



A Preliminary Ecological Appraisal & Mitigation Strategy for The Barns, at Parkend Lodge Farm.

Aim: To establish the presence or absence of bats & birds in the building & importance of adjacent habitats.

Mr. & Mrs. Downton
Parkend Lodge Farm
Castle Lane
Moreton Valence
GL2 7NE

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Prepared by Ros Willder
Telephone: 01452 849428 Office, 07920 147441
E-mail: roswillder@yahoo.co.uk

Website: www.willderecology.co.uk

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1. Introduction

As part of the planning application, for the proposed conversion of the barns at Parkend Lodge Farm, Moreton Valence it is necessary to survey the barns and areas to be directly affected by the proposed development, to establish whether there are any protected species currently using the barns proposed for conversion or any priority habitats adjacent to the barns or any designated sites in the wider area that could be affected by the proposals. This report should be read in conjunction with the D & A strategy by Design Storey.

2. Methodology of Surveys

The survey of the buildings & adjacent land was carried out on the 8th April 2022; by [REDACTED] Bat Licence number CLS03109 & RC121 of Willder Ecology, the weather was sunny & the initial daytime survey began at 10:30 am.

A detailed daytime survey was carried out of the barns and any areas which would potentially be affected by the proposal. This was done by a thorough visual inspection of all the buildings using a strong hand-held torch.

A frequency division bat detector and endoscope were used, where appropriate, to enable further detail examination of the walls & roof areas. The area around the barns was also surveyed and the adjacent habitats assessed.

In addition to the initial daytime survey, two evening bat emergence surveys were carried out on 29th June 2022 & 18th July 2022 [REDACTED]

The first evening survey on 29/06/22 the Sunset was at 21:32 (BST), the temperature was 19.3°C at the start and 12.7°C by the survey end. The wind speed was 0m/s, dry conditions, and a cloud cover of 100%. The evening survey began at 21:15 and ended at 23:02 as per the Bat Conservation Trust good practice guidelines (Collins, 2016).

The second evening survey on 18/07/22 the Sunset was at 21:18(BST), the temperature was 31°C at the start and 26.3°C by the survey end. The wind speed was 0.3m/s and a cloud cover of 5%. The evening survey began at 21:00 and ended at 23:00 as per the Bat Conservation Trust good practice guidelines (Collins, 2016).

The equipment used included three heterodyne bat detectors, one Pettersson D240X bat detector, a Bat scanner Stereo & two Echo Meter touch Pro bat detectors & one Echo Meter three recorder & one Song meter bat mini static recorder. For survey results see section 3.2.

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

3.1 Examination of the barns at Parkend Lodge Farm

The barns proposed for conversion are a group of barns which are clustered around a hard standing courtyard. The farmhouse forms the north eastern corner of the courtyard & the main road is to the south west of the site as shown in figure one below. The Farmhouse & the barns are labelled for ease of identification North Barn, East Barn, & South Barn as shown below in figure one & in the location & Block plan in appendix two.



Figure 1 –The Barn buildings for reference (Google 2022)

South Barn is the most southerly two storey barn & **East Barn** is a single storey barn building attached to another smaller single storey building & **North Barn** is an L shaped barn furthest north of the site, situated by the tennis court & attached to the Farmhouse on the eastern elevation as shown above in figure one.

All the barns are individually described over the page & face on to the extended central area of hard standing, with the enclosed farmhouse garden to the rear of the East barn, the pasture field to south of the South Barn & a tennis court & turning circle adjacent to the North barn.

The southern barn is two storey timber framed barn with single skin timber treated (originally creosoted) clad walls on a brick base with large timber doors on the front & rear elevation & flood lights as shown below in figures two & three. The roof was reroofed with new clay tiles & well mortared at the edge & lined with modern membrane approximately five years ago as shown below in figures two & three.



Figure 2 – The South Barn (rear elevation)



Figure 3 – The South Barn (front elevation) with flood lights

Internally the **South Barn** has exposed timber framed walls & roof, with the underside of the roof having been lined with wooden boards & the walls being unlined single skin timber cladding as shown in figure four below.



Figure 4- internal view of the south Barn

The **South Barn** is naturally well lit throughout the barn as there are gaps at the edge of the roof & in-between some of the timbers as well as having a series of strip lighting & some decorative party lanterns as shown above in figure four. The barn Owl shown on the Gable end wall is not a live barn owl but a stuffed figure. Although there is a Triangular Owl box on the external NE gable end wall there was no evidence of use by nesting birds in the South Barn.

The barn has a concrete floor & low numbers of bat droppings were found on the floor as such droppings were collected using a sterile sampling kit for laboratory eDNA analysis.

The East Barn is a single storey barn with a pitched roof that has red brick walls that have been rendered & painted in sections interspersed with timber framed glazed windows & has double painted timber doors as shown below in figure five. The pitched roof is covered in double ridged clay tiles with painted barge boards at the edge of the roof as shown below in figure five.



Figure 5 – External view of the East Barn

Adjacent to the eastern side of the East Barn there is another small building that is used to house the large oil tank & as a wood store this was reroofed five years also & lined with modern membrane.



Figure 6– External view of the building adjacent to the East Barn

Internally the East Barn has been divided into three separate sections with a concrete floor & a traditional felt lined roof throughout as shown below in. The northern section (closest to the farmhouse) is used as a Chiropodist office & practice room & has been painted & plastered throughout & is completely sealed. The largest central section has white washed walls & is naturally well lit with electric lighting throughout & used for storage as shown below in figure seven.



Figure 7 – internal view of East Barn

The last smallest southern section of the East Barn is used by sheep for shelter & has an open doorway directly into the field adjacent to the southern gable end of the barn. The door shown above in figure seven leads directly into this section of the barn used by stock (sheep at the time of the surveys). Whilst no evidence of bats was found during the daytime survey of East Barn, a bird's nest was found in the roof rafters as shown below in figure eight below.



Figure 8 – Birds nest in East barn

The North Barn is a single storey L shaped barn building comprised of brick walls that have been predominately rendered & painted interspersed with painted timber framed glazed windows as shown below in figure nine. The roof is the same as the East barn with double ridged clay tiles lined with bitumastic roofing felt & painted bargeboards. There are two bright flood lights on the external walls with an additional external light.

The brick walled part of the North Barn shown below will be retained as a store building for the farmhouse & not included as part of the conversion proposals for the rest of the North Barn.

As such the part of the North Barn for conversion will be confined to the rendered & painted wall parts of the barn as shown below in figure nine & on the photo on the front cover of this report.



Figure 9 – The North L shaped barn

The North barn is accessed by a series of single painted timber doors as shown above in figure nine. There is a small section of open roof bay that adjoins the single storey barn to the farmhouse gable end wall, this covers the hard surfaced turning circle to the rear of the north barn as shown in figure one.

Internally the barn is naturally well lit throughout by the series of glazed windows along the walls & the roof has been lined with painted boards between the painted timbers which add to the light levels in the North barn. Internally the whole barn is electrically lit throughout & is regularly used as a play & party barn so as a high degree of disturbance throughout as shown below in figure nine.

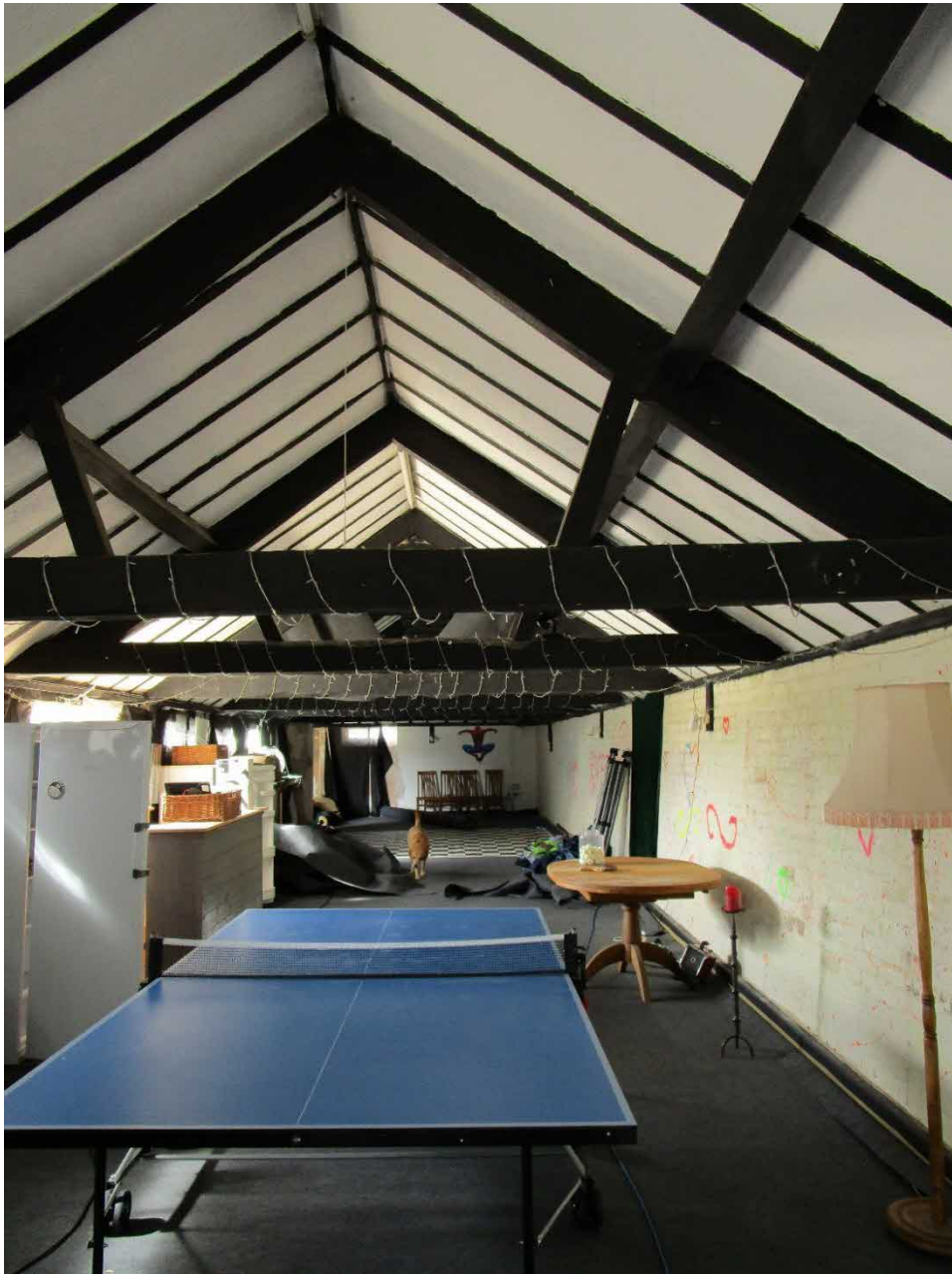


Figure 10 – The open plan area within North Barn

At the furthest end of the barn closest to the farmhouse & open roof bay is an enclosed toilet block which is painted & tiled.

At the opposite end in the corner section of the L shaped North Barn there is a small, enclosed loft area but there was no evidence of bat or bird usage within the loft area as shown below in figure eleven. However there had been a problem with squirrels in the roof space of North barn causing damage to it.



Figure 11 – internal view of the small loft area in the North barn

There is a gym in the final section of the North Barn to be converted & adjacent to that is the brick store part of the barn that is to be retained unconverted for use as storage as shown above there is strip lighting throughout this part & there was no evidence of use by birds or bats in this part of the North barn.

Despite the high levels of Natural light in the Barns, due to the gaps within the double ridge tiles on the roof of both North & East Barns & the finding of droppings within the South Barn bat evening surveys were carried out as shown in section 3.2.

Adjacent to all the Barns is the hard standing parking areas as shown in Figures one, three, five & nine. To the side of the East Barn is the farmhouse Garden which is comprised of a close mown garden lawn & formal flower borders as shown below in figure twelve.



Figure 12 – the formal farmhouse garden

To the rear of the South Barn is a tightly grazed pasture field as shown in figure two. To the rear of the North Barn is an area of tightly grazed & mown grassland that has a group of planted trees that is adjacent to the tennis court as shown in figure one & below in figure thirteen.



Figure 13 – the area to the rear of North Barn

3.2 Results of evening surveys

Evening Bat Activity Survey – Parkend Lodge Farm South Barn

29/06/2022

Temperature: Start 19.3 ° C End 12.7 ° C,

Cloud cover: 100%,

Wind: None

Surveyors

Positions:

Sunset 21:32 (Start: 21:15 End: 23:02)

21:18	Common Pipistrelle (CP) x2 emerged (E) from under roof overhang of Southwest sidewall of barn.
21:24	Noctule (N) flying past over site.
21:28	N flying high over site.
21:42	CP flew back into roost on same Southwest side wall.
21:46	Soprano Pipistrelle (SP) E above double doors of barn on West elevation.
21:48	CP E out of main barn door on Eastern elevation and SP flying past barn to the North.
21:58	Whiskered Myotis E from above barn doors on western elevation of barn
22:03	Brown long eared bat E at Southwest Corner of barn
22:07	CP continuously foraging around courtyard continuously southeast of the barn
22:09	CP foraging around in field south of barn.
22:11	CP x2 foraging around courtyard & then south of barn
22:19	CP x2 foraging around courtyard & then south of barn
22:20	CP x2 foraging around courtyard & then south of barn and then flew over the roof West to East
22:21	Noctule flying high over site
22:26	CP x2 foraging in field behind the barn
22:28	CP foraging around courtyard
22:31	CP foraging around courtyard
22:34	CP flying past from SW to NE

22:39	CP foraging in the courtyard & then in paddock to the rear of the barn on other side
22:42	CP foraging in the courtyard & then in paddock to the rear of the barn on other side
22:43	N flying high over site.
22:45	CP foraging over courtyard
22:46	SP heard not seen
22:47	CP foraging all-around barn.
22:52	CP foraging in the courtyard
22:56	Lesser Horseshoe bat flying through field to the south past the barn
23:02	Survey finished.

Notes: 1SP & 3CP & 1 BLE & 1 Possible whiskered Emergence from south barn

North 'L' shaped Barn

Temperature Start 19.3 ° C End 12.7 ° C,

Cloud cover 100%,

No Wind

Surveyors

Positions: JS- North, RW- rear/ West elevation of North Barn, DS- South & East elevation.

Sunset 21:32 (Start: 21:25 End: 23:02)

21:25	Soprano Pipistrelle (SP) flew South to North over roof of barn.
21:35	SP flew South to North over roof of barn from courtyard.
21:41	SP flew South to North over roof towards tree line.
21:47	SP flew South to North over roof towards tree line.
21:48	Common Pipistrelle (CP) flew South to North over roof towards tree line.
21:54	CP flew from Farmhouse over end of barn Southwest to Northeast and then foraging around trees and hedges until 21:56.
21:56	CP flying over roof of barn South to West.
21:58	CP flew back over building North to South near Farmhouse.
21:58	Brown Long Eared bat (BLE) flying along at low level to the rear of the barn South to North.
21:59	SP flew North to South near Farmhouse over barn roof.
22:03	SP flew North to South over barn roof and into courtyard.
22:04	CP foraging back and forth over barn roof.
22:06	CP foraging by trees to the West elevation of barn.
22:07	CP foraging by trees to the West elevation of barn.
22:08	CP foraging and flying under archway between barn and Farmhouse.
22:10	CP foraging around roof and trees at the corner of 'L' shaped part of the barn.
22:11	SP & CP foraging by trees by North barn at end closest to the entrance gate.
22:13	CP flying between house and trees East to West foraging up and down.

22:14	CP foraging over roof of barn.
22:15	CP x2 foraging at the corner of the site by gate at entrance.
22:16	CP x2 constant foraging to rear of 'L' shaped barn by trees and tennis court.
22:19	CP x2 constant foraging to rear of 'L' shaped barn by trees and tennis court.
22:20	CP still foraging over barn and by trees to rear until 22:24.
22:21	Noctule (N) flying high over site.
22:22	Lesser Horseshoe Bat (LHB) flew through courtyard by barn and house.
22:25	Myotis flying past along road.
22:26	CP x2 foraging by trees at edge of site.
22:27	SP flew South to North over barn roof.
22:32	CP x2 foraging and BLE flying past barn to the rear by trees.
22:34	CP and BLE still foraging by trees.
22:35	LHB flying under archway.
22:37	SP foraging by barn.
22:41	LHB hanging up under archway between barn and house.
22:43	CP foraging by trees to rear of barn.
22:45	SP foraging by trees to rear of barn.
22:48	SP foraging by trees to rear of barn.
22:49	LHB flying around under archway of barn roof and house.
22:51	LHB flew off South to North away from Barn.
22:57 & 22:58	CP heard not seen foraging by barn.
23:02	Survey finished.

No emergencies but a Lesser Horseshoe bat feeding roost is confirmed in the open roof area that connects to the farm house from the L shaped North barn

Temperature: Start 19.3 °C End 12.7 °C,

Cloud cover: 100%,

Wind: None

Surveyors: XXXXXXXXXX

Positions: RW- West elevation, GR- East elevation, BH- South elevation.

Sunset 21:32 (Start: 21:15 End: 23:02)

21:16	Common Pipistrelle (CP) emerged (E) from ridge of barn by apple tree and then away to South.
21:19	Common Pipistrelle (CP) flew from courtyard past West elevation of East barn North to South and back again.
21:25	CP E 4m from South gable end on ridge line and then flew South into courtyard and through gateway into field.
21:46	SP flying past barn to along east elevation South to North.
22:03	SP flying North to West past East barn.
22:06	Brown Long Eared bat (BLE) flying tight to East elevation of barn close to the ground.
22:08	CP feeding and foraging around garden by East barn.
22:09	CP foraging by South elevation of barn.
22:19	CP flying past barn through garden North to East.
22:21	Noctule (N) flying past high over site.
21:25	CP commuting past barn North to East.
21:33	SP flying through garden by barn.
22:53	CP flying past South to North by barn.
23:00	Survey finished.

Notes- CP x2 **E** from East barn roof

Evening Bat Activity Survey – Park End Lodge Farm (East Barn)

18/07/2022

Temperature Start 31 ° C End 26.3 ° C

Cloud cover 5%

Wind: average of 0.3 m/s

Surveyor



Positions: RW = NW & BH = SE

Sunset 21:18 (Start: 21:00 End: 22:55)

21:38	Common Pipistrelle (CP) Emerged (E) from ridge line of East Barn.
21:41	Noctule (N) flying high over site.
21:44	N flying high over site North to South.
21:50	CP E from just below the ridgeline of the roof.
22:04	CP flying between East and South Barn, North to South through yard.
22:05	Brown Long Eared bat (BLE) flying past at low level through garden on East elevation of East Barn and Whiskered Bat x2 flying through farmyard.
22:06	CP foraging in yard and N flying high over site.
22:08	CP foraging in yard and N flying high over site.
22:09	CP foraging over East Barn ridge.
22:10	CP flying over the barn roof.
22:14	CP foraging through yard North to South between East and South Barn & Whiskered Bat foraging in yard.
22:17	Soprano Pipistrelle (SP) and CP x2 foraging in yard.
22:18	SP foraging in yard.
22:19	CP foraging in yard.
22:21	CP flying through the yard North to South.
22:26	CP and SP foraging and Lesser Horseshoe Bat (LHB) flying by trees north of L shaped North Barn & brief LHB flying by but nothing hanging up in North Barn overhang.
22:38	LHB foraging to the north of the farmhouse and L shaped North Barn by trees and around open area of L shaped barn.
22:44	SP flying past.

22:50	CP foraging around site and Serotine Bat x2 flying past barn.
22:55	Serotine flying through yard.
22:55	Survey finished

Notes- 2 emergences by 2 CP from ridge line in roof of East barn

Evening Bat Activity Survey – Park End Lodge Farm (South Barn) 18/07/2022

Temperature Start 31 ° C End 26.3 ° C

Cloud cover 5%

Wind: average of 0.3 m/s

Surveyors

Positions: NJ – Northwest (NW) IH – Southeast (SE)

Sunset 21:18 (Start: 21:00 End: 23:00)

21:21	Common Pipistrelle (CP) Emerged (E) from under roof hang of South Barn and flew through farmyard past east barn on South elevation.
21:36	Brown Long Eared (BLE) E above double doors on North elevation.
21:37	Noctule (N) foraging above main yard.
21:40	N flying through main yard.
21:42	Soprano Pipistrelle (SP) flying past from field behind barn South to North.
21:43 & 44	N continuous foraging over site.
21:46	SP flying from road West to North.
21:47 - 54	N continuous foraging over site.
21:57	CP E from under roof eaves at Gable end and flew SW.
21:58	CP foraging within the main yard and then out into field and rear garden of farmhouse.
22:01	CP flying over East Barn.
22:02	SP flying from North to South through site.
22:03	CP flying from South to West through site.
22:04	SP foraging in farmyard.
22:06	CP foraging in farmyard and BLE flying past.
22:07	N flying high over site and CP foraging through yard.
22:10	N flying high over site.
22:17	CP foraging over site.
22:18	CP foraging over site.

22:20	CP foraging over site.
22:22	CP foraging over site.
22:27	Myotis flying past over site.
22:31	SP foraging over yard.
22:34	SP foraging over yard.
22:35	CP foraging over yard.
22:38	SP & CP foraging around site.
22:42	SP & CP foraging around site.
22:45	N flying high over site.
23:00	Survey finished.

Notes- 2CP & 1 BLE Emergences from South Barn

Checks were made on the North barn, but the Lesser Horseshoe bat was not found within the open roof bay of North Barn during this survey.

4. Pond & Data search results & Ecological Assessment

4.1 POND SEARCH

A pond search was carried out, using the MAGIC map service from Natural England, to within a radius of 500m of the buildings at Parkend Lodge Farm. The results of the map-based pond search found four ponds within 500m.

Pond one was shown as being 450m to the north west of the barns & divided from the site by the Gloucester & Sharpness canal, Pond two was found to be 415m to the south of the site but divided by the main road. Pond three was found to be situated 500m to the south west from the site & also divided by the main road. Pond four was situated 325m to the north east & divided by field drains. However, when the field survey was carried out Pond four was found to no longer be there as it had dried up.

No ponds were found to be within 250m of the site the key GCN foraging area as shown in the Pond map in appendix three & the Ponds identified within the magic map service were found to either be divided by physical barriers or to no longer exist during the field survey.

This together with the lack of suitable GCN habitat on site to be affected by the proposal due to the close mown grass lawns & large areas of hard standing on site making the likelihood of any Great Crested Newts on site 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 that there are no designated sites within a 2km radius of the site with the nearest designated Site being Frampton Pools SSSI which is situated 3.8km away . The Upper Severn Estuary Ramsar, SAC & SSSI was also identified as being over 5km from the site as shown in the designated sites map in appendix four. Due to the distance of the designated sites from Parkend Lodge barns there will be no potential for adverse impacts from the proposed conversion of the barns as detailed in section 4.3.

Within the 2km search radius, results showed several Priority Habitats within the wider area including:- Good Quality Semi Improved Grassland, and Deciduous Woodland. None of the woodlands was found to be areas of Ancient Semi Natural Woodland.

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, Curlew, Redshank, Common Pipistrelle, Brown Long Eared, Soprano Pipistrelle, Brandt's and Whiskered were also recorded. Great Crested Newt surveys 25/06/19 found GCN to be absent from the area.

4.3 Ecological Assessment

The habitats within the barns themselves and the adjacent areas of hard standing in the central Courtyard & the close mown lawns have generally negligible suitability for use by reptiles or amphibians. However, at the edge of the site there is a grassland field which is tightly grazed grassland, so there is a lack of cover for amphibians.

The daytime surveys found evidence of birds using the East Barn, a re-lined nest was recorded that would suggest use by a robin. The evening bat activity surveys confirmed the presence of bats & found that the East Barn was in use by low numbers of (2) Common Pipistrelle (CP) & South Barn had one Brown long eared bat (BLE) & three Common Pipistrelle & one Soprano Pipistrelle (SP) & one Whiskered bat. Although the North L shaped Barn had no bats emerge from it, on one of the evening surveys a Lesser Horseshoe bat was seen to fly into the open roof bay & hang up briefly. As such it is confirmed that East Barn is a Day Roost for 2 CP bats & South Barn C is a day roost for up to 3 CP, 1SP, 1 BLE & 1 Whiskered bat.

The low numbers of bats in the barns may be due to the high light levels within the barns by both natural & artificial light & their regular use. Also of note is that the South Barn was reroofed five years ago & lined using modern membrane (which is known to be lethal to bats). However, as the underside of the roof has been lined with boards this has hopefully reduced the potential threat.

In order to reduce impacts & any potential harm to the identified bat day roosts it is recommended timing the works outside of the times at which the Bats are using the roofs (May to September), this will also avoid any potential harm to nesting birds. It is also recommended that all construction workers be subject to a 'Toolbox Talk' on Bats and an experienced, qualified and licensed ecologist be present to supervise any proposed roof works.

All of the existing key access features of the roofs of the barns used by bats to enter East & South barns will be altered by the conversion works. Once works have been completed bats will be able to re-utilize the areas between the cladding on the South Barn & in between the roofing tiles in East Barn roof if the correct bat friendly lining (bitumastic) is used.

In addition, the underside of the Southern roof has been lined with boards so provision for crevice dwelling bats will also be provided by creating a bat loft with access through bat access points in the cladding & several new bat features & crevices created within the timber clad walls.

The open roof bay that is formed by the extension of the North barn roof onto the side of the farmhouse was due to be dismantled. But as the evening surveys have identified it as a Lesser Horseshoe feeding roost the owners were keen to see it retained as such it will be retained & no current works planned to the open roof bay & there will be no additional light spill allowed into this area.

However, to reduce the impact of the proposed works new bat access tiles will be positioned near where the existing access points currently used by the bats in the East Barn are.

In addition, as an enhancement for Bats new bat access points will be created within the North Barn roof which will be relined with traditional bitumastic felt where any works are planned to the roof.

To mitigate for the loss of key features and to make enhancements for any bats potentially using the barns post-development, the following key actions are recommended.

Roof repair materials must include untreated timbers and **Bitumastic-type roofing felt** where bats will have access to the roof area.

Breathable Roofing Membrane (or BRM) must not be used in any of the roof areas to be restored.

A small loft area will be incorporated into the roof area of South Barn to encourage higher numbers of bats to use the barn in the future.

Bat tiles should be incorporated into the design of the replacement roofs for both the East & North Barns to help retain the bat roosts identified in the roof of the East barn & encourage bats to use the North Barn.

Bat boxes (Habitat eco) shall also be incorporated into the Gable end of the South barn to encourage crevice dwelling bats to increase in number.

Open fronted bird boxes shall either be incorporated into the top of the side walls of the East Barn & North Barn & also a swift box shall be erected on to the top of the field side wall of the South Barn & the small Owl box retained or replaced on the clad gable end wall.

As a result of the distance (5km) from the proposed works from the River Severn Estuary RAMSAR & SAC by the sharpness canal & several roads and the relatively small-scale nature of the proposed works which will be largely confined to the barns themselves, i.e. the conversion of the existing barns within an area of hard standing & close mown grass lawns there should be no direct adverse impacts upon any part of the designated sites or the River Seven. It is important to note that there are no ditches on the site that link to any watercourse that connects to the River Seven on site.

In addition, all building material storage & any mixing of materials will be confined to the Hard surface area so that no runoff can occur into habitats outside of the site and therefore cause any potential leaching into any of the catchment areas of the River Severn.

However, there is the potential for secondary impacts such as light spill & how that could adversely affect any bats as such this has also been carefully considered.

In order to avoid any light spill into the wider habitats off site there will be no additional external lights on the converted barns once the works have been completed and there will be limited light spill from the glazed windows once the barns are converted as there will be curtains used at night. The design of the converted barns has not included any roof lights to reduce any light spill into the surrounding fields & the night sky.

There are no trees or hedges to be affected by this proposal as there are no trees to be removed within the red development line & a traditional orchard will be created as an enhancement.

5 CONCLUSION, MITIGATION & ENHANCEMENTS

The proposed works will be restricted to the conversion of the barns on site this will include repair of the roofs on the North & East Barns & all the internal works necessary for the conversion of the barns. The proposed works will not extend beyond the existing barns & no footings will need to be dug so disturbance to the wider countryside & habitats off site will be minimal except for native enhancement planting.

As discussed in section 4.3 there are no direct potential impacts that could affect the Frampton Pool SSSI (3.8km) or the River Severn Estuary SSSI & SAC (5.1km) but the potential for secondary impacts must also be addressed as such there will need to be control of where materials are mixed & no external lighting on the barn that could cause light spill into the foraging areas of any bats. As such any mixing of materials will be done on an area of hard standing with no potential for run off from site & no external lighting is proposed on the barns once converted except for low level down lighters which be directed to the ground to avoid any potential illumination into the night sky.

The evidence obtained during the evening surveys confirm that the East Barn proposed for conversion contains one Day Roost for a maximum of two Common Pipistrelle Bats, and the South Barn is confirmed as containing Day roosts for one Brown long eared bats, three Common Pipistrelle bats, one soprano pipistrelle bat, one whiskered bat. It is unlikely due to the thin single skin cladding of South Barn & the high levels of natural & artificial light & disturbance that they are used for either hibernation or as a Maternity roost.

The lesser Horseshoe feeding roost will remain unaltered & unchanged by the proposal & unlit.

Roosts of this size and type, of more common Bat species are considered to be of low conservation significance; however, they are still protected under European and UK legislation (Appendix 1).

Roosts classed as low conservation significance can be legally disturbed/destroyed under a new licensing system adopted by Natural England in 2015, known as a Bat Low Impact Class Licence (BLICL) and recently updated into the Bat Mitigation Class Licensing (BMCL) in October 2018.

For works to go ahead the site will need evening surveys, including a minimum of two bat activity surveys in the main season May - August/September which have already been carried out & to be registered with (and approved) by Natural England by a registered consultant at least three weeks (fifteen working days) before commencement of any work, and a bat mitigation strategy must be adhered to see section 6.1.

5.1 Bat Mitigation Strategy

Given the presence of roosts of this type, a European Protected Species (bat) Mitigation Licence will be required in order to affect the roost; a Bat Mitigation Licence would be appropriate for licensing for the works.

With a suitable mitigation strategy in place, there is no reason to believe that Natural England would not issue a Bat Mitigation Licence. This is due to the fact that the favourable conservation status of the species can be maintained, killing and injury can be avoided, and suitable features can be incorporated into the proposed conversion of the barn to maintain the continued ecological functionality of the building as a roost site.

Supervision of Roost Disturbance

The disturbance of the Brown long eared, Common Pipistrelle, Soprano Pipistrelle & Whiskered Day Roosts implemented under the BMCL. All roof works proposed i.e. repair will be supervised by a BMCL registered consultant (Ros Willder RC121). If bats are encountered during works, they will be carefully rescued by the supervising ecologist and transferred to an appropriate place (wooden bat box on a tree or taken in to care if underweight) to be retained undisturbed on site.

Careful Work Practices

Any disturbance to the roof will proceed in a careful and controlled manner, outside of when bats may be using the barn and roof apex (April/May to September). Contractors will be given a 'tool-box talk' and briefed with regard to the fact that individual bats can often exploit very small crevices as roost sites (such as gaps between tiles) and that bats can move between roost sites on a regular basis.

Restoration of Roosting Opportunities

As part of the proposal crevices will be created within the areas between the timbers & the roofing tiles of both the East & North Barns as well as a small loft (3.7m by 2.4m by 1.8m) within the roof of the South Barn & accesses through the western gable end with an access of 50 x 150mm as well as two Habitat Eco boxes included within the gable end wall of South Barn behind the cladding.

Access into the roof will be by bat access tiles which will be included in the roof of both the North & East Barns and the roof will be lined with bitumastic roofing felt to encourage future use of the roof areas under the tiles by bats as shown in Appendix five.

In addition, wooden crevice bat boxes will be incorporated within the small loft in South Barn to provide further enhancements & to encourage increased use of the site by Brown Long eared & whiskered bats.

Lighting

No external lighting is planned on the walls of the buildings that could cause light spill into the surrounding area or the retained LHB feeding roost & if any external lighting is planned other than low level down lighters, a lighting strategy will need to be submitted to the LPA for approval before works can begin to show how this will be achieved without causing any light spill into the wider areas off site

ENHANCEMENTS

Due to birds' nests being found in the East Barn, open front nests boxes will be incorporated into or on the side walls of East & North barns & a swift box erected on to the field side of the South barn as shown in appendix five.

If all the recommendations are followed no harm will occur to the River Severn Estuary SAC 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

To provide a real biodiversity gain to the site traditional varieties of fruit trees will be planted to create a traditional Orchard & native species rich hedgerows created to provide enhanced cover for wildlife & improve the bat foraging & bird nesting across the site as shown on the plan in appendix five.

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 birds of 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)).

APPENDIX TWO EXISTING SITE & ELEVATION PLANS



1.00 SITE PLAN
1:500

DESIGN STOREY

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Client: [Blank]

Location: [Blank]

Date: [Blank]

Project No: [Blank]

Scale: [Blank]

Author: [Blank]

Checker: [Blank]

Approver: [Blank]

DESIGN STOREY

Project Name: [Blank]

Client: [Blank]

Location: [Blank]

Date: [Blank]

Project No: [Blank]

Scale: [Blank]

Author: [Blank]

Checker: [Blank]

Approver: [Blank]



2.00 SECTION 1
1:50



3.00 ELEVATION 1
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4.00 ELEVATION 2
1:50



5.00 ELEVATION 3
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6.00 ELEVATION 4
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DESIGN STOREY

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Date: [Blank]

Project No: [Blank]

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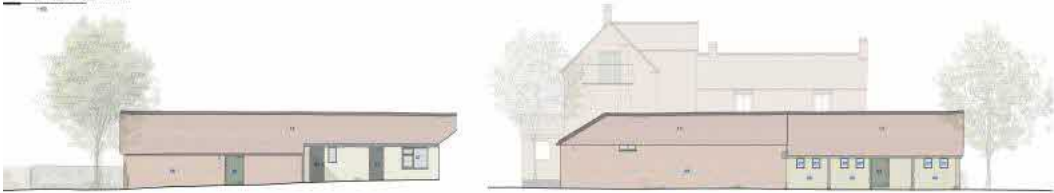
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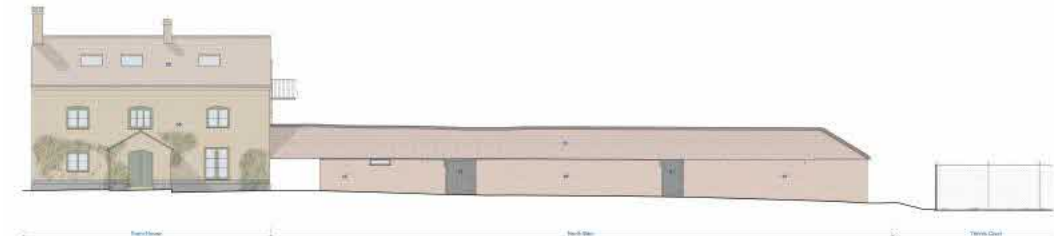


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WEST ELEVATION
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Architectural elevation drawing showing the exterior of the building. The drawing is labeled 'WEST ELEVATION'.

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- 02 - Overall Elevation
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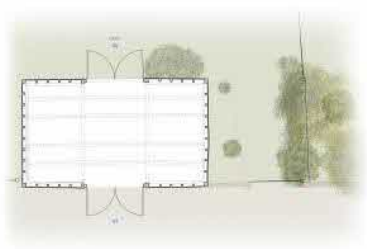
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Client	Design Storey
Location	11000001
Date	19/03/20

DESIGN STOREY
Architectural Elevation Drawing
11000001

Project: 2120 P006 P2
Client: Design Storey
Location: 11000001
Date: 19/03/20

Scale: 1:50

Project: 2120 P006 P2
Client: Design Storey
Location: 11000001
Date: 19/03/20



WEST ELEVATION
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Architectural elevation drawing showing the exterior of the building. The drawing is labeled 'WEST ELEVATION'.

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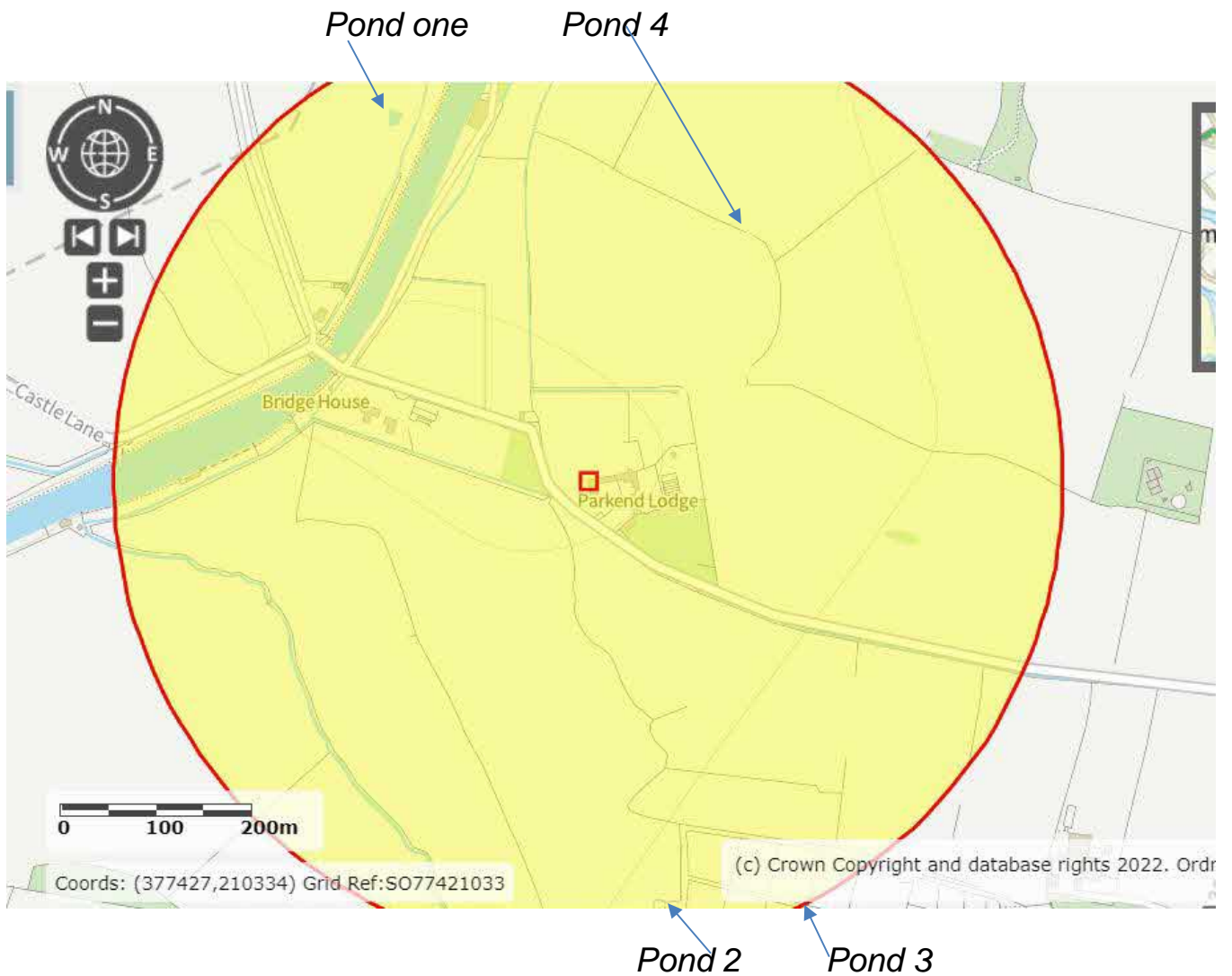
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Architectural Elevation Drawing
11000001

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Client: Design Storey
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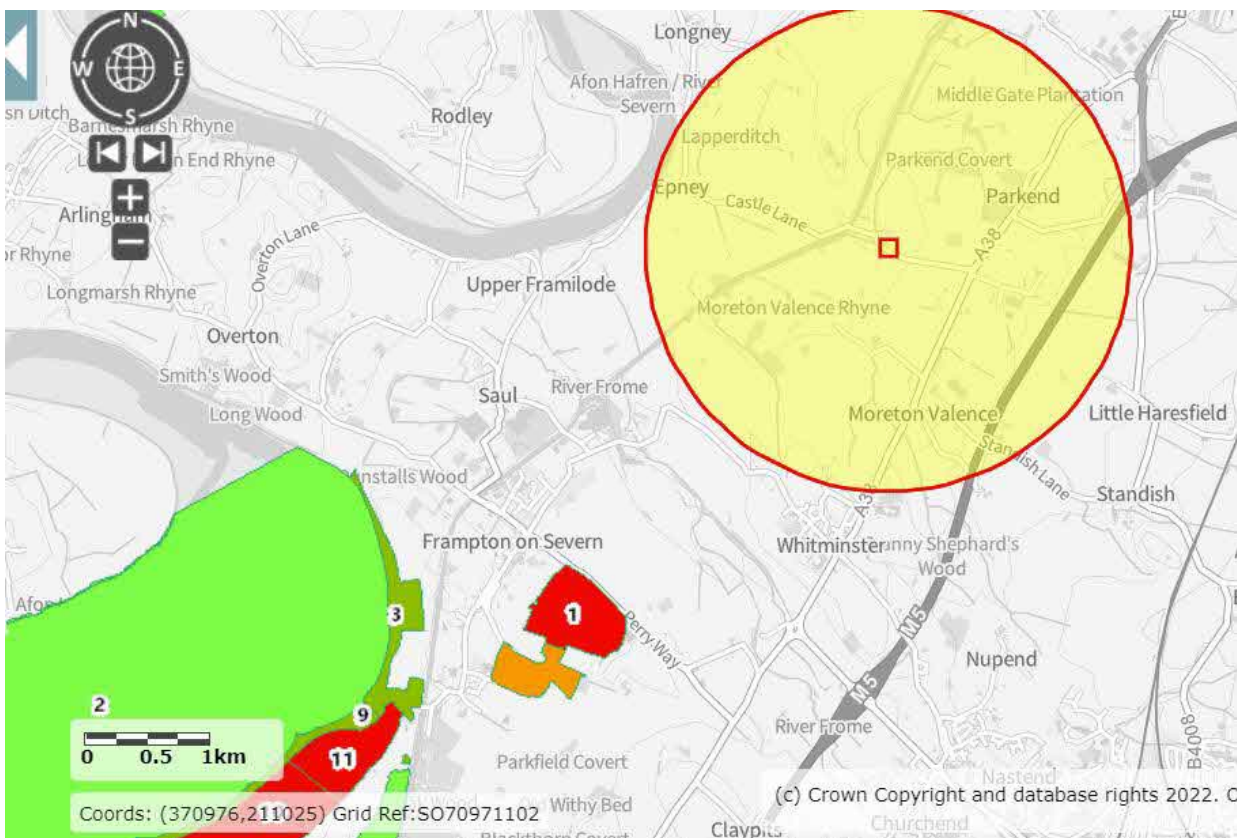
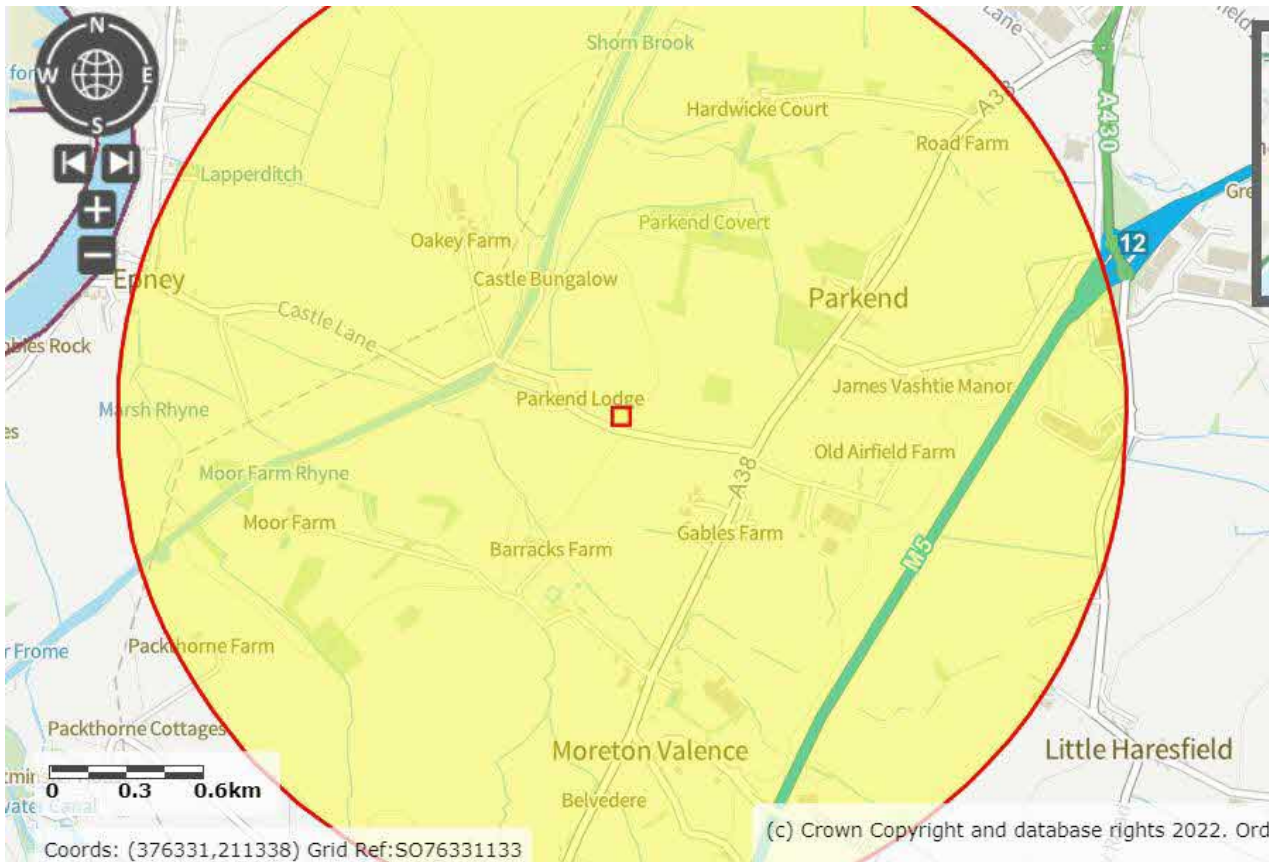
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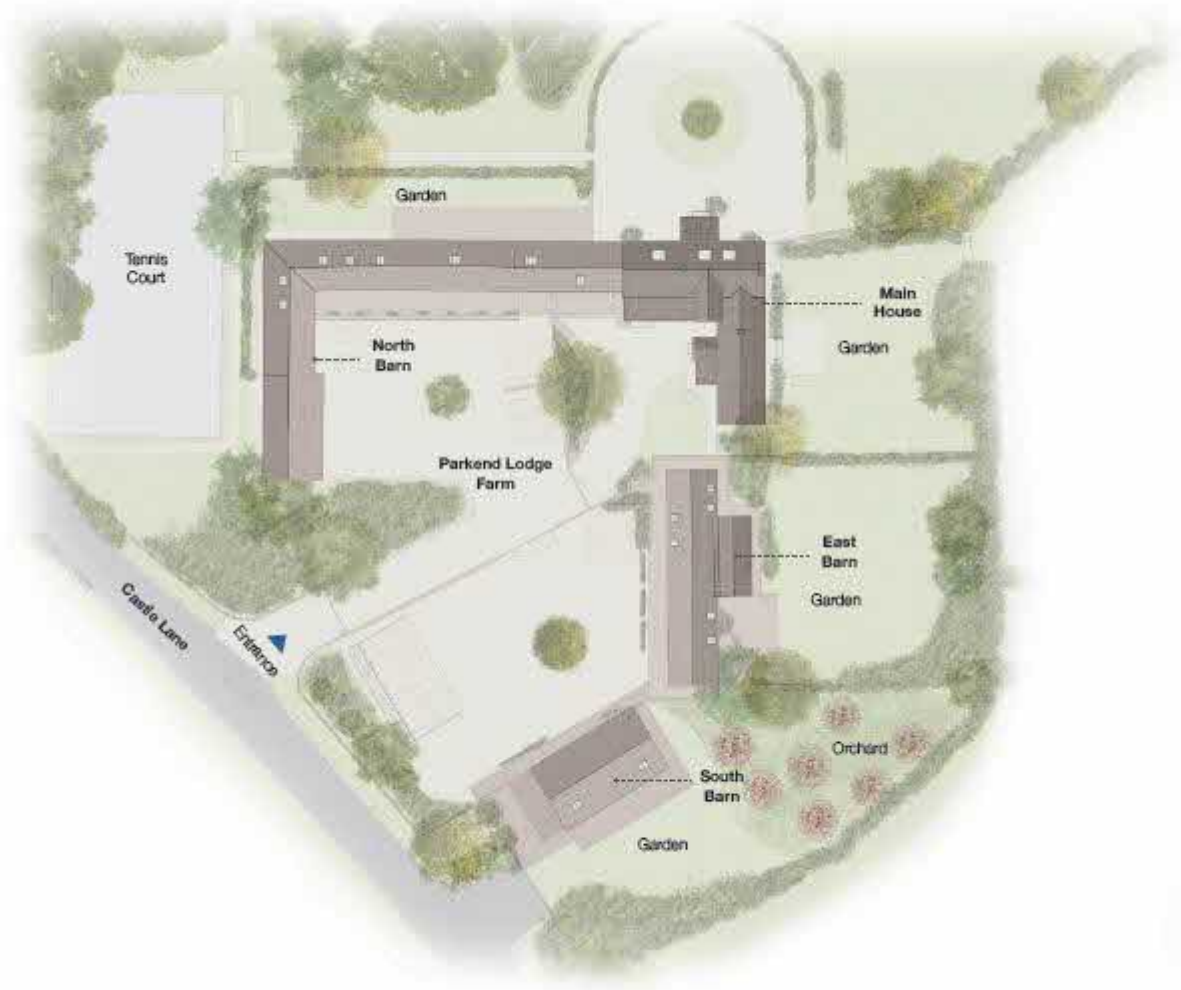
APPENDIX THREE POND SEARCH MAP



APPENDIX FOUR DESIGNATED SITE SEARCH MAP



APPENDIX FIVE PROPOSED PLANS & ENHANCEMENTS



See elevation plans showing Bat Access slate tiles X4 on East & North Barn and Bat Eco Habitat box x 2 on South Barn & open fronted nest boxes x2 on top of walls on East & North Barn & swift box x1 on South Barn details over the page





swift box

Bat Access Tiles

Bat Access Roof Tile

Providing roost and hibernation spaces in new builds and renovations is important as modern buildings tend not to have the cavities and access found in older buildings. Access tiles can be used as part of a mitigation package required by law for existing roosts or as access where a roost has not previously been present. This set of roof tiles is designed to provide bats with access to the under-felt or loft space, this is particularly attractive to Pipistrelle bats who like to roost in confined spaces under tiles. Brown long eared bats may also benefit from such access as they often use roof timbers and ridges inside lofts. This design also has the benefit of improving ventilation. NHBS Price: £29.99 including VAT.



WoodStone Build-in Open Nest Box

WoodStone Build-in Open Nest Box is designed for use in new build or renovations. The nest box is intended to be built into walls to provide nesting cavities. This provides much needed nesting cavities for species such as Robins, Wagtails and Black Redstarts. Constructed from FSC certified WoodStone this nest box will not deteriorate like a traditional wooden nest box. NHBS Price: £17.95 including VAT.





1 EAST BARN, PROPOSED FLOOR PLAN
1:50

Architectural drawing title block containing project information and a legend.



2 EAST BARN, PROPOSED WEST ELEVATION
1:50



3 EAST BARN, PROPOSED NORTH ELEVATION
1:50



4 EAST BARN, PROPOSED EAST ELEVATION
1:50



5 EAST BARN, PROPOSED SOUTH ELEVATION
1:50

Project information table for the East Barn, including client details, project name, and planning reference.



6 EAST BARN, PROPOSED EAST ELEVATION
1:50



7 EAST BARN, PROPOSED WEST ELEVATION
1:50



8 EAST BARN, PROPOSED SOUTH ELEVATION
1:50



9 NORTH BARN, PROPOSED WEST ELEVATION
1:50



10 NORTH BARN, PROPOSED EAST ELEVATION
1:50



11 NORTH BARN, PROPOSED SOUTH ELEVATION
1:50

Project information table for the North Barn, including client details, project name, and planning reference.

