A Preliminary Ecological Appraisal of Howle Green Lodge Barn & land

Aim: To establish the presence or absence of bats & birds in the barn & the importance of habitats on the land

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Contents

1. Introduction

As part of the planning application for a change of use from agricultural to mixed agricultural & private equestrian use to include the barn, outbuildings and land at Howle Green Lodge, it is necessary to survey the buildings and areas to be directly affected by the proposed development, to establish whether there are any protected species currently using the barn or any priority habitats adjacent to the barn.

2. Methodology of Surveys

The survey of the building (barn) & land was carried out on the 30th April & 28th May 2021; by Ros Willder MCIEEM & CEnv, Bat Licence number CLS03109 & Natasha James, Dormouse license number 2019-43685-CLS of Willder Ecology, the weather was sunny. The daytime surveys began at 10:30 am & 12.30pm.

A detailed daytime survey was carried out of the barn and any areas which would potentially be affected by the proposal. This was done by a thorough visual inspection of building using a strong hand- held torch. In addition, a frequency division bat detector and endoscope were used, where appropriate, to enable further detail examination of the walls. The area around the barn was also surveyed.

In addition, an extended Phase one habitat survey was carried out. The survey followed the standard Phase one habitat survey methodology (JNCC 2010) and focused on:

- A habitat survey to determine type, quality and extent of habitats present (using the DAFOR scale, which is Dominant, Abundant, Frequent, Occasional & Rare). Botanical lists of each habitat type where appropriate.

- A survey to determine the presence of, or the potential for the site to support protected animals which include the following:-

    - Potential for reptile or amphibians particularly great crested newt.

    - Potential for Badgers to use the areas of the site to be affected by the proposals such as evidence of setts, latrines, tracks etc.

    - Potential for breeding birds or bats to use the areas of the site to be affected

A pond search was carried out to identify ponds within 250m & 500m of the site, the results of which are discussed in Section 4 and shown on the Pond Search map is shown in Appendix Three.

A designated site search was also carried out using the MAGIC map service from Natural England and the results are discussed in section 4 and shown in Appendix four.

3. Results of Surveys.

Examination of the barn and outbuildings at Howle Green Lodge

The building proposed for equestrian use was in daily use as an agricultural building but has been recently cleaned before being converted into stables as shown below.

The main construction for the walls of the barn is a mixture of concrete panels and Yorkshire boarding (as shown in figure one and the cover photo). The barn structure is RSJ's and timbers for the roofing. The roof is comprised of Corrugated tin sheets with Perspex sheets interspersed as shown in figure one and the cover photo. The barn has a high degree of natural light throughout & there is a concrete floor base.

Figure 1 - The barn

There was no evidence of use by either bats or birds in the barn despite the direct flight access available to either.

Figure 2 - Photo to Show the outbuildings on the west of the barn.

Adjacent to the agricultural barn on the western elevation there is a stable block. There is a lean-to section that is used for storage and is open fronted (as shown above in figure 2) it has a corrugated tin roof with four Perspex sheets within as shown in figure 3.

The stable block is built from timbers & timber boarding. The stable block has horizontal timber cladding which is tightly sealed. The roofing material is wooden timbers covered in unlined corrugated tin roofing sheets. The stable doors are also comprised of the same material and are open at the top. There are several window sections which are covered with wire. It was also noted that there is a flood light on the stable building for security.

Figure three – western elevation of the stables

Figure 4 – internal of the stables

The area around the barn and stables is all hard standing. The Hard standing is comprised of bare concrete & compressed gravel & mud to the southern side of the site as shown in figures 1,2, 3 & 6 and on the photo on the front cover this is typical of a working farmyard.

The interior of the building is naturally well lit by the Perspex windows within the unlined corrugated tin sheet roofing. In addition, there is electric strip lighting throughout the building as shown in figure 4 on the previous page.

Figure 5 – swallow nest

There is concrete flooring throughout the stables. They had been previously used to house chickens. Four swallow nests were found on the internal roof timbers. The timbers are heavily cobwebbed. There was no evidence of bats within the stables

Figure 6 - the lean to on the southern elevation of the agricultural barn

The lean to on the southern elevation of the agricultural barn is comprised of the same materials as the barn. The frame is metal RSJs with Yorkshire boarding and concrete panels. There is a metal gate across the front but the front of the lean to is open. The roof is comprised of corrugated tin roofing sheets. There were no evidence found of use by bats or birds in the lean too shed. Next to the lean too area is the area used for storage for used animal bedding & muck as shown above in figure six.

3.2 Examination of the land

The area where the manege is proposed is an area immediately adjacent to the south of the barn and lean to (as shown in figure 6) and is an area of bare disturbed ground this is separated from the field on the southern side of the site by a fence as shown below in figure seven.

Figure 7- The bare ground

Inside the field in the southeastern side where the proposed menage continues the ground is disturbed and poached as shown below in figure eight.

Figure 8 – the disturbed ground

The area proposed for the mange is comprised of predominately bare & disturbed ground & the remaining grassland is comprised of Rye grass, Spear thistle, Daisy, Dandelion & Red and White Clover, Creeping Thistle.

The rest of the grassland field is comprised of the following species: Red Fescue, Milkwort, Annual Meadow Grass, Sweet Vernal Grass, Stitchwort, Rye grass, creeping thistle, Spear thistle, Daisy, Dandelion, Red and White Clover, Eyebright, Mouse Ear, Germander Speedwell, Meadow Buttercup, Thyme, Rough Hawkbit and Common Fumitory. As such the grassland would be classed as semi-improved grassland that would be considered to be fairly species rich. There is a large Oak tree marked T1 on the phase one habitat map in appendix two & shown in the photo below.

Figure 9 – Grassland field & T1 Oak tree & Boundary two

Boundary one (B1) Is a fence line with stock netting and timber posts shown in figure seven.

Boundary two (B2) Is a roadside hedge on the eastern edge of the site, that is regularly cut and is comprised of; Holly, Blackthorn, Hawthorn and Bramble as shown above in figure nine.

Boundary three (B3) is a fence line with stock netting and timber posts that separates the southern field from the two other fields.

The adjacent grassland field is comprised of Creeping Buttercup, Red Clover, Annual Meadow Grass, Sweet Vernal Grass, Cut Leaved Cranesbill, Dandelion, Sow Thistle, False Oat Grass, Rye Grass, Meddick, Self-Heal, Daisy, Birds Foot Trefoil (o), Germander Speedwell, Sorrel, Stitchwort, Meadow Vetch, Red and White Clover, Eyebright, Mouse Ear & Rough Hawkbit. This field would also be classed as semi-improved grassland but is also fairly species rich as shown below in figure ten. The boundaries are all fence lines & there are no hedgerows or trees in this field.

Figure 10- the grassland fields divided by Boundary three

The other smaller grassland field on the northwestern edge of the site close to the house (as shown at the top of Figure ten) has been more poached/disturbed and is comprised of Annual Meadow Grass, Rye Grass, Dandelion, False Oat Grass, Creeping Buttercup and Daisy. This grassland whilst also being classified as semi-improved grassland is more species poor than the other two fields. There is a large Sweet Chestnut tree marked as T2 on the Phase one habitat map in appendix two. The boundaries are all fence lines and there are no hedgerows around these two grassland fields.

4. Pond & Data search results & Ecological Assessment

4.1POND SEARCH

A pond search was carried out, using the MAGIC map service from Natural England, to within a radius of 500m of the barn at Howle green lodge. The results of the map-based pond search show there was one pond within 500m as shown on the pond search map in appendix three.

During the site survey the one large pond was observed on the southwest of the site. However, whilst from a distance it looked like a large pond when it was closely examined it was found to have pond vegetation, but no water was present as it appeared to have dried up as shown below in figure eleven.

Figure 11 – Dried up pond to the southwest of the grassland fields

The Pond is situated approximately 400m from the barn building & the proposed manege due to the lack of water the pond is not considered to suitable for Great crested newts to breed in as such the likely hood of GCN being present on site is considered to be negligible.

4.2 THE DATA SEARCH

The data search was carried out using the MAGIC Map service from Natural England. The search results identified the site is within the Wye Valley Area of Outstanding Natural Beauty. But no other designated sites were identified within a 2km radius of the site.

The nearest designated sites outside of the 2km radius are Puddle brook Quarry & Park Wood Site of Special Scientific Interest (SSSI) which are situated 2.7 & 2.9km away and The River Wye SSSI & SAC Coughton Wood & marsh SSSI which is situated 2.6km away from the site as shown in appendix four.

Within the 2km search radius, results showed several Priority Habitats within the wider area including:- Lowland Calcareous grassland, Lowland meadows, Traditional Orchard and Deciduous Woodland.

Of the Deciduous Woodland recorded within the search radius, several sites were noted as Ancient Semi-natural Woodland, Beech Tree Wood, Cornage Wood, Dam Wood, Deep Dean, Ferny Bank & Mayer's grove, Hengrove & Warm hill Woods, Howle hill wood, Marks well wood, Lodge Grove, Little Wood, Purlieu Wood, Sixteen-acre wood, The slough wood and wet wood. It should be noted that no Priority Habitats were observed or recorded within the proposed development Boundary.

The following species were also recorded within the 2km search radius, Lapwing, Turtle dove & Yellow Wagtail and GCN But no other records of European Protected Species were found.

4.3 Ecological Assessment

The habitats within the barn itself and the adjacent areas of hard standing have negligible suitability for use by any European protected species. The natural light throughout the barn, the unlined corrugated tin & Perspex sheets on the roof & the complete lack of available cracks and crevices within the building make the building of negligible suitability for use by bats and this was confirmed by the complete lack of evidence of use by bats. There was no evidence of nesting birds within the main barn.

This proposal for the barn will require no footings to be dug as the proposed alterations are minimal & predominantly within the existing barn. The area around the barn is entirely hard standing. The proposals will mainly affect the internal layout of the existing barn as shown on the existing plan in appendix two & the proposed plans in appendix five.

There will be no adverse impacts on any amphibians including GCN by this proposal as no ponds will be affected by this proposal and there are no ponds within 250m of the site, with the nearest pond being 400m away and the pond dries completely annually. The Barn is surrounded by hard standing which provides no cover for GCN as such the likelihood of any adverse impacts on GCN is considered to be negligible.

The area proposed for the manege will affect an area of bare ground used for horse muck & an adjacent area of disturbed ground & a species poor area of semi-improved grassland as such the impact of the proposal will be minimal. As the manege will be situated outside of the 2m Root Protection Zone RPZ of the roadside hedgerow & the single Oak tree in the field their will be no loss of priority habitat.

The existing stables and lean to did have evidence of Swallows nesting but no evidence of bats was found. The stables were naturally well lit and had electric strip lighting. Due to the nesting birds within the stable's mitigation will be required to avoid harm to any nesting birds such as dismantling outside of the main nesting season & erecting artificial swallow nesting cups in the new stables to be built within the barn.

The nearest designated sites are situated over 2km away from the barn, as such the designated sites will be unaffected by the proposed low-level works to the main barn & the creation of a manege and the proposed change of use to the land therefore there will be no impact on the designated sites.

5. Conclusion, Mitigation & Enhancements

The main proposal will involve internal works within the large barn itself which is situated in an area of hard standing in a well-lit area. In addition, the proposed works involve a change of use to mixed equestrian & agricultural use which will involve the creation of a manege that is to be situated away from the roadside hedge & to directly affect an area of bare ground & adjacent area of disturbed ground within a species poor part of semi-improved grassland. The building and its adjacent areas of hard standing, disturbed & bare ground are of limited value to wildlife, as such the proposal will not have any adverse effects on the wider area or any designated sites such as River Wye SSSI & SAC Coughton Wood & marsh SSSI or priority habitats or any European protected species such as Bats or amphibians or reptiles in the wider area.

The lack of evidence of Bat activity within the barn & existing stables suggests that there are no bats currently using the buildings for roosting; this may be due to the high natural light levels due to the Perspex roof windows and the site being well-lit from external flood lights and the construction being comprised primarily of concrete walls which are well sealed providing no cracks or crevices and the corrugated tin roofing sheets having adverse thermal properties for bats. As such it can be concluded that the barn & stables have negligible suitability for bats.

Even though no evidence of bats was found, birds' nests were found in the stables and although the majority of the adjacent habitats are hard standing & disturbed grounds a careful precautionary approach to works to the dismantling of the timber stables should be taken so these impacts can be avoided all together as detailed in section 5.1 Mitigation (a precautionary approach). Although the barn is surrounded by hard standing & no amphibian (included GCN) habitat will be affected by this proposal & the likelihood of any GCN being on site is concluded to be negligible a precautionary approach is always recommended to avoid all potential harm.

Even though the works are deemed to have minimal impact to the local site this does not mean that enhancements cannot be designed to enable a clear biodiversity gain for wildlife as part of this proposal see section 5.2.

5.1. Mitigation (a precautionary approach)

All persons involved in the works to the barn, dismantling of the stables & building of the manege shall receive a detailed 'Toolbox Talk' on Nesting birds, Bats & Great Crested Newts from Ros Willder of Willder Ecology, or a similarly qualified ecologist.

The toolbox talk will cover the following: -

- ❖ the full legal protection of Nesting birds Bats & amphibians (GCN)
- ❖ The careful timing & dismantling of the small stables & store to avoid the main nesting bird's season
- ❖ the lifecycle of Bats and their potential roosting areas the identification of Bats & their potential roosts
- ❖ The lifecycle of Great Crested Newts (GCN) & what habitats they will be found in & how to identify a GCN.
- ❖ What to do if evidence of either Bats are found during works
- ❖ What to do if Great Crested Newts are found during works

Before any works begin the barn shall have a pre-commencement check to see if any birds have begun nesting or that there is any evidence of use by bats. All dismantling works of the stables will be overseen by Ros Willder of Willder Ecology. If any bats or GCN are found all works will cease until Natural England has been contacted and way forward agreed which may include a license application to permit the works to continue.

No new external lighting is planned on the walls of the barn that could cause additional light spill into the surrounding area and the existing flood lights on the existing stables will be removed & any replacement external lights directed towards the current yard & away from the wider surrounding countryside habitats such as the roadside hedge & downwards to avoid light spill into the night sky.

The manege will be unlit so that there will be no potential for light spill into the nearby roadside hedgerow.

5.2 ENHANCEMENTS

Although no bats an integral bat soffit box will be included behind the barge boards at the edge of the roof to encourage future use of the barn by bats as shown in Appendix five.

As swallow nests will be lost four artificial swallow cups will be erected within the stables in the main barn as shown in Appendix five.

The existing pond which is dried up will be restored to create a sump area which will retain water all year round as this will provide an important biodiversity gain for wildlife.

A new native hedgerow (comprised of field maple, hawthorn, hazel, blackthorn, spindle & dogwood) will be planted along the main fence line to create both a biodiversity gain & a landscape gain across the local landscape & provide a much-needed Wildlife highway across the fields.

Ideally the management of the grassland fields by less intensive grazing by both livestock & horses particularly the field closest to the pond to encourage greater numbers of wildflowers within the sward to increase could also provide a real biodiversity gain.

If all the recommendations are followed no harm will occur to either the designated sites or bats or birds and enhanced provision will be made for future use by both bats and birds as an overall enhancement for biodiversity to the site.

APPENDIX ONE LEGAL STATUS OF BATS & BIRDS

LEGAL PROTECTION OF BATS

The Wildlife and Countryside Act 1981 (WCA) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'. The 1981 Act has been amended several times, most recently by the Countryside and Rights of Way [Crow] Act 2000, which added 'or recklessly' to S 9 (4)(a) and (b).
All species of bats are listed on Schedule 5 of the 1981 Act, and are therefore subject to the provisions of section 9, which make it an offence to:

- Intentionally kill, injure or take a bat
- Possess or control any live or dead specimen or anything derived from a bat Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose

The Conservation of Habitats and Species Regulations 2017 which consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law and came into force on 30th November 2017.

All bats listed on Annex IV of the Directive and some are also listed on the Annex II. The latter Annex relates to the designation of Special Areas of Conservation (SACs) and covers **Greater** and **Lesser Horseshoe bats**, **barbastelle** and **Bechstein's** bat.

Inclusion on Annex IV ('European protected species) means that member states are required to put in place a system of strict protection as outlined in Article 12; this is done through inclusion on Schedule 2 of the Regulations. Regulation 53 makes it an offence to;

- Deliberately capture or kill a bat Deliberately disturb a bat
- Damage or destroy a breeding site or resting place of a bat
- Keep, transport, sell or exchange, or offer for sale or exchange alive or dead bat or any part of a bat

LEGAL PROTECTION OF BIRDS

The Wildlife and Countryside Act 1981 is the main instrument for the protection of wild birds in the law of England, Wales and Scotland.

It protects all wild birdsof whatever species (certain exceptions apply within the act).
Barn Owls are listed on Schedule 1 which gives them special protection.

The act makes it an offence “if any person intentionally- Kills, injures or

takes (handle)any wild bird;

Takes, damages or destroys the nest of any bird while that nest is in use or being built; (barn owls do not ‘build’ a nest but may make a nest scrape) or

Takes or destroys an egg of any wild bird”

It is also an offence “if any persons have in his possession or control-

any live or dead wild bird or any part of, or anything derived from, such a bird; or An egg of a wild bird or any part of such an egg” (s 1 (2)).

LEGAL PROTECTION OF AMPHIBIANS AND REPTILES

Reptiles are protected from killing and injury (two species are fully protected, this includes, but is not confined to:

Disturbance and deliberate destruction of their habitat) under The Wildlife and Countryside Act 1981 (as amended).

The Conservation (Natural habitats &c.) regulations 1994 (the habitats Regulations were recently updated by
The Conservation of Habitats and Species regulations 2017

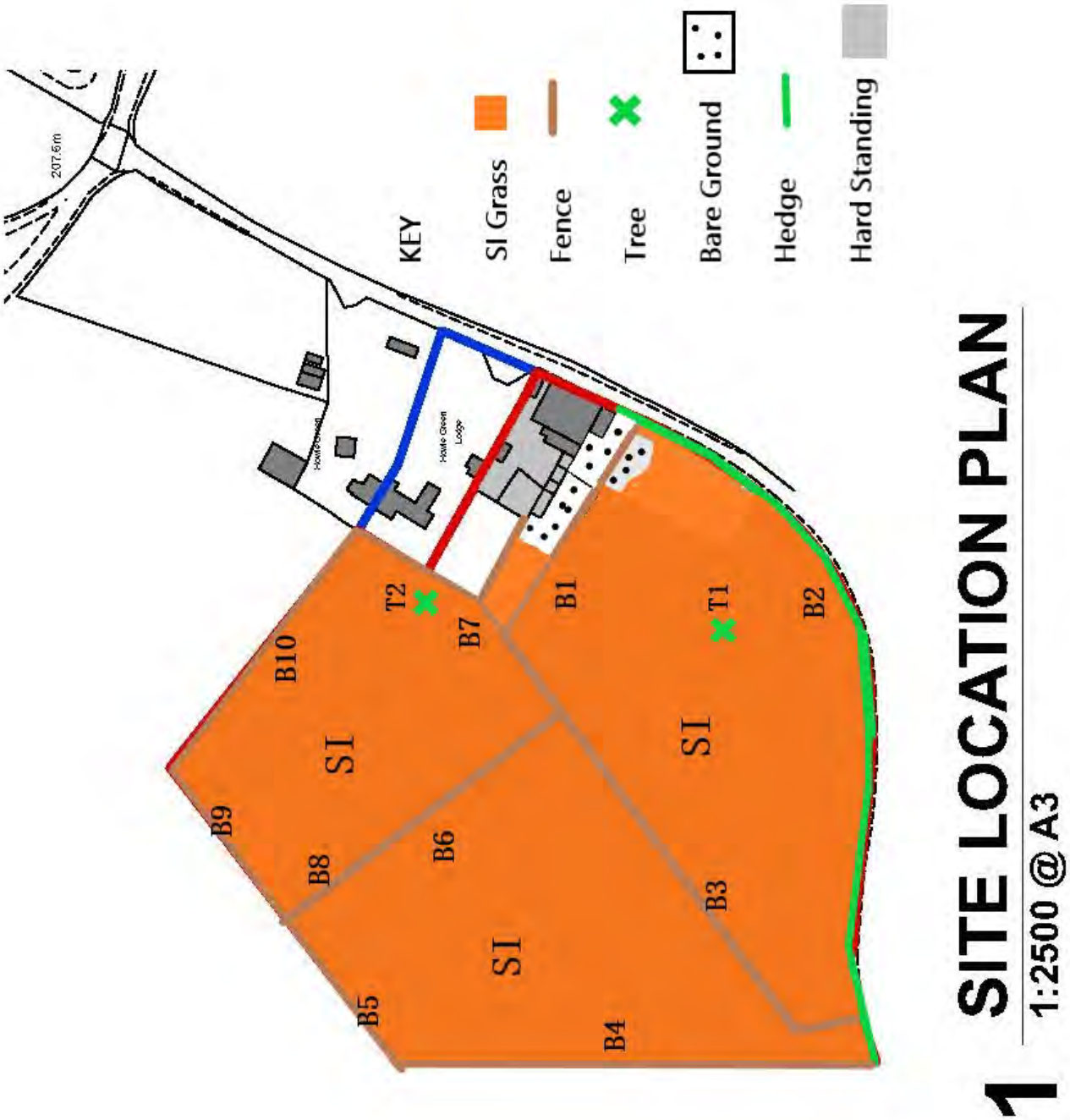
Amphibians such as Great crested newts are fully protected, including protection against:

- Deliberate disturbance
- Deliberately killing or capturing
- Deliberately taking or destroying eggs
- Deliberately damaging or destroying breeding sites and places of shelter.

Licensing from Natural England

A Licence simply permits an action that is otherwise unlawful. A licence should be applied for if, on the basis of survey information and specialist knowledge, it is considered that the proposed activity is reasonably likely to result in an offence (killing, breeding site destruction, etc – see above). No licence is required if, on balance, the proposed activity is unlikely to result in an offence (this is from the great crested newt mitigation guidelines).

APPENDIX TWO EXISTING PHASE ONE HABITAT PLAN & BLOCK PLAN OF BARN OVER THE PAGE



1 SITE LOCATION PLAN
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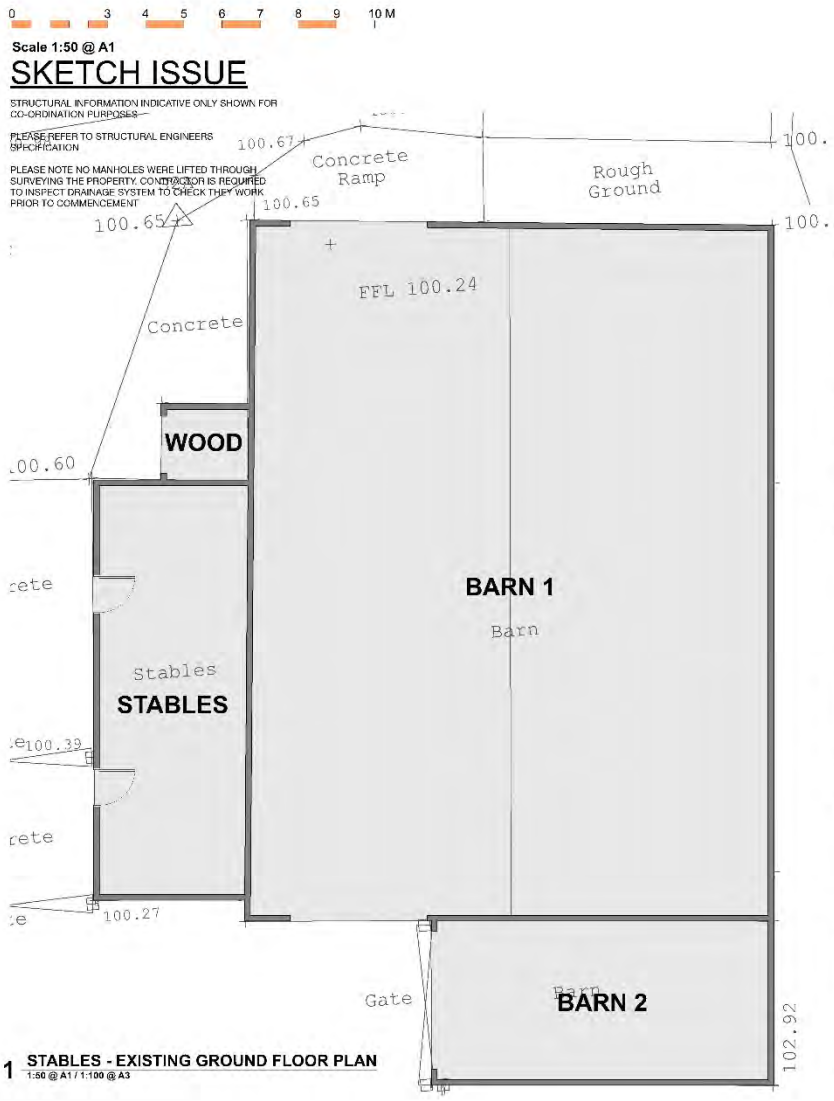
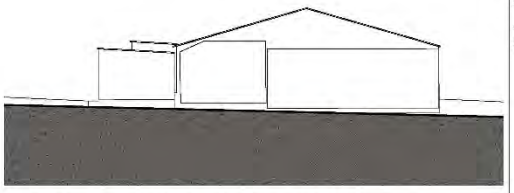


1 STABLES - EXISTING GROUND FLOOR PLAN
1:50 @ A1 / 1:100 @ A3



5 STABLES - EXISTING SOUTH ELEVATIONS
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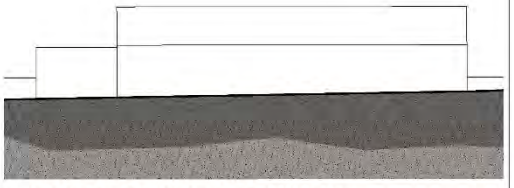

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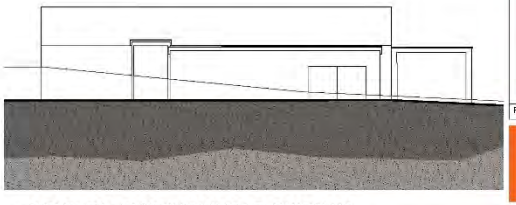

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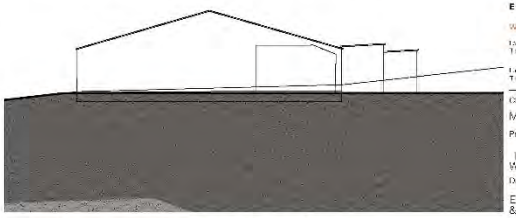

2 STABLES - EXISTING NORTH ELEVATIONS
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1 Do not scale off this drawing.
2 Any discrepancies to be referred to the Architect.
3 This drawing is to be read in conjunction with all relevant specifications and other drawings issued by the Architect, and other consultants.
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5 IF IN DOUBT ASK.

DRAFT FOR COMMENT 06/05/2021

Revision	Description	Date	Check	Rev
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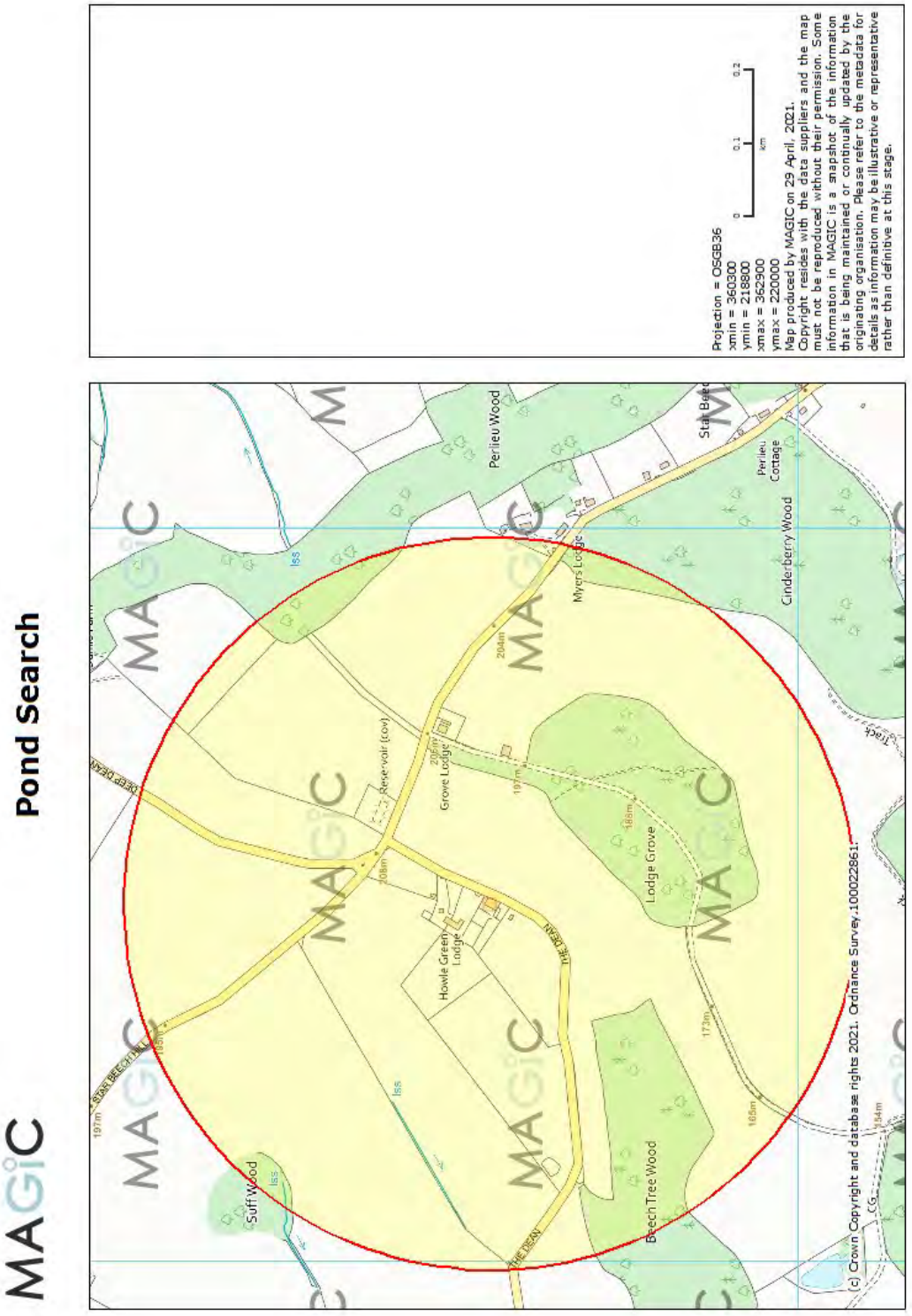
Project
Towle Green Lodge, Towle Hill, Ross-On-Wye, Herefordshire HR9 5SN

Drawing Title
EXISTING GROUND FLOOR PLAN & ELEVATIONS

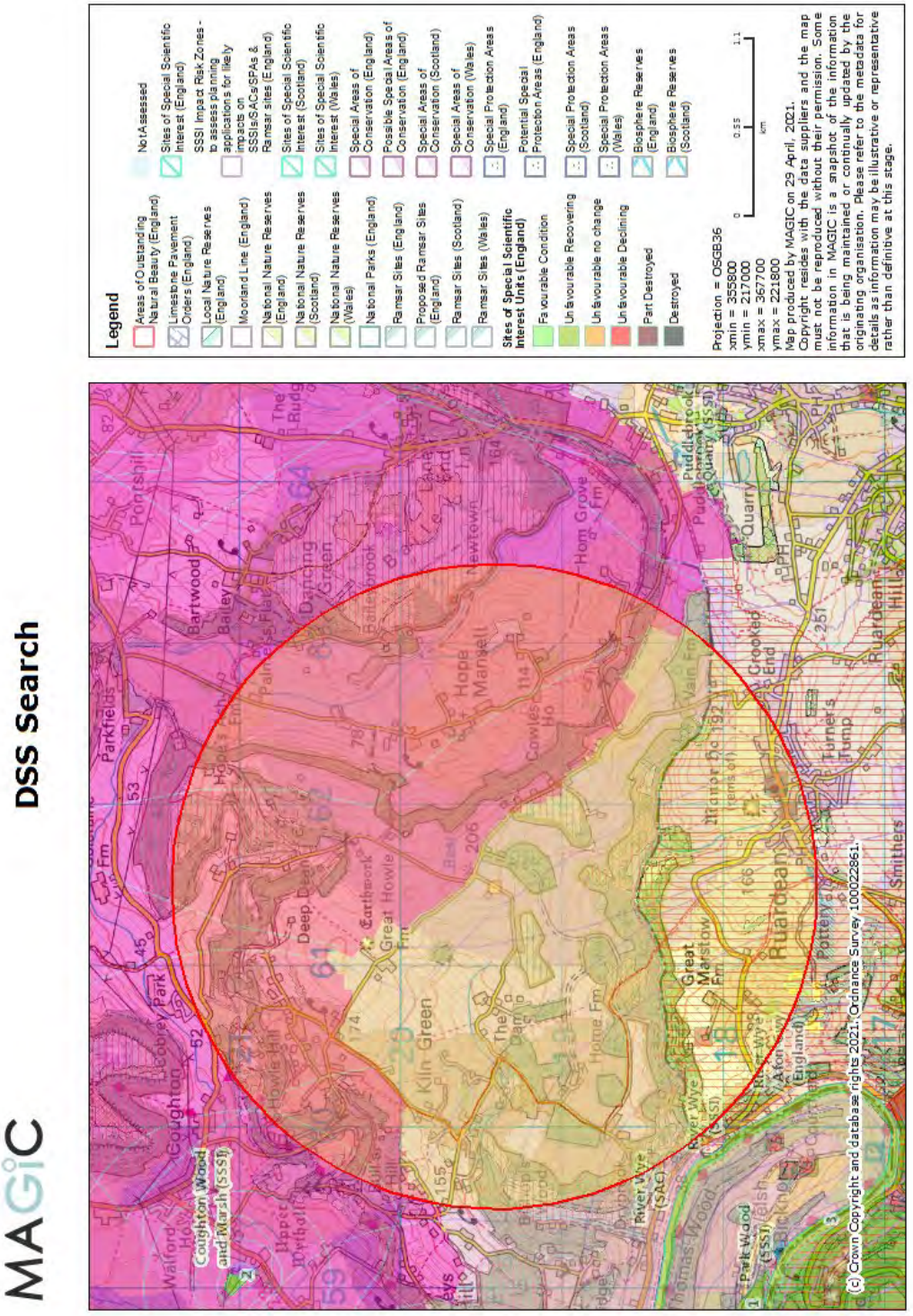
Status	Date	Drawn By
Planning	28/04/2021	DS

Drawing No.	Revision	Scale
3803 P(1) 01	A	1:100

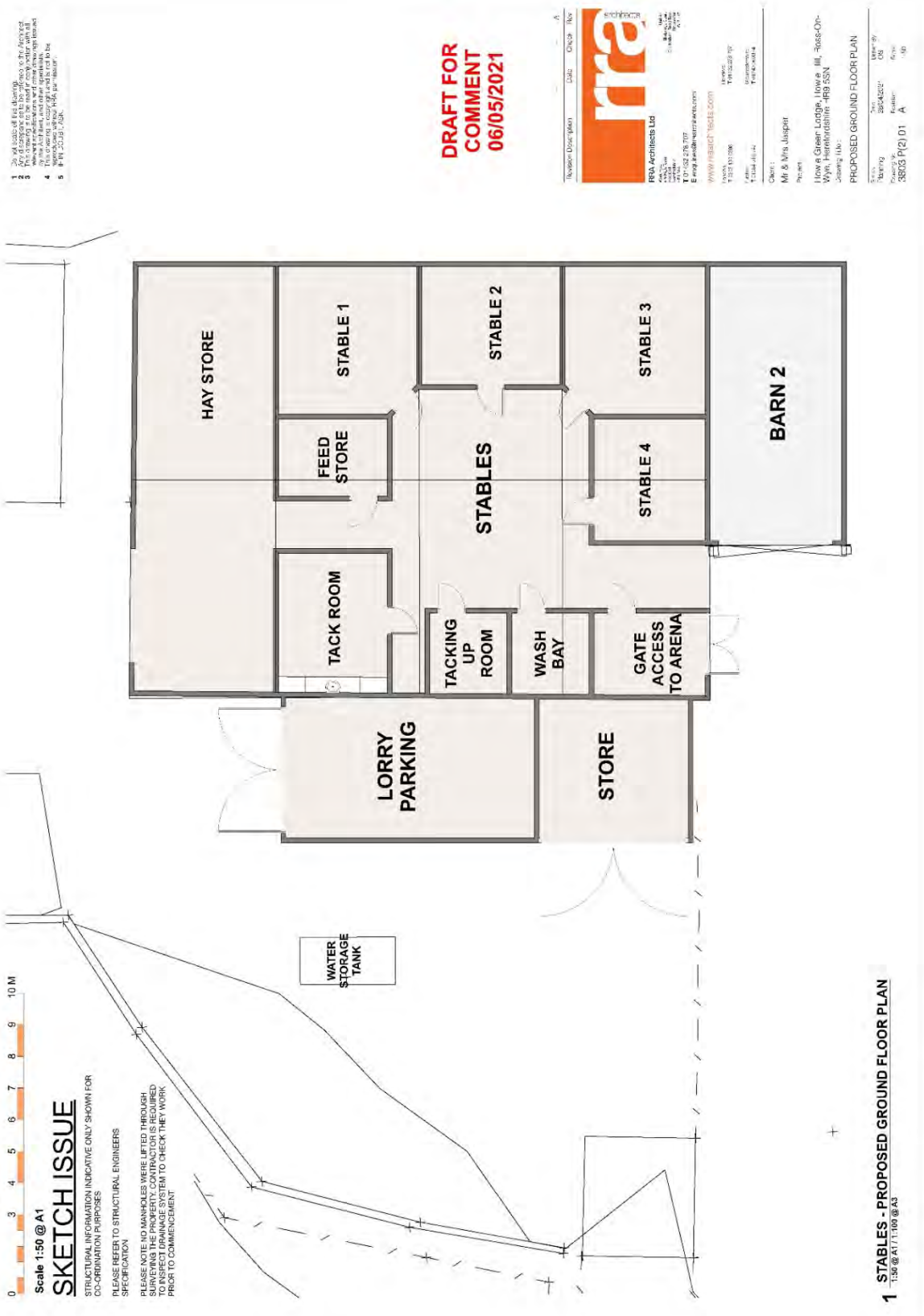
APPENDIX THREE POND SEARCH MAP



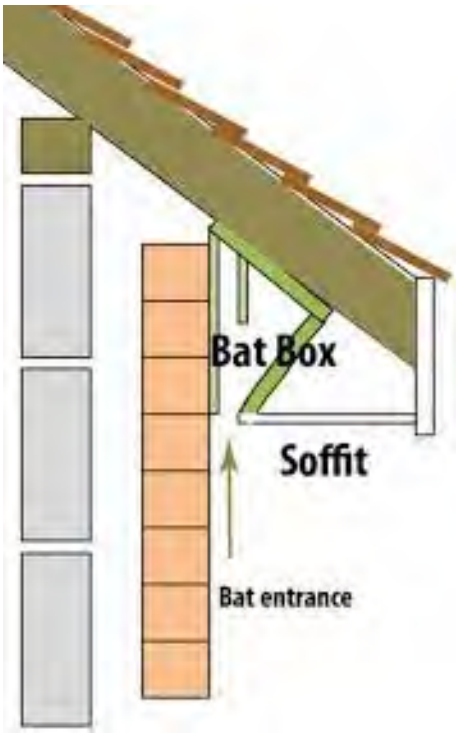
APPENDIX FOUR DESIGNATED SITE SEARCH MAP



APPENDIX FIVE PROPOSED ENHANCEMENTS



See Bat bird box details over the page

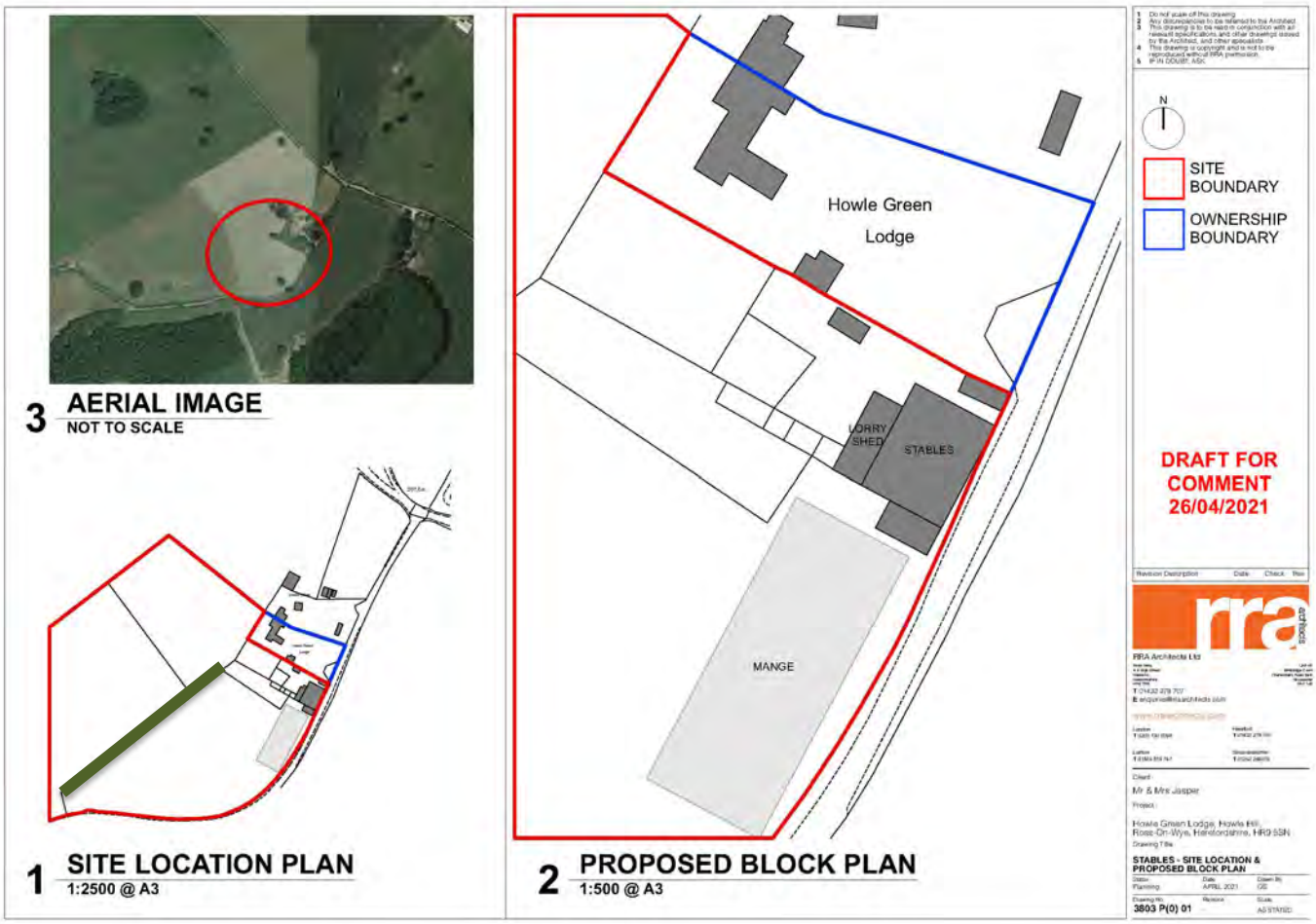


To be positioned behind the barge board at the edge of the roof

Schwegler 10 Swallow Nest - Product code: 10110

£17.95 Incl. Tax: Swallows are increasingly finding it difficult to access soft mud to build their nests. Woodcrete is an excellent imitation of their natural nests and can help them get started quickly in a dry spring. The back board is long-lasting as it is made from exterior chipboard to prevent warping. The back board can be painted to match the wall or building behind.
Fix them high up in the building approx. 100mm down from an overhanging ledge or the roof.
If you are having more than one nest they should not be adjacent to each other but intervals of approximately 1m apart.
Droppings board accessory available
https://www.wildcareshop.com/swallow-nest.html

A total of four artificial swallow nest cups to be positioned in the mam barn



Native hedgerow to be planted along the central fence line comprised of field maple, hawthorn, hazel, blackthorn, spindle & dogwood