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**LAND AT ASPINALL FARM
BROCKHALL VILLAGE
LANGHO**

- EXTENDED PHASE 1 HABITAT SURVEY -

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BROCKHALL VILLAGE
LANGHO**

- EXTENDED PHASE 1 HABITAT SURVEY -

A report for

Simpson Farm Dairies

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October 2015

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PART 1 INTRODUCTION:

1.1 REASONS FOR STUDY:

PENNINE *Ecological* have been commissioned by Avalon Town Planning and Architectural Consultancy on behalf of Simpson Farm Dairies, to undertake an Extended Phase 1 Survey of land at Aspinall Farm, Brockhall Village, Langho, Blackburn.

The study also includes a badger survey, a full evaluation of the ecological significance of the survey findings, a statement of potential impacts, and recommended mitigation measures where appropriate.

The surveys are required due to a proposal to extend the current Ribble Valley View holiday lodge site.

1.2 LOCATION:

The study area is situated on land north of Old Langho Road at OS grid ref SD 6988 3604.

The study area comprises the proposal field, and in the case of badger, part of the adjacent land.

The extent of the development is shown on plans submitted in support of the application, those plans are not reproduced in this report.

1.3 SITE STATUS:

The site has no statutory designation relating to ecology.

1.4 SURVEY METHODOLOGY:

1.4.1 Extended Phase 1 Habitat Survey:

An Extended Phase 1 Habitat Survey (*Nature Conservancy Council 1990*) of the study area was undertaken on 13th October 2015. The site's habitats were fully mapped and higher vascular plant species were recorded and given abundance values according to the standard DAFOR scale, where:

D = Dominant
A = Abundant
F = Frequent
O = Occasional
R = Rare

Where appropriate these values can be prefixed by the letter L (locally) or V (very), to provide more subtle biogeographical data.

1.4.2 Badger Survey:

The badger survey focused on land directly affected by the proposed development and land within 50m - 100m of the site.

The survey used standard techniques for establishing the use of the site by badger, and includes searches for evidence of badgers including:

- Setts
- Pathways
- Footprints
- Latrines
- Foraging areas
- Scratching posts

1.4.3 Preliminary Bat Roost Survey:

All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010.

The site was visited on the 13th October 2015 and an assessment of potential bat interest undertaken.

Guidance provided in *Bat Surveys: Good Practice Guide. 2nd Edition*. (Bat Conservation Trust 2012) was referred to in respect of the survey.

The surveys were undertaken by an experienced preliminary assessment surveyor for bats.

1.4.4 Other Species:

In addition to the above, general assessments of the suitability of the site to support breeding birds and great crested newt were also undertaken as part of this study.

1.4.5 Surveyor Experience:

The surveyor and author of this report, Ian Ryding, has 28 year experience in ecological survey and evaluation. Key skills include the following.

- Extended Phase 1 Habitat Survey and National Vegetation Classification Survey.
- Highly proficient field botanist, including some difficult plant groups.
- Breeding bird survey.
- Mammal surveys including surveys for badger, water vole*, otter*, brown hare and preliminary bat survey.

*Over 250km of river reaches surveyed in England.

- Extensive experience in great crested newt (GCN) survey, evaluation, licensing and mitigation. Natural England Class Licence WML-CL08 held.
- Ecological Evaluation and Impact Assessments in association with large scale commercial development and civil engineering.

1.5 SURVEY CONSTRAINTS:

1.5.1 Extended Phase 1 Habitat Survey:

There were no constraints to survey.

1.5.2 Badger Survey:

There were no constraints to survey.

1.5.3 Bat Survey:

The search for potential roosts was not constrained.

1.5.4 Other Species:

There were no constraints to the evaluation of the site in respect of breeding birds and great crested newt.

PART 2 SURVEY RESULTS:

2.1 DESK BASED STUDY:

A request for ecological data was made to Lancashire Environment Record Network (LeRN) to obtain details of any biological records relating to the site. The extent of the study is shown on the LeRN Ecology Plan in the appendix.

Desk based studies were also undertaken to establish the presence of ponds within a 250m radius of the site, as part of a scoping study relating to great crested newt (GCN)

The results of the desk study revealed the following information;

- The site has no statutory wildlife or ecological designations.
- There are no Sites of Special Scientific Interest (SSSI) within 2km of the site.
- The site is not a Biological Heritage Site (BHS) and the nearest BHS, Great Wood & Mill Wood (63NE19) is approximately 200m north of the site.
- There are no known waterbodies capable of supporting GCN within 250m of the site and none within 500m that are not separated by significant barrier effects.
- The LeRN data search returned no protected species records for the site.
- Species records within 250m of the site include wall brown (butterfly) only.
- Species records within 500m of the site include Indian Balsam, American mink and pipistrelle bat only.

2.2 EXTENDED PHASE 1 HABITAT SURVEY:

2.2.1 General Description:

The site of the proposed development lies immediately north of the existing Ribble Valley View site above the river valley of Dinkley Brook. The land slopes slightly to the north and is composed of typical dairy grassland, with occasional scattered mature trees and shrubs that are relics of former field boundaries.

The land to the east is composed of a juvenile mixed plantation woodland that is approximately 10-15 years old and dominated by a mixture of spruce, pine and ash. There is a network of public paths throughout the wood that link to an open coarse grassland above Dinkley Brook to the north, and to St Leonard's Churchyard to the south.

The land to the north and west of the site is an extension of the dairying land on the site, whilst to the south lies the existing Ribble Valley View site.

2.2.2 Extended Phase 1 Habitat Survey Target Notes:

Survey locations, Target Notes and the proposed working area locations are shown on Map 1 in the Appendix. All species nomenclature follows Stace, C. (1996) 'New Flora of the British Isles' – definitive English names.

Target Note No: 1

An area of improved, or possibly old ley grassland that forms the main habitat on the site. Whatever its origins, the grassland is derived from a significantly improved sward that displays little floristic diversity overall. The grassland some affinity with the **MG7** *Lolium perenne* leys and related grassland as defined in British Plant Communities.*

*(Rodwell et al. 1992)

The field is managed through a combination cattle grazing and grass cropping and was grazed at the time of survey.

Species:	Abundance:
Perennial rye-grass	D
Red fescue	A
Yorkshire-fog	LA
White clover	LA
Common sorrel	VLF

Target Note No: 2

An area of improved grassland that forms a distinct area around the trees and shrubs on the site. The area is uneven, contains trees, and is therefore difficult to manage by modern machinery, and consequently the sward is coarser here.

Species diversity remains typically low with grasses the predominant species throughout. The grassland some affinity with the **MG6** *Lolium perenne-Cynosurus cristatus* grassland or one of its variants as defined in British Plant Communities.*

*(Rodwell et al. 1992)

Several mature/semi-mature sycamore, alder and hawthorn occur in this area.

Species:	Abundance:
Perennial rye-grass	D
Yorkshire-fog	LD
Cock's-foot	LA
Red fescue	VLA
Common bent	VLA
Creeping buttercup	LF
Common sorrel	O
Dock spp.	O
Tufted hair -grass	VO

Site Photographs - Habitats:



Photograph 1: Typical view of the grassland affected by the proposal. The coarser grassland with trees is visible in the background. The photograph was taken from the south-east corner of the site.)



Photograph 2: Second view of the grassland affected by the proposal looking north along the north-eastern boundary.

2.3 BADGER SURVEY:

2.3.1 Survey Details and Results:

The badger survey employed standard techniques to establish if badgers are present on site or use the site for foraging/commuting. (See Section 1.3 Survey Methodology)

The following searches were undertaken.

- Searches for setts on site and within 50-100m of the site, where accessible.
- Searches for foraging signs and pathways.
- Boundary searches for runs, pathways and latrines.

The survey results are outlined below.

Sett Search:

The survey found no setts on the site or on the surrounding land.

Search for Foraging Signs and Pathways:

The site was thoroughly searched for badger pathways or signs of foraging. Foraging was mostly restricted to land within the adjacent woodland and coarse grassland off-site. The grassland was particularly well used with numerous snuffle holes noted.

Several badger paths are present in these areas that lead to badger runs on the boundary fence. The paths lead out into the woodland and towards Dinkley Brook, however they become more diffuse as the badgers appear to share the same informal footpaths that are present in the land to the east of proposal area.

The on-site grassland was surprisingly unused for foraging, however several small snuffle holes were noted along the fence-line on the north-eastern boundary where a badger path is present.

The distinct lack of foraging on the farmland was also noted in the findings of the badger survey undertaken in 2010.*

*See *Land at Aspinall Farm, Brockhall Village, Langho - Badger Survey*. (Pennine Ecological 2010).

Boundary Search:

All of the boundaries of the site were walked and examined for potential runs, pathways and latrines. Three badger runs were found along the north-eastern boundary, with a distinct badger path running along the field-side down to Dinkley Brook, linking to three runs.

The path and runs link to other paths that radiate eastwards from the site boundary. There are two latrine sites associated with the runs on the fence-line. Both of the latrines are off-site.

The adjacent farmland to the west was searched for up to 100m (approx.) for signs of badger activity, none was found.

2.3.2 Survey Conclusions:

The survey found evidence of current use of the site by badgers along the north-eastern site boundary only, where minor foraging signs, three runs and a badger path are present.

Most activity recorded was off-site in the adjacent grassland and woodland which largely terminates at the site boundary fence where the presence of latrines probably mark a territorial boundary.

No setts were found within at least 50m of the site and it is likely that the sett is some distance away in mature woodland.

Map 2 in the appendix shows the extent of badger activity on and adjacent to the site.

Site Photographs - Badger:



Photograph 3: Badger path along the north-eastern boundary.



Photograph 4: Typical run entering the site from off-site woodland to the north-east.

2.4 BIRDS:

2.4.1 Bird Evaluation:

Breeding bird surveys were not undertaken due to the late season and small size of the site. Given the nature and size of the site, the level of bird use can be reasonably evaluated without recourse to survey.

The site has value for small numbers of common birds only that might use the few trees and shrubs on site as nest sites.

The site is highly unsuitable for ground-nesting birds such as skylark and/or lapwing, on account of its small size, proximity of high boundary features, levels of disturbance and agricultural cropping regime which is understood to involve silage production.

No bird species were noted during the survey.

2.5 BATS:

2.5.1 Bat Evaluation:

Bat Roosts:

The roost search revealed rot holes in a single alder and single sycamore on the site that could potentially be used by foraging bats.

The location of the trees with the potential roost are shown on Map 2 in the appendix.

Foraging & Commuting Routes:

Foraging potential is very localised on the site and restricted to the area around the trees and the north-eastern boundary of the site, where the off-site woodland provides a potential foraging/commuting route.

Foraging potential is considered to be minor as the site is elevated above the valley of Dinkley Brook and highly exposed to the prevailing westerly wind. The trees are also of limited height and the canopy doesn't overhang the site

In addition, the main grassland on site is very improved and will naturally have low invertebrate values. However the coarser improved swards would be expected to have some invertebrate value above that on the adjacent field.

Foraging might occur intermittently on the site, however there is excellent foraging along the tree-rich river corridor of Dinkley Brook that extends for over 1km to the south-west, and over 1 km to the north and east connecting to Great Wood, Mill Wood and to the River Ribble corridor.

Based on the habitats available on the site and those available off-site in near vicinity, it is reasonable to predict that the extensive prime off-site foraging locations will be the key bat foraging sites locally.

2.6 GREAT CRESTED NEWT:

2.6.1 Great Crested Newt Evaluation:

There are no ponds on the site and reference to Ordnance Survey maps and online aerial photographs indicate that the nearest pond is located approximately 370m north-west of the site.

There are no other ponds within 600m (approx.) of the site, or any other waterbodies potentially capable of supporting GCN.

All of the ponds identified are separated by Dinkley Brook which is considered to be a major barrier to GCN movement/migration.

The 2015 desk study returned no records of GCN within 2km of the site.

Therefore there are no potential impacts generated on GCN or its habitat resulting from the proposals for the site.

PART 3 ECOLOGICAL EVALUATION:

3.1 EVALUATION OF SURVEY FINDINGS:

The following section evaluates the site in relation to statutory/non-statutory sites, protected species and species/habitats listed under Section 41 Species/Habitats of Principal Importance in England (NERC) Act 2006 and the Lancashire Biodiversity Action Plan.

3.1.1 Statutory Sites:

There are no statutory wildlife sites within 2km of the site.*

**Source: LeRN*

3.1.2 Biological Heritage Sites:

The area affected by the proposal fails to meet any of the guidelines for selection associated with the Lancashire Biological Heritage Site scheme. There is one Biological Heritage site within 500m of the site, that is Great Wood & Mill Wood (63NE19) which is approximately 200m north of the site.

3.1.3 Protected Species:

There are no badger setts on site or within at least 50m of it.

There is evidence of badger foraging along the north-eastern site boundary where runs are also present.

Breeding bird potential is limited to a few trees and shrubs on the site.

There is no ground-nesting bird potential on the site.

There is bat roost potential in two trees on the site and foraging potential is considered to be very minor.

There are no potential GCN breeding sites within 300m of the site that are not separated by significant barrier effects. In addition the site contains no ponds or suitable terrestrial habitat for GCN.

3.1.4 Section 41 (S41) Habitats and Species of Principal Importance in England Natural Environment and Rural Communities (NERC) Act 2006:

There are no S41 habitats or species on the site.

3.2 SUMMARY EVALUATION:

3.2.1 Vegetation – Habitats and Species:

The survey found no habitats that are obviously higher than site value. The habitat present is entirely composed of improved or possibly ley grasslands with minimal biodiversity value.

3.2.2 Badgers:

Following the survey undertaken, it is concluded that most of the land directly affected by the development is of limited value to badgers that commute along the field boundary and possibly cross the area to forage in the wider area.

The type of impacts generated are insignificant and it is predicted that the proposal will have no measurable long-term effects on the badger population as **no setts are affected**, there is no loss of known foraging areas and extensive areas of good foraging and water supply are available in the wider landscape.

The local badger population will continue to use the area, as the main foraging area is off-site and none of the main commuting routes are compromised.

As there are no setts on site or within at least 50m, unlawful disturbance is not predicted. Therefore the development does not conflict with current badger legislation and no licence is required.

Badger activity is restricted to the north-eastern boundary of the site, where foraging is present on both sides of the fence line but notably more frequent off-site. Runs and badger pathways are also present on the fence line.

Therefore it can be concluded that whilst badgers use the site it doesn't form a particularly important role in terms of foraging areas.

3.2.3 Birds:

Nesting bird habitat is restricted to the few trees and shrubs on the site, there is no ground-nesting bird potential. Therefore the site is only capable of supporting very low numbers of nesting birds only.

3.2.4 Bats:

There are rot holes in two trees on the site that could potentially be used by roosting bats. Foraging is poor on account of the very exposed conditions, limited foraging areas and level agricultural improvement.

In addition very high quality foraging habitat is present off-site in near vicinity. The off-site areas are considered most likely to be the main foraging sites for bats locally.

3.2.5 Great Crested Newt:

There are no ponds on the site and the nearest pond is located approximately 370m north-west of the site. The pond and all other distant ponds identified are separated by Dinkley Brook which is considered to be a major barrier to GCN movement/migration.

The 2015 desk study returned no records of GCN within 2km of the site.

Therefore there are no potential impacts generated on GCN or its habitat resulting from the proposals for the site.

PART 4 RECOMMENDATIONS:

4.1 HABITATS:

The proposed works will directly affect an improved/ley grassland only and no further habitat surveys are recommended.

4.2 FAUNA:

4.2.1 Badger:

Natural England guidance *Badgers & Development A Guide to Best Practice and Licensing* was followed during the survey and evaluation of impact on the species. The guidance states that,

‘the local planning authority should request a detailed ecological survey/report and developers should be prepared to provide the following information:

- *The numbers and status of badger setts and foraging areas that are affected by the proposal;*
- *the impact that the proposal is likely to have on badgers and what can be done in the way of mitigation;*
- *judgment on whether the impact is necessary or acceptable; and*
- *a recommendation on whether a licence will be required.’*

The following points are relevant in this respect.

- The survey has shown that there are no setts within at least 50m of the site, therefore no setts are affected by the proposal and there are no licensing issues in respect of disturbance to any badger sett.
- The site shows no evidence of widespread foraging, and very extensive areas suitable foraging habitat occurs off-site.
- The site contains no water supply that badgers might depend on.
- Badgers currently enter the site and will most likely continue to do so during the operational phase of the caravan park.
- Badgers are common mammals and as such have no Biodiversity based designations such as the UKBAP, LBAP or NERC Act etc. and the resident population is considered to be of **local** value.

Impacts are considered to be negligible overall without mitigation, and might be generated by animals falling into service trenches during the construction phase.

Recommendations to address the potential impacts are provided below.

As stated above the overall effect on the local badger population is considered to be negligible, however there is a risk that animals might fall into service trenches during construction. The following points should be considered here.

- The trenches will be open for a short period of time only and will be relatively shallow.
- It is not envisaged that the service trenches will be deep and a standard minimum depth for services subject to road traffic is 800mm. As the site doesn't form part of a highway trench depth may be reduced. However, as a precaution where service trenches are left open overnight earth ramps should be placed at the ends of trenches to allow easy escape for any animals that might fall in.
- For trenches over 1.5m deep, the holes should be back-filled the same day or boards (plywood sheet or 'stockboard') should be placed over the trenches at night to prevent badgers from falling in.

In addition, it is understood that the site will be fenced by a timber post and rail fence, under which badgers will be able to travel unimpeded. However, if there is a need to install sheep netting at any time in the future, then simple small holes should be cut in the wire that will allow badgers to pass through. The holes should be approximately 250mm square.

If required, it is advised that one hole be provided at a point within 1m of the north-eastern boundary, and another on the opposite south western boundary.

4.2.2 Birds:

Nesting bird habitat is restricted to the few trees and shrubs on the site, there is no ground-nesting bird potential.

It is understood that the trees and shrubs are to be retained as landscape features on the site so no precautions are required unless there are proposals to remove the trees/shrubs.

If removal is required, it must be done outside of the bird breeding season during September-February. Removal in the period March-August must not be undertaken unless an ecologist has inspected the site and deemed the vegetation to be clear of nesting birds.

If breeding birds are found then a buffer zone of 5m around the nest site must be implemented to prevent disturbance until the young have fledged and left the nest. The buffer zone must be fenced off temporarily until the nest is unoccupied. The trees/shrubs containing the nest site can only be felled once the ecologist has declared the site clear of nesting birds.

It is important to note that bat roost status needs to be determined if work affecting the alder and sycamore with potential roosts are proposed. See Map 2 in the appendix for potential bat roost locations.

4.2.3 Bats:

It is understood that the trees are to be retained as landscape features on the site, therefore roost/emergence surveys are not required unless the proposals change.

If the proposals change then an licensed inspection by a bat ecologist will be required. If the inspection proves bats to be absent, then the tree can be felled taking note of the precautions in respect of nesting birds.

If evidence of use is found, then the bat ecologist will advise what action to take in respect of licensing.

It is understood that high levels of lighting are not proposed for the site, and that lighting will follow the low-level bollard luminaire layout applied to the existing caravan park. This will ensure that potential roosts and foraging areas are not detrimentally affected by the proposals.

The following information is provided as guidance in relation to the lighting of the site.

'In addition to causing disturbance to bats at the roost, artificial lighting can also affect the feeding behaviour of bats. There are two aspects to this. One is the attraction that light from certain types of lamps has to a range of insects; the other is the presence of lit conditions.

Lighting can be particularly harmful if used along river corridors, near woodland edges and near hedgerows used by bats. In mainland Europe, in areas where there are foraging or 'commuting' bats, stretches of road are left unlit or lighting is designed in such a way as to avoid isolation of bat colonies.'^{*}

^{*}*Bats and lighting in the UK- bats and the built environment series.* Bat Conservation Trust.

The following table summarises the relative impacts of light types on bats.[†]

High Negative Impact	<ul style="list-style-type: none"> • Broad spectrum lights (particularly blue-white light) with high UV. • Metal halide and mercury. • Uplights - which light above the horizontal plane, illuminating trees and foraging habitat.
Medium Negative Impact	<ul style="list-style-type: none"> • Broad spectrum lights with low/no UV. • White LED, high pressure sodium.
Low Negative Impact	<ul style="list-style-type: none"> • Narrow Spectrum Lights with no UV content. • Low pressure sodium and warm white LED[*] • Directional downlights - illuminating below the horizontal plane which avoids light trespass into the environment. <p style="margin-top: 10px;">[*] low relative attractiveness for insects compared to white light and therefore minimal impact on bats insect prey (Eisenbeis 2009).</p>

[†]Bats and Lighting - Overview of Current Evidence and Mitigation. E.L. Stone. Bat & Lighting Research Project - University of Bristol.

The following guidance provided below is appropriate in respect of bats and should be consulted in relation to the lighting proposals for the site.

Type of lamp (light source)

The impact on bats can be minimised by the use of narrow spectrum lights with no UV content including low pressure sodium lamps and warm white LED.

Luminaire and light spill accessories

Lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire itself and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

Planting can also be used as a barrier or man-made features that are required within the build can be positioned so as to form a barrier.

Lighting column

The height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill.

For pedestrian lighting this can take the form of low level lighting that is as directional as possible and below 3 lux at ground level. The acceptable level of lighting may vary dependent upon the surroundings and on the species of bat affected.

Predicting where the light cone and light spill will occur

There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process if required.

In all instances light spillage in the direction of the trees with potential roost and the woodland edge must be avoided.

Light levels

The light should be as low as guidelines permit. If lighting is not needed, don't light.

Timing of lighting

The times during which the lighting is on should be limited to provide some dark periods.

4.2.4 Great Crested Newt:

The local GCN population is considered isolated from the site due to barrier effects, and there is also no suitable GCN habitat on the site.

There is no reasonable possibility of impacting on GCN or its habitat, therefore additional surveys or precautions are not recommended.

REFERENCES

REFERENCES:

Bat Conservation Trust (2007) *Bats and lighting in the UK- bats and the built environment series*.

Clark, M. (2001) *Badgers*. Whittet.

Corbet G. B & Harris S., (1996) *The Handbook of British Mammals (Third edition)*. Blackwell Science.

English Nature. (2009) *Badgers and Development A Guide to Best Practice and Licensing*. English Nature.

English Nature, (2001) *Great Crested Newt Mitigation Guidelines*. English Nature.

Harris, S. et al. (1994) *Problems With Badgers*. RSPCA.

HMSO (1985) *Wildlife & Countryside Act 1981*. HMSO.

Hundt, L (2012) *Bat Surveys: Good Practice Guidelines, 2nd Edition*. Bat Conservation Trust.

Lancashire County Planning Department, (1998) *Biological Heritage Sites, Guidelines for Site Selection*. Lancashire County Council

Langton, T., Beckett, C., & Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Froglife.

Nature Conservancy Council, (1990) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. Nature Conservancy Council.

Rodwell et al. (1992) *British Plant Communities Volume 3, Grasslands and Montane Communities*. Cambridge University Press.

Roper T. J., (2010) *Badger*. Collins – New Naturalist

Stone, E.L, *Bats and Lighting - Overview of Current Evidence and Mitigation*. Bat & Lighting Research Project - University of Bristol

APPENDIX:

Map1: Extended Phase 1 Habitat Map

Map2: Badger & Preliminary Bat Roost Survey Map

LeRN Ecology Plan



Key: Species Codes

- Ag Alder
- Ap Sycamore
- Cm Hawthorn
- HI Yorkshire-fog

Key: Habitat Colour Codes

- Scattered trees - broad-leaved
- Scattered scrub
- Improved grassland
- Fence
- Target Notes 1-2
- Study area boundary

This feature is not present on site



Job title:
**Land at Aspinall Farm
 Brockhall Village
 Langho, Lancashire
 Extended Phase 1 Habitat Survey**

Job Ref: N/A

Map 1: Extended Phase 1 Habitat Map

DRAWN:
 Ian Ryding

SCALE:
 Not to scale

DATE:
 13th October 2015



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PROPOSED SITE PLAN

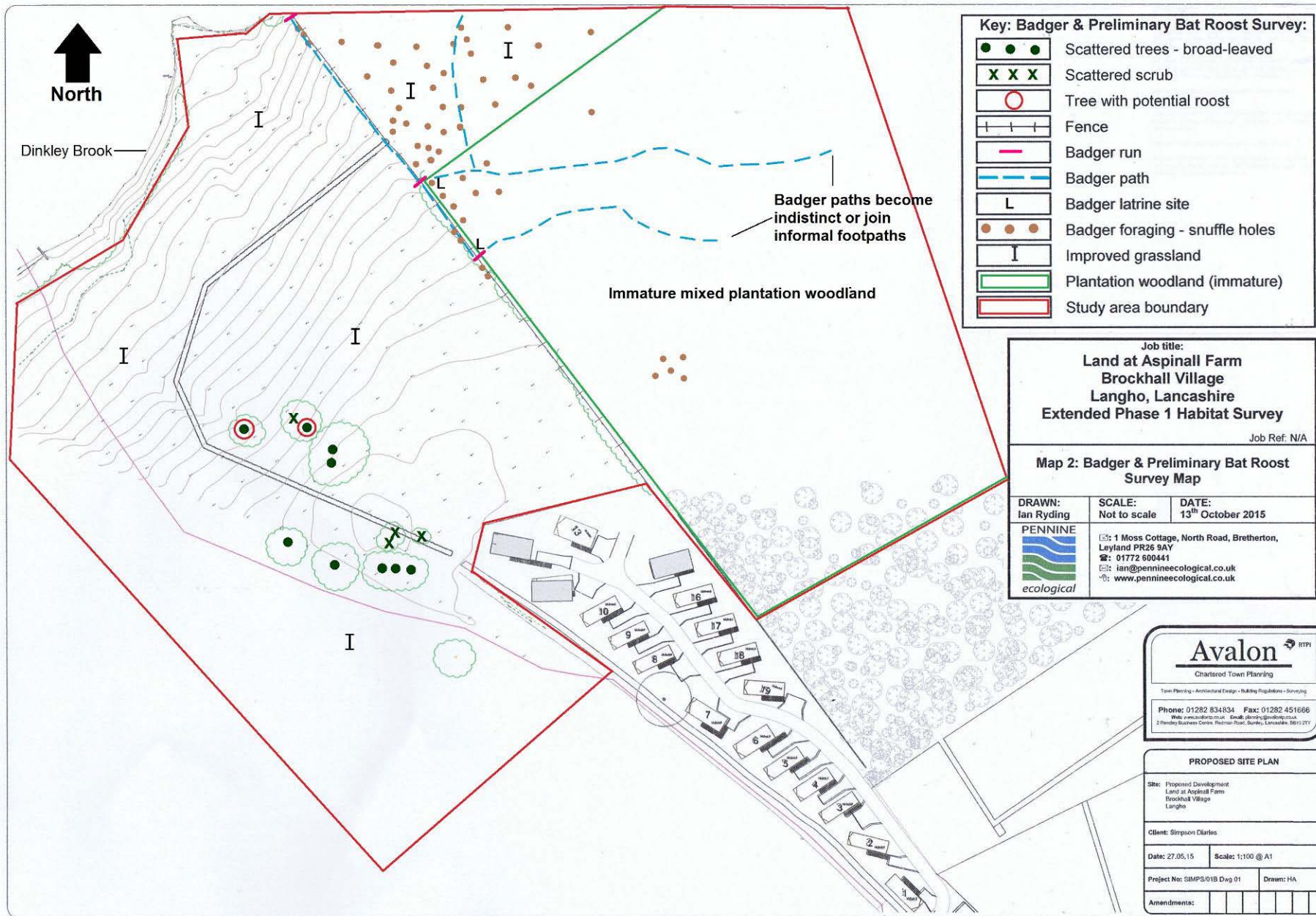
Site: Proposed Development
 Land at Aspinall Farm
 Brockhall Village
 Langho

Client: Simpson Clarke

Date: 27.05.15 Scale: 1:100 @ A1

Project No: SIMPS/01B Dwg 01 Drawn: HA

Amendments:



North

Dinkley Brook

Badger paths become indistinct or join informal footpaths

Immature mixed plantation woodland

Key: Badger & Preliminary Bat Roost Survey:

- Scattered trees - broad-leaved
- Scattered scrub
- Tree with potential roost
- Fence
- Badger run
- Badger path
- Badger latrine site
- Badger foraging - snuffle holes
- Improved grassland
- Plantation woodland (immature)
- Study area boundary

Job title:
Land at Aspinall Farm
 Brockhall Village
 Langho, Lancashire
 Extended Phase 1 Habitat Survey

Job Ref: N/A

Map 2: Badger & Preliminary Bat Roost Survey Map

DRAWN: Ian Ryding	SCALE: Not to scale	DATE: 13 th October 2015
 PENNINE ecological	1 Moss Cottage, North Road, Bretherton, Leyland PR26 9AY ☎: 01772 600441 ✉: ian@pennineecological.co.uk 🌐: www.pennineecological.co.uk	

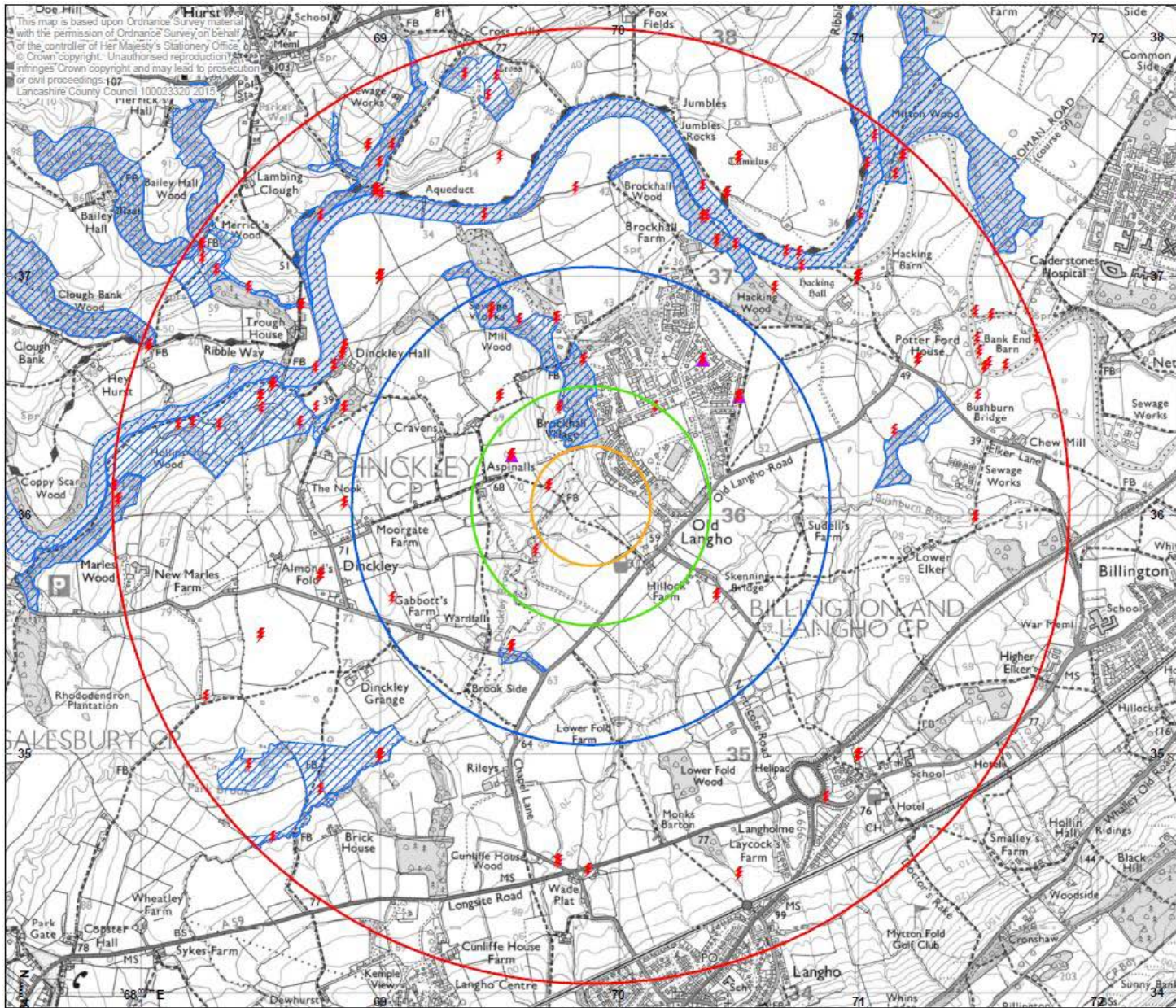
Avalon RTP1

Chartered Town Planning

Town Planning - Architectural Design - Building Regulations - Surveying

Phone: 01282 834834 Fax: 01282 451666
 Web: www.avalon.co.uk Email: info@avalon.co.uk
2 Riverside Business Centre, Bretherton Road, Bretherton, Lancashire, PR26 9TY

PROPOSED SITE PLAN	
Site: Proposed Development Land at Aspinall Farm Brockhall Village Langho	
Client: Simpsons Dairies	
Date: 27.05.15	Scale: 1:100 @ A1
Project No: SIMPS/01B Dwg 01	Drawn: HA
Amendments:	

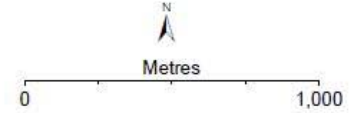


Project:
 off Old Langho Road

Client:
 Pennine Ecological Preston

Grid Ref: 369880 436040

- Legend**
- 250 m Buffer
 - 500 m Buffer
 - 1 km Buffer
 - 2 km Buffer
 - Lancashire Key Species
 - Bats (subset of LKS)
 - Biological Heritage Sites



"Boundaries of statutory designations (Natura 2000, SSSI etc) are included for information only. Definitive information for these designations should be obtained from Natural England."

Lancashire Key Species records are plotted at the centre of the area to which they relate (the precision of each record is given in the accompanying attribute data and spreadsheet).

Lancashire Environment Record Network
 CIO Planning Group
 Environment Directorate,
 Lancashire County Council,
 PO Box 100,
 County Hall,
 Preston, PR1 0LD



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