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Storage Buildings, Stables & Barns, Manning's Heath Golf and Wine Estate, Horsham, East Sussex

Preliminary Roost Assessment - Bats

Report for Manning's Heath Estate

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Summary of Key Findings

Temple was commissioned by Mannings Heath Estate in January 2025 to undertake a survey to determine the suitability of buildings to support roosting bats and any likely constraints to the proposed development of the storage buildings, stables and barns at Mannings Heath Golf Club & Wine Estate, Mannings Heath, Horsham, West Sussex, RH13 6PG. The main findings are as follows:

- The site contained seven agricultural storage buildings and barns, including an existing steel frame. Buildings were in a poor state of repairs and used for storage.
- The small barn (B2) and brick barn (B4) provide moderate suitability for roosting bats. The timber lean to (B3) provides low suitability for roosting bats. The pole barn (B5), stables (B6), timber structure (B7), brick wall and steel structure (B1) all had negligible suitability for roosting bats.
- The proposals include adding a roof to the existing steel frame (B1), as well as the pole barn (B5), stables (B6) and timber structure (B7). The proposals will only impact buildings that were assessed as having negligible suitability for roosting bats, and buildings assessed as having low or moderate suitability for roosting bats will not be affected by the proposals, therefore no further surveys of the buildings are required under the current proposals.
- If the proposals change or if future works are required to the small barn (B2), brick barn (B4), or timber lean-to (B3), further assessment may be necessary.
- The Site was considered suitable to support reptiles, and phased clearance is recommended. The Site also had some suitability for breeding birds, and suitable timing of works is recommended.
- Recommendations to enhance the Site for biodiversity, above and beyond that required for mitigation, include providing suitable roosting opportunities.

1 Introduction

BACKGROUND TO COMMISSION

1.1 Temple was commissioned by Manning's Heath Estate in January 2025 to undertake a Preliminary Roost Assessment (PRA) for bats at Storage Buildings, Stables & Barns at Mannings Heath Golf Club & Wine Estate, Mannings Heath, Horsham, West Sussex, RH13 6PG, in order to inform a planning application for the construction of a new roof to the existing storage buildings.

1.2 The survey covers all seven buildings/structures located within the site boundary (henceforth referred to as 'the Site') as indicated on the plan provided by the client (Hollington, 2025; Appendix 1, Figure 3 and 4).

SCOPE OF REPORT

1.3 This report provides an assessment of the likelihood that the Site supports roosting bats and outlines any requirement for further survey. It also provides an assessment of the value of the site for foraging and/or commuting. Where possible, it also outlines any avoidance, mitigation, compensation and enhancement measures as may be required to ensure compliance with legislation and policy.

1.4 The assessment is based on the following sources of information, including that obtained from third parties and the results of surveys:

- a desk study including:
    - a data search for bat records within a 2km radius of the site;
    - an assessment of the surrounding habitats for their likely importance for bats;
    - the presence of any protected areas cited for their bat populations; and
    - the location and status of any nearby historic or extant bat mitigation licenses within a 2km radius of the site.

- a detailed building inspection/inspection of each structure within the site boundary.

1.5 This assessment has been prepared with reference to best practice guidance published by the Bat Conservation Trust (Collins, 2023) and as detailed in British Standard 42020:2013 *Biodiversity – Code of Practice for Biodiversity and Development* (BSI, 2013).

1.6 This report provides supporting information in the appendices with a georeferenced map of the survey results in Appendix 1 and cross-referenced photographs in Appendix 2.

SITE CONTEXT AND STATUS

1.7 The proposed development Site is 0.12 ha in size and centred on Ordnance Survey National Grid Reference TQ 21004 29697. The Site consists of the existing buildings, including: small barn, timber lean to, brick barn, pole barn, stables and timber structure. There is an existing brick wall to the north and steel frame with no roof. A ground floor plan is provided in Appendix 1, figure 2.

1.8 The Site is situated to the north of Hammerpond Road, with multiple parcels of woodland present in the wider landscape, in connectivity with the Site. The closest area of woodland is St Leonards Forest, approximately 65m to the north of the Site. The wider landscape consists of a golf course, agricultural fields are present as well as small tree-lined roads. The Site is 5.8km south-west of Crawley and 1.6km east of the town of Horsham. For Site context, see Appendix 1, Figure 1.

DEVELOPMENT PROPOSALS

1.9 This planning application relates to an agricultural barn and its replacement roof to allow the barn to be used for the storage of equipment and machinery associated with the maintenance of the vineyard within Mannings Heath Golf Club & Wine Estate. The existing roof for the streel frame (B1) has perished, and a replacement roof needed. See Appendix 1, Figure 3 and 4 for the proposals and footprint of the new roof. The floor area of the barns is not increased by the proposals. The works will be limited to the brick wall and the existing steel structure (B1), pole barn (B5),

timber structure (B7) and stables (B6). The other buildings, including the small barn (B2), timber lean to (B3) and brick barn (B4) will not be impacted by the current proposals.

RELEVANT LEGISLATION AND PLANNING POLICY

1.10 The following key pieces of nature conservation legislation are relevant to this assessment. A more detailed description of this legislation is provided in Appendix 3.

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006; and
- The Environment Act 2021.

1.11 The actions that could result in an offence occurring under the above legislation include: the disturbance of bats within (and, in some cases, away from) a roost; loss or damage of a roost; obstructing access to or from a roost; or modification of a roost[1]. If development proposals are likely to result in an offence, then a mitigation licence must be obtained from Natural England prior to works, to provide a derogation from the relevant legislation. Alternatively, where no more than three low conservation significance roosts are present and are used by low numbers of bats of no more than three of the (qualifying) species that mitigation licences are most commonly applied for, it may be possible to register the site under the Bat Mitigation Class Licence (BMCL) scheme.

1.12 The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2024) requires public authorities to contribute to and enhance the natural and local environment including by minimising impacts on and providing net gains for biodiversity when taking planning decisions. The Environment Act,

[1] These actions are inferred from Section 43.1 and 43.2 of *The Conservation of Habitats and Species Regulations 2017* (as amended).

2021 has strengthened the duty to conserve biodiversity within the Natural Environment and Rural Communities Act 2006, such that all public authorities are required to conserve and enhance biodiversity.

1.13 Other planning policies at the local level which are of relevance to this site include: Horsham District Council Planning Framework (Horsham District Council, 2015).

NOMENCLATURE

1.14 Common names of species, in accordance with the Natural History Museum Species Dictionary (Natural History Museum (2022), are used throughout this report with scientific names given at first mention only for fauna.

2 Methodology

DESK STUDY

2.1 A desk study was conducted to obtain data relating to bats within a 2km radius of the site, as made available by the Sussex Biodiversity Record Centre.

2.2 Additional contextual information was compiled from publicly available data sources:

- MAGIC (http://www.magic.gov.uk) – the Government's on-line mapping service. Information was sought regarding: the presence of ancient semi-natural woodland (ASNW), statutory designated nature conservation sites and extant or historic mitigation licences for bats; and

- Ordnance Survey mapping and publicly available aerial photography to determine any features such as: running and standing water, woodland, tree lines, hedgerows, railway corridors and the surrounding landscape uses.

PRELIMINARY ROOST ASSESSMENT – BUILDINGS

2.3 The PRA consisted of an external inspection of all features/surfaces of the buildings/structures and an internal inspection where access allowed. The survey and assessment was undertaken by Maisie Worthington BSc (Hons) ACIEEM, an experienced ecologist with seven years' commercial bat survey experience.

2.4 The aim of the surveys outlined below is to establish the suitability of the buildings within the site to support bat roosts. The suitability of structures to support roosting bats, ranging from negligible to the presence of a confirmed roost, is assessed using the findings of the survey and the desk study. The following criteria were used to determine the suitability of the buildings for roosting bats (taken from Collins, 2023):

- Negligible – While presence cannot be absolutely discounted there were no significant visible features that could be used by bats for roosting.

- Low – A structure with one or more potential roost sites that could be used by individual bats opportunistically; however, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.

- Moderate – A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).

- High – A structure or tree 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.

- Confirmed roost[2] – Evidence indicates a building or other structure is used by bats, for example:

    - bats seen roosting or observed flying from a roost or freely in the habitat;

    - droppings, carcasses and feeding remains indicative of a roost; and

    - bats heard 'chattering' inside on a warm day or at dusk.

2.5 The gathered information has been used to inform whether further survey is required in the form of dusk emergence and/or dawn re-entry surveys to fully understand how bats are using the site and the potential impacts of the proposals

[2] Adapted from Cowan, A. (2006) Trees and Bats. Guidance Notes 1. Arboricultural Association, Cheltenham

on bats, or whether an assessment can be made on the basis of the [building] inspection alone.

Internal and External Inspections

2.6 The PRA was carried out on the 21 January 2025 in weather conditions of 3°C, 1/12 Beaufort scale wind, 1/8 okta cloud cover.

2.7 The survey comprised an internal and external inspection of the seven existing buildings within the site, involving a detailed search of all accessible architectural features for bat droppings, urine staining, scratch marks, staining around suitable crevices and feeding remains. Windowpanes and other external surfaces were checked for droppings or other secondary evidence. This included external features, such as soffits and fascias, roof lining, brickwork and window casements. Any features that could potentially provide access into internal areas (such as cavity walls) were noted. Where buildings were open the internal area was viewed but was only accessed where safe to do so.

2.8 The survey methodology followed best practice guidelines (Reason and Wray, 2023; Collins, 2023). Equipment used during the building inspection included close-focusing binoculars, a hand-held LED torch and a high-powered torch.

2.9 Finally, all buildings/structures were inspected for evidence of/potential for breeding and/or roosting birds.

EVALUATION AND IMPACT ASSESSMENT

2.11 Where sufficient baseline data are available, the Site's ecological importance has been evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (south-east) county (Sussex), or other local authority-wide area (Horsham District Council); and of importance at the zone of influence of the site only. In evaluating the nature conservation importance of the site, the following factors were considered: nature conservation designations;

species/habitat rarity; naturalness; fragility and connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.

2.12 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2023) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development. Reference is also made to Section 6 of the Bat Mitigation Guidelines (Reason and Wray, 2023) and Natural England's standing advice and includes a summary of the scale of impact according to roost type and development effect, if known.

2.13 Where ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the Environment Act 2021, National Planning Policy Framework (NPPF) and local/regional planning policies, opportunities to enhance or create benefits for wildlife are provided where this is possible based on the information available to date. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain.

DATA VALIDITY AND LIMITATIONS

2.14 It is important to note that even where data are held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

2.15 Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season is possible that roost sites that are used for a limited time only could be missed, and the detection of small numbers of crevice dwelling species from an inspection alone may remain problematic, particularly where droppings accumulate within an inaccessible void such as a cavity wall or above the roof lining. Where visible and

undisturbed, however, evidence of bats inside a building is likely to be detectable throughout the year.

2.16 Some of the buildings on-site were in a poor state of repair, making an internal inspection unsafe. Certain areas were not safe to access due to structural instability, overgrown vegetation, and debris. The pole barn had a partially collapsed roof, and the timber structure was overgrown with brambles and scattered with rubble, preventing entry. However, as the buildings and structures were open, with no enclosed sides and no roof on the timber structure, the surveyor was able to conduct an external survey and see internally through the open sections.

2.17 Data from bat surveys should be considered to be valid for a period of 12-18 months, unless there are any significant changes to the buildings or other habitats within the site (CIEEM, 2019). Data used to support a mitigation licence application to Natural England must be from the most recent survey season; depending on the timing of the application, this may mean from the same or previous year.

3 Results

DESK STUDY

3.1 The data search returned 28 records of bats from within the past ten years from at least nine species. Of these six were roosts/possible roosts and the remainder were field records/grounded bats. There are no historic mitigation licences known from within a 2km radius of the Site.

3.2 A summary of the results is presented in Tables 3.1

Table 3.1: Summary of data search results

Species	Distance & Orientation	Date of most recent record	Description
Soprano Pipistrelle *Pipistrellus pygmaeus*	0.2km west	01/10/2015	Unspecified Roost
Common Pipistrelle *Pipistrellus pipistrellus*	1.1km south	04/09/2015	Maternity Roost
Common Pipistrelle	1.6km south	13/05/2017	Unspecified Roost
Common Pipistrelle	1.6km south-east	26/07/2016	Unspecified Roost; Droppings
Common Pipistrelle	1.9km west	August 2018 - September 2018	Unspecified Roost

Designated sites

3.3 No sites designated for bats are present within 2km of the Site. There are two statutory designated sites that contain significant areas of woodland or wetland and are likely to be of value to bats locally and have connectivity to the Site, but do not specifically cite bats. These are presented in Table 3.3.

Table 3.3: Statutory/non-statutory sites where bats are included in the citation

Site	Distance & Orientation	Description
St Leonard's Forest Site of Special Scientific Interest (SSSI)	0.2km north-west	This site preserves remnants of a once-extensive deciduous forest, with varied ground vegetation and streams retaining relic flora from 5000 years ago. The woodland supports diverse bird species, including woodpeckers *Picidae*, nightjar (*Caprimulgus*

Site	Distance & Orientation	Description
		europaeus), and redstart *Phoenicurus phoenicurus*, as well as the rare purple emperor butterfly *Apatura iris*. Dominated by pedunculate oak, birch and beech, the site also features conifer plantations, heathland flora, and wetland areas with alder and willow. Hawkins Pond and surrounding habitats host rare mosses, liverworts, and aquatic plants, while Sheepwash Gill's humid microclimate sustains ancient bryophytes.
St Leonard's Park Ponds Site of Special Scientific Interest (SSSI)	1.4km north-west	These species-rich ponds support diverse botanical communities and provide important habitat for dragonflies and damselflies, including several rare species. The surrounding woodland and fen vegetation host uncommon plants, while open water areas feature broad-leaved pondweed and white water-lily.

Significant landscape features

3.4 The surrounding woodland has good connectivity to the Site. Two lakes, Hawkins and Hammer Pond, are situated 0.7km and 1.2km east of the Site boundary respectively. Such habitats are likely to provide important foraging and commuting resources for bats locally.

FIELD SURVEY

Overview

3.5 No evidence of roosting bats was recorded during the PRA undertaken at any of the buildings on Site.

Preliminary Roost Assessment

3.6 The building inspection covered seven buildings and structures, as detailed below. A site plan is provided in Appendix 1 and supporting photographs of key features in Appendix 2. Table 3.4 provides an assessment of each building/structure.

Table 3.4 Preliminary Bat Roost Assessment

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
Brick wall and steel structure (B1)	The steel structure consists of a series of metal columns supporting an open framework of horizontal and diagonal steel beams. The roof is entirely missing, leaving the frame exposed (Appendix 2, Photograph 1). To the north is a brick wall approximately 1.8m in height. The brick wall is not a cavity wall and has some missing brick in places. The mortar was in fairly good condition, with no cracks (Appendix 2, Photographs 2 and 3).	The missing bricks were inspected closely, but none provided suitable roosing features for crevice dwelling bats.	Site has connectivity to surrounding woodlands.	Negligible	The current proposals (Hollington Architects, 2024) include replacing the roof on the existing steel frame (Appendix 1, Figure 3 and 4). No features suitable for roosting bats. No further surveys required
Small Barn (B2)	The small barn has a pitched roof, though it is deteriorating in places. Its eastern (Appendix 2, photograph 5) and northern walls are built of brick, while the southern wall is constructed from timber weatherboarding, which is missing in some places. The western side is fully open, with	The west elevation of the barn is completely open, exposing the internal area of the barn to ingress of weather elements.	Site has connectivity to surrounding woodlands. The building is likely to be draughty and to fluctuate in temperature as	Moderate	Current proposals (Hollington Architects, 2024) do not include any works to the Small Barn, with proposals only affecting the existing steel structure (B1), Pole Barn (B5) and Stables (B6). There will be no works to the Small Barn (B2), and the works to B1 adjacent will not affect the

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
	a double door measuring approximately 3m x 2m, which remains open at all times (Appendix 2, photograph 4). The roof is covered with clay tiles, though many are lifted or missing, leaving parts of the structure exposed. The southern wall has several windows, though these are broken and open to the elements. Internally, the barn is open to the timber rafters, with a felt-lined roof. No void is present. Overall, the barn is in poor condition, with signs of deterioration. It is currently used for storing golf buggies.	Lose and lifted clay tiles. Lifted and missing weather boarding. Missing windows and doors provide direct flight access to the inside of the building where there are exposed wooden beams which are likely to provide roost locations.	there is no external wall to the west. Open to the eaves, no internal void suitable for bats. Building is subject to high levels of ambient light.		lifted and lose tiles, or affect the weatherboarding. The barn will remain open to the west, and the current proposals will not impede access into the building. No further surveys are required, however, if proposals change, or any future development occur at the barn, further assessment may be required.
Timber lean to (B3)	Attached to the north of the small barn is an open timber lean to structure. The lean-to was in a state of disrepair, with a sloped roof partially collapsed. Lose and lifted clay tiles were present, as well as timber weather boarding (Appendix 2, photographs 6	Loose and lifted clay tiles. Lifted weather boarding.	Site has connectivity to surrounding woodlands.	Low	Current proposals (Hollington Architects, 2024) do not include any works to the Timber lean to, with proposals only affecting the existing steel structure (B1), Pole Barn (B5) and Stables (B6) to the east and south of the timber lean to.

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
	and 7). The timber lean to provides a dry internal roof area, with access available through the collapsed side.				No works are proposed to the timber lean to. No further surveys are required, however, if proposals change, or any future development occurs to the lean to, further assessment may be required
Brick Barn (B4)	The brick barn is a small, two-story barn built from brick with a pitched roof and gabled end (Appendix 2, photograph 8). There are no voids present, with the second story open to the rafters. Windows at both ends of the barn allow light into the building, as well as open to the ingress of weather (Appendix 2, photograph 9). The roof is constructed from timber rafters with no lining and clay tiles. There is a hole in the roof to the east of the building, and the clay tiles have started to fall into the building. The timber lean to extends to the north of the brick barn	Loose and lifted clay tiles. Gaps under the eaves. Open windows and holes in the roof allow access into the building. The internal wooden beams provide potentially suitable roosting locations	Site has connectivity to surrounding woodlands. The building is likely to be draughty and to fluctuate in temperature as there are large windows with no glass present. Open to the eaves, no internal void suitable for bats. The internal area was subject to high levels of ambient light, with open windows	Moderate	Current proposals (Hollington Architects, 2024) do not include any works to the Brick Barn (B4), with proposals only affecting the existing steel structure (B1), Pole Barn (B5) and Stables (B6) to the east and south of the Brick Barn. No further surveys are required, however, if proposals change, or any future development includes works to the Brick Barn (B4), further assessment may be required

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
			and a hole in the roof allowing light in. Lifted tiles provide suitable habitat for crevice dwelling species only.		
Pole Barn (B5)	The pole barn consists of a timber structure with a corrugated metal roof, that has partially collapsed in places. The ground is covered with rubble, including bricks, metal sheets, wooden planks, and various discarded items (Appendix 2, photograph 10).	No features suitable for roosting bats	Site has connectivity to surrounding woodlands.	Negligible	Current proposals (Hollington Architects, 2024) include the reinstatement of the roof to the Pole Barn (B5). No further surveys required.
Stables (B6)	Breezeblock built stables. Asbestos/timer roof cover western edge, roof missing rest of the building. No crack or gaps in breezeblock walls (Appendix 2, photo 11).	No features suitable for roosting bats	Site has connectivity to surrounding woodlands.	Negligible	Current proposals (Hollington Architects, 2024) include the reinstatement of the roof to the Stables (B6). No further surveys are required.
Timber structure (B7)	To the east of the Site lies the timber frame remains of a structure. The structure is a	No features suitable for roosting bats	Site has connectivity to	Negligible	Current proposals (Hollington Architects, 2024) do not include any works to the

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
	partially collapsed wooden enclosure with no roof. The wooden walls are heavily weathered, with broken and missing planks. The ground is covered by rubble and old railway sleepers, and overgrown with ruderal vegetation (Appendix 2, photograph 13).		surrounding woodlands.		timber structure (B7), with proposals only affecting the existing steel structure (B1), Pole Barn (B5) and Stables (B6) to the west of the timber structure. No further surveys are required, however, if proposals change, or any future development includes works to the Brick Barn (B4), further assessment may be required

Other Fauna

3.7 Within the pole barn and to the north of the stables, there are large piles of rubble, including bricks, metal sheets, wooden planks, and various discarded items. Theses piles of rubble are overgrown with vegetation in places. The Site is also connected to adjacent woodland to the south. This provides suitable habitat for reptiles.

3.8 There is also the potential for the buildings and the overhanging vegetation to support breeding birds.

4 Evaluation and Impacts

ROOSTING BATS

4.1 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately capture, kill, disturb and damage or destroy a bat roost. Some species of bat are also Species of Principal Importance and Sussex LBAP species.

4.2 The small barn (B2) and brick barn (B4) provide moderate suitability for roosting bats. The timber lean to (B3) provides low suitability for roosting bats. Current proposal, as presented in Appendix 1, Figure 3 and 4, do not included any works to theses buildings, and the construction of the new roof will not impact the buildings suitability to support roosting bats.

4.3 The current proposals include the construction of a new roof that will cover the brick wall and steel structure (B1), pole barn (B5), stables (B6) and timber structure (B7). These buildings had negligible suitability for roosting bats and as such, no further surveys of the building are required under current development proposals. The current proposals do not include any additional lighting.

4.4 If the proposals change or if future works are required for the small barn (B2), brick barn (B4), or timber lean-to (B3), a further assessment may be necessary.

OTHER FAUNA

4.5 All species of reptile are afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill or injure reptiles.

4.6 The rubble surrounding the pole barn and stables provides a suitable habitat for reptiles, offering shelter and basking opportunities. The current proposals (Hollington, 2024) do not explicitly state whether the rubble piles will need to be

removed to facilitate the new roof and enable the barn to be used for future storage. If removal is required, it is recommended that a precautionary approach is taken. Any dismantling of the rubble piles should be carried out sensitively between March and November, outside of the reptile hibernation period. Additionally, all areas should be hand-searched for individual reptiles immediately before removal.

4.7 All wild birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended).

4.8 Where possible any pruning that may be required of the overhanging vegetation should take place outside of the main breeding bird season (March-September, inclusive). If this is not possible, then a nesting bird check of the vegetation should be carried out by a suitably qualified ecologist no longer than 48 hours prior to works commencing. Any active birds' nests should be left in situ and a suitable buffer established until all the chicks have fledged, or the breeding attempt considered over.

5 Summary and Recommendations

SUMMARY

0.1 The proposed ground floor and proposed elevation plans (Appendix 1, Figure 3 and 4) show a new roof will be added to the existing steel frame (B1), timber structure (B7), pole barn (B5) and stables (B6). Theses buildings were all considered to be negligible for roosting bats, and no further surveys of these buildings/structures is required.

0.2 The small barn (B2), and brick barn (b2) were considered to have moderate potential for roosting bats, while the timber lean to (B3) had low potential for roosting bats. The new roof will extend to the east of these buildings, and no direct works to theses buildings is proposed. The proposed east elevation (Appendix 1, Figure 4) shows that the new Kingspan roof will sit below the existing roof for both the small barn and brick barn (see also Appendix 2, photographs 5 and 8). The proposed new roof will not impede access to the loose clay tiles or impede access into the barns themselves.

0.3 If the proposals change, or if any works to the small barn, timber lean to and brick barn that are not currently outlined in the proposals (Appendix 1, Figure 3 and 4), further assessment or survey will be required.

0.4 The development proposals do not include any additional lighting, but should it be considered, the following principles should be applied during construction and post-development. This could include specifications for downward facing lights or the inclusion of baffles with light spillage kept to a minimum. During the construction phase artificial lighting should only be utilised where necessary for health and safety reasons with lighting only used for the period of time for which it is required (Jones, 2000). Standard guidance for sensitive lighting for bats is presented in Appendix 4.

ENHANCEMENTS

0.5 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. Measures set out below can be used to achieve a net gain in biodiversity, and in particular bats. Please note, however, that no formal calculations have been provided as this is outside the scope of this document.

0.6 The following measures would be suitable for integration into the site's design.

Provision of Bat Roosting Opportunities

0.7 There are opportunities to enhance the value of the site for roosting bats through the installation of additional bat roost features in or on the new roof or the retained buildings. There are a variety of ways in which roosting opportunities can be incorporated into buildings including the integration of bat tubes into the walls of the buildings (N.B. these are wholly self-contained and do not permit bats access into wall itself) and different types of bat boxes mounted externally on the façades of buildings. Woodcrete models are recommended as these are longer lasting, require little maintenance, provide a more stable environment for inhabitants and generally have higher occupancy rates than wooden varieties. Bat tubes/boxes should be located at least 5m above ground level to allow for clear flight paths and in positions where they will not be subject to artificial lighting. If possible, bat roost features should be incorporated on the southern aspects, particularly where these lie adjacent to suitable foraging or commuting habitat (including woodland and scattered trees).

Reptile hibernacula

0.8 Log/brash piles and hibernacula/basking banks could be created in the woodland to the south, or areas that will remain free from future disturbance in sunny, sheltered areas. These will provide refuge, hibernation and basking habitat for reptiles as well

as increasing structural diversity and opportunities for other species including invertebrates, amphibians, small mammals and birds.

0.9 Their construction should follow that set out in the Reptile Habitat Management Handbook (Edgar *et al.,* 2010) with the hibernaculum being of at least size 4m long, by 2m wide by 1m high. This larger construction should contain a range of materials of varying diameters such as cut timber, brash, inert hardcore, bricks and rocks. Wood chip and loose soil can be used to infill gaps. Where this is set in grassland habitat, turf should be removed from the footprint of the hibernaculum and used to cover the bank after construction. If this is not possible, then the bank should be seeded with a meadow seed mix to promote vegetation growth.

References

British Standards Institution (BSI) (2013). *Biodiversity. Code of practice for planning and development: 42020*. BSI, London.

CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. Version 1.2*. Chartered Institute of Ecology and Environmental Management, Winchester

CIEEM (2019) *Advice Note on the Lifespan of Ecological Reports and Surveys*. April 2019.

Collins. (2023) *Bat Surveys - Good Practice Guidelines* 3rd Edition. Bat Conservation Trust, London.

Cowan, A. (2006) *Trees and Bats. Guidance Notes 1.* Arboricultural Association, Cheltenham.

Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth. Available at: https://www.arc-trust.org/habitat-management-handbooks

Fure, A. (2006). *Bats and lighting*. The London Naturalist

Hollington Architects (2024) Leonardslee Horse Shed, Lower Beeding, Horsham, West Sussex, RH13 6PP, Ground Floor Plan As Proposed.

Horsham District Council (2015) Horsham District Planning Framework (excluding South Downs National Park). Horsham District Council.

Gunnell, K., Grant, G. and Williams, C. 2012. Landscape and urban design for bats and biodiversity. Bat Conservation Trust

Institution of Lighting Professionals (2023) *Bats and Artificial Lighting in the UK*. Guidance Note 08/23. Institution of Lighting Professionals and Bat Conservation Trust

Jones, J. (2000) *Impact of lighting on bats*. Bat Conservation Trust, London.

Mitchell-Jones, A.J. & McLeish, A.P. (2004) *The Bat Workers' Manual* 3rd Edition. Joint Nature Conservation Committee, Peterborough.

Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework. London

Newton, J. Nicholson, B. Saunders, R. Willets, R. & Venables, R. (2011) *Working with wildlife: guidance for the construction industry* (2nd Ed.). London: CIRIA

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1.* Chartered Institute of Ecology and Environmental Management, Ampfield.

Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation. University of Bristol.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1.* Chartered Institute of Ecology and Environmental Management, Ampfield.

Appendix 1: Survey Map

Figure 1: Preliminary Roost Assessment Map

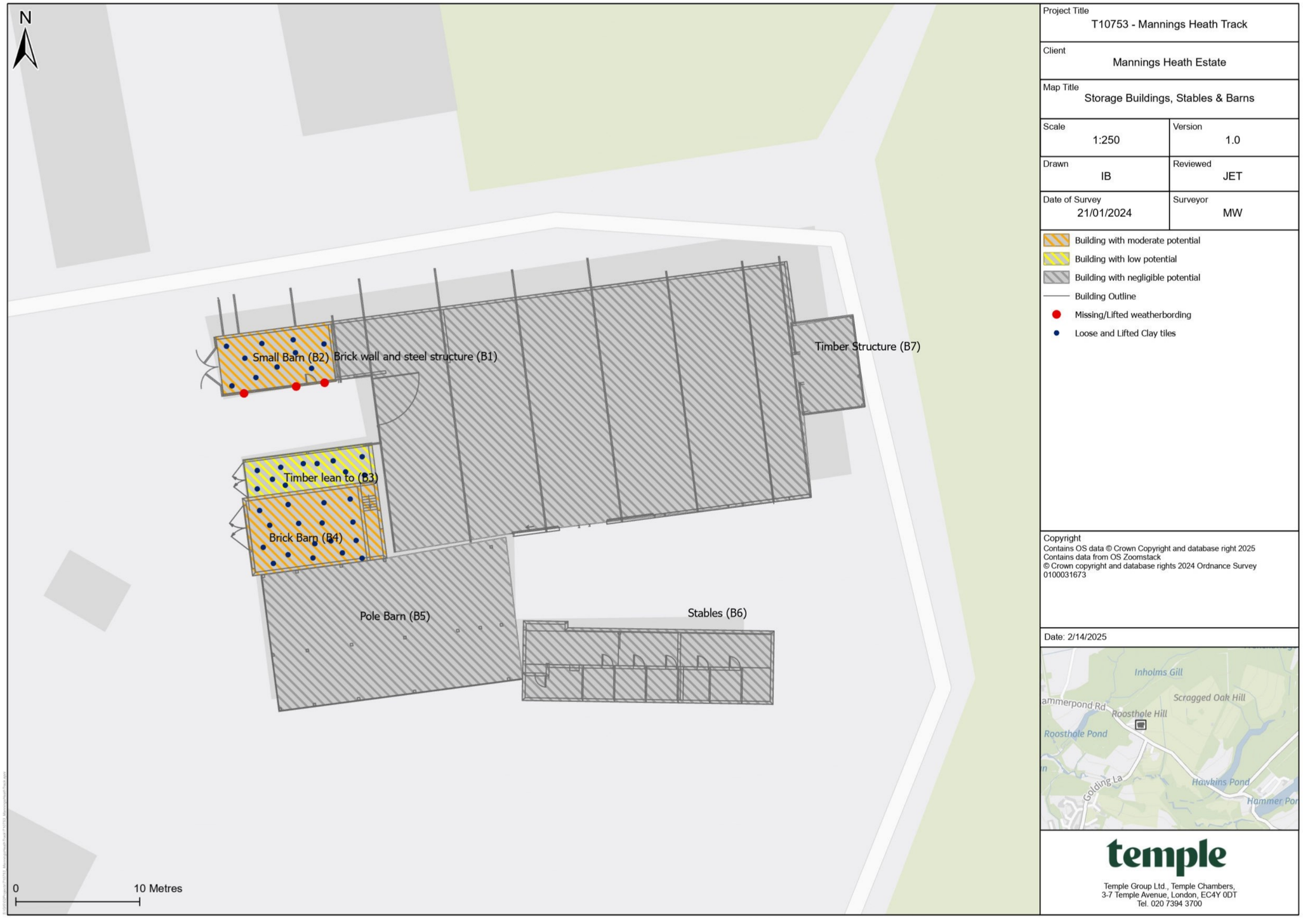


Figure 2: Existing ground floor plan (Hollington, 2024)

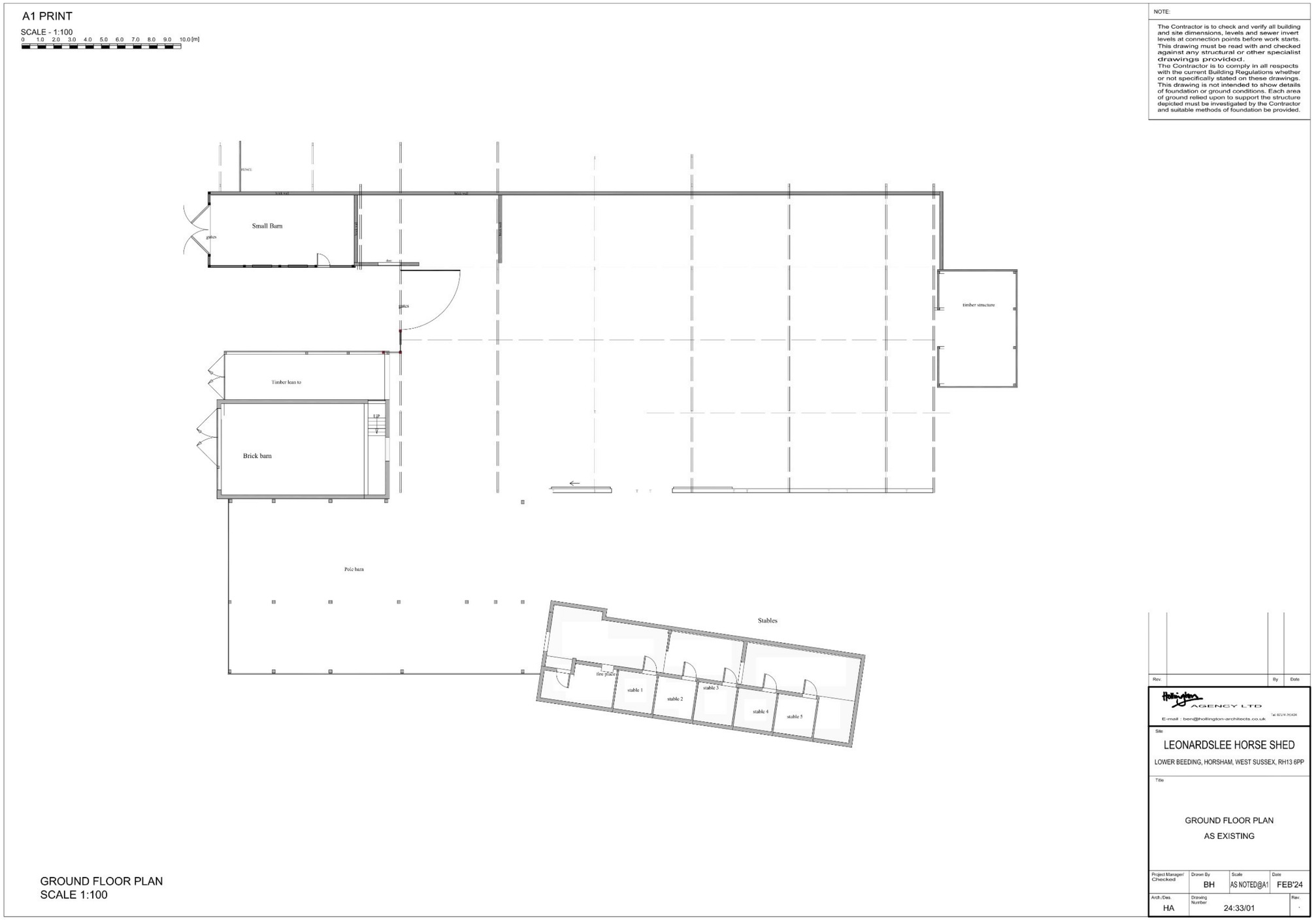


Figure 3: Proposed ground floor plan (Hollington, 2024)

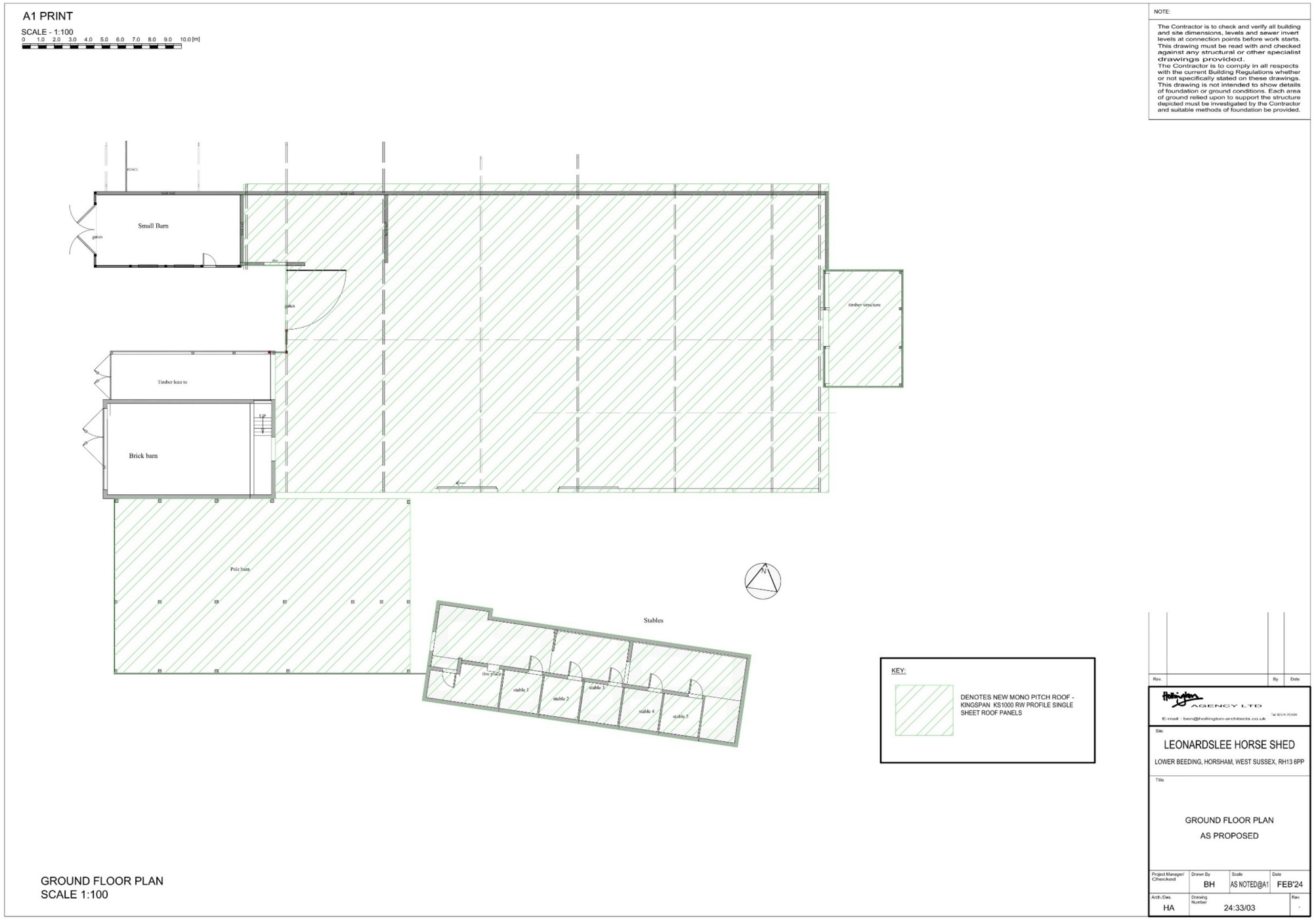
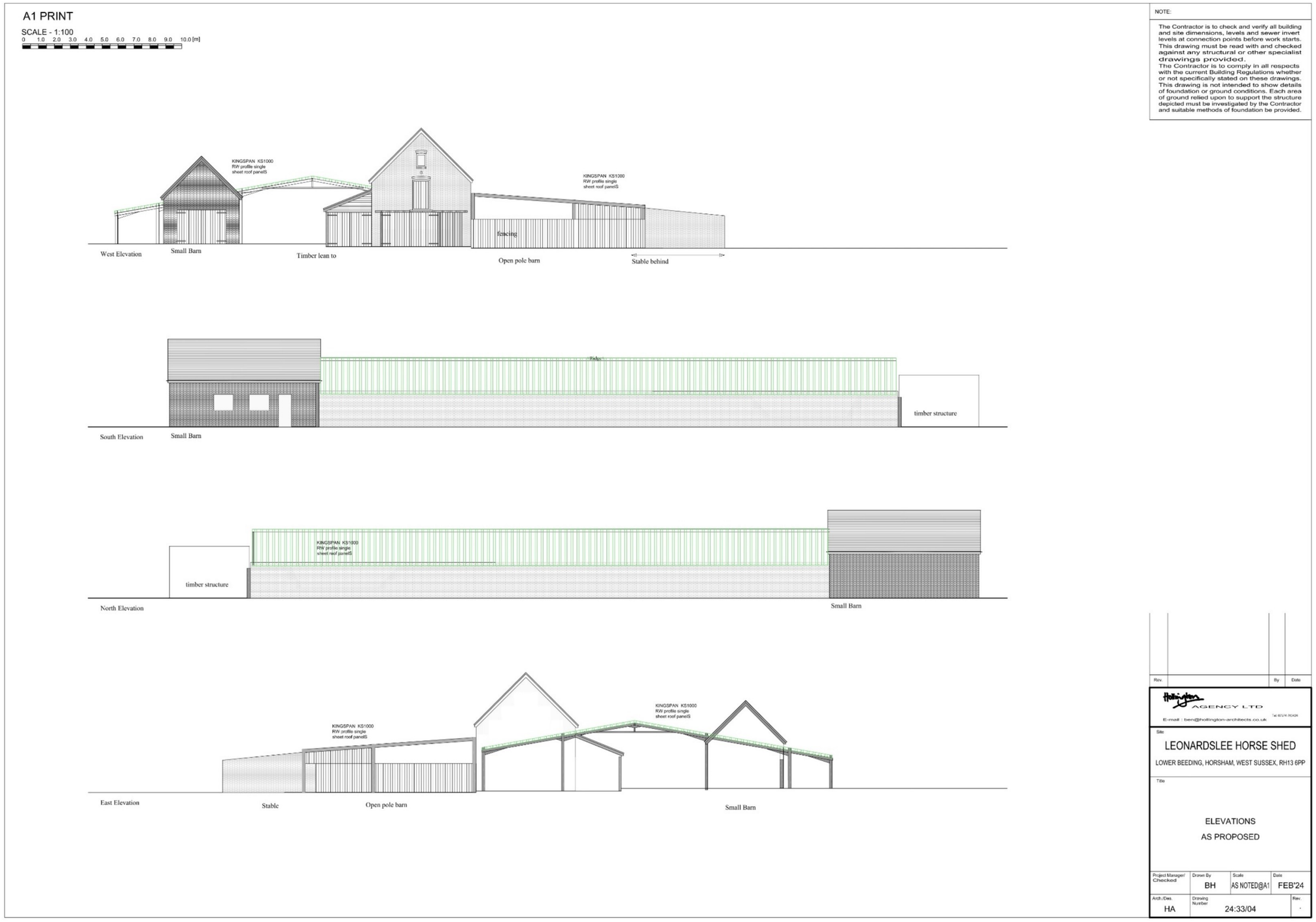


Figure 4: Proposed elevations (Hollington, 2024)



Appendix 2: Photographs

Photograph 1
Existing steel frame (B1). Negligible potential for roosting bats.



Photograph 2
Existing brick wall to the north of the site (B1) with small barn (B2) in the background.



Photograph 3
Example of missing brick on northern wall.



Photograph 4
Small Barn (B2)with lifted and missing tiles on the roof, and open fronted entrance to the west. Moderate suitability to support roosting bats.



Photograph 5
Eastern aspect of small barn (B2). The barn extends above the steel frame where the proposed new roof will be built.



Photograph 6
Western aspect of timber lean to (B3) and brick barn (B4).



Photograph 7
Timber lean to (B3). Low potential to support roosting bats.



Photograph 8
Brick barn (B4) Moderate suitability to support roosting bats.



Photograph 9
Internal of brick barn (B4)



Photograph 10
Pole barn (B5) with collapsed roof. Negligible suitability to support roosting bats.



Photograph 11
Stables (B6). Negligible suitability to support roosting bats.



Photograph 12
Stables (B6) in the background with overgrown rubble pile in front



Photograph 13
Timber structure (B7).
Negligible suitability to support roosting bats.



Appendix 3: Legislation

Important Notice: This section contains details of legislation applicable in England and Wales only (i.e. not including Scotland, the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to represent the current (at the time of writing) situation with respect to the UK's position outside of the EU and to ensure accuracy throughout, this section should not be relied upon as a definitive statement of the law.

Over the past few years, three important bills have been published which are intended to shape how growing pressures on the environment post-Brexit (post-transition period) are tackled. Both the Agriculture Bill and Fisheries Bill gained Royal Assent in November 2020 and are now the Agriculture Act 2020 and Fisheries Act 2020 respectively; and, more recently, the Environment Bill was passed into law in November 2021, becoming the Environment Act 2021. *N.B. as environment policy is a devolved matter, most of this Act applies to England only.*

A LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[3] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by **The Conservation of Habitats and Species Regulations 2017 (as amended)** and **The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended)**.

Various amendments to the 2017 Regulations in England and Wales have been made through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These changes came into effect on the 1 January 2021 following the UK's departure from the EU and the end of the Transition Period. The changes are largely limited to 'operability changes' that will ensure the Regulations can continue to have the same working effect as before.

[3] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

As well as delivering long-term targets to reduce waste and improve resource efficiency and improve air and water quality targets, the **Environment Act 2021** aims to halt the decline of nature by 2030, mandates Biodiversity Net Gain for developments in England and amends the Wildlife and Countryside Act 1981 (as amended) to introduce an additional purpose for granting a protected species licence in relation to development which is 'for reasons of overriding public interest'. The Act also introduces the Office for Environmental Protection (OEP), which will be a new public body intended to hold government and public authorities to account, although the government will be able to issue guidance to the OEP on how it enforces policies and legislation.

Some of the key biodiversity elements in the Act that will have a bearing on species protection in the UK include:

- A strengthened biodiversity duty on Local Planning Authorities;
- Biodiversity net gain to ensure developments, including Nationally Significant Infrastructure Projects (NSIP), deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;

- Introduces the power for the Habitats Regulations to be amended or 'refocused' to 'to deliver creative public policy thinking that delivers results'.

This section does not provide further detail on the Environment Act 2021 as, at the time of writing (November 2021), the Act, in its final form, has not been published and it remains to be seen how and when the various elements will be enacted at a national and local level.

Other legislative Acts affording protection to wildlife and their habitats include:

- Salmon and Freshwater Fisheries Act 1975;
- Deer Act 1991;
- Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- The Eels (England and Wales) Regulations 2009; and
- Environment (Wales) Act 2016.

Species and species groups that are protected or otherwise regulated under the aforementioned legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (as amended), which includes smooth snake, sand lizard, great crested newt, natterjack toad, all bat species, otter, dormouse and some plant, invertebrate and fish species, are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Habitats Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

- The Conservation of Habitats and Species Regulations 2017 (as amended) does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered where relevant.
- In order to obtain a mitigation licence for species protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

BATS

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 43 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats);
- Deliberate disturbance of bat species as:

  a) to impair their ability:
    - to survive, breed, or reproduce, or to rear or nurture young; or
    - to hibernate or migrate.

  b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost[4].

BIRDS

All wild birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). A wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Among other things, the legislation makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird; or
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

[4] Garland and Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

Certain species of bird, for example the barn owl *Tyto alba*, black redstart *Phoenicurus ochruros*, hobby *Falco subbuteo*, bittern *Botaurus stellaris* and kingfisher *Alcedo atthis* receive additional special protection under Schedule 1 of the Act. This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young.
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction is to undertake work outside the main bird nesting season which typically runs from March to August[5]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are also protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest. It should be noted that there is no threshold under which disturbance is not an offence, that is to say that disturbance need not be 'significant' for an offence to be committed.

While it is possible to obtain a licence to permit some activities that would otherwise constitute an offence, these can only be issued for specific purposes set out in the Act. This includes damage to crops, to preserve public health or safety and to preserve air

[5] It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species, geographical location of the site and vagaries of the season in any particular year) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

safety, but does not include development, some land management and recreational activities and damage to property.

LOCAL PLANS

Horsham District Planning Framework (excluding South Downs National Park) 2015-2031 (Horsham District Council, 2015)

Policy 25

Strategic Policy: The Natural Environment and Landscape Character

The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats will be protected against inappropriate development.

The Council will support development proposals which:

1. Protects, conserves and enhances the landscape and townscape character, taking into account areas identified as being of landscape importance, the individual settlement characteristics, and maintains settlement separation.

2. Maintain and enhances the Green Infrastructure Network and addresses any identified deficiencies in the District.

3. Maintains and enhances the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and ensures no net loss of wider biodiversity and provides net gains in biodiversity where possible.

4. Conserve and where possible enhance the setting of the South Downs National Park.

Appendix 4: Standard Guidance for Sensitive Lighting for Bats

Bats and Lighting

Night-time lighting affects different bat species to varying degrees with certain species such as brown long-eared bats and myotis species being particularly sensitive to artificial illumination. Excessive and/or poorly directed lighting may delay bats in emerging from their roosts; shortening the time available for foraging, as well as causing bats to move away from favoured foraging grounds and drinking resources, movement corridors or roosting sites to alternative, and potentially sub-optimal darker areas (Jones, 2000). Artificial lighting is also thought to increase the chance of predation, as many avian predators will hunt bats (Institution of Lighting Professionals, 2018).

To minimise indirect impacts from lighting associated with new developments it is recommended that artificial lighting is only directed where necessary for health and safety reasons. Lighting should not illuminate any features of value to bats, including newly created, suspected or confirmed bat roosting sites and habitats of value to foraging and commuting bats. Habitats which are likely to support bats, and which could be affected by lighting include woodland, mature trees, hedgerows, scrub, ponds, lakes, ditches, streams, canals, rivers, rough grassland and buildings with suitability to support roosting bats. Lighting should only be used for the period of time for which it is required (Jones, 2000).

This can be achieved by following accepted best practice (Fure, 2006; Bat Conservation Trust 2011; Stone 2013; Institution of Lighting Professionals, 2018):

- Where appropriate, professional lighting designers should be consulted, and the need for quantitative lighting measurements should be considered;
- Lighting mitigation should be based on robust baseline surveys of bat behaviour and existing light levels on site wherever possible;
- The level of artificial lighting including flood lighting should be kept to an absolute minimum;
- Where this does not conflict with health and safety and/or security requirements, the site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Variable lighting regimes (VLR) can be utilised to lower lighting levels during periods of low human activity (e.g. 00:30-05:30);
- Lighting required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor-activated lamps;
- Use narrow-spectrum light sources that peak higher than 550 nanometres, avoiding lights with UV, white and blue wavelengths;

- Lights utilising LED technology are the preferred option as these lights do not emit on the UV spectrum, are easily controllable in terms of direction/spill and can be turned on and off instantly;
- A 'warm white' spectrum LED light (ideally <2700 Kelvin) should be used over 'cool white' to reduce blue light component;
- Avoid the use of sodium or metal halide lamps, these gas lamps require a lengthy period in which to turn off and the diffuse nature of the light emitted makes light spillage a significant problem.
- Lights required for night time deliveries or security patrols could be set to activate with pressure activated sensors set into the ground;
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield/hood/cowl/baffle/louvre that directs the light below the horizontal plane and restricts the lit area;
- Usually using lower lighting columns and increasing the spacing between them reduces light intensity and spill;
- Plant vegetation to form light barriers and dark corridors. Use close-boarded fencing to screen light until vegetation matures. Dark corridors should be well connected to commuting routes;
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be lit;
- The use of reflective surfaces under lights should be avoided;
- Consider the use of 'smart glass' or automatic blinds where windows and glass facades cannot be avoided; and
- Create new habitat as alternative bat flightpaths if the effects of light cannot be properly mitigated for.

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