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Report prepared for: Oldfield Construction Ltd.

For the Site of: 1 Boston Grove, Ruislip, HA4 7RY

Version:	Written by:	Checked by:	Final:
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Final	Amy Palmer 08/02/2022	Rob Beer 09/02/2022	Amy Palmer /02/2022

Cherryfield Ecology has prepared this report for the named clients use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be no more than 12 months old and therefore should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Preliminary Roost Assessment (PRA)

0.0 Non-Technical Summary

0.1 Background

The report undertaken follows national guidelines Collins (2016) allowing for a day-time inspection and recommends for further surveys if considered necessary. If a deviation from the guidelines has been made this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of 1 Boston Grove, Ruislip, HA4 7RY.

The client commissioned Cherryfield Ecology to undertake a PRA as the proposals include for the demolition of the existing dwelling and detached garage to be replaced with a new two-storey dwelling. Plans have been provided see Appendix I.

0.2 Results and Findings

- The site consists of a detached dwelling (B1a), with an adjoined garage (B1b), a small bin store (B2) and a small, garden outbuilding (B3).
- No bats or evidence of bats were found at the time of the survey.
- B1a provides **negligible** potential for roosting bats due to a lack of potential access points and roosting features.
- B1b provides **negligible** potential for roosting bats, due to an overall lack of roosting features / access points with only one gap found which on closer inspection did not lead to a suitable cavity, it should also be noted that there are more suitable roosting opportunities present in neighbouring buildings.
- B2 provides **negligible** potential for roosting bats, due to a lack of suitable roosting features internally
- B3 provides **low** potential for roosting bats, due to a small number of potential access points / roosting features.

0.3 Impact Assessment and Recommendations

B1a, B1b and B2 – No impacts are foreseen; however, if bats are found during the development, all works must stop, and advice sought.

B3 - It is currently understood that B3 is to remain in situ, if this is the case, no further surveys are required.

If the proposals change and B3 is to be affected one presence/Likely Absence survey, with two surveyors will be required. If bats are found to be using B3, two further surveys will be required, a minimum of two weeks apart. These surveys must be undertaken within the May to September window (with September considered sub-optimal). Two of these surveys will need to be undertaken during the optimal timeframe of mid-May to August.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4 for further details).

1.0 Introduction

1.1 Aim of the Survey

This survey aims to inform the client of any bat issues that may be present on site and that could affect the development. It recommends for further survey when considered necessary and provides possible mitigation and enhancement should this become required.

1.2 Background Information

The client, Oldfield Construction Ltd., has commissioned Cherryfield Ecology to undertake a PRA for the site of 1 Boston Grove, Ruislip, HA4 7RY. Planning permission is being sought to replace the existing single-storey dwelling and detached garage with a new, two-storey dwelling.

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or features known to be used by bats e.g. crevices, gaps or holes that cannot be checked for a variety of reasons.

The inspection was conducted on the 01/02/2022.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find evidence.

Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and, therefore, a synopsis is provided.

The survey can be conducted year-round, however it can be limited due to bad weather and in the winter, when bats are not active, thus evidence and bats are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural

Habitats and of Wild Fauna and Flora ("Habitats Directive") which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is well-defined by the legislation as the 'resting place' of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

2.0 Methods

The survey follows the national guidelines Collins (2016) and the following equipment is available for the inspection (it may or may not all be used):

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors as above (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence (should this be found).

The assessment allows for a detailed inspection of the site looking for bats, evidence of use by bats e.g. droppings/feeding remains, and features known to be used by bats for roosting e.g. gaps, crevices and holes. Trees and buildings are assessed from ground level only and may require climbed surveys of holes, cracks and crevices.
Biological records data is ordered from the local records centre to provide context and background information. As the data is often sensitive, a synopsis is provided.
If a deviation from the guidelines has been made, the reason and justification will be explained below:
No deviation from the standard guidelines has been made for this survey.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey only. Bats are highly mobile and can turn up from time to time, unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Roosting features (likelihood) of bat presence assessed against Collins (2016) guidelines *Source: Adapted from Collins (2016) pp 35, Table 4.1.*

Likelihood of bat presence (Habitat Value)	Features that bats can use, regardless of evidence being present.
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
Moderate and Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids. Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland. High levels of external lighting.
Negligible likelihood of bat presence.	No features suitable for roosting, minor foraging or commuting.

Notes on using this table

1 The features listed here may not be indicative of use of the site by bats during winter or spring.

2 Pre-1914 buildings may present the greatest likelihood of providing roost space for bats due to their design, materials used and age. Pre-1990 buildings, especially when close to good foraging habitat, and with favoured features such as cavity walls and soffits, also have a high likelihood of providing roost sites for some bat species.

3 Post-1990 buildings are generally less likely than older buildings to house roosts; however, some modern designs provide access to suitable roosting spaces for bats. Pipistrelles, in particular, occupy modern buildings and built structures providing that there are suitable access gaps (>8mm) and provided the structure has appropriate characteristics for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference – TQ085883 and Postcode – HA4 7RY.

Table 2: Weather Records

Temperature	8ºC
Cloud cover	20%
Precipitation	None
Wind	2/12

3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1):

- There are three statutory sites located within the search area:
  - Ruislip Local Nature Reserve (LNR) is situated approx. 1.8km east of the site.
  - Ruislip Woods National Nature Reserve (NNR) and Site of Special Scienitfic Interest is situated approx. 230m north-east, 800m north-west and 1.4km west of the site. The SSSI is classed as being in a favourable condition.
- There are two NEPS licences granted for bats within the search area:
  - Common Pipistrelle *Pipistrellus pipistrellus*, approx. 750m south-east of the site (Licence 2010-1919).
  - Common Pipistrelle and Soprano Pipistrelle *Pipistrellus pygmaeus* approx. 1.6km south-east of the site (Licence 2012-4853).

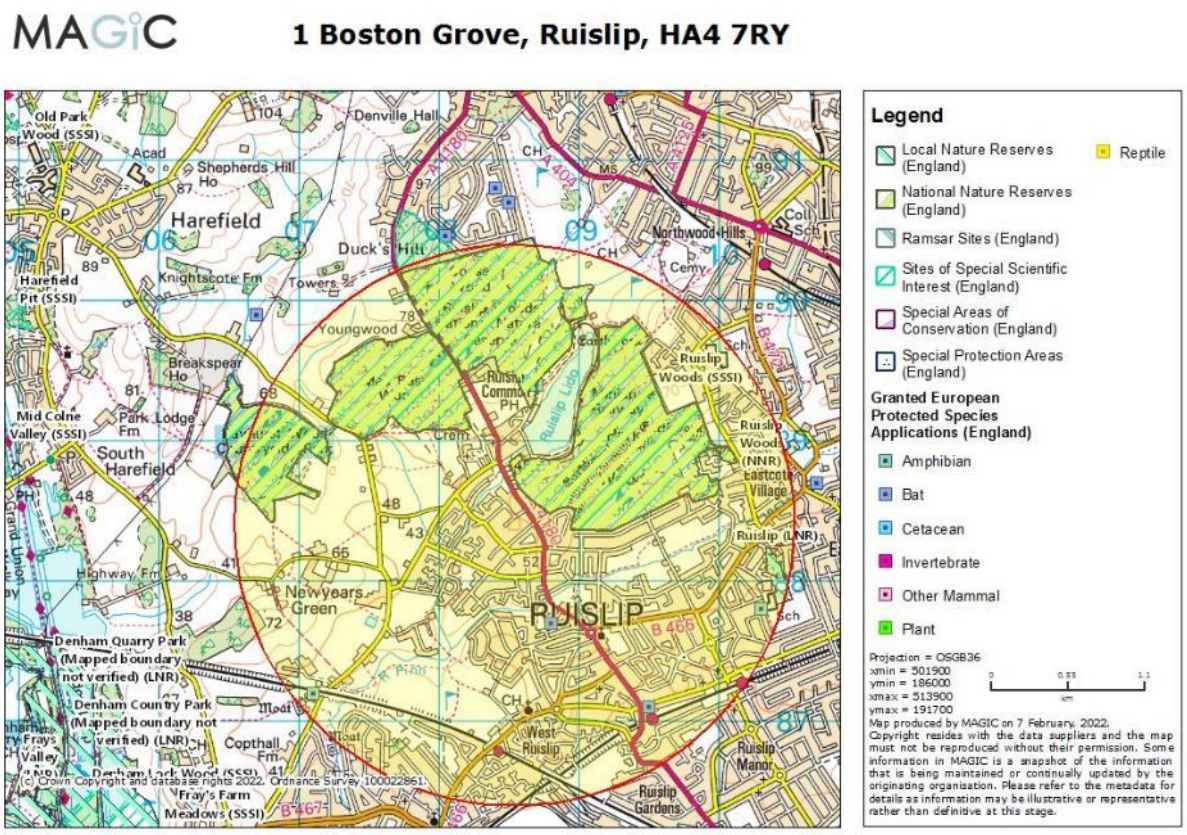


Figure 1: Magic Map Search

3.3 Biological Records Data

A 1km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from London Bat Group (LBG, 2022). A total of 294 records were provided from a total of 10 confirmed bat species.

Table 3: Biological Records

Species	Number of Records	Closest record (accuracy)	Most recent record (year)
Brown Long-Eared *Plecotus auritus*	18	410m (100m)	2020
Common Pipistrelle *Pipistrellus pipistrellus*	55	410m (100m)	2020
Daubenton's *Myotis daubentonii*	49	410m (100m)	2017
Leisler's *Nyctalus leislerii*	4	880m (100m)	2020

Nathusius' Pipistrelle *Pipistrellus nathusii*	2	800m (1m)	2017
Natterer's *Myotis nattererii*	21	410m (100m)	2020
Noctule *Nyctalus noctula*	30	410m (100m)	2020
Serotine *Eptesicus serotinus*	4	880m (100m)	2020
Soprano Pipistrelle *Pipistrellus pygmaeus*	63	310m (100m)	2020
Unidentified Long-Eared *Plecotus sp.*	3	>2km (100m)	2013
Unidentified Myotis *Myotis sp.*	4	690m (100m)	2009
Unidentified Pipistrelle *Pipistrellus sp.*	20	410m (100m)	2020
Unidentified Vesper *Vespertilionidae*	10	>1km (100m)	2020
Whiskered/Brandt's *Myotis mystacinus/brandtii*	11	>1km (1m)	2017

3.4 Site Location and Surrounds

The site is located in Ruislip, in the London Borough of Hillingdon and is surrounded by urban sprawl in the immediate local. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for bat use in the general area

Feature	Description
Water course	The River Pinn suns approx. 620m south of the site. There is a canal feeder stream found approx. 330m west of the site, drains found approx. 680m west and a small stream approx. 770m east.
Water bodies	Ruislip Lido is found approx. 550m north-east of the site. There are several small ponds found approx. 540m north-west, 700m north-west and 890m south-east respectively.
Woodland	Ruislip Woods National Nature Reserve is situated approx. 220m north-east of the site and 830m north-west of the site.
Linear e.g. hedgerows	There are limited linear features found in the immediate surrounds, however there are some agricultural hedgerows found bordering field margins approx. 600m west of the site and woodland edges along Ruislip Woods approx. 200m north-east.
Pasture/arable/grassland	Pasture and arable land are found approx. 600m west of the site.
Other	N/A

3.5 Building, Tree or Other Structure

This section details the structures reference and description (see Figure 22 for Site Plan).

Building/tree/structure reference – B1a and B1b (Main Building with garage), B2 (Bin store), B3 (outbuilding)

3.5.1 Description

3.5.2 General

The site consists of a detached dwelling (B1a), with an adjoined garage (B1b), a small bin store (B2) and a small, garden outbuilding (B3).

3.5.3 External

B1a is a single-storey dwelling, with a hipped roof structure, there is a cross-hip to the front of the building and a conservatory to the rear. The building is brick built with concrete roof tiles. The building has a single chimney, plastic windows, doors and rainwater goods.

B1b is a single garage attached to B1a by a wall, with a hipped roof structure. The building is brick built, with concrete roof tiles and plastic soffits.

B2 is small, bin store with a hipped roof. B2 is brick built, with concrete roof tiles.

B3 is a small outbuilding, the building is timber framed, with timber cladded sides and concrete tiles on the pitched roof.

Figure 2: Front elevation of B1a and B1b

Figure 3: Side elevation of B1a

Figure 4: Rear elevation of B1a

Figure 5: Side elevation of B1b

Figure 6: External of B2 (bin store)

Figure 7: External of B3

3.5.4 Internal

B1a has one internal loft void, with a modern truss rafter beam structure. The void is lined with bitumen felt and has a combination of boarding and insulation across the floor.

B1b has no internal loft void, and a vaulted ceiling. The roof is lined with bitumen felt.

B2 has a very small internal space, there is no void or roof lining with a very small section of central ridge board.

B3 is open sided and has a small inaccessible void.

Figure 8: Loft void in B1a

Figure 9: Loft void space in cross hip of B1a

Figure 10: Internal space in B1b

Figure 11: Internal space in B2

Figure 12: Internal space and inaccessible void in B3

3.6 Bats, Evidence or Likelihood of Bat Presence

The following table details the results of the surveys:

Table 5: Bats, evidence or likelihood of bats being present.

Bats found	No bats were found at the time of the survey.
Evidence of bat use	No evidence of bats was found at the time of the survey.
Potential for bat use	Level of likelihood of presence – **B1a – Negligible** B1a provides negligible potential for roosting bats due to a lack of potential access points and roosting features. The roof tiles across B1a were intact and tight fitting (see figures 13 and 14), with the soffits also flush against the walls of the building (see figures 15 and 16). Internally the bitumen felt was tightly clad to the rafters (see figure 17) with no obvious entry points.

Figure 13: Example of tight-fitting roof tiles on B1a

Figure 14: Further example of tight-fitting roof tiles on B1a

Figure 15: Example of soffits flush against walls of B1a

Figure 16: Further example of soffits flush against walls of B1a

B1b – Negligible

B1b provides negligible potential for roosting bats. Internally there were no obvious access points, with the roofing felt tight-fitting to the rafters. Externally, the brick walls were intact and in a good condition with the soffits also tight fitting to the walls (see figure 17). Overall, the roof tiles across the building were intact and tight-fitting, with only one gap present under a lifted roof tile. Though this could act as a potential access point, more suitable roosting opportunities were present in neighbouring buildings including numerous gaps under clay roof tiles.

Figure 17: Example of brick work in good condition and tight-fitting soffits on B1b

Figure 18: Example of mostly tight-fitting roof tiles but one gap present

B2 – Negligible

B2 provides negligible potential for roosting bats. Though potential access points were present in the structure via small gaps under the eaves, inside there is a very small internal space, with a very short section of central ridge board which was tightly fitted to the roof and a lack of roof lining the tight-fitting tiles, and therefore the internals are considered to provide sub optimal roosting opportunities for bats.

Figure 19: Very small internal space in B2

B3 – Low

B3 provides low potential for roosting bats, due to a small number of potential access points / roosting features. A small number of gaps were present under loose roof tiles and a small gap was present in the cladded sides which led into the inaccessible, but small void above.

Figure 20: Small number of gaps in roof tiles in B3

Figure 21: Example of gap leading to void in B3

3.7 Supplementary Observations

There were no other protected species found at the time of the survey.

Figure 22: Site Plan

4.0 Conclusions, Discussion and Recommendations

The following section details the conclusions, discussion, potential impacts and recommendations in the context of the proposed works.

Building/tree/structure reference – B1a and B1b (Main Building with garage), B2 (Bin store), B3 (outbuilding)

4.1 Conclusion and Discussion

The proposals include for the replacement of the main dwelling and garage on site, with a new, two-storey dwelling. The site consists of a detached dwelling (B1a), with an adjoined garage (B1b), a small bin store (B2) and a small, garden outbuilding (B3). No bats or evidence of bats were found at the time of the survey. B1a provides **negligible** potential for roosting bats due to a lack of potential access points and roosting features. B1b provides **negligible** potential for roosting bats, due to an overall lack of roosting features / access points with only one gap found which on closer inspection did not lead to a suitable cavity, it should also be noted that there are more suitable roosting opportunities present in neighbouring buildings. B2 provides **negligible** potential for roosting bats, due to a lack of suitable roosting features internally. B3 provides **low** potential for roosting bats, due to a small number of potential access points / roosting features. It is currently understood that B3 is to remain in situ during the proposals, if however plans change and B3 is to be affected, further survey will be necessary.

4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

Table 6: Impact Assessment

Impact	No impacts are foreseen.
Characterisation of unmitigated impact on the feature	n/a
Effect without mitigation	n/a

Mitigation	See Table 7
Significance of effects of residual impacts (after mitigation)	n/a

4.3 Recommendations

B1a, B1b and B2 – No impacts are foreseen; however, if bats are found during the development, all works must stop, and advice sought.

B3 - It is currently understood that B3 is to remain in situ, if this is the case, no further surveys are required.

If the proposals change and B3 is to be affected one presence/Likely Absence survey, with two surveyors will be required. If bats are found to be using B3, two further surveys will be required, a minimum of two weeks apart. These surveys must be undertaken within the May to September window (with September considered sub-optimal). Two of these surveys will need to be undertaken during the optimal timeframe of mid-May to August.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4 for further details).

4.4 Recommended Mitigation and Enhancements

The following table details the recommended precautionary measures and enhancements.

Table 7: Recommended precautionary measures and enhancements

Work	Specification
Precautions to be undertaken during works.	The following must be undertaken – • All works must be undertaken within 12months of this report, thereafter a material change check will be required to check for changes that could affect potential bat habitat. • If a bat is found at any point whatsoever during works, works will stop and further advice will be sought.
Enhancements to provide a net gain as per the LPA's duty.	A minimum of one Schweglar 1FF or similar boxes (Figure 23) will be hung on the trees at a minimum of 3m from ground level and face south/southwesterly. These boxes are known to be used by crevice and void dwelling species.  Figure 23: Schweglar 1FF bat box Bat tubes can also be built into the building (Figure 24), these require no maintenance and can be hidden by facing the tube with the cladding/brick etc. for aesthetics.

	 Figure 24: Example of bat tube
Lighting	Any lighting near or shining onto any trees, especially those with bat boxes in or commuting routes shown to be present at further survey stage, should be designed to minimise the impact it has on potential bat roosting and commuting. Lighting should be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2018) *https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/* This lighting should be of low level, be on downward deflectors and, ideally, be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used. This will ensure that the roosting and commuting resources that the bats are likely to be using is maintained.

5.0 References

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at https://www.cieem.net/data/files/ECIA%20Guidelines.pdf

Collins, J. (ed), (2016), Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition, BCT, London

Google Earth, (2017), Located on site postcode, online

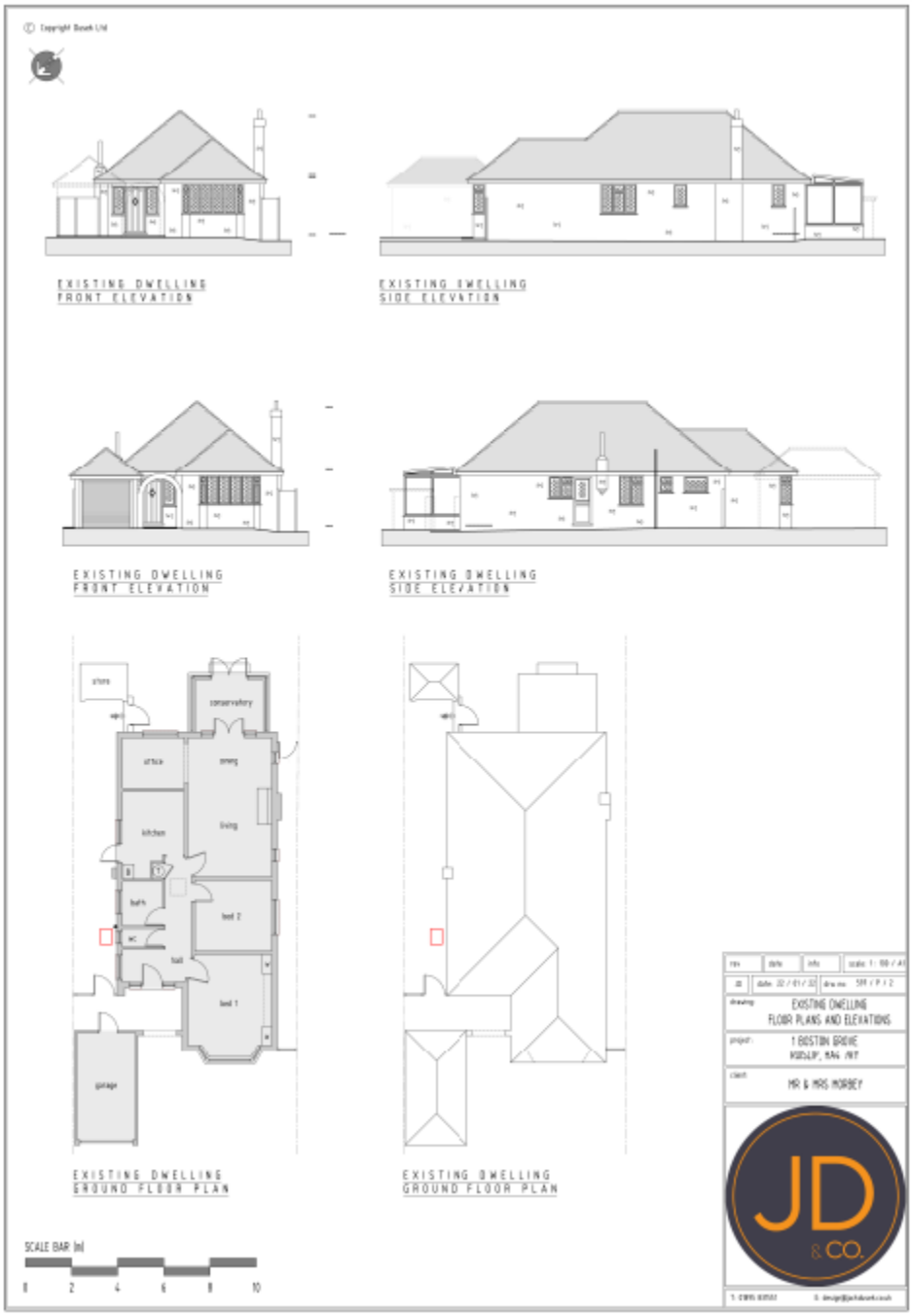
MAGIC, (2017): Magic maps, NEPS licences and designated sites, online http://www.magic.gov.uk/Login.aspx?ReturnUrl=%2fMagicMap.aspx, accessed as report date.

Mitchell-Jones, A.J. (2004), Bat Mitigation Guidelines, English Nature, Peterborough

Records: London Bat Group (2022), LBG, Biological Records Data

Appendix I

Existing Dwelling Floor Plans and Elevations (JD & Co. 2022)



Proposed Dwelling Floor Plans and Elevations (JD & Co. 2022)