

Three Mile Cross Pumping Station

Bat Mitigation Report

M Group

April 2026

Quality information

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1. Introduction

1.1 Background

AECOM was commissioned by M Group (the Client) to conduct bat surveys at the Three Mile Cross Pumping Station site (the Site) located in Shinfield, Berkshire, in support of the demolition of the disused pumping station building within the Site and associated works to repurpose the existing storm tank to a storage tank (the Scheme).

Previous surveys of the Site were conducted by Mott MacDonald in 2024 and 2025 (Mott MacDonald, 2025) comprising:

- A Preliminary Roost Assessment (PRA) of Building 1 (the pumping station building) informed by both external inspections on 9 July 2024 and 25 September 2025 and an internal inspection on 25 September 2025, which accorded the building High suitability to support roosting bats due to the presence of dense ivy cover on the exterior of the building and potential bat access points to the interior of the building;
- Three dusk bat emergence surveys of Building 1 on 30 July 2025, 21 August 2025 and 25 September 2025, with no bats recorded emerging from the building; and,
- A Ground Level Tree Assessment (GLTA) of all trees within the Site which identified one tree referred to as Tree 1 (to be retained but pruned) that was subject to three aerial inspections by Mott MacDonald ecologists who hold a Natural England bat survey licence at Level 2 on 23 July 2025, 28 August 2025 and 17 September 2025, which had six features considered to be PRF-I (i.e. suitable to support individual bats) and one feature considered to be PRF-M (i.e. suitable to support multiple bats). No features suitable to support hibernating bats were recorded.

AECOM were subsequently commissioned to complete the following surveys to inform the bat mitigation required for the Scheme:

- An updated PRA of Building 1 completed during winter, to check for any evidence of hibernating bats;
- Installation of an automated bat detector within Building 1; and,
- An updated GLTA in the Site.

1.2 The Site

The Site is located off Basingstoke Road, in Shinfield, Berkshire, at Ordnance Survey national grid reference SU7154868162 and is approximately 0.05 ha.

The Site comprises a sewage pumping station building, with trees around the Site perimeter.

1.3 The Scheme

The Scheme comprises demolition of Building 1, pruning of Tree 1 and felling three trees present on-site (hereafter referred to as Tree 4, Tree 5 and Tree 6) to enable access and working areas required for the demolition of Building 1. Additional works also include construction of new 11 m and 8 m gravity sewers, repurposing the storm tank into a storage tank, construction of new manholes and abandoning some of the existing infrastructure on-site.

1.4 Purpose of the bat surveys

The purpose of the surveys completed by AECOM in 2026 was to provide updated results (where required) and additional survey data during the winter period to inform requirements for mitigation and licensing (if required).

2. Relevant wildlife legislation

2.1 Bats

All UK native bat species and their roosts (whether bats are present or not) are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017) and the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981). Taken together, under this legislation, it is an offence to:

- Deliberately, intentionally or recklessly capture, injure or kill a bat;
- Damage/destroy a breeding site or resting place of a bat (this is an offence whether the act is deliberate or not);
- Deliberately, intentionally or recklessly disturb a bat; or
- Intentionally or recklessly obstruct access to any structure which a bat uses for shelter or protection.

A bat roost is defined as “any structure or place, which is used for shelter or protection” or a “breeding site or resting place”. Because bats commonly use the same roosts at particular times of the year after periods of absence, the roost is protected whether or not bats are resident.

Given the legislation, the potential presence of bats at a site represents a material consideration in the planning process. Even where planning permission is not required there is still a legal responsibility placed on the developer to ensure that a Natural England licence is obtained to cover any works that have the potential to result in an offence under the above legislation.

Seven UK bat species are listed as species of principal importance within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (as amended) (HM Government, 2006): namely barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule bat *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*.

2.2 Nesting birds

Birds are protected at a European level under the EC Directive on the Conservation of Wild Birds 1979 (79/409/EEC) (The Council of the European Communities, 1979). This gives general protection to wild birds from deliberate killing, taking from the wild, egg collecting, nest destruction and keeping in captivity, but allowances are made for game birds. Specially protected birds are listed in Annex II of the Directive. Many are afforded protection by the designation of land as SPA.

All species of wild bird in the UK are protected under Part 1 Section 1(1) of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981). They are protected against intentional killing, injuring or taking, as well as taking, damaging or destroying nests in use or being built and taking or destroying eggs.

In addition to general protection for birds, certain species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are afforded special protection. These birds are rare, endangered, declining or vulnerable species. Schedule 1 birds and their young must not be disturbed at the nest.

3. Methods

3.1 Winter Potential Roost Assessment of Building 1

Building 1 was assessed for its suitability to support roosting bats, in line with current best practice guidelines (Collins, 2023). Two AECOM ecologists, one of whom held a Natural England Bat Class Licence WML CL-18 (Bat Survey Level 2), conducted an external assessment of buildings on 10 February 2026 and 10 March 2026. The survey was conducted in February to target the bat hibernation season.

Close-focusing binoculars and a high-powered torch (Cluson Clulite) were used to conduct an external assessment from the ground, noting any potential access/egress points and features with suitability to support roosting bats (e.g. crevices, missing tiles, gaps around soffits) along with any evidence that may indicate the location of roosts.

Following the external survey, an internal survey of Building 1 was completed to search for signs of roosting bats.

Based on the survey, the overall suitability of each feature to support roosting bats was classified as None, Negligible, Low, Moderate or High (see Table 2 in Appendix A for definitions of bat roost suitability categories). This assessment was based on both the intrinsic suitability of features to support roosting bats and other evidence giving an indication of the likelihood of use by bats (e.g. presence of droppings, lack of cobwebs, or exposure to elements).

In addition to the aforementioned categories, a building may be classified as Confirmed where bats are seen (either live bats, or bat carcasses), where chattering has been heard inside, or where the building has been found to contain bat droppings.

Hibernation suitability was also assessed for Building 1 in line with the criteria in Table 3 in Appendix A.

3.2 Static automated detector survey

One static automated bat echolocation detector (SM4bat full spectrum (FS) detector) was placed within Building 1 between 12 February 2026 and 18 February 2026. The automated bat detector provided supplementary information on any bat activity within the building. Data were recorded onto an SD card for subsequent call analysis using Kaleidoscope software and subsequent verification.

3.3 Ground Level Tree Assessment

All trees that could be lost or otherwise impacted (e.g. pruned, or if a bat roost was present, subject to disturbance) were subject to an updated GLTA in accordance with the current survey guidelines (Collins, 2023) and with reference to BS 8596:2015 *Surveying for bats in trees and woodland* (British Standards, 2015). The GLTA was completed on 10 February 2026 by two AECOM ecologists, one of whom held a Natural England Bat Class Licence WML CL-18 (Bat Survey Level 2).

Close-focusing binoculars and a high-powered torch (Cluson Clulite) were used to conduct an external assessment from the ground. All potential access/egress points and features with suitability to support roosting bats (e.g. cracks, crevices) were identified and recorded along with any evidence which may have indicated the location of roosts, such as:

- Stains around entrance holes (from the deposition of oil secretions in bat fur);
- Scratch marks around entrance holes (from bat claw holds);
- Bat droppings;
- Feeding remains; and,
- Odours or noise (e.g. chattering) characteristic of bats.

The grading system used to determine the suitability of trees for supporting roosting bats is contained within Tables 4 and 5 Appendix A. Where features could be clearly viewed from the ground initial PRF-I and PRF-M classifications were applied, however where uncertainty remained trees were conservatively classified as requiring further assessment (FAR).

3.4 Constraints

The GLTA survey was completed from within the Site boundary. As such the view of trees T2 and T3 was limited due to the trees being located in third party land, meaning that one aspect facing away from the Site could only be partially viewed. However it was possible to view all parts of T2 and T3 with potential requirements for pruning for access or working areas and as such this is not considered to be a significant constraint to the survey results.

It should be noted that ecosystems are dynamic and constantly changing, and therefore bats may cease to use a roost and/or adopt new roosts. In line with CIEEM (2019) (Chartered Institute of Ecology and Environmental Management, 2019), ecological survey data are generally considered valid for up to 12 months, subject to site conditions remaining unchanged. Where surveys exceed this period, or where changes have occurred, ecological advice should be sought to confirm whether an update is required.

the results of the bat surveys are considered to be valid for a period of between 12 and 24 months and after this timeframe an ecologist should be consulted to determine if updated survey and assessment is required.

3.5 Quality assurance

This survey and subsequent report were completed in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2015 and BS ISO 45001 2018. In addition, our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

AECOM Ecologists are members, at the appropriate level, of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of conduct when conducting ecological work.

4. Results

4.1 PRA of Building 1

Building 1 is a single storey brick building with a hipped pitched pan tile roof and dense ivy cover on the exterior (Plates 1, 2 and 3). Potential access points to the interior of the building were recorded.

The internal inspection found potential access into the loft space via holes in the ceiling (Plate 4).

No bats or signs of bats were recorded during the external and internal inspections, however the building retains High suitability to support roosting bats. No evidence of hibernating bats was recorded, although the building is considered to have Low suitability to support roosting bats and comprises a non-classic type in line with the definitions in Table 3 in Appendix A.

Photographs of Building 1 are contained in Appendix B.

4.2 Static automated detector survey

No bat call registrations were made during the 12 February 2026 to 18 February 2026 monitoring period.

4.3 GLTA

All trees within the Site and a surrounding 10 m buffer, where accessible, were examined from the ground to determine their suitability to support roosting bats. Photographs are contained in Appendix B. Tree locations are shown in Appendix C.

Table 1. Summary of GLTA survey results

Tree number	Species	Tree description	Suitability for roosting bats
T1	Pedunculate oak <i>Quercus robur</i>	Located to the east of Building 1. 1 m diameter at breast height (DBH). A very large lower limb has already been removed and logged/sectioned up at some time in the past. Suitable features present include woodpecker holes, a callous roll and a branch tear out.	PRF-M, based on confirmation of suitable features still present following the aerial inspection completed by Mott MacDonald in 2025
T2	Norway maple <i>Acer platanoides</i>	0.6 m DBH. No features with suitability for bats recorded.	None
T3	Ash <i>Fraxinus excelsior</i>	0.25 DBH. Ivy cover recorded on trunk.	None observed, however, precautions required for dense ivy cover if tree to be pruned or felled
T4	Cherry <i>Prunus</i> sp.	0.3 m DBH. Ivy cover	None observed, however, precautions required for dense ivy cover if tree to be pruned or felled
T5	Cherry	0.15 m DBH. Ivy cover	None observed, however, precautions required for dense ivy cover if tree to be pruned or felled
T6	Unknown	0.35 m DBH. Tree stump with ivy cover	None observed, however, precautions required for dense ivy cover
T10	Silver birch <i>Betula pendula</i>	0.25 m DBH. No features with suitability for bats recorded.	None
T12	Field maple <i>Acer campestre</i>	0.3 m DBH. No features with suitability for bats recorded.	None
T14	Ash	0.45 m DBH. Ivy cover	None observed, however, precautions required for dense ivy cover if tree to be pruned or felled

5. Discussion and recommendations

5.1 Assessment of presence of roosting bats

Surveys conducted in 2024 and 2025 identified suitable habitat within the Site to support roosting bats. Specifically, PRA and emergence surveys determined that Building 1 has High suitability to support roosting bats, although no evidence of bats was recorded. One tree (T1) was identified within the Site and surrounding 10 m buffer with PRF-M suitability to support roosting bats, based on confirmation of the features remaining present as per the aerial inspection conducted by Mott MacDonald in 2025.

The 2026 surveys completed by AECOM confirm that Building 1 continues to have High suitability to support roosting bats, with no evidence of bats recorded during the inspection surveys completed on 10 February 2026 and 10 March 2026 or on the static automated detector.

T1 is considered to retain a Potential Roost Feature suitable for multiple bats (PRF-M). This classification was assigned on the basis that the feature subject to aerial inspection survey by Mott MacDonald in 2025 is still present and a repeat aerial climbed inspection is not required to confirm this classification. All other trees within the Site and 10 m surrounding buffer are considered to lack features suitable to support roosting bats. However, it has been noted that ivy cover is present on trees T3, T4, T5, T6 and T14, which could obscure features suitable for roosting bats.

Based on the results of the surveys, mitigation measures for bats have been recommended in relation to the demolition of Building 1 and felling of trees T4, T5 and T6.

It is understood that no pruning works will be required in proximity to any of the features recorded as suitable to support roosting bats on T1 and that a long reach machine will be used for the demolition of Building 1. The features suitable to support roosting bats on T1 are located at a distance greater than 10 m from the demolition works. As such no further mitigation measures are required.

It is understood that there will be no works to T2, T3, T10, T12 or T14, therefore no mitigation measures are required.

5.2 Mitigation strategy - bats

5.2.1 Building 1

It is understood that Building 1 will be demolished to facilitate the repurposing of the Site.

Although no evidence of roosting bats has been recorded during the surveys completed to date by Mott MacDonald and AECOM, Building 1 retains High suitability to support roosting bats. As such the demolition of Building 1 should follow a precautionary method of working (PMoW) under supervision as follows:

- The contractors responsible for the demolition of the building should be provided with a toolbox talk from an ecologist, and the steps to be followed if a bat or signs of bats are encountered;
- The dense ivy should be removed from the building by hand, with an ecologist who holds a Natural England Bat Class Licence WML CL-18 (Bat Survey Level 2) present;
- Removal of the asbestos panels and electrical panels should be conducted by hand, with an ecologist who holds a Natural England Bat Class Licence WML CL-18 (Bat Survey Level 2) present; and
- An ecologist who holds a Natural England Bat Class Licence WML CL-18 (Bat Survey Level 2) should conduct an inspection of the building immediately prior to mechanical demolition to confirm the continued absence of roosting bats.

If bats or signs of bats are discovered, works must cease and a European Protected Species Mitigation Licence (EPSML) obtained from Natural England.

5.2.2 T4, T5 and T6

It is understood that T4, T5 and T6 will require felling to facilitate machinery accessing the Site for the demolition of Building 1. No features suitable to support roosting bats have been identified on these trees, however ivy cover is present on the trunks of all three trees.

It is recommended that T4, T5 and T6 are subject to a check of safely accessible areas by ladder of ivy cover by an ecologist prior to felling. Once felled the trees should be checked on the ground and left for a period of 24 hours prior to removal from Site or chipping.

In the unlikely event that bats or signs of bats are discovered works must cease and a European Protected Species Mitigation Licence (EPSML) obtained from Natural England.

5.3 Mitigation strategy – nesting birds, mammals, reptiles and amphibians

Building 1 and trees T4, T5 and T6 offer suitable habitat for nesting birds.

Between March and September inclusive an ecologist will be required to confirm the absence of active bird nests immediately prior to works commencing to avoid a breach of legislation. If a nest is discovered, clearance or other construction works should be stopped immediately within an exclusion zone to be determined by an ecologist (generally 5 m radius, but dependent on species). The exclusion zone will be demarcated appropriately. The nest will subsequently be monitored, typically on a weekly basis, by a suitably experienced ecologist. Once it is confirmed that all fledglings have flown and ceased to return to the nest, and that no other nests are in use within the exclusion zone, the vegetation can be removed.

Construction materials and equipment, left undisturbed for even short periods of time during the breeding bird season, have the potential to be used by nesting birds. Therefore, care should be taken when moving materials and equipment during the breeding season, particularly if they have been *in situ* for several days.

It is understood that the log piles present within the Site from previous limb removal from T1 will be removed from Site. As the log pile has potential for use as a refuge by small mammals, reptiles and amphibians it is recommended that prior to removal from Site it is dismantled by hand, with an ecologist present.

6. References

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- The Council of the European Communities. (1979). *Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds*. Retrieved from <https://eur-lex.europa.eu/eli/dir/1979/409/oj/eng>

Appendix A Bat roost suitability terminology

Table 2. Suitability of buildings to support roosting bats, taken from Collins, 2023

Suitability to support roosting bats	Description
Confirmed	A feature within which bats are seen to be present (either live bats or bat carcasses) or heard chattering inside will be classified as a confirmed roost. In addition, any feature/structure found to contain droppings during inspections will, in the first instance, be considered as a confirmed roost. N.B. In some cases, it may be appropriate to revise this assessment following further survey (e.g. for buildings containing low numbers or old droppings and showing no evidence of use during emergence surveys).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. A structure that has potential to support high conservation status roosts, such as maternity or hibernation roosts.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but unlikely to support a roost of high conservation status (i.e. maternity or hibernation)
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year, but does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by larger numbers of bats.
Negligible	No obvious features likely to be used by roosting bats; however, a small element of uncertainty remains, as bats can use small and apparently unsuitable features on occasion.
None	No features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

Table 3: Bat hibernation suitability assessment, taken from Collins, 2023

Suitability	Description of potential hibernation features
Classic	Classic features, such as underground areas, cellars and tunnels.
Non-classic	Non-classic features, such as hanging tiles or sheltered wall cavities.
No/very Limited	No features present, or only features with very limited potential, such as those in exposed areas or subject to disturbance.

Table 4. Suitability of trees to support roosting bats based on GLTA, taken from Collins, 2023

Suitability to Support Roosting Bats	Description
Potential Roost Features (PRF)	A tree with at least one potential roost feature present. PRF-I – only suitable for individual bats, or small numbers of bats PRF-M – suitable for multiple bats, and therefore could support a maternity colony.
Further Assessment Required (FAR)	Further assessment required to establish whether potential roost features are present.
None	No potential roost features, or highly unlikely to be any.

Table 5. Suitability of trees to support roosting bats based on aerial inspection, taken from Collins, 2023

Suitability to support roosting bats	Description
None	Either no PRFs in the tree or highly unlikely to be any
PRF-I	Suitable for individual or small numbers of bats
PRF-M	Suitable for multiple bats, suitable to support a maternity roost. Only PRF-M trees are assumed potentially suitable for hibernating bats.

Appendix B – Photographs



Plate 1. Building 1, looking west



Plate 2. Building 1, looking east



Plate 3. Building 1, looking south



Plate 4. Building 1 interior



Plate 5. Tree 1, mature oak on eastern Site boundary



Plate 6. Tree 1, woodpecker holes on trunk split



Plate 7. Tree 1, branch callous roll



Plate 8. Tree 3 cherry with dense ivy cover

Appendix C – Site plan



