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Preliminary Roost Assessment for Bats / Nesting Birds - Barn & Byre at Orchard House, Newton Arlosh, Wigton, CA7 5ET

This report outlines the findings of a daytime site inspection at Orchard House, Newton Arlosh, Wigton, CA7 5ET (Nat Grid Ref. NY 19558 54809 - See Figure 1).

Plans 'as existing' and 'as proposed' (Figures 2 & 3) have been provided and it is proposed to convert the existing single storey barn / byre into a single self contained residential unit.

The proposed work could present a risk that bats could be harmed and bat roosts destroyed. All bat species and their roosts are protected in the UK under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

For this reason Hesketh Ecology were commissioned in June 2025 to complete a Preliminary Roost Assessment / daytime inspection of the buildings / sections proposed for works under this scheme. It is understood that this survey and report will be used to inform proposals for the site and to accompany a planning application for this proposed work.

Survey Objective and Timing

The site inspection was conducted on the 3rd July 2025, adhering good practice guidance and within the recommended time for a preliminary roost assessment on a structure (Table 2.2. 'Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)' - The Bat Conservation Trust. London. ISBN-978-1-7395126-0-6).

Any evidence of bats is recorded as encountered but the primary objective of this daytime site inspection was to identify the level of bat roost potential and determine any further advice and survey requirements. Nesting birds / barn owls were also considered.

See Figures 1 & 2 for site location & existing building / survey area.

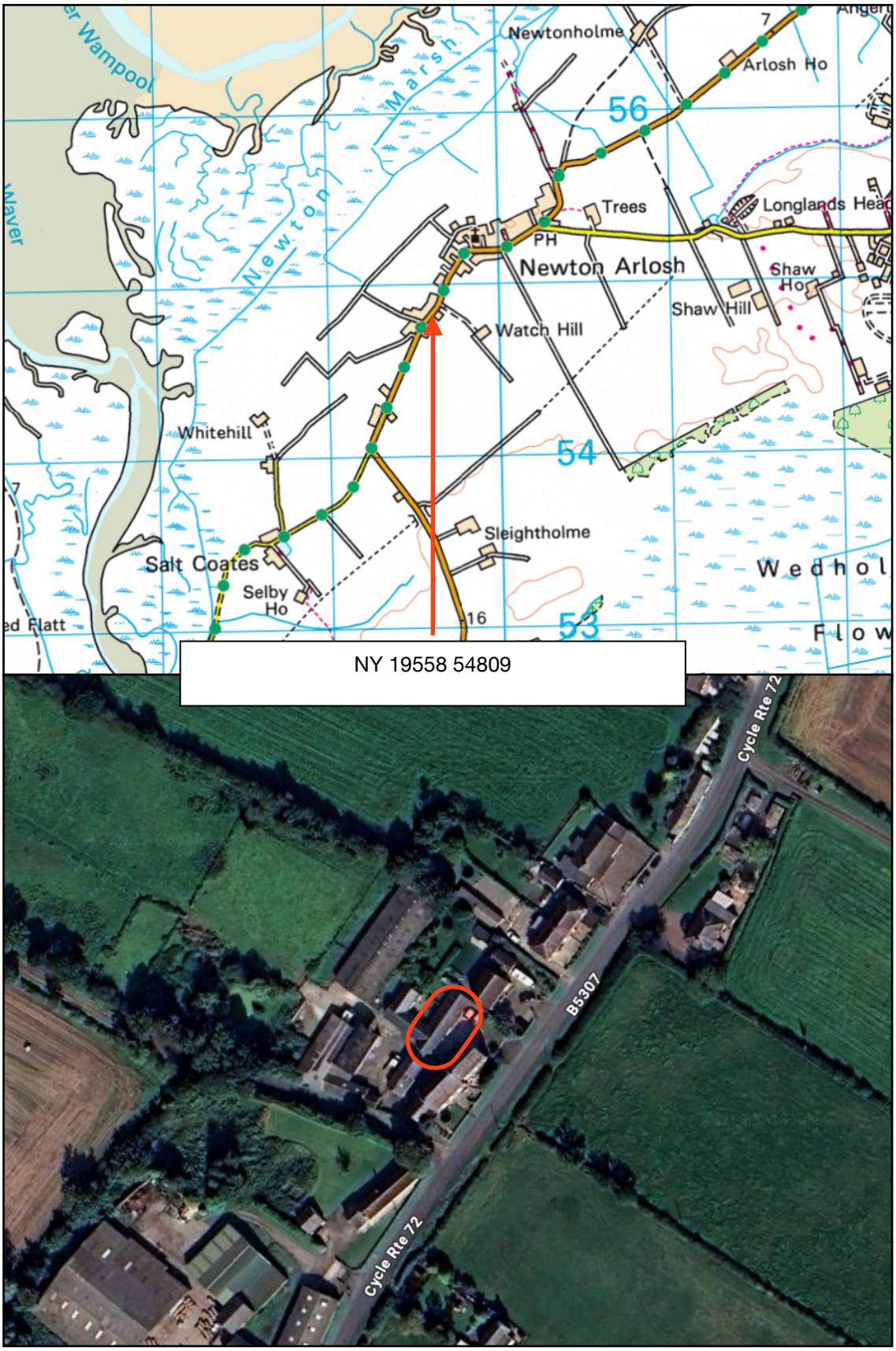

Figure 1: *Survey Area. Barn - Byre at Orchard House, Newton Arlosh, Wigton, CA7 5ET - Location Plan (Top) and Site Plan (Bottom). Surveyed building / sections in red outline - see also Figure 1 below.*

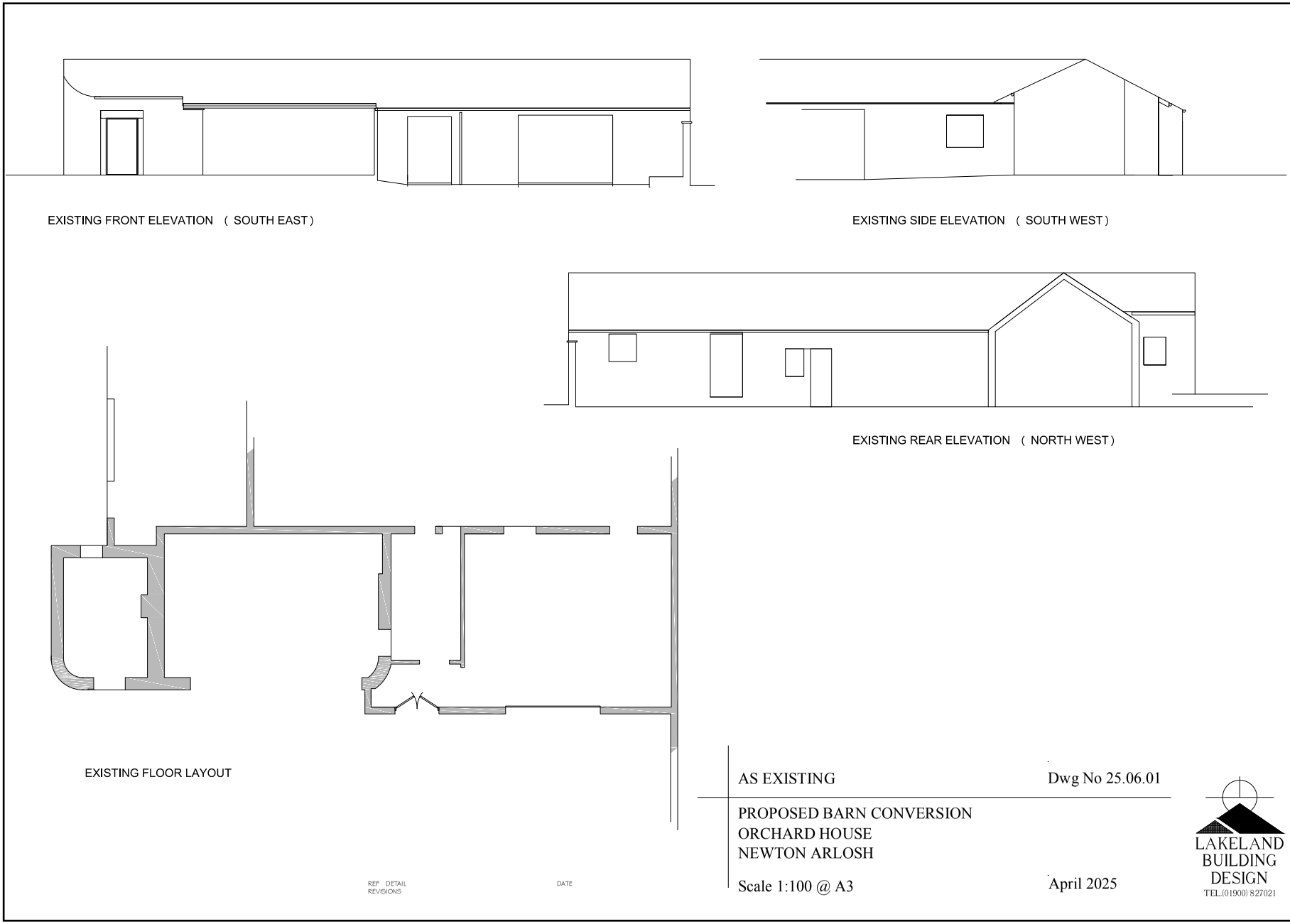

Figure 2: *Plans As Existing. Drawing By Lakeland Building Design.*

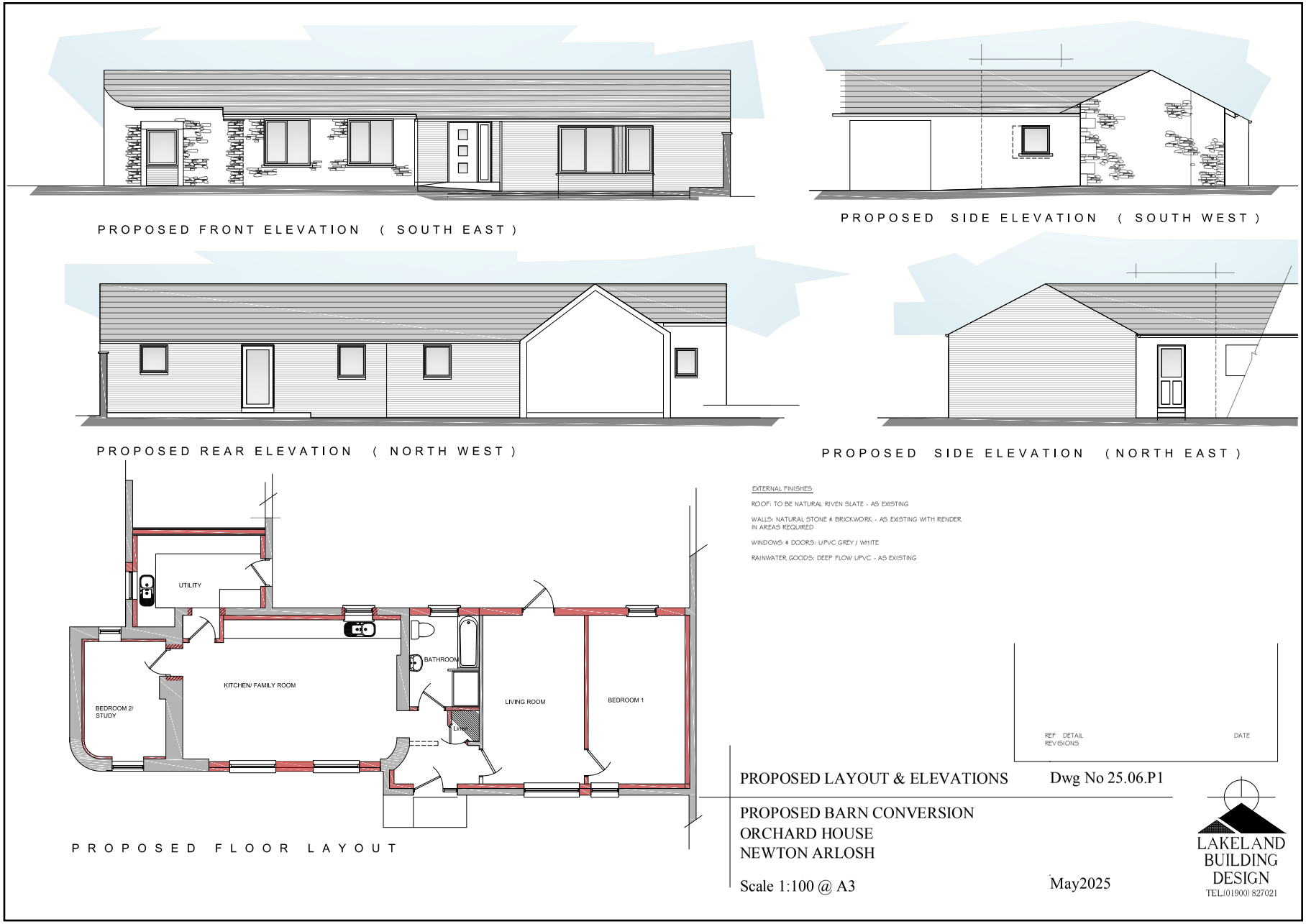

Figure 3: *Plans As Proposed. Drawing By Lakeland Building Design.*

Site & Surrounding Habitat

The Orchard House site is a former steading which is no longer in agricultural use, the single storey byre / barn proposed under this scheme is set within the courtyard with the farmhouse and other traditional buildings close / adjacent and a couple of other purpose built sheds within the site / to the north and west of the courtyard.

The site is to the south-west of Newton Arlosh village, with dwellings to the north and the 'West End' farm steading directly south, there are some well established gardens and hedgerows in the close vicinity - with trees and small copse also present on adjacent land and within / near to the curtilage of Orchard House.

The lonning stretching west towards the marsh is also lined with some mature trees and well established hedges.

The immediate surrounds is of agricultural land, some of which is less intensively managed, most of the land is divided by hedges and with some wide field margins / verges also present. The smaller fields clustered around the village centre have good hedgerows and well established gardens with mature trees.

Newton Marsh, floodplain, coastal salt marsh is 600m to the northwest of the site and Wedholme Flow NNR, one of the South Solway Mosses is 1.4km to the southeast, both providing some excellent foraging conditions for bats.

The wider habitat provides, wells, pools, becks / numerous watercourses, wetland areas, marshland and the channel of the River Waver is 1.5km to the west, with the channel of the River Wampool 3km north.

There is no road lighting and very little light spillage in the area; with no barriers to bat activity, this combined with the above habitat features provides good opportunities for bats to forage and commute throughout the land.

The site / general location is considered to represent at least 'moderate' quality bat habitat.

Desktop Search

A data search was not commissioned from Cumbria Biodiversity Data Centre (CBDC) for this survey report due to the small scale of the proposal.

A search using the MAGIC website (https://magic.defra.gov.uk) managed by Natural England for records of European Protected Species Mitigation Licensing (EPSML) was conducted on 15/08/25; this revealed there no recorded EPSML's within a 2km radius of the site:

Site Check Report generated on Fri Aug 15 2025
You selected the location: Centroid Grid Ref: NY19655494

Granted European Protected Species Applications (England)
No Features found

A search of historic planning applications was conducted on the Cumberland Council planning authority online search facilities (https://cumberlandcouncil.my.site.com) on 15/08/25 "CA7 5ET" (i.e. the post code area for the site).

This found a total of 140 no. previous planning applications for the post code area, of which 50 no. (from 2010 when protected species considerations became obligatory under planning legislation) were assessed - with proposals likely to be accompanied by a bat survey searched for relevant information.

Of the applications only a small number were considered likely to be accompanied by a bat survey (barn conversion / farm site development / extensions to dwellings etc), of these there was a proposal to a barn at Church House Farm accompanied by a daytime bat survey (by Steve Wake with no conclusion on bat presence).

An outline application at West End Farm was accompanied by a decision notice which listed bats and barn owl requirements under its conditions (no other files or ecology survey were available).

A review of the 'Cumbria Mammal Atlas', Cumbria Biodiversity Data Centre and Cumbria Mammal Group (November 2017), shows that a total of 28 mammals have been recorded with the following bat species previously recorded in hectad NY15 (pre- and post- 2000) - Table 1 below.

NB. The Atlas is somewhat dated now and a lack of records in an area does not indicate that any locally known species are absent.

Hectad NY22		
Species	**Pre- 2000**	**Post- 2000**
Whiskered bat (*Myotis mystacinus*)		
Brandt's bat (*Myotis brandtii*)		
Natterer's bat (*Myotis nattereri*)		
Daubenton' bat (*Myotis daubentonii*)		
Noctule bat (*Nyctalus noctula*)		
Pipistrelle species (Pipistrellus spp)		
Brown Long-eared bat (*Plecotus auritus*)		
Western Barbastelle (*Barbastella barbastellus*)		
Leisler's bat (*Nyctalus leisleri*)		

Table 1: *Bat species records for hectad NY15, pre- and post- 2000. Green = record of presence exists; red = no records exist. Taken from 'Cumbria Mammal Atlas', Cumbria Biodiversity Data Centre and Cumbria Mammal Group (November 2017).*

Hesketh Ecology have conducted various bat and bird survey and monitoring work in the locality and most of the bat species shown in Table 2 below are known to be present and / or breeding in the area around Newton Arlosh and the surrounding habitats.

Barn owl are present in the area / close to the site with a number of known roosting places and nesting sites within 2 - 3 km (authors own records).

Species	UK Population Estimate and Proportion of Bat Fauna	UK Status	Local Status	Habitat
Noctule *Nyctalus noctula*	50,000 / 1.02%	Uncommon but stable	Widespread but uncommon; mobile populations; breeding roosts recorded.	Tree dweller; predominantly in lowlands. Occupies woodpecker and rot holes. Seldom in buildings. Will utilise bat boxes. Feeds over deciduous woodland, parkland, pasture, water and forest edges.
Daubenton 's bat *Myotis daubentoni i*	560,000 / 11.39%	Common and increasing	Widespread; hibernacula and breeding roosts recorded.	Bridges, tunnels, caves, mines, stone buildings and trees. Has been found hibernating underground at high altitude (550m). Feeds over rivers, canals and other water bodies. Will forage in riparian woodland.
Natterer's bat *Myotis nattereri*	148,000 / 3.01%	Common and increasing	Widespread; hibernacula and breeding roosts recorded. Less common than Daubenton's.	Similar to Daubenton's and can be found together; bridges, old buildings, barns, trees and underground sites. Feeds in woodland and parkland. Has recently been recorded in some upland areas, mainly using riparian habitats.
Whiskered bat *Myotis mystacinus*	64,000 / 1.3%	Uncommon but stable	Widespread but uncommon; breeding roosts and hibernacula recorded.	Older, mainly stone buildings, churches, trees and often in bat boxes. Feeds mainly in deciduous woodland
Brandt's bat *Myotis brandtii*	30,000 / 0.61%	Uncommon but stable	Widespread but uncommon; hibernacula and breeding roosts recorded. "Swarming" sites recorded.	Similar to whiskered.
Brown long-eared bat *Plecotus auritus*	245,000 / 4.98%	Common and stable	Widespread and common; hibernacula and breeding roosts recorded.	Old buildings, churches, barns (often with trees close by), underground sites and trees. Often found in bat boxes. Feeds in deciduous and coniferous woodland often within the canopy; around parkland trees, gardens, along hedgerows.

Species	UK Population Estimate and Proportion of Bat Fauna	UK Status	Local Status	Habitat
Common pipistrelle *Pipistrellus pipistrellus* (45kHz)	2,430,000 / 49.41%	Common and increasing	Widespread and common; breeding roosts recorded but species recognition only recently recorded.	Wide age range of buildings; favours modern structures, trees occasionally and bat boxes. Feeds over diverse habitats; rural and urban gardens, woodland, farmland, or near water. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia boarding and in gaps in wooden window frames, also hibernates in trees.
Soprano pipistrelle *Pipistrellus pygmaeus* (55kHz)	1,300,000 / 26.43%	Common and stable	Widespread and common; breeding roosts recorded but species recognition only recently recorded.	As common pipistrelle. Favours riparian habitat, and roosts in larger maternity colonies than the common pipistrelle. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia boarding and in gaps in wooden window frames, also hibernates in trees
Nathusius' pipistrelle *Pipistrellus nathusii*	16,000 / 0.33%	Uncommon and trend unknown	Rare. Three UK breeding sites known. A single bat-detector record of a night roost in Cumbria, and several foraging records.	Tree dweller; hollow trees, cracks, bat boxes and buildings. Sometimes shares nursery roost with pipistrelle or Brandt's bats. Feeds mainly around riparian and woodland edge habitats.
Leisler's bat *Nyctalus leisleri*	28,000 / 0.57%	Uncommon and trend unknown	Rare. Scarce records for Cumbria. Breeding status unknown. Present in adjacent counties (Yorkshire and Dumfries and Galloway).	Woodland bat, similar to noctule but will roost in buildings. Feeds in open deciduous and coniferous woodland, over water bodies, parkland and around street lamps in suburban areas.

Table 2: *Local status and habitat of Cumbrian bat species.*

Daytime Inspection - Preliminary Roost Assessment (PRA)

The buildings due for works was externally inspected for signs of bats / suitable roosting features using a high-powered torch, ladders and binoculars (LED Lenser H14R.2 1000 Lumens Headlamp / Equinox HP 8x42 Binoculars). An inspection of the entire barn / byres, all elevations; external walls / windows / doors, eaves, wall tops, guttering and roof cladding / flashings, and an assessment of adjacent buildings and habitat was undertaken.

The external inspection included the grounds immediately surrounding the building and the interior areas were accessed and fully inspected.

The potential suitability of the building / sections proposed under this scheme and the surrounding habitat for bats was assessed in line with relevant guidelines and allocated to one of the categories detailed within Table 3 (below).

Personnel

The survey and assessment were undertaken by Vic Griffin BSc Hons, MCIEEM, NE Bat Licence CL 18 Survey Level 2 (2017 32609-CLS-CLS). Victoria is an experienced and competent ecologist, with over 23 years experience of study, training & work in the field of wildlife conservation and ecology, working with protected and native species, exotics and rare breed animals. She has 18 years experience in bat survey & mitigation, has held a bat survey licence and roost visitors licence since 2006 and has a NE trainers licence. Vic gained ‘earned recognition’ by NE in 2016 by qualifying and training as a Registered Consultant for the Bat low impact / mitigation Class Licence (WML-CL21). Vic has participated in numerous bat, ecology, survey and mitigation courses in the last 19 years. Becoming a full member of CIEEM in 2016 she qualified under the Institutes' competency framework at an ‘Accomplished’ level of competence (lead in bat survey work / ecology) and so is of BCT level 3 (CIEEM Accomplished) competence.

Victoria is experienced in barn owl ecology with local knowledge of this species and is accredited agent under a BTO Schedule 1 Disturbance Permit 2024. This includes ongoing training / work in northwest Cumbria with a licensed bird ringer; ringing barn owls and conducting nest box checks / monitoring. She is also Accredited Agent (suitably trained and experienced - able to carry out work under a licence without the personal supervision of the Registered Person) under Barn Owl Class licence CL29: to survey and monitor barn owl nest sites (Licence Ref No. 2024-11918-CL29-OWL) for the purposes of monitoring the presence of the species and effectiveness of conservation efforts, including surveying sites to inform future development proposals.

PRA - Results

The single storey barn proposed under this scheme appears to have a stone section to the west which is probably original and the northern parts are of more modern appearance and are constructed of brick - with some block sections present, which provide support in areas / along wall tops and beneath the pitched roof. The roof is slate clad and has been fairly recently laid - with a modern breathable membrane liner present. The ridges are cement tiles which are tightly laid with no gaps and the slates are tightly set with gaps investigated from ladder height and these were found to be small and sub-optimal - extremely unlikely to be accessible even to occasional pipistrelles. There are no obvious crevices in the roof available to bats and no roof voids. Internally the barn is light and there are no gaps in the walls / no gaps around timbers / wall tops which could be used by bats. Doorways / lintels were inspected and there were no crevices / gaps present.

The external walls do not contain any gaps expect for in a couple of locations at the southern end - these are in external wall tops areas and as identified / discussed with the owners - these are not likely to be blocked as a result of the proposed works to convert the buildings. There are coping stones along the main elevations and the gable ends have cement which is continuous along the wall top / under the slates - no gaps / suitable access for bats.

The open-front byre to the rear / western elevation has a small section adjacent the single storey barn - this is to be converted as part of the proposal and this area was also accessed and considered as part of the survey, this also had no internal gaps and the roof is modern - with slates and ridges tightly set over a modern BRM and no roof / dark internal voids.

There were no gaps, access for bats or typical roosting opportunity in the single storey barn / byre proposed for works as in Figures 1 & 2.

There were two small gaps in the stonework and the brick wall top - coping stones at the southern end that may give some level of potential for bats to access but they did not appear to lead to crevices and were considered sub-optimal.

Even considering these two gaps (which will be retained though the works) then overall the barn / byre is considered to offer 'negligible' bat roost opportunity.

See Table 3 and Photos; Figs 4 - 7 below.

Suitability	Roosting Habitat	Potential flight-paths and foraging habitat
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of year (i.e. no habitats that provide continuous lines of shade/ protection for flight-lines, or generate/shelter insect populations available for foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats: however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A built structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. 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 a larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	Habitat that could be used by small numbers of commuting bats such as gaps hedgerows or unvegetated stream, but isolated, I.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (i.e. temperature, humidity, height above ground, light levels, level of disturbance) 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).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Table 3: *Adapted from 'Table 4.1; Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement', Chapter 4, Pg. 44 - 'Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)'.*

Figure 4: *Showing the southwestern gable end - despite a through search of the entire buildings area, from ladder height there was no typically suitable access for bats present. To the left is the small section of byre which will provide utility space as shown in Figure 3.*

Figure 5: *Showing the slate clad roof and cement ridges - very tightly set and no access for bats throughout.*

Figure 6: *Internal space - this is from inside the byre and looking the barn section through the door - no potential voids internal and no wall top gaps or crevices suited to bats. NB. Nesting swallows were present to both the byre and the barn.*

Figure 7: *Byre and barn tie-in area - both roofs are modern and have no suitable access for bats and the walls do not provide crevices - wall tops also do not present gaps or access to suitable voids / crevices.*

Conclusion

There was nil / negligible potential for roosting bats to the barn / byre sections proposed under this scheme. The impacts from the current proposal are minimal.

"If no suitable habitat for bats is found then further surveys are not likely to be necessary…..including evidence that an adequate assessment has been made by a suitably qualified ecologist and the conclusion is reasonable". (See Pg. 45 of Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6).

There is nil / negligible risk to bats from this particular scheme and no further surveys are required to the single storey barn & byre section.

The site is set in good habitat with adjacent buildings / trees / structures with potential for bats / barn owl / nesting birds - the working methods below should be adhered.

Nesting swallows were present during the survey and any works during the breeding bird season should be vigilant for active nests / avoid risk of disturbance.

The site has a number of other open buildings / sheds and so nesting provision for swallows on this site will not be lost as a result of the conversion.

Recommendations - Working Methods

Bats move roost often and are opportunistic; there is a risk that bats could be present / active around the site. Bats could also occupy any small gaps created whilst works are underway.

- Where possible gaps will not be left open over night to avoid the possibility of bats opportunistically roosting in gaps which will later be blocked.

- If bats are discovered or suspected at any time prior to or during works, all work in that area must pause and advice from the acting consultant be sought.

This report must be made available to any contractor working on site.