500m radius of the site centroid within the past 6 months, for matter such as change of conditions regarding building design, prior approval for demolition, changes to roof, erection of hoarding, temporary change of use for entertainment, retention of gatehouse etc, installation metal window security, signage, extension of city skate park, installation of guardrail, changes to contract, discharge of planning conditions, changes to condition wording and display of temporary mesh banner.

Within the past year, more than 11 further applications were registered, for matters such as signage, domestic extension, hotel extension, listed building consent, change of use to temporary entertainment venue and discharge of planning conditions. A search for a full 5 years is difficult to interpret as much of the area within 500m of the site has been subject to applications of some sort – see Figure, below.

None of the applications in considered to have significantly impacts upon the local bat populations is such a way that the additional impacts from these proposals would be detrimental to their status. This is because:

- Overall bat populations are low in central Manchester
- There are many other potential roost sites for small numbers of common pipistrelle bats in the area
- Local bat populations in this area are already habituated to regular disturbance from traffic, lighting and human activity.
- Bat activity in central Manchester is mainly associated with suitable habitats such as open parks, rivers and canals, and these will not be affected by the proposed demolition.

Figure B2.2 Planning Applications within 500m of Site Centroid for last 5 years.



Important Advice: locations of other bat mitigation sites that may have significantly impacted or are likely to significantly impact on the same population/s of bats as this application must be shown on Figure B2.2.

C Survey and site assessment (also see section 5 of the Bat Mitigation Guidelines)

C1 Pre-existing information on the bat species at the survey site:

Please undertake a historical data search within a 2km search radius and provide a summary of the results of this search. For example, records from local environmental records centres, local bat groups and previous survey work undertaken at the site is all relevant. Please briefly comment on the results in relation to your project/site

- Should no historical records be found from your search please state this – and specify what searches you undertook.
- Note that you must not include records from National Biodiversity Network (NBN) without first obtaining written permission from the relevant Data Provider.

A desk study request undertaken in 2016 to Greater Manchester Ecology Unit (GMEU) identified the following roosts:

Species		No. Roosts	Closest Record of Roost (m)	No. other Signs	Closest Record of Sign (m)
Common Name	Latin Name				
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	2	850	13	80
Daubenton's bat	<i>Myotis daubentonii</i>	0	n/a	1	850
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	1	370	0	n/a
Pipistrelle species	<i>Pipistrellus</i> sp.	6	On site	7	500
Bat species	<i>Chiroptera</i> sp.	0	n/a	3	80

The most recorded species in the area are common pipistrelle (*Pipistrellus pipistrellus*) and unspecified pipistrelle species (*Pipistrellus* sp.). A pipistrelle roost was reported from within the site in the old station (grid reference SJ 8503 9768) and two records of pipistrelle roosts immediately to the north of the site.

Previous bat surveys at the site between 2013 and 2018 have recorded only common pipistrelle.

C2 Status of the bat species: Detail conservation status at the local, county and regional levels. Please complete the following table, justifying your assessment, and add additional lines where necessary. If the status is unknown then please enter 'unknown'.

Species	Conservation status assessment		
	Local	County	Regional
Common pipstrelle	Present throughout central Manchester (https://species.nbnatlas.org)	Common in greater Manchester	Common across northwest England
Soprano pipistrelle	Not present in central Manchester (https://species.nbnatlas.org)	Widespread but not common in Greater Manchester (https://species.nbnatlas.org)	Widespread, common
Daubenton's	Not present in central Manchester (https://species.nbnatlas.org)	Widespread but not common in Greater Manchester (https://species.nbnatlas.org)	Widespread across northwest England, in suitable habitats

****Please note that you can add more rows to the table: right click in any cell outside the grey box area. Choose Insert > Insert rows below.**

C3 Objectives of the survey to inform this proposal: Please complete the following table, entering 'Yes', 'No' or N/A to indicate the objective of your survey and provide comments/explanation where necessary:

Survey objective	Yes / No / N-A	Comments
Determine presence / absence of bats	Yes	Building inspections & emergence/re-entry surveys (PAA 2016, 2017, 2018)
Determine bat usage of site (e.g. maternity, hibernation, night roosts in various structures (specify)).	Yes	Emergence/re-entry surveys (PAA 2016, 2017, 2018)
Identify foraging, commuting or swarming sites (explain)	Yes	Transect surveys x 2 (PAA 2017)
Other (explain)	Yes	Automated monitoring (PAA 2017)

C4 Site/habitat description: Please provide:

- Brief descriptions of the site, including total size of the development site (ha) (most often within the red line planning boundary) and areas of the site with potential value to bats (ha).

The site boundary includes an area approximately 9.1 ha, comprising a series of buildings that are predominantly commercial or light industrial units and associated areas of hard and soft landscaping. Some buildings are occupied, others disused for many years. The site is surrounded on all sides by dense urban development, with tall buildings and busy roads. Manchester Piccadilly rail station is immediately to the north and the River Medlock flows west to east through the centre of the site, but is culverted in two places.

The main habitats of value for bats are the buildings and culverts (confirmed and potential roost sites) and the River Medlock (commuting corridor and foraging area). Buildings occupy 3.13ha of the site. The river (435m in length including culverted sections totalling 118m) has particular value beyond its 'degraded' status (PAA 2017b) because it provides a dark and connected path for bats (and other species) to move along which is away from traffic and streetlighting and represents a good source of insect prey for bats. It connects the site to other habitats up and downstream.

- Brief descriptions of the structures on site, differentiating between **those surveyed** and **not surveyed**, with an explanation why. Ensure structures are referenced and consistently indicated on relevant figures and tables.

The structures are shown on Figure C5b. The table below provides a description of each, including their bat roost status as assessed in the 2016 inspection survey (PAA 2016).

Table C4a Building Descriptions and Bat Roost Inspection Survey findings

Reference	Picture	Description	Potential Bat Roost Features and Evidence of Roosting	Assessed Roost Status
B1		Former Mayfield Station. Brick façade with stone parapet and stone lintels to windows. Large decoratively tiled stairwell and offices/warehouse at ground floor, offices and station concourse at second floor. No roof structure remaining. All windows and doors boarded up. No access to interior due to presence of asbestos & lead paint.	Damaged wooden fascia boards on external façade providing access to cavity behind. Small crevices in brickwork and around stone lintels on external façade. Unglazed window into stairwell providing potential bat access to internal rooms.	High Potential
B2a		Former station platforms and warehouses. Brick façade with two large internal warehouses. Concrete floor, flat roof supported by concrete pillars. Narrow enclosed ramp from ground level to platforms on southern elevation, supported by metal framework and covered with corrugated sheets. Open ramp on northern elevation. Series of large brick arches beneath platforms at eastern end, each enclosed with wooden boarding and used as warehouse/industrial units.	Crevices on the external façade. Broken windows and gaps around roller shutter doors providing access to internal warehouses. Very limited roost potential within these rooms but considered likely to be used as sheltered foraging site during poor weather conditions. Existing record of pipistrelle roost on northern side, potentially on external façade or at platform level.	Confirmed Roost High Potential on rest of structure
B3		Industrial unit occupied as warehouse. Brick walls with pitched roof covered with corrugated asbestos cement sheets and numerous plastic skylights. Roof supported by metal framework, open to ridge with no roof voids. Concrete floor.	None	Negligible Potential

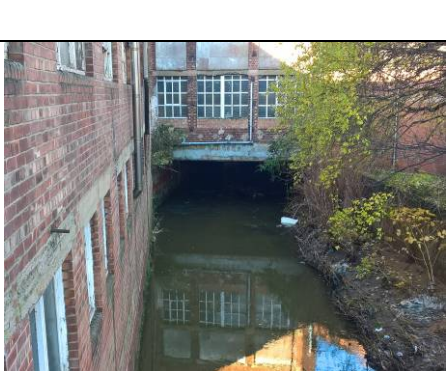
B4		Industrial unit occupied by Fedex as warehouse and distribution centre. Brick walls with corrugated metal sheets on front elevation. Pitched roof of corrugated asbestos sheets with numerous plastic skylights. Open to ridge with no roof void.	None	Negligible Potential
B5		Office unit of warehouse complex occupied by Fedex. Metal sheet walls to front elevation, brick walls with pitched roof of corrugated sheets to rest of building. No roof voids.	None	Negligible Potential
B6		Industrial unit used as storage warehouse together with B9 and B10b. Brick with pitched roof covered with asbestos cement sheets. Roof supported by metal framework, open to ridge with no roof voids. Concrete floor. Large basement, also used for storage.	Crevices on brickwork on northern elevation above River Medlock. Basement provided no obvious crevice features and was too light and disturbed for potential hibernation use.	High Potential

B7a		Disused industrial units, part of former Towbar and Trailer Centre. Two-storey section, brick with pitched slate roof, clay ridge tiles and wooden bargeboards at gable ends. Underside visible from interior - open to ridge and appeared to be lined with wooden or metal boards. Two-storey section at SE corner, brick with pitched roof covered with bitumen felt. No access for internal inspection on this section, potentially a roof void present. Single storey section with flat bitumen felt roof. Concrete floors throughout and single glazed windows boarded up or secured with wire mesh.	Numerous crevices in brickwork. Crevices around windows providing bat access to interior of two storey sections. Crevices beneath barge boards, potentially providing access to space between slates and lining beneath. Dilapidated fascia boards at eaves on single storey section.	Moderate Potential
B7b		Disused industrial units, part of former Towbar and Trailer Centre. Brick walls with pitched roof covered with metal sheets. Wooden ceiling with roof void above – no obvious hatches to provide access for inspection. Underside of roof partially visible at rear of building (adjacent to two-storey section visible in photo for B7a), supported by wooden rafters and fully lined with membrane. Underground basement.	Basement provided no obvious crevice features but was dark and likely to provide relatively stable temperature conditions. In use until relatively recently and therefore likely to have been too disturbed for hibernation use; however, could potentially be used in future now that the building is disused.	Negligible Potential

B7c		Industrial unit, occupied as religious premises. Brick walls with pitched roof covered with bitumen felt and clay ridge and hip tiles. Skylights on roof suggesting no roof void present. Small section at front with flat roof covered with bitumen felt and narrow wooden fascia boards at eaves. No access permission for inspection.	None apparent from areas visible.	Full inspection required.
B8a		Industrial/office units. Two-storey brick building, two separate pitched slate roofs with hipped gables. No access permission for internal inspection.	Potentially two roof voids. Crevices on external brickwork.	Moderate Potential Full inspection required
B8b		Industrial units. Two-storey flat roofed building with brick walls with metal sheeting at upper level. No access permission for internal inspection.	Unlikely to be any roof void. No obvious crevices on external façade.	Negligible Potential
B9		Industrial unit occupied as factory and storage warehouse, together with B10b and B6. Brick with pitched roof of asbestos cement sheets. Roof supported by metal framework, open to ridge with no roof voids. Concrete floor. Large basement beneath, used for storage.	No roof void. Basement provided no obvious crevice features and was too light and disturbed for potential hibernation use.	Negligible Potential

B10a		Two-storey brick building with brick parapet at front elevation. Four ridges to the roof, covered with slates and clay ridge tiles.	No access for internal inspection	Moderate Potential Full inspection required
B10b		Industrial unit occupied as factory and storage warehouse, together with B9 and B6. Brick with pitched roof of asbestos cement sheets. Open to ridge with no roof void.	None	Negligible Potential
B11	Previously demolished, site of this building is now amenity grass.			N/a
B12		Industrial unit used as a storage/distribution warehouse. Brick walls with corrugated metal sheeting towards roof level. Shallow pitched roof covered with corrugated sheets, open to ridge with no roof void.	None	Negligible Potential
B13		Industrial unit. Two-storey building with brick walls at ground level and metal sheeting at first floor level. Shallow pitched roof covered with metal sheets.	None	Negligible Potential
B14		Industrial unit. Two-storey building with brick walls at ground level and metal sheeting at first floor level. Shallow pitched roof covered with metal sheets.	None	Negligible Potential

B15		Industrial unit. Two-storey building with brick walls at ground level and metal sheeting at first floor level. Shallow pitched roof covered with metal sheets.	None	Negligible Potential
B16		Industrial units. Single-storey building with brick walls at ground level and metal sheeting towards roof level. Shallow pitched roof covered with metal sheets.	None	Negligible Potential
B17		Industrial unit. Brick walls at ground level and metal sheeting towards roof level. Shallow pitched roof covered with metal sheets.	None	Negligible Potential
B18		Warehouse/industrial unit, used as storage and recycling facility. Brick walls with pitched roof of asbestos cement sheets, open to the ridge with no roof void. Interior very cluttered.	None	Negligible Potential
B19	No access permission for inspection.			Full inspection required
B20		Two-storey brick structure with sloping roof covered with corrugated sheets. Unlikely to have roof void. Narrow wooden fascia board at eaves. No access permission for inspection.	None apparent from visible areas	Negligible potential

B21		Small lean-to structure adjoined to B2. Corrugated metal walls with roller shutter door and sloping metal roof.	None	Negligible Potential
B22		Electricity substation. Metal walls. Pitched roof with metal sheet covering.	None	Negligible Potential
B23		Single-storey brick building. Pitched slate roof with clay ridge tiles and overhanging eaves with wooden soffit and bargeboards at gable ends. Metal roller shutter door (locked) on southern elevation, door and window on eastern gable end boarded up. No access permission for internal inspection.	Gaps between brickwork and soffit providing potential access to cavity within soffit and/or interior of building. Gap beneath end ridge tile at eastern gable end. Gap above roller shutter door.	High Potential
B24		Culverted section of River Medlock. Length approx. 60m, width approx. 4m, height approx. 2.5-3m above water level. No access for internal inspection.	Bats known to roost in a similar culvert on another nearby site in Manchester.	High Potential
B25		Pair of open fronted garages with brick walls and flat concrete roof. Used for storage but appeared relatively undisturbed.	None	Negligible Potential

B26		Culverted section of the River Medlock at east of site. Length approx. 60m within the site and extending for at least the same distance beyond the site boundary. Poor visibility for assessment.	Bats known to roost in a similar culvert on another nearby site in Manchester.	High Potential
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- A description of adjacent areas/offsite habitats, specifying any relevance to bats, including descriptions of habitat/s relevant to bat commuting/foraging behaviour.

The habitat survey was undertaken by experienced ecologists Victoria Burton (ACIEEM)¹ and Hazel Robson (MCIEEM)² on 24th November 2016, and is reported in PAA 2016.

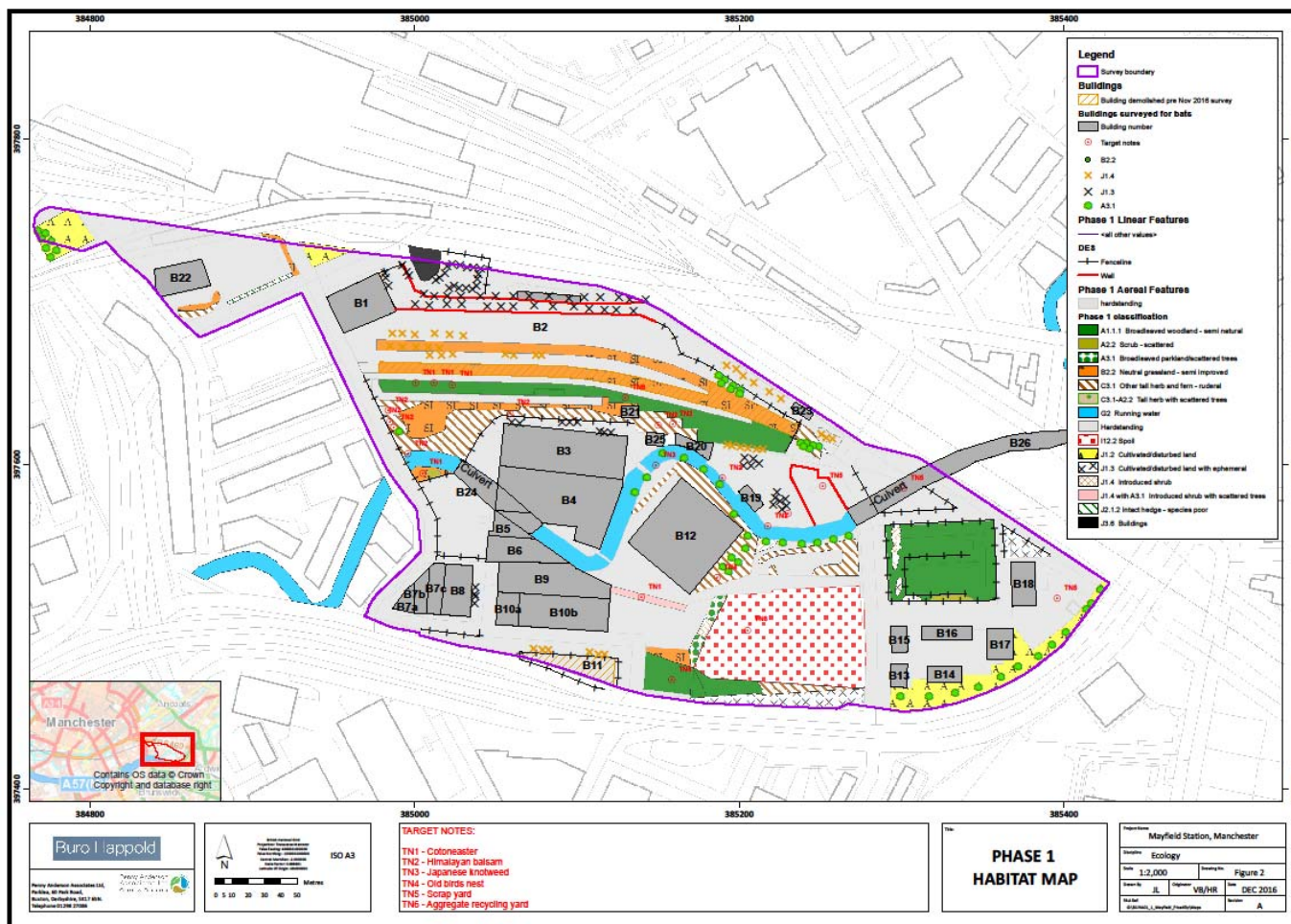
The site chiefly comprises the following habitats, as shown on the Habitat Map (see Figure):

- hardstanding;
- buildings;
- spoil;
- ephemeral short perennial vegetation;
- broadleaved scattered trees;
- scattered scrub;
- tall ruderal;
- semi-improved neutral grassland;
- introduced shrub;
- amenity grassland;
- hedgerow;
- broadleaved semi-natural woodland; and
- running water (River Medlock).

Figure C4 Habitat Map

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

² Full Member of the Chartered Institute of Ecology and Environmental Management.



Buildings & culverts provide actual and potential bat roost sites and the river & associated vegetation provide high value habitats for bats to commute and forage within the densely urban area of Manchester city centre.

The majority of the trees are relatively immature and none provide potential roost features such as woodpecker holes or crevices in dead wood that could be used by bats.

Of the built structures illustrated on the site plan the majority were light industrial or commercial buildings with open plan warehouse style interiors and no roof voids. These provide no potential roost features for bats within the roof structure or interiors. The external walls of some of the units did have crevice features (B8, B10a and B6) suitable for use by species such as pipistrelle bats. B13 to B17 are relatively modern structures of brick and metal with no features suitable for use by bats on the interior or exterior. The former Mayfield Station complex (B1 and B2) has crevice features and internal areas that could be used by bats. There is also an existing record of a pipistrelle roost on B2, although the exact location is not specified within the data this was considered likely to be on the external façade. Due to health and safety considerations, the interior rooms of B1 were not accessible for inspection. B23, situated at the eastern end of B2 on the platform level, has crevice features and access to the interior, which was not accessible for inspection. B7 has features suitable for crevice-dwelling bat species, including gaps in the brickwork, behind damaged fascia boards and also access to the internal rooms and basement, although no evidence of bat droppings or feeding remains was found inside. The culvert over the River Medlock (B24) also provides potential roost habitat for bats, which are known to use culverts in Manchester.

Detailed descriptions of all structures are presented in Table C4a, above. The table below (Table C4b) summarises the buildings identified with moderate to high bat roost potential.

Table C4b Summary of Buildings with Bat Roost Potential

Building No.	Description	Roost Status
B1	Mayfield Station	High Potential
B2	Mayfield station platforms and warehouses	Confirmed Pipistrelle Roost on N elevation (desk study record)

		High Potential throughout rest of structure
B6	Northern wall of industrial unit above retaining wall on River Medlock	High Potential
B7a	Disused industrial units (former Towbar Centre)	Moderate Potential
B7b	Disused industrial units (former Towbar Centre)	Moderate Potential
B7c*	Industrial unit used by church group as a meeting room/place of worship.	Negligible Potential
B8*	Brick warehouse/office units with pitched slate roof	Moderate Potential
B10a*	Brick warehouse/office units with pitched slate roof	Moderate Potential
B23*	Small brick building at end of station platforms	High Potential
B24	Culvert over River Medlock	High Potential

**These buildings were subject to external assessment only due to lack of access permission for internal inspection.*

- Please also include annotated (cross reference the structures) and dated photographs (showing both internal and external survey areas) as these are very useful as an assessment aid. These can be inserted below or submitted as a separate (referenced) document.

Please see section C4, above.

C5 Field survey(s):

Surveys must be up to date and have been conducted within the current or most recent optimal season. Surveys must be undertaken in accordance with the most up to date edition of the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists – Good Practice Guidelines* and the *Bat Mitigation Guidelines*.

C5a Justification for surveys that deviate from the best practice guidelines: Please provide full justification below if your surveys deviate from the aforementioned best practice guidelines, confirming how you have obtained a full appreciation of the bat species roosting at the site, and of the type and status of roosts they use on site and in the context of the immediate surrounding area. **Please note that inadequate survey information is likely to cause delays to your licence application and may result in a Further Information Request.**

C5b Please complete the following tables and add additional lines where necessary (*right click in any cell outside the grey box area. Choose Insert > Insert rows below*). Please enter 'N/A' if the table is not applicable to your survey. Please ensure the information is consistent with Figure **C5b** (showing all buildings, structures and habitats that are within the survey area and distinguishing those that were surveyed and those that were not; indicate where surveyors were located):

Visual inspection

Date of each survey visit (e.g. format 01/06/13)	Structure reference / location	Equipment used (e.g binoculars, endoscope)	Weather – (Include temps, precipitation, Beaufort wind scale etc)
19/07/2018	B24 Culvert	Torch, binoculars, endoscope	Suitable
Comments (to include # of surveyors used for each visit): Helen Hamilton, Hazel Robson, Celia Barlow			
24/11/2016	B2 The Depot	Torch, binoculars, endoscope	Suitable
Comments: Hazel Robson and Victoria Burton.			
24/11/2016	B6 Warehouse	Torch, binoculars, endoscope	Suitable

Comments: Hazel Robson and Victoria Burton.

Please provide surveyors names (including Class Licence registration number if applicable) and ensure the above table states the number of surveyors used for each survey visit undertaken.

Helen Hamilton Survey Licence Class 2 - 2015-15840-CLS-CLS
Hazel Robson – Survey Licence Class 2 - 2015-10504-CLS-CLS
Celia Barlow – 2017-32202-CLS-CLS
Victoria Burton

Dusk survey

Date of each survey visit (e.g. format 01/06/13)	Start and end times and time of sunset	Structure reference / location	Equipment used (include make of bat detectors and logging equipment)	Weather – (Include start and end temps, precipitation, Beaufort wind scale etc)
24/5/2017	Start – 2100 Sunset – 2117 End – 2245	B2 The Depot (platform level)	Bat box Duet (or equivalent) Anabat SD1	Dry with light wind. Temperature 17.5°C dropping to 14.9°C by the end. Relative humidity 73%, increasing to 93%. Cloud cover 0/8 throughout.
Comments (no. surveyors etc): 2				
20/06/2017	Start – 2125 Sunset 2139 End – 2255	B2 The Depot (platform level)	“	Dry with light wind. Temperature 18°C, decreasing to 17°C. Relative humidity 60%, increasing to 67%. Cloud cover 1/8 throughout.
Comments: 2				
04/07/2017	Start – 2125 Sunset – 2140 End – 2250	B24 culvert	“	Dry and calm, some light drizzle for 10 minutes. Temperature 21.8 °C, decreasing to 18.2 °C. Relative humidity 55%, increasing to 65%. Cloud cover 8/8 throughout.
Comments: 2				
20/07/2017	Start – 2100 Sunset – 2124 End – 2248	B2 (platform level)	“	Dry and calm. Temperature 20.5°C decreasing to 15.2 °C. Relative humidity 34% increasing to 54%. Cloud cover 6/8 increasing to 8/8.
Comments: 4				
17/08/2017	Start – 2015 Sunset – 2035 End – 2200	B24 culvert & B6	“	Dry and calm. Temperature 19.4°C increasing to 19.8°C. Relative humidity remained at 32%. Cloud cover 7/8

				throughout.
Comments: 2				
21/09/2017	Start – 1839 Sunset – 1909 End – 1939	B2 (ground)	“	Dry and calm. Temperature 15°C, decreasing to 10°C by end. Relative humidity 57%, increasing to 80%. Cloud cover 6/8, clearing to 2/8 by end.
Comments: 1 (in this area of the site)				
23/07/2018	Start – 2120 Sunset 2100 End - 2230	B2 (ground)	“	Dry and calm, Temperature 24.8°C, decreasing to 19.9°C. Relative humidity 54%, increasing to 75% by end. Cloud cover 100% throughout.
Comments: 3				
08/08/2018	Start – 2053 Sunset – 2030 End - 22002	B2 (ground)	“	Dry and calm. Temperature 19.4°C decreasing to 19.2°C. Relative humidity remained at 62% throughout survey. Cloud cover 20% throughout.
Comments: 4				

Please provide surveyors names (*including Class Licence registration number if applicable*) and ensure the above table states the number of surveyors used for each survey visit undertaken.

Helen Hamilton Survey Licence Class 2 - 2015-15840-CLS-CLS
Hazel Robson – Survey Licence Class 2 - 2015-10504-CLS-CLS
Celia Barlow – 2017-32202-CLS-CLS
Gerard Hawley
Caroline Boffey
Rob Lamb
Martyn Betts
Abbie Case
Matt Hampson
Sam Hubbard

Dawn survey

Date of each survey visit (e.g. format 01/06/13).	Start and end time and time of sunrise	Structure reference / location	Equipment used (include make of bat detectors and logging equipment)	Weather – (<i>Include start and end temps, precipitation, Beaufort wind scale etc</i>)
21/06/2017	Start – 0335 Dawn – 0440 End – 0455	B2 The depot (ground level)	Bat box Duet (or equivalent) Anabat SD1	Dry with light wind. Temperature 16°C, dropping to 15°C by end. Relative humidity 68%, increasing to 72%. Cloud cover 1/8,

				increasing to 2/8.
Comments (to include # of surveyors used for each visit): 6				
21/07/2017	Start – 0350 Dawn – 0508 End – 0525	B24 Culvert	“	Dry with light wind. Temperature 14°C decreasing to 13 °C. Relative humidity 70% increasing to 75%. Cloud cover 8/8 decreasing to 7/8.
Comments: 2				
25/08/2017	Start – 0430 Dawn – 0606 End – 0620	B2 (platform level)	“	Dry and calm. Temperature 13.5°C decreasing to 11.2°C. Relative humidity 60%, decreasing to 80%. Cloud cover 1/8 throughout.
Comments: 2				
1/09/2017	Start – 0505 Dawn – 0618 End – 0630	B2 (ground level)	“	Dry and calm. Temperature 11°C throughout. Relative humidity 75%, increasing to 85%. Cloud cover 0/8 throughout.
Comments:3				

Please provide surveyors names (including Class Licence registration number if applicable) and ensure the above table states the number of surveyors used for each survey visit undertaken.

Hazel Robson - Survey Licence Class 2 - 2015-10504-CLS-CLS
 Rob Lamb
 Matt Hampson
 Rachael Whittaker
 Victoria Burton
 Sam Hubbard
 Abbie Case

‘Other’ survey (please specify e.g. trapping, remote, etc)

Date of each survey visit (e.g. format 01/06/13).	Start and end times	Structure reference / location	Equipment used (include make of bat detectors and logging equipment)	Weather – (Include start and end temps, precipitation, Beaufort wind scale etc)
Walked transect - 04/07/2017	Start – 2140 End – 2252	Site	Bat box Duet (or equivalent) Anabat SD1	Dry and calm, some light drizzle for 10 minutes. Temperature 21.8°C, decreasing to 18.2°C. Relative humidity 55%, increasing to 65% by end. Cloud cover 8/8 throughout.
Comments (to include # of surveyors used for each visit): 2				
Walked transect – 17/08/2017	Start – 2034 End – 2153	Site	“	Dry and calm.

				Temperature 19.4°C increasing to 19.8°C. Relative humidity remained at 32% throughout survey. Cloud cover 7/8 throughout.
Comments: 2				
Automated monitoring 21/07/2017 to 26/07/2017 (5 days)	Approximate sunset to sunrise (2122-0508)	River corridor, B6	Anabat Express	Mostly dry and calm but with some scattered showers. Temperature highs of 22°C during the day and lows of 13°C during the nights.
Comments: NA				

Please provide surveyors names (*including Class Licence registration number if applicable*) and ensure the above table states the number of surveyors used for each survey visit undertaken.

Hazel Robson - Survey Licence Class 2 - 2015-10504-CLS-CLS
Victoria Burton

Please explain any constraints on the survey/s undertaken (time of year, cold weather, refused access, safety issues preventing access etc – justify as necessary and include evidence where required). If access was refused please provide evidence (letter/email) to demonstrate this.

NA

Also complete the following:

- If DNA analysis of droppings has been undertaken, please indicate below (Yes, No, N/A) and ensure that **Figure C5b** (if applicable – see below) details the locations where the samples were taken. Where long-eared bats are detected but cannot be identified to species level visually, DNA analysis of any droppings will be needed where grey long-eared bats may be present.

NA

- Please confirm that a walk over survey/check has been carried out within 3 months *prior* to application submission by a suitably experienced ecologist to ensure that conditions have not changed since the most recent survey was undertaken. Provide details of any changes to conditions and habitats and/or structures on site since the surveys were undertaken.

Date of walkover survey/check	19/07/2018 – Helen Hamilton visited B24 and the roost at B6 as part of the culvert inspection undertaken on that date. B2 (ground level) was visited on 23/07/2018 by Hazel Robson and Helen Hamilton as part of emergence surveys undertaken on that date.
Details of any changes to conditions and habitats and/or structures, if there are no changes please insert 'None'	No change to B2, B6 or B24 noted.

C6 Survey results: Summarise your findings in the tables below and cross reference to **Figure C6** (which must also include flight lines, access points, dimensions of existing roosts etc). If you did not undertake a specific survey type please add N/A to the relevant table/s. Raw data is to be appended to the Method Statement (including sonograms, DNA analysis results etc).

Roost types to be referenced as: Day, Night, Feeding Perch, Transitional, Satellite, Maternity, Hibernation confirmed, Foraging Area, Commuting Route, Swarming Site, Other. See end of document for “Definitions” of these roosts.

When completing “**Notes/observations**” include reference to direct observations, extent and age of droppings, presence of field signs, emergence or re-entry, echolocation analysis. Also include DNA results if applicable and include nil results)

Visual inspection results

Date (e.g. format 01/06/13)	Species and numbers	Roost type (to be consistent with the above listed types)	Structure reference (consistent with relevant figures and other text)	Roost location	Access points (include # of them)	Dimensions of existing roosts or explanation of where the roost is (as appropriate)
NA						

Provide further (brief) comments/explanation if required:

Please refer to appended reports for full details of each building surveyed:

- Bat Survey Report (2017)
- Ecological Appraisal (2016)

Dusk survey results

Date (e.g. format 01/06/13)	Start and end times	Species and numbers	Roost type (to be consistent with the above listed types)	Structure reference (consistent with relevant figures and other text)	Roost location	Access points (include # of them)	Dimensions of existing roosts or explanation of where the roost is (as appropriate)
04/07/2017	2125-2250	Common pipistrelle (1)	Day	B6	Wall below fire escape	1	Small crevice in wall
Notes/observations: bat few away from wall where small crevice present							
20/07/2017	2100-2248	Common pipistrelle (3-4)	Day	B2 south elevation	Exact location unclear on large building covered by metal ramp structure	1	Not known, likely to be crack/crevice in wall
Notes/observations: bats suddenly appeared close to building 15 minutes after sunset; previous studies had reported bat roost in this area (Wardell Armstrong 2014)							
17/08/2017	2015-2200	Common pipistrelle (3)	Day	B24 culvert	Inside culvert, location not confirmed	1	Location not confirmed, several small potential crevices within structure
Notes/observations: bats flew into culvert and did not emerge.							

Provide further (brief) comments/explanation if required:

Please refer to appended reports for full details of each building surveyed:

- Bat Survey Report (PAA 2017)
- Ecological Appraisal (PAA 2016)

Dawn Survey results

Date (e.g. format 01/06/13)	Start and end times	Species and numbers	Roost type (to be consistent with the above listed types)	Structure reference (consistent with relevant figures and other text)	Roost location	Access points (include # of them)	Dimensions of existing roosts or explanation of where the roost is (as appropriate)
21/07/2017	0350-0525	Common pipistrelle (3)	Day	B24	Inside culvert, location not confirmed	1	Location not confirmed, several small potential

							crevices within structure
Notes/observations: bats flew into culvert, did not emerge							

Provide further (brief) comments/explanation if required:

Please refer to appended reports for full details of each building surveyed:

- Bat Survey Report (2017)
- Ecological Appraisal (2016)

'Other' results – please specify.

Date (e.g. format 01/06/13)	Species and numbers	Roost type (to be consistent with the above listed types)	Structure reference (consistent with relevant figures and other text)	Roost location	Access points (include # of them)	Dimensions of existing roosts or explanation of where the roost is (as appropriate)
NA – no roosts detected using walked transect or automated detector surveys						

Provide further (brief) comments/explanation if required:

Please refer to appended reports for full details of each building surveyed:

- Bat Survey Report (2017)
- Ecological Appraisal (2016)

C7 Interpretation/evaluation of survey results (also see the Bat Mitigation Guidelines section 5.8 and Figure 4 for conservation significance of roost type): Please complete the following table:

Structure reference (ensure consistency with other text and Figures)	Species	Count / estimate of number of individuals	Roost location	Site status assessment (e.g. maternity, feeding roost, swarming site, hibernation confirmed etc)	Conservation significance of roost
B2 The depot	Common pipistrelle	Up to 5	External on south elevation at parapet level	Day	Low
B6	Common pipistrelle	1	Wall below fire escape over river	Day	Low
B24 culvert	Common pipistrelle	Up to 4	In crevice within culvert	Day	Low

Provide further (brief) comments / explanation if required:

NA

Important Advice:

Survey maps that must be included in this section of the Method Statement, or as separate documents if preferred, are listed in section I "Map checklist" at the end of this document.

Insert survey figures, photographs etc below here if not submitting them as separate documents:

D Impact assessment in absence of mitigation or compensation for each species / roost type

(also see section 6 of the Bat Mitigation Guidelines). Where appropriate you must take into consideration cumulative impacts of your proposals on the bat species and populations identified in your survey in each section.

Guidance on quantifying roosts for the purpose of licensing: To be considered the same roost, the locations need to have the same **functional** and **qualitative** (e.g. physical) characteristics, be used by the **same species** for the **same purpose** (e.g. day roosting) and be within the **same building / structure**. If the physical characteristics are different (e.g. one roost is in external crevices in the wall and the other is in the roof void against internal timbers) then they should be considered different roosts - because they offer bats different roosting opportunities. If the physical characteristics are similar and provide the same functional characteristics, used by the same species for the same purpose (e.g. transitional roost) but with different individual roosting locations within the overall building / structure, that could be considered one transitional roost. If two species are using an area which provides the same characteristics, for the same function, it is still two roosts - as there are two species.

D1 Initial impacts: The impact/s of activities undertaken on site pre-development and during works must be considered and explained. **Consider disturbance** (such as human presence, noise, vibration, dust, lighting, access obstruction due to scaffolding and plastic sheeting etc), **temporary damage and temporary loss of roosts and injuring/killing**.

E.g. Unsupervised contractor removing roof tiles has the potential to crush 3 common pipistrelle bats using the roof tiles as day roosts. Major negative impact at a site level; Demolition of an extension to a building will take place adjacent to a maternity roost of common pipistrelle bats situated under the soffit board of the retained building. Potential for significant disturbance if demolition works are undertaken during the maternity period through vibration, noise and dust. Medium negative impact on a local level.

Because of the locations of the roosts, the initial impacts are considered to be minimal – the roost on B2 is very high above the ground, the roost on B6 is over the river and the roost in B24 is within a culvert. Their relative seclusion is why they have been selected by bats for roosting and all will be sheltered from disturbance by site set up activities.

The works themselves will result in the following:

B2 – removal of the metal ramp structure has the potential to permanently damage or destroy a small day roost for up to 5 common pipistrelle bats. Because the exact location of the roost is not known on this large structure, the worst case scenario has been assumed – i.e. permanent destruction of the roost. There is also potential for temporary disturbance of bats during the removal of the ramp, and the possibility of injury to bats during the works.

B6 – the demolition of B6 will result in the permanent destruction of a day roost of one common pipistrelle bat, located under the fire escape over River Medlock. Also, there is the possibility of injury to bats during the works.

B24 – removal of buildings over the culvert may result in the temporary disturbance of the roost during the works, but otherwise the roost will be retained with existing access points etc (until later removal of the culvert itself which is included within the SRF for the site and seen as an ecological enhancement for all species including bats).

Confirm number of roosts to be damaged: 3

Confirm number of roosts to be damaged:

D2 Long-term impacts: Consider and explain the impacts of the proposed works on the different species populations at a site, local, regional, and national level.

D2.1. Roost modification: e.g. changes to roosts/access points, new entrances (including human access e.g. for servicing/maintenance etc), change in size of roost space, changes in air flow, temperature and humidity, light etc. Please detail the access points into each roost and the type/s of roosts which will be modified.

E.g. Non-mitigated changes to the roof structure, which requires replacing, will lead to the modification of 3 access points into a common pipistrelle maternity roost which will result in bats being unable to enter or exit the roost. Moderate negative impact on a local level.

NA

Confirm number of roosts to be modified: 0

D2.2. Roost loss: Loss or deterioration of roosting sites, access points, habitat, etc must be considered. Please detail the access points into each roost and types of roost/s which will be lost.

E.g. Demolition of building reference X in June will lead to the loss of a night roost in the porch used by 1 lesser horseshoe bat and the loss of a maternity brown-long eared bat roost in the loft space. This will lead

to the death and/or injury of bats including dependent young and permanent destruction (loss) of both roosts. Moderate negative impact at a site level for lesser horseshoe bats and moderate negative impact at a local level for brown-long eared bats.

B2 – removal of the metal ramp structure has the potential to permanently damage or destroy a small day roost for up to 5 common pipistrelle bats. Because the exact location of the roost is not known on this large structure, the worst case scenario has been assumed – i.e. permanent destruction of the roost. However, it is possible that the roost can be retained, and if it can be, it will. In this case the roost will be clearly marked and appropriately protected as far as possible for the duration of the works. The precise nature of this protection would need to be devised based upon the constraints of the demolition process, but would be developed under the instruction of the licensed ecologist and be in line with best practice such as outlined in Mitchell-Jones (2004) and Mitchell-Jones and McLeish (2004). There is also potential for temporary disturbance of bats during the removal of the ramp, and the possibility of injury to bats during the works.

B6 – the demolition of B6 will result in the permanent destruction of a day roost of one common pipistrelle bat, located under the fire escape over River Medlock. Also, there is the possibility of injury to bats during the works

Confirm number of roosts to be destroyed: 2

D2.3. Fragmentation and isolation: Will the proposed works results in these impacts? E.g. loss of linear features such as hedges, tree lines, increased lighting, severance of flight lines by roads/rail lines, separation of breeding/hibernation sites from feeding grounds, etc.

E.g. In addition to the removal of common pipistrelle day roosts in trees along the proposed road, removal of hedgerows, shown on Figure D, and the construction of the new road will fragment a significant commuting and foraging route for a lesser horseshoe maternity roost. This may cause a reduction in the long term success of the breeding colony of lesser horseshoes by restricting existing foraging range or killing bats on the road. Potentially major negative impact at a site and local level.

Not considered to be significant issue, ultimately the site proposals will improve habitats and connectivity for bats, especially as it is proposed to open up approximately 118m of culverted River Medlock within a new Mayfield Park.

D3 Post-development interference impacts: e.g. extra street lighting or other external lighting, use of loft space as storage, increased noise. Please also consider other direct or indirect post development impacts which may include disturbance/ injuring/killing.

E.g. Security lighting being installed will shine on the brown-long eared bat maternity roost access points which may affect emergence patterns and lead to a reduction in foraging times. This may cause a reduction in the long term success of the breeding colony or cause the roost to be abandoned. Moderate to high negative impact at a site and local level.

The application relates to demolition consent only, so there will be no change in lighting, or it may get darker on site in the short term.

However, since redevelopment is proposed in the SRF, there will, in the long term future, be a change in lighting and disturbance patterns for the site. These are likely to be off-set by opening up the culverted sections of the River Medlock and other enhancements contained within the SRF. Sensitive lighting requirements for bats should form part of the planning conditions for the site to ensure that bats' needs are considered appropriately but it would not be appropriate to include them within the compensation for loss/disturbance to these roosts.

D4 Predicted scale of impact of this development/activity on species status (also see section 6.5 of the Bat Mitigation Guidelines and the BCT's Bat Survey Good Practice Guidelines): Please complete the following table to explain what this is likely to be at the site, local/county and regional levels for each roost type and species. Add additional lines when necessary

Roost types to be referenced as: Day, Night, Feeding Perch, Transitional, Satellite, Maternity, Hibernation confirmed, Foraging Area, Commuting Route, Swarming Site, Other.

Species and Numbers (which will be affected at the time works will be undertaken)	Roost type	Predicted scale of impact (place X in relevant column)			Notes (include impact on roost – damage / destruction /modification etc)
		Site	County	Regional	
Common pipistrelle (up to 10)	Day	X			3 x small day roosts, common species

*** Please note that you can add more rows to the table: right click in any cell outside the grey box area. Choose Insert > Insert rows below.**

Provide further comments/explanation as required (this helps understand how the impacts will be mitigated or compensated for when assessing section E):

Important Advice:

Please ensure that a separate 'Impact map' is provided ([Figure D](#)) which must show all structures or habitats (clearly referenced) that will be disturbed, damaged or destroyed, detailing where the roosts and access points are etc. Also see section I "Map checklist" at the end of this document.

E Mitigation and Compensation (please also see section 7 and 8 of the Bat Mitigation Guidelines)

E1 Please explain why this design was chosen over other potential solutions - set out what other designs were considered and why they were not feasible (e.g. if the proposal is to construct a new stand-alone roost, explain why it is not possible to retain the roost in the existing structure etc). The mitigation solution being proposed in the method statement should be the one that delivers the 'need' with the least impact on the bat population.

Timing - for all roosts, works to take place when bats likely to be absent i.e. during autumn, winter and early spring. This is because day roosts such as these are generally used by bats in summer.

A tool-box talk will be given to contractors to notify them of the presence of bats, their protected status and the timings and methods to be employed to protect bats from disturbance and injury where possible during the works.

Any bats found will be captured by hand and released at dusk using a purpose-mounted bat box close to the River Medlock (at or in the vicinity of SJ 85240 97623, Figure E3). Any injured bats will be conveyed to a nearby veterinary practice.

Two no. permanent durable bat boxes (see figure below for e.g.) will be erected on or in the vicinity of B2 (approximate grid reference SJ 85240 97623), as shown in Figure E3. This will happen prior to any works commencing on the areas containing bat roosts. These can be used for capture and release operations during the works and left in situ afterwards to provide ongoing compensation for roost losses.

B2 - removal of metal ramp structure and possible destruction of roost area. The ramp is unsafe and unsuitable for future uses of the building. It must be removed to facilitate redevelopment in line with the SRF and local planning policy. Therefore specific mitigation will comprise:

- Pre-demolition inspection (if possible to safely access the general area where the roost is located) using endoscope to examine potential roost cracks and crevices at ramp level.
- Exclusion where bats are found using a feature that will be destroyed as part of the ramp removal operations. Exclusion to follow standard methods (e.g. Mitchell-Jones and McLeish (2004)).
- Watched demolition of any features identified as hosting the bat roost or having high potential for roosting that are to be destroyed during the works.
- Retention and protection of roost feature if found and not needing to be destroyed as part of the ramp removal works.
- Capture and release of any accessible bats following best practice guidance (E2.2)

B6 – demolition of building containing roost. The building can not be re-purposed in line with the SRF and local planning policy and must be removed, including the area containing the bat roost. Specific mitigation will comprise:

- Pre-demolition inspection using endoscope
- Exclusion if bat found present
- Watched demolition of area round roost
- Capture and release of any accessible bats following best practice guidance (E2.2)

B24 – demolition of buildings above culvert but retention of roost. The buildings over the culvert must be removed as part of the redevelopment plans for the site. The culvert is retained (for now).

Figure E1 Example of suitable bat box type for crevice-dwelling species such as common pipistrelle
(<https://www.wildcare.co.uk/large-multi-chamber-woodstone-bat-box.html>)



E2.2 Capture and release (if applicable):

Please confirm that you agree to undertake the following procedures for the capture and exclusion of bats, where these are applicable:

- a. The use of endoscopes, artificial light from torches, destructive search by soft demolition (see Definitions), temporary obstruction of roost access, temporary or permanent exclusion methods (including installation) and use of static hand held nets must only be undertaken or directly supervised by the Named Ecologist, or an Accredited Agent.
- b. Where capture and/or handling of bats are necessary, only the Named Ecologist, Accredited Agent, or an Assistant directly supervised by the Named Ecologist may do so. Capture/handling/exclusion of bats must only be undertaken in conditions suitable for bats to be active.
- c. Where bats are discovered and taken (excluding unexpected discoveries during adverse weather conditions) they must either be relocated to an alternative roost (see Definitions) suitable for the species, or where bats are held this must be done safely and bats released on site at dusk in, or adjacent to, suitable foraging/ commuting habitat in safe areas within or directly adjacent to the pre-works habitat.
- d. Endoscopes and hand held nets are only to be used to assist with the locating and capture of bats.
- e. Temporary and permanent exclusion must be carried out using techniques specified in the most up to date edition of the '*Bat Workers Manual*'. If one-way exclusion devices are to be used, each device must remain in position for a period of at least 5 consecutive days/ nights throughout a spell of suitable weather conditions, or remain longer until these conditions prevail.
- f. Prior to destructive works, an inspection using torches and/or an endoscope must be performed internally to search for the presence of bats. If any licensed vesper bat species is found and is accessible, each will be captured by gloved hand or hand-held net, given a health check and then each placed carefully inside a draw-string, calico cloth holding bag or similar for transport. If any licensed horseshoe bat species is found, the capture methods outlined in (h) will only be used after it has been shown that overnight dispersal or exclusion are no longer practicable methods.
- g. Following inspection and exclusion operations, the removal of any feature with bat roost potential, will be only performed by hand and under direct ecological supervision. Where applicable, materials will be removed carefully away and not rolled or sprung to avoid potential harm to bats. The undersides of materials will be checked by the Named Ecologist or Accredited Agent for bats that may be clung to them before removal.
- h. For sites where the presence of horseshoe species has been confirmed, the following exclusion method will be used: prior to work commencing, the Named Ecologist or Accredited Agent will conduct a thorough internal inspection for the presence of horseshoe bats. Only after the void is shown to be unoccupied will

the destructive search commence, or all apertures into that void be closed and sealed (windows, doors, etc) by use of boarding, sealed tarpaulin or similar.

If a horseshoe bat is encountered, it will be left undisturbed during daylight. After all bats have dispersed overnight, the void will be sealed as described above. If all bats have not emerged, the Named Ecologist will either use torchlight and non-tactile human presence to disturb the bat to encourage it to emerge and disperse, during night only, or through use of a hand held net. Only after all bats have emerged from the building or void will it be sealed.

Yes, I agree / No, I don't agree
Yes

If NO, please provide justification below. Please use this text box to describe any additional information on protocols to be employed if bats are found during works. Non-standard capture and exclusion apparatus must be shown on **Figure E2**.

--

Should your proposals include capture (taking) please specify numbers of each species that will be affected at the time the works are to be undertaken:

Species	Expected number of bats to be captured at the time works will be undertaken. <i>Note: this may be different to the number of bats using the roost at its optimum time as timings for works will be at a time when bats are least likely to be present.</i>

*** Please note that you can add more rows to the table: right click in any cell outside the grey box area. Choose Insert > Insert rows below.*

E3 Bat roost and access point retention, modification and creation: Please detail how all impacts to each species (as identified in sections C and D) will be mitigated. If not applicable to your proposals please state 'N/A' in the relevant text boxes.

Please note that breathable roofing membranes must not be installed into a roof used by bats. If the use of roof membranes is necessary, only Bitumen type 1F felt with a hessian matrix will be permitted under licence:

N/A

E3.1 Retention of existing roost(s) – *Works may include, for example, maintenance works that result in no material changes to the roost but may cause disturbance or temporary damage e.g. temporary exclusion of a roost to allow investigative and repair works to a bridge.* Provide details of all works including:

- Number and description of roosts to be retained, with an explanation of how they will be retained. Confirm dimensions to be retained.

1 roost – in B24 culvert. Culvert to be retained in the short term. Future demolition of the culvert is planned for later phase of the site redevelopment works.
--

- Number of access/entrance points to be retained and how this will be achieved. If enhancements to the roosts will be provided, such as through crevice provision, please detail.

NA

- Mitigation for any other impacts e.g. new lighting at the site.

NA

E3.2 Modification of existing roost(s) - Works may include, for example, reduction in roof void height, change of tiles and roof lining (stating the type of membrane that will be used), alteration of access point through replacement of soffits etc. Please provide the following:

- Dimension details of modified roosts: clearly state what the original roost dimensions were and what the dimensions of the modified roost will be.

NA

- Dimension details of modified access points: clearly state how the access points are being modified.

NA

- Details of any other modifications to be made to roosts.

- Mitigation for any impacts of lighting on the modified roost/s if appropriate.

NA

E3.3 New roost creation (including bat houses, cotes and bat boxes etc).

Note – creation of compensation for high impact cases (e.g. loss of a maternity roost) must be protected in the long term. Any bat boxes or roost structures that are part of a licence proposal which do not show signs of bats must be retained for a minimum of 5 years from date of completion of the development/works. Typically this will be around 5 years for low conservation status roost compensation (e.g. bat boxes) and longer for other significant roosts (e.g. bat houses, lofts etc). The exact time period will be specified in any licence issued. For high conservation status roost loss, the compensation roost/s must still be protected in the long term by another means (such as a s106 agreement), which is particularly important if the structure is likely to change ownership.

E3.3a Please complete the table below for the species and roost types listed. For all other species and roost types please provide information under **E3.3b**.

Species & Roost type for which new roost creation will be provided Select 'yes' for those species impacted or 'N/A' if not applicable to this application	New roost creation		
	Compensation should be in line with the <i>Bat Mitigation Guidelines</i> . Where compensation is being provided, there should be at least one compensation feature, suitable for the species concerned, per roost and per species to be impacted , OR If a proposal impacts more than one bat species and / or roost type then cumulative impacts must be considered when designing the compensation; this should always be in line with the species and / or roost type which will be subject to the greatest impact and ensure that the requirements of all species impacted are met.		
	Compensation Feature	Quantity	Location of Compensation Feature (as shown on Figure E3)
Common pipistrelle ☒ Yes ☐ N/A Day roost Night roost Feeding Transitional/Occasional	☒ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None	2	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): on or in vicinity of B2, see Figure E3
Soprano pipistrelle ☐ Yes ☒ N/A Day roost Night roost Feeding	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):

<i>Transitional/Occasional</i>			
Whiskered ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Brandt's ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Daubenton's ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Natterer's ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Brown long-eared ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	Note: boxes for this species will only be acceptable in certain circumstances, where this is justified on an ecological basis ☐ Bat box, justification ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Serotine ☐ Yes ☒ N/A <i>Day roost</i> <i>Night roost</i> <i>Feeding</i> <i>Transitional/Occasional</i>	Note: bat boxes are not suitable for this species. Compensation should replicate, as closely as possible, the existing roost: ☐ Bat tile ☐ Bat brick ☐ Other (specify):		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Lesser Horseshoe ☐ Yes ☒ N/A <i>Day roost</i> <i>Transitional/Occasional</i>	A proportionate number of bat features suitable for the species. The provision of one feature, suitable for the species concerned (eg void) per roost to be impacted will be considered appropriate: Specify:		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):

E3.3b For all species and roost types not covered in the above table please provide the following:

- New roost dimension details or features (to include bat tiles/boxes as applicable).

- Access points and size of access points.

- Location details (including an 8-figure grid reference for bat houses or bat lofts relating to the structure. 8-figure grid references are not required for positions of individual boxes, tiles etc).

- Aspect. Explain how the internal conditions of the roost will be created.

- Details of the materials to be used e.g. timber, sarking, felt etc.

- Justification for any variation from the original roost and/or deviations from recommendations in the Bat Mitigation Guidelines. *(Diagrams of widely available standard bat box designs are not required; just refer to bat box name and reference number, e.g. Schwegler 1FF).*

- Mitigation for any impacts of lighting if appropriate.

- Structures for access for monitoring / maintenance purposes (if applicable)

E3.4 Other habitat re-instatement or creation (e.g. retention of existing flight lines, retention or creation of appropriate vegetation around roost entrances where applicable) – please include details of:

- Habitat replacement (following works resulting in temporary impacts) or creation not covered by sections E2 to E3 such as hedgerow/woodland planting or enhancement. State the length of hedgerow planting and areas (ha) of other planting to be provided such as woodland and anticipated establishment period etc.

- Creation of flight lines/routes of connectivity.

- Foraging area enhancements, etc

- Mitigation for any impacts of lighting if appropriate.

E3.5 Wider biodiversity gains:

Please indicate if enhancements, over and above what is necessary to mitigate the impact of the activity of the licence proposal, are being provided. Please indicate if enhancements are included to satisfy the requirement of a planning permission, and if so state the relevant planning condition, or other consents in your response below. Please also state if an applicant wishes to provide more than is typically required to mitigate for the impacts. Enter N/A if this is not applicable to your application.

Note: Any licence granted will only cover mitigation and compensation required to fulfill licensing requirements, but will acknowledge additional biodiversity enhancements.

Ultimately the redevelopment of the site under the current Mayfield SRF will result in wider enhancements to the site for bats and other wildlife. A new park will be created (2.6ha) plus other habitats (2.6ha) and 118m of River Medlock will be opened up from culvert, extending the habitat by 27%. There is also opportunity for new bat roost sites within new buildings and sensitive lighting can be included to minimise the impact of the urban environment upon bats.

Important Advice:

Scaled maps/plans of mitigation/compensation must be provided as separate maps/figures (also **see section 1 "Map checklist" at the end of this document**):

- **Figure E2** if non-standard capture and exclusion apparatus is proposed please include diagrams/photographs.
- **Figure E3** to show specifications for mitigation / compensation to be provided and annotate where it will be provided. Should the scheme be large or complicated it may be necessary to submit more than one figure.

NOTE: It must be possible to compare these with the survey results plan (**Figure C6**) and 'Impacts' Figure (**D**).

E4 Post-development site safeguard: Further guidance and explanation on post-development monitoring requirements are included within our 'How to get a licence' document http://www.naturalengland.org.uk/Images/wml-g12_tcm6-4116.pdf. Also see Section 8.7 of the Bat Mitigation Guidelines.

E4.1 Habitat/site management and maintenance: Is any specific post-development habitat management and site maintenance planned? If 'No'; state 'N/A'. If 'Yes' include the following:

- The period (years and months) for which habitat management and maintenance will take place. Ensure that this is consistent with the post development works detailed in section **E5b** of the **Work Schedule document, WML-A13-a-E5a&b**.

Bat boxes on (or in the vicinity of) B2 to be maintained for a minimum of 5 years.

- Details of what will be undertaken in terms of site maintenance required to ensure long-term security of the affected population (e.g. maintain, repair or reinstate access points; maintain and repair heaters and /or data loggers; maintain, repair or restore bat feature / bat loft in good condition; repair or replace inspection hatches; management and maintenance of lighting regime, or bat boxes etc).

Maintain and replace bat boxes for 5 years.

- Details of what will be undertaken in terms of habitat management (e.g. planting cover around roost structure, hedgerow management regime, checking establishment of habitat creation; reduction of shade around roosts, woodland management to maintain species and structural diversity etc). Ensure this relates to the relevant map.

NA

Note – for phased or multi-plot developments a separate habitat management and maintenance plan is required, which must be submitted with the master plan: see guidance on phased developments.

Important Advice:

Please include **Figure E4** as a separate figure to show which structures and habitats will be managed, maintained and monitored post development as part of your proposal – also **see section 1 "Map checklist" at the end of this document**).

E4.2 Population monitoring, roost usage etc: This should be in line with the monitoring requirements detailed in the Bat Mitigation Guidelines section 8.7 and Figure 4.

E4.2a Please complete the table below for the species and roost types listed. For all other species and roost types please provide information under E4.2b.

Species	Roost type	Post-development monitoring requirement
Common pipistrelle Soprano pipistrelle Whiskered Brandts Daubenton's Natterer's Brown long-eared Serotine	Day roost Night roost Feeding Transitional/Occasional	☒ None. There is no post-development requirement for proposals affecting bat roosts supporting up to any 3 species indicated, of the roost types listed, where they are used by low numbers of each species. ☐ A single presence / absence survey at an appropriate time of year is to be undertaken. This should not take place in the first year following completion of development.

		Timing (year): ☐ Other (specify):
Lesser Horseshoe	<i>Day roost Transitional/Occasional</i>	☐ A single presence or absence survey at an appropriate time of year to be undertaken in year 2 post development plus a check of the condition and suitability of the roost. ☐ Other (specify):

E4.2b For all species and roost types not covered in the above table please include details of:

- Timing – state the years and months post development monitoring or other will be undertaken. Ensure that is consistent with the post development works detailed in section **E5b** of the **Work Schedule document WML-A13-a-E5a&b**.

NA

- The type of monitoring which will be undertaken – include survey methods and equipment to be used. If it is expected any bats are to be taken or disturbed during this period please state anticipated numbers per species against each licensable activity.

NA

- Specify which compensation/mitigation measures will be subject to monitoring (as referenced on Figure E4).

NA

Please note that it will be a requirement of the licence to undertake remedial action should monitoring identify that further management/maintenance is required of any compensation/mitigation provided, to ensure that mitigation/compensation measures are working effectively and are fit for purpose.

Important advice: Please always consider whether any *post development* monitoring effort should be staggered over alternate years in cases where use of the compensation measures may not occur in the same year of provision.

E4.3 Mechanism for ensuring safeguard of mitigation/compensation and post-development management, maintenance and monitoring works:

Please explain what mechanism is in place to ensure safeguard of mitigation/compensation provisions (e.g. Restrictive Covenant, clause to relinquish future development rights in S106 agreement, NERC Act agreement, explicit recognition of site in local planning documents, designation as County Wildlife Site or similar.) The need for this, and the type of mechanism, will vary with the scheme and impact. For substantial impact schemes (e.g. destruction of a significant maternity roost, or important hibernation site), some mechanism is always required. If you offer no specific mechanism, explain how you believe the population will be free of threats as far as can be reasonably determined (**the expectation of the granting of a licence should not be used for this purpose**).

Explain how all post-development works (management, maintenance (including remedial action) and monitoring, as appropriate) will be ensured? Include a commitment that the monitoring, habitat management and maintenance work will be undertaken. Mechanism/s for ensuring delivery must be in place before applying for a licence (also see Section F).

E5 Timetable of works: Please complete the **work schedule document WML-A13-a-E5a&b** found on the 'bat' application form web page and append to your application pack.

Important Advice: Please note that from end of March 2014 a separate work schedule is a mandatory requirement to support a new bat licence application when using this template.

F Declarations

If the mitigation/compensation area/s is/are not owned by the applicant, you must have consent from the relevant land owner(s). You must have also secured details of how any measures to maintain the population in the long term will be achieved (e.g. a legal agreement).

F1 Declaration Statement(s) – You must include the following declarations within your Method Statement and include the appropriate answer (Yes/No/Not applicable):

F1.1 Re: section E1 - I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts or access into roosts on land outside the applicant's ownership:

Select

F2.2 Re: section E2 - I confirm that landownership consent/s has/have been granted to allow the creation of the proposed compensation on land outside the applicant's ownership

Select

F2.3 Re: section E3 - I confirm that consent/s has/have been granted by the relevant landowner/s for monitoring, management and maintenance purposes on land outside the applicant's ownership

Select

Comments if applicable:

Important Advice:

Unsecured consents statement:

If you have been unable to secure consents for any of the three declarations please explain why and detail any plans you have in place to obtain the consent(s) or provide details of any right(s) or agreement(s) that will enable the lawful implementation of the proposed mitigation, compensation and monitoring. Failure to provide the appropriate landowner consents means that the Method Statement is unlikely to meet the requirements for the FCS test to be met. It is therefore in your interest to ensure that the appropriate consents have been secured *before* applying for a licence.

G References: List any references cited, and include credits for source information.

H Annexes (supporting documents please append to your application pack)

H1 Pre-existing survey reports;

H2 Raw survey data.

I Check list of figures to be submitted with each Bat Method Statement

With your Method Statement and supporting documents please submit the following maps/figures – see table below. Note that some can be included within the Method Statement itself (if preferred) and others must be submitted individually (i.e. separate documents). Maps/Figures must include the title, site name as referenced on your application form, date and figure reference. If a grid reference is more applicable (e.g. a bat house is being provided please included this). Include a scale bar (appropriate to the situation e.g. 100m on site maps, 1km on location maps) and direction of North etc.

Additional maps, photographs or diagrams should be included where necessary to adequately explain the scheme.

Figure reference	Mandatory as will be included	Mandatory for assessment	What it must show (also see details above on site reference, dating and naming).
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	in the annexed licence, if applicable	purpose only, but will not be included in the annexed licence	
Figure B2.1	-	Yes, if the application is part of a phased or multi-plot development	Master plan overview- note – this is not the same as a master plan document, for which you should follow the guidance as stated in section B2.1.
Figure B2.2	-	Yes, if applicable	Locations of other nearby bat licensed sites, or sites which will be impacted on by future development.
Figure C5a	-	Yes	Location map at an appropriate scale for the application (often 1:50,000 or 1:25,000)
Figure C5b	-	Yes	Survey area showing all buildings, structures and habitats that are within the survey area and distinguishing those that were surveyed and those that were not. Indicate where surveyors were located. Aerial photographs should be provided where possible (ensure you have permission to use copy righted maps). If automated detectors were used or transect routes, ensure that these are indicated as appropriate.
Figure C6	-	Yes	Survey results - provide clear, annotated and cross-referenced maps/plans/photographs to show the survey results (access points, location of roosts, flight lines, results of activity surveys where DNA samples were taken etc). Ensure Figure is at a suitable scale to show the results.
Figure D	Yes	-	Impacts plan – map/figure which must show all structures or habitats (clearly referenced) that will be disturbed, damaged or destroyed, detailing where the roosts and access points are.
Figure E2	Yes – but only if applicable to the application	-	Non-standard capture and exclusion apparatus. If these are proposed please include diagrams/photographs.
Figure E3	Yes	-	Specifications for mitigation / compensation (including all dimensions for bat lofts/houses/stand-alone structures and materials to be used etc and 8-figure grid reference). Mitigation / compensation (must show all habitat creation, restoration, boxes). It may be necessary to submit more than 1 figure if the proposal is large or complicated.
Figure E4	Yes – when monitoring and maintenance will be included in the licence	-	Monitoring, management and maintenance map. Please indicate the specific structures and habitat that are to be managed, maintained and monitored as part of this licence proposal. Ensure that they are correctly referenced and are consistent with other parts of the Method Statement and figures.

Definitions of roost types to be included in the application (further detail can also be found in the Bat Mitigation Guidelines and the BCT's "Bat Surveys Good Practice Guidelines"):

- a. **Day roost:** a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
- b. **Night roost:** a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
- c. **Feeding roost:** a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
- d. **Transitional / occasional roost:** used by a few individuals or occasionally small groups for

generally short periods of time on waking from hibernation or in the period prior to hibernation.

- e. **Swarming site:** where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites
- f. **Mating sites:** sites where mating takes place from later summer and can continue through winter.
- g. **Maternity roost:** where female bats give birth and raise their young to independence.
- h. **Hibernation roost:** where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as '**hibernation confirmed**'.
- i. **Satellite roost:** an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.
- j. **Other** – please explain what the roost type is if not one of the above (we recognise that roost types are interchangeable and not always easy to classify according to the nuances of certain species).
- k. An '**alternative roost**' shall include: a purposely installed bat box; an existing roost which will not be impacted by the works; or other new/enhanced roosting opportunities. Any alternative roost must be suitable for the species, within or close to the existing roost and free from additional disturbance or development pressure.