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Land at Higgins
Brook, Longridge,
Ribble Valley

Ecological
Assessment

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Habitat Features Plan
2001/P04b August 2014 JM/JE

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Summary

- S1. This report has been prepared to inform an outline planning application for residential development at Higgins Brook, Longridge, Ribble Valley, hereafter referred to as the 'site'.
- S2. The site consists of pastoral fields and supports semi-improved grassland, amenity grassland, hedgerows, mature trees and ponds.
- S3. The site is not covered by, or adjacent to any sites that are the subject of statutory or non-statutory protection and no such sites would be affected.
- S4. Detailed fauna surveys conducted in 2014 indicate the presence of:
- Bats (dealt with separately via an ecology addendum to be submitted prior to planning determination);
 - Amphibians (namely common frog). Surveys determined that great crested newts are not likely to occur within the site;
 - Hedges and mature trees are likely to provide habitat for a range of common woodland bird species, given the improved nature of fields and short grass sward (due to intensive grazing it is unlikely that the site is of importance for bird species reliant on open farmland habitats;
- S5. The most significant issue with respect to development of the site is the loss of hedges (with the associated potential for habitat loss in relation to bats and breeding birds). However, the development has been designed to retain opportunities for these species by providing new native species hedges and associated native tree planting, together with the retention of existing ponds and creation of new ponds. The habitats created will enable the development to make a positive contribution to local biodiversity action plan targets in respect of hedges and ponds.
- S6. With the implementation of the mitigation and enhancement strategy described, the proposed development would be in conformity with relevant planning policy and legislation, as set out at **Appendix 1**. The strategy could be controlled by appropriately worded planning conditions and obligations.



Section 1: Introduction

- 1.1 This report has been prepared by Tyler Grange LLP on behalf of Barratt Homes Manchester. It sets out the findings of an ecological assessment in relation to land north of Longridge, Ribble Valley (hereafter referred to as the 'site').
- 1.2 The site comprises land off Chipping Lane located to the immediate north of the settlement of Longridge. The site is approximately 15.4 ha and is centred on Ordnance Survey (OS) grid reference SD 6038 3811.
- 1.3 A new residential development (up to 520 dwellings) is proposed including: affordable housing and housing for the elderly; relocation of Longridge Cricket Club to provide a new cricket ground, pavilion, car park and associated facilities; a new primary school; and vehicular and pedestrian accesses. Landscaping and public open space is proposed on the northern outskirts of Longridge.
- 1.4 A detailed application for the first 106 homes / 7.07 ha (known as Bowland Meadows Ref: 3/2014/0227) has also been submitted by the developer and is subject to a separate Ecological Assessment (see report TG Ref: 2001_R06).
- 1.5 This Ecological Assessment has been prepared to cover both Phase 1 and Phase 2 'Land at Higgin Brook' which will develop the east side of the site.
- 1.6 The relevant planning applications boundaries are shown on **Plan 2001/P04b**.
- 1.7 The site currently comprises pastoral fields separated by hedgerows with occasional scattered trees. Three ponds are present within the site. Adjacent land use also primarily agricultural.
- 1.8 The purpose of this report is to:
 - Using available background data and results of field surveys, describe and evaluate the ecological resources present within the likely 'zone of influence' (ZoI)¹ of the proposed development;
 - Assess ecological issues and opportunities as a result of development; and
 - Where appropriate, describe mitigation and enhancement proposals, together with planning controls to ensure their delivery, to ensure conformity with policy and legislation.
- 1.9 This assessment and the terminology used are consistent with the 'Guidelines for Ecological Impact Assessment' (IEEM 2006).

¹ Defined as the areas/resources that may be affected by the biophysical changes caused by activities associated with a project (Ref. 1)



Section 2: Methodology

Definitions

- 2.1 The 'site' is defined by the application red-line boundary; see Habitat Features **Plan 2001/P04b**. The 'study area' extends to a 1km radius for protected and priority species records, 2km for non-statutory site designations and nationally designated statutory sites and a 5km radius for European statutory site designations.

Scoping

- 2.2 The scope of the ecological assessment was determined by undertaking a desk based assessment of available records and published sources, together with an initial site survey. With this information, the Zol of the proposed development was established, together with any further detailed work - such as detailed surveys - that might be necessary to inform the assessment.

Data Search

- 2.3 The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.
- 2.4 The data search covered the study area using the distances defined in paragraph 2.1. It was conducted in September 2013. The following organisations and resources were contacted and consulted:
- Multi-Agency Geographical Information for the Countryside (MAGIC) Website for international nature conservation designations such as Special Areas of Conservation within 5km such as and statutory designated sites (e.g. Local Nature Reserves (LNRs)) within 2km of the site;
 - Non-statutory local wildlife sites and records of protected species within 2km of the site were requested from the Lancashire Environmental Records Centre LERN;
 - The Ribble Valley Borough Council District Wide Local Plan was checked to identify policies which need to be considered as part of the development of the site (see **Appendix 1**); and
 - Natural England's website (www.naturalengland.org.uk) was checked to identify the Natural Area² in which the site is located.
- 2.5 Information supplied by these organisations has, where relevant, been incorporated into the following account with due acknowledgement.

² National Character Areas divide England in to 159 Natural Areas. Natural Area boundaries are based on the distribution of wildlife and natural features, and on the land use pattern and human history of each area. Natural Areas inform local priorities for nature conservation.



Extended Phase I Survey

- 2.6 An extended Phase I habitat survey of the site was undertaken on 29 November 2013 by Paul Moody (Ecologist, Tyler Grange) a full member of CIEEM³ and Hayley Care (Ecologist, Tyler Grange) an associate member of CIEEM.
- 2.7 The habitat survey methodology was based on guidance set out in the 'Handbook for Phase I habitat survey' (JNCC 2010). This entailed recording the main plant species and classifying and mapping the broad habitat types present.
- 2.8 Note was taken of the more conspicuous fauna and any evidence of, or potential for the presence of protected/notable flora and fauna.
- 2.9 A basic inventory of the habitats and a representative species list was produced. Where access allowed, adjacent habitats were also considered, in order to assess the site within the wider landscape and to provide information with which to assess possible impacts within the context of the site boundary.
- 2.10 The weather conditions during the survey were mostly dry and cool (4°C), with a light breeze and heavy cloud and fog in the morning.

Additional Surveys

- 2.1. The following additional surveys were also conducted during the Phase 1 habitat survey:
- Great crested newt *Triturus cristatus* (GCN) survey and Habitat Suitability Index (HSI) assessment of ponds within 250m of the site (see Appendix 2 Tyler Grange Report 2001/R07);
 - An assessment of hedgerows with regard to the Hedgerows Regulations 1997 (**see Appendix 3**);
 - A badger *Meles meles* survey (see **Appendix 4**); and
 - An assessment of trees and buildings within the site for their suitability to support roosting bats and bat activity surveys (see bat survey report to be submitted separately).

Evaluation

- 2.11 The evaluation of habitats and species is defined in accordance with published guidance (IEEM 2006). The level of value of specific ecological receptors is assigned using a geographic frame of reference, with international value being most important, then national, regional, county, borough, local and lastly, within the site boundary only.
- 2.12 Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type),



other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

Impact Assessment

- 2.13 Prediction of the likely significant effects takes into account the different stages and activities within the development process, and the inherent mitigation built into the development.
- 2.14 In accordance with published guidance and terminology (IEEM 2006), a significant effect, in ecological terms, is defined as an effect (adverse or beneficial) on the integrity of a defined site or ecosystem(s) and/or the conservation status of habitats or species within a given geographical area, including cumulative effects. Insignificant effects are those that would not result in such changes.
- 2.15 The value of any feature that would be significantly affected is then used to identify geographical scales at which the effect is significant. This value relates directly to the consequences, in terms of legislation, policy and/or development control at the appropriate level. So, a significant negative effect on a feature of importance at one level would be likely to trigger related planning policies and, if permissible, generate the need for development control mechanisms as described in those policies.
- 2.16 If an effect is found not to be significant at the level at which the resource or feature has been valued, it may be significant at a more local level. For instance, an effect resulting in loss of 5% of a habitat at a county level, but 80% at a more local level is more likely to be significant locally, even if it was not considered significant at a county level.
- 2.17 Significant effects on features of ecological importance should be mitigated (or compensated for) in accordance with the guidance derived from policies applied at the scale relevant to the feature or resource.
- 2.18 The following factors are considered in determining whether ecological effects are significant:
- Extent - this is the area over which an effect occurs;
 - Magnitude - the size or amount of an effect, determined on a quantitative basis where possible;
 - Duration - the time for which an effect is expected to last prior to recovery or replacement of the resource or feature;
 - Reversibility - an irreversible (permanent) effect is defined as one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) effect is one from which spontaneous recovery is possible or for which effective mitigation is both possible and enforceable;
 - Timing and frequency - some effects are only likely if they happen to coincide with a critical life-stage or seasons. Others may occur if the frequency of an activity is sufficiently high; and
 - Cumulative effects - where consideration is given to any other developments within the ZoI that, together with the proposed development, may result in significant effects.



Limitations

- 2.19 The Phase I survey was undertaken in November, which is sub-optimal, as most plants were not in leaf/flower and some species may have not been recorded. However, given the nature of the site and habitats present this is unlikely to have affected the evaluation of the habitats or assessment of potential development impacts.
- 2.20 Please note that the findings of this report are valid at the time of writing. Owing to the dynamic nature of ecological resources, if more than six months have elapsed since the report was written, advice should be sought to determine whether update work is required. The findings of this report should not be relied upon without this advice.

Quality Control

- 2.21 All ecologists at Tyler Grange LLP are members of CIEEM and abide by the Institute's Code of Professional Conduct.



Section 3: Ecological Resources

Site Context

- 3.1 The site comprises pastoral fields consisting of species poor semi-improved grassland separated by hedgerows with occasional scattered trees. The land is more or less flat and is to the north of Longridge, Ribble Valley. The site is bordered by residential developments and a Sainsbury's supermarket to the south, Chipping Lane, further pastoral fields and Longridge Cricket Ground to the west, and by further pastoral land to the north and east.

Natural Area

- 3.2 The site is situated within Natural England Natural Area Number 12 – Forest of Bowland. The Forest of Bowland is dominated by a distinct, almost circular dome of heather moorland. The high Millstone Grit-capped summits of Bowland Fells and Pendle Hill, with their expansive areas of wild, open rolling heather moorland and blanket bog, are managed principally for grouse and sheep. Such areas provide a habitat for internationally important populations of red grouse *Lagopus lagopus*, hen harrier *Circus cyaneus*, merlin *Falco columbarius*, peregrine *Falco peregrinus* and golden plover *Pluvialis apricaria*.
- 3.3 This dome of moorland is incised by steep, wooded river valleys and is surrounded by a soft, undulating landscape with a mosaic of rush-filled pastures, herb-rich hay meadows and broadleaved woodland, separated by lush agricultural grassland, parkland and water bodies, such as Stocks Reservoir. The area is traversed by many fast-flowing upland streams and rivers, including the Hindburn, Roeburn, Lune, Wyre, Brock, Calder, Ribble and Holder.
- 3.4 Most of the site is pastoral and is not representative of habitats typifying the Forest of Bowland Natural Area.

Protected Sites

- 3.5 The site is not covered by, or adjacent to any site which is designated on account of its nature conservation importance.
- 3.6 The site does not have any statutory nature conservation designations and none are present within 2km. No internationally designated sites are present within 5km of the site.

Non-statutory sites

- 3.7 There are four non-statutory sites (known in the Ribble Valley as Biological Heritage Sites; BHS and Important Bird Areas (IBA)) within the study area (see Table 3.1 below). Non-statutory nature conservation designations are not afforded legal protection but do receive protection through planning policy (see **Appendix 1**). They are recognised as being of countywide importance because of their significance as wildlife habitats, value to communities or other reasons relating to their locational context.



Site Name and Designation	Distance and Direction from Site	Description/ Summary
Bowland Fells IBA	1.30km north and north east at nearest point	An extensive upland area with major habitats comprising heather-dominated moorland and blanket mire. It is important for its upland breeding birds, especially breeding merlin and hen harrier
Spade Mill Reservoirs BHS 63NW03	800m south east	Two reservoirs with associated managed grassland. Used as an angling site. It is designated for the bird species present including wintering lapwing <i>Vanellus vanellus</i> , snipe <i>Gallinago gallinago</i> , black-headed gull <i>Chroicocephalus ridibundus</i> , common gull <i>Larus canus</i> and lesser black-backed gulls <i>Larus fuscus</i> and summer breeding birds including little ringed plover <i>Charadrius dubius</i> and oystercatcher <i>Haematopus ostralegus</i> r. Birds use these reservoirs in conjunction with Alston Reservoirs (BHS 63NW01)
Alston Reservoirs BHS 63NW01	1.2 km south	Two reservoirs surrounded by agricultural land with residential development to the west and College Wood BHS to the east. The site is of ornithological importance, supporting high diversity and numbers of wintering wildfowl (which also utilise Spade Mill Reservoirs (BHS 63NW03)). The site is also of botanical importance with species-rich grassland embankments.
College Wood BHS 63NW02	1.60km south east	Predominantly semi-natural woodland which is listed in the Lancashire Inventory of Ancient Woodland (English nature, 1994). Surrounded by fields of grassland pasture, it is designated for the woodland and scrub habitat present.

Table 3.1: Non-statutory sites within the study area

Habitats and Flora

- 3.8 The Habitat Features Plan (**2001/P04b**) shows the habitats present within the site and on adjacent land.

Species Poor Semi-Improved Grassland (Plate 1)

- 3.9 The site predominantly comprises grazed pastoral fields, consisting of poor semi-improved grassland. Plant species present include perennial ryegrass *Lolium perenne*, cocksfoot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus*, white clover *Trifolium repens*, red clover *Trifolium pratense*, broad-leaved dock *Rumex obtusifolius*, common sorrel *Rumex acetosa*, creeping buttercup *Ranunculus repens* and meadow buttercup *R. acris*. Occasional patches of soft rush *Juncus effusus* are present in areas which are subject to waterlogging.

Amenity Grassland

- 3.10 Longridge Cricket Club which consists largely of amenity grassland lies to the west of the site.





Plate 1: Species poor semi-improved grassland

Hedgerows

- 3.11 The fields are, for the most part bounded by hawthorn *Crataegus monogyna* dominated hedgerows which are subject to various levels of management, with some being flail cut and others receiving no management and becoming treelines and scrub.
- 3.12 Further details on the structure and species composition of the hedges can be found in **Appendix 4**, which also gives an assessment of their likely importance in relation to the Hedgerows Regulations 1997



Photo 2: Hedgerow 4 illustrating typical structure of hedges within the site

Mature Trees

- 3.13 There are mature trees present within hedges throughout the site which are associated with hedgerows and ponds. Species present include alder *Alnus glutinosa*, pedunculate oak *Quercus robur* and ash *Fraxinus excelsior*. These trees are denoted on the **Habitat Features Plan**

(2001/P04b) A separate Tree Quality Survey report (Report Ref 2001/R09) has also been produced by Tyler Grange to accompany the planning application submission.

Ditches

- 3.14 Eight ditches are present within or adjacent to the site and are associated with hedges H1, H2, H3, H4, H10, H11, H12 and H13 which delineate field boundaries. The ditches are heavily shaded by their associated hedgerows and, at the time of survey, had little emergent vegetation, with in-channel species being limited to soft rush, willowherb *Epilobium* sp., common nettle *Urtica dioica* and bramble *Rubus fruticosus*.



Photo 3: Ditch present associated with hedgerow H3

Ponds

- 3.15 There are three ponds (P1, P2 and P3) shown on the **Habitat Features Plan (2001/P04b)** present within the site.
- 3.16 Ponds 1 and 2 are partially shaded by willow *Salix* sp. trees and emergent, aquatic vegetation includes soft rush, reed canary grass *Phalaris arundinacea*, foals water cress *Apium nodiflorum* and marsh marigold *Caltha palustris* with floating sweet-grass *Glyceria fluitans* present in margins.
- 3.17 Pond 3 is a small ephemeral flooded area present to the south of hedgerow H13 - it is heavily shaded by the hedgerow and trees and aquatic vegetation were limited to soft rush and floating sweet-grass at the time of survey. Further details can be found in **Appendix 2**.



Plate 4: Pond 2

Buildings

- 3.18 Several modern pre-fabricated buildings of a flat roof construction are present within the cricket club grounds. Further details are provided within a separate addendum to be provided in the planning determination period.

Invasive Species

- 3.19 No invasive species that are subject to statutory controls were recorded during the survey.

Habitats on Adjacent Land

- 3.20 Land adjacent to the site consists of fields supporting grassland and hedges of a similar composition to that recorded within the site.
- 3.21 A further pond, P4 lies adjacent to the northwest site boundary (see **Plan 2001/P04b**) and **Appendix 2** for photograph of this pond.
- 3.22 Examination of maps and aerial photography suggested that a further three ponds are present within 250m of the site, however during the Phase 1 survey these were found to be dry depressions with soft rush present.
- 3.23 One small section (approximately 35m) of dry stone wall lies adjacent to the northern site boundary.
- 3.24 To the south of the site lies residential development and a Sainsbury's supermarket.

Botanical Records

- 3.25 No notable botanical records were provided by Lancashire Biodiversity Records Centre LERN.

Protected and Priority Fauna

- 3.26 Details of protected and priority species⁴ using the site, including a summary of the results of detailed surveys, are described below and should be read in conjunction with **Plan 2001 /P04b**.

Badgers

- 3.27 No records of badgers are held by LERN for within 2km of the site.
- 3.28 No field signs were recorded during the survey. The site offers suitable foraging habitat in the form of pastoral fields and sett digging habitat within hedgerows.

Bats

- 3.29 Bats are covered in separate addendum report to be submitted during the planning determination process.

Breeding Birds

- 3.30 The following records of birds protected and or priority bird species were obtained during the desk study:

- Barn owl *Tyto alba* one record 1.5km northeast (2013)
- Curlew *Numenius arquata*
- House sparrow *Passer domesticus*
- Starling *Sturnus vulgaris*
- Dunnock *Prunella modularis*
- Lapwing *Vanellus vanellus*

- 3.31 No notable or rare birds were observed during the Phase 1 habitat survey.
- 3.32 The hedgerows and scattered trees are all likely to provide nesting and foraging habitats for a range of common passerines. This could include priority species such as dunnock, song thrush *Turdus philomelos* and yellowhammer *Emberiza citronella*
- 3.33 There is are very poor nesting opportunities for ground nesting birds due to disturbance and trampling by livestock.
- 3.34 No buildings are present on site which could afford barn owl nesting opportunities, however the site contains suitable foraging habitat for barn owl . No evidence of previous occupation either for nesting or roosting by any owl species was evident during inspections of tree holes for bats.

Great Crested Newts and other Amphibians

- 3.35 The following records were obtained for amphibians during the desk study:



- GCN 19 records, 2km south (2011 & 2003).
 - Common toad *Bufo bufo* (a UK priority species) two records, 2km south (2011).
 - Common frog *Rana temporaria*, eight records within 2km.
- 3.36 Of the four ponds present within or within 250m of the site, three (Ponds 1, 2 and 4) are considered to be 'good' by the HSI (see **Appendix 2**).
- 3.37 Pond 3 was considered poor, predominantly due to poor water quality.
- 3.38 A full presence/absence survey was conducted in 2014 (see **Appendix 2**) to ascertain the status of GCN within the site. No GCN were recorded during the survey and it is concluded that GCN are absent from the site.
- 3.39 Only one amphibian species, common frog was recorded during the survey.

Invertebrates

- 3.40 The following records of priority moth species were obtained during the desk study.

- Heath rustic *Xestia agathina*
- Dark-barred twin-spot carpet *Xanthorhoe ferrugata*
- Small Phoenix *Ecliptopera silaceata*
- Small square spot *Diarsia rubi*
- Haworth's minor *Celaena haworthii*
- Green brindled crescent *Allophyes oxyacanthae*
- Rosy rustic *Hydraecia micacea*
- Sallow *Xanthia ictertia*
- Oak hook-tip *Watsonalla binaria*
- Buff ermine *Spilosoma luteum*
- White ermine *Spilosoma lubricipeda*
- Dot moth *Melanchra persicariae*
- Ghost moth *Hepialus humuli*
- Dusky brocade *Apamea remissa*
- Spinach *Eulithis mellinata*
- Dusky thorn *Ennomos fuscantaria*
- Centre-barred sallow *Atethmia centrargo*
- Grey dagger *Acronicta psi*
- Shoulder-striped wainscot *Mythimna comma*
- Figure of eight *Diloba caeruleocephala*
- Garden tiger *Arctia caja*
- Broom moth *Melanchra pisi*
- Cinnabar *Tyria jacobaeae*

Lancs LBAP Provisional Long List:

- Gold spangle *Autographa bractea*
 - Puss moth *Cerura vinula*
- 3.41 The hedgerows were the only habitat on the site identified as being likely to be of importance to invertebrates and habitats present on site are expected to support a common assemblage of invertebrates.



Reptiles

- 3.42 No records of reptiles were obtained during the desk study.
- 3.43 The site does not contain any high value habitat for reptiles such as tussocky grassland with associated scrub, south facing embankments, log piles or compost heaps. The site is also subject to high levels of disturbance by grazing livestock and as such is unlikely to support reptile populations.

Water Vole

- 3.44 No records of water vole *Arvicola amphibius* were returned during the desk study.
- 3.45 The ditches present within site are shallow, dry on a regular basis and lack suitable food species for water vole due to heavy shading. The presence of water vole can be reasonably discounted at this site.

Other Species

- 3.46 The following records of mammals were obtained during the desk study.
- European hedgehog *Erinaceus europaeus*: two records 1.73km south (2011 & 2009);
 - The site represents potential habitat for hedgehog (hedgerows and field boundaries) and;
 - No polecat habitat in the form of waterways or woodland is present within the site.
- 3.47 No otter habitat is present within the site in the form of rivers, brooks or streams. The ditches present within the site held little water at the time of survey and although such habitats can be used as commuting routes for otter, no ditches within the site connected to suitable water courses and as such are unlikely to be used by otter.



Section 4: Evaluation of Ecological Resources

4.1. Table 4.1 below summarises the value of ecological resources within the Zol of the proposals and evaluation of ecological resources in accordance with the IEEM geographic scale, along with any protection offered by relevant legislation and planning policy (see **Appendix 5**).

Ecological Resource	Ecological value
Protected Sites	
Bowland Fells Important Bird Area (IBA)	Bowland Fells IBA is considered to be of international ecological value for breeding birds.
Spade Mill Reservoirs BHS 63NW03	BHSs are considered to be of nature conservation value within the county, and as such they are considered to be of county ecological value .
Alston Reservoirs BHS 63NW01	BHSs are considered to be of nature conservation value within the county, and as such they are considered to be of county ecological value .
College Wood BHS 63NW02	BHSs are considered to be of nature conservation value within the county, and as such they are considered to be of county ecological value .
Species poor semi-improved grassland	The species-poor semi-improved grassland is heavily grazed, contains only common and widespread species, is a common and widespread habitat locally and is not of intrinsic ecological value. As such this habitat is considered to be of negligible ecological value . However, it may have some supporting value to a range of bird species and foraging bats, as well as amphibians, small mammals and invertebrates, although they are not likely to be of importance in maintaining populations of these species in the wider locality.
Amenity Grassland	Cricket pitch - Negligible ecological value



Ecological Resource	Ecological value
Hedgerows	The hedgerows present within the site are NERC Habitats of Principal Importance (HoPI) and provide some foraging habitat for bats and birds and cover and shelter for wildlife in an otherwise open landscape. The hedgerows also provide wildlife corridors and contribute to the network of similar habitat within the local area. Some of the hedges are deemed to be important or of borderline importance under the Hedgerow Regulations 1997. Overall The hedgerow network within the site is a considered to be of local ecological value .
Mature Trees	The mature trees within the site provide suitable habitat for breeding birds and foraging bats as well as structural diversity within the site. The mature trees are not replaceable within the short to medium term and are considered to be of local ecological value .
Ditches	The ditches present within the site provide potential habitat for invertebrate species and small mammals. The ditches also provide wildlife corridors and contribute to the network of similar habitat within the local area and are considered to be of ecological value within the context of the site .
Buildings	Negligible ecological value – though there may be some limited potential for cricket club buildings to support bat roosts (see separate addendum report).
Habitats on Adjacent Land	
Poor Semi-improved Grassland	The species-poor semi-improved grassland present adjacent to the site is of the same character as that occurring within the site and is therefore also evaluated as being of negligible ecological value .
Hedgerows	The hedgerows present adjacent to the site also of the same character as those occurring within the site and is therefore also evaluated as being of local ecological value .
Mature Trees	The mature trees within the hedges adjacent to the site are of the same character as those occurring within the and are therefore also evaluated as being of local ecological value .
Ponds	The ponds adjacent to the site potentially provide habitat for amphibians and invertebrate species. The ponds present adjacent to the site are considered to be of ecological value within the context of the site .
Ditches	The ditches present adjacent to the site provide potential habitat for amphibians and invertebrate species. The ditches also provide wildlife corridors and contribute to the network of similar habitat within the local area and are considered to be of ecological value within the context of the site .
Dry stone wall	The dry stone wall present to the north of the site potentially provides habitat for amphibians, small birds, and invertebrates. The dry stone wall present to the north of site is therefore considered to be of ecological value within the context of the site .



Badger	No evidence of badger was recorded during the survey within or adjacent to the site. Negligible ecological value
Bats	Bats are covered in separate addendum report to be submitted during the planning determination process.
Birds	The hedgerows, trees and ponds present within the site are potential ecological resources for birds which are most likely to consist of common woodland species, though some of these such as dunnock and yellowhammer are priority species. The site is unlikely to be a major resource for wintering birds due to disturbance from livestock. The site is considered likely to support an assemblage of birds of local ecological value .
GCN and other Amphibians	As stated in Section 3 GCN are not present within the site. Apart from small numbers of common frog no other amphibian species were recorded within the site. The amphibian assemblage is considered to be of ecological value within the context of the site .
Terrestrial Invertebrates	The site is considered likely to support a common assemblage of invertebrates, likely to be of ecological value within the context of the site . No high quality species rich grassland, woodland or other habitat features exist which would be indicative of high invertebrate diversity. They do not require further consideration in this assessment.
Other mammals	Due to a lack of suitable habitat (see Section 3) the site is unlikely to support polecat or otter. The site represents potential habitat for hedgehog, likely to be of ecological value within the context of the site , if present.
Reptiles	As stated in Section 3 the site does not contain any suitable habitat for reptiles. Reptiles are not considered further in this assessment.

Table 4.2: Evaluation of ecological resources



Section 5: Potential Ecological Effects, Mitigation & Enhancement Strategy

Proposed Development and Likely Zone of Influence of Development

- 5.1. The proposed development layout is shown in **Appendix 5** and is a new residential development (up to 520 dwellings) including affordable housing and housing for the elderly; relocation of Longridge Cricket Club to provide new cricket ground, pavilion, car park and associated facilities; a new primary school; and vehicular and pedestrian accesses. Landscaping and public open space is proposed on the northern outskirts of Longridge.
- 5.2. Development will mainly affect pastoral fields, though there may be the need to remove some sections of hedgerow to provide access into the site and for the creation of areas to be developed for housing
- 5.3. Once operational, the potential for ecological impacts on habitats and species is likely to be limited to the risk of increased disturbance to habitats locally due to informal recreation, such as dog walking.

Potential Impacts and Mitigation

- 5.4. The following paragraphs provide an analysis of the likely impacts of development at the site and potential consequences in respect of planning policy and relevant wildlife legislation (see **Appendix 6**).
- 5.5. Both the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006 give the importance of conserving biodiversity a statutory basis, requiring government departments (which includes Local Planning Authorities) to have regard for biodiversity in carrying out their obligations (which includes determination of planning applications) and to take positive steps to further the conservation of listed species and habitats. These articles of legislation require Ribble Valley Council to take measures to protect listed species or habitats from the adverse effects of development, where appropriate, by using planning conditions or obligations. Planning authorities should refuse permission where harm to the species or their habitats would result, unless the need for, and benefits of, the development clearly outweigh the harm.

Designated Sites

- 5.6. The site is not covered by any statutory or non-statutory nature conservation designations. Given the physical distances between the site and conservation designations in the locality (see Table 3.1) and taking into account the mainly residential nature of development proposed, it is very unlikely that future development will result in any adverse effects to the features for which these sites are designated.
- 5.7. Therefore development proposals are not likely to trigger planning policy related to protected sites.



Habitats

- 5.8. The development of the site is likely to result in the loss of approximately 22 ha of species poor semi-improved grassland and 1 ha of amenity grassland of negligible ecological value. This loss will not trigger any planning policies and will not require any specific mitigation.
- 5.9. Development would result in the losses of some sections of hedge totalling approximately 445m from the following hedges. Lengths are approximate based on measurements taken from the illustrative masterplan provided in **Appendix 5**). Levels of importance in accordance with the Hedgerow regulations 1997 are given in parenthesis:
- H2 - complete loss (Borderline importance)
 - H3 – 20m (Important);
 - H8 – 195m (unimportant);
 - H10 - 70m (unimportant);
 - H13 – 40m (unimportant); and
 - H15 20m (unimportant)
- 5.10. A ditch also associated with H8 would need to be culverted in two places, resulting in the loss of approximately 40m of ditch habitat. In the absence of mitigation this would potentially trigger planning policies both within the NPPF and local planning policy ENV 13 which seeks to protect important landscape features including hedges and their associated features.
- 5.11. Loss of hedge sections will be compensated by providing new species-rich hedgerow planting within the site - approximately 1,264 m in total. The proposed locations for new hedges are shown on the masterplan (see **Appendix 5**). Their design seeks to augment retained habitats and enhance connectivity between similar habitats present on adjacent land.
- 5.12. In addition to hedgerow planting, retained hedges within the site will receive management to improve their condition consisting of gapping-up of defunct sections and laying, where appropriate, to improve hedge thickness, fruiting, flowering and longevity.
- 5.13. Where hedgerows are associated with ditches these will also be managed to increase their wildlife value. Operations would include dredging of blocked sections and selected tree felling to encourage marginal vegetation and potentially the installation of dams with overflows to increase water depth where appropriate.
- 5.14. In addition to hedge planting, the masterplan seeks to increase the ecological value of the site through:
- The retention and management of existing ponds and provision of additional wildlife ponds;
 - Creation of rough margins to fields;
 - The establishment of low intensity grazing regimes aimed at improving the floral diversity of existing grass sward; and
 - Bird and bat boxes will be erected on mature trees where appropriate.



- 5.15. A Sustainable Urban Drainage System (SUDS) will also be incorporated within the sites green infrastructure. As well as reducing flood and pollution risks, ecological elements will include a mixture of open water and reed margins which will have additional benefits for wildlife such as invertebrates, amphibians and birds.
- 5.16. More generally in relation to pollution risk, construction activities will adhere to the Environment Agency's Pollution Prevention Guidelines (PP5 and PPG6).

Protected and Notable Species

Badgers

- 5.17. No setts or other definitive evidence of badger activity are present on the site. However the site does have appropriate sett building and foraging habitat for badgers and their status can change rapidly.
- 5.18. It is therefore recommended that a badger survey is carried out three months prior to the commencement of any development works, to check that no badger setts have been dug on site or on adjacent land since the completion of the Phase I survey. If necessary, suitable appropriate mitigation proposals would need to be devised. It is considered that given the current absence of badger setts within / adjacent to the site the above measures could be secured via a planning condition and further survey work should not be required prior to determination of a planning application.

Bats

- 5.19. Bats are dealt with separately in separate addendum report to be submitted during the planning application process.

Breeding birds

- 5.20. The hedgerows and trees may support some priority species such as dunnock, song thrush and yellowhammer together with other common woodland birds. Loss sections of hedgerow within the site could displace some birds which currently use these habitats. But given the relatively short hedgerow lengths affected and taking into account the green infrastructure that will be provided within the development layout, which will include replacement hedgerow planting, it is unlikely that development would adversely affect the conservation status of priority bird species locally.
- 5.21. New hedgerows are proposed to north of the development (see masterplan in **Appendix 5**). This would provide additional nesting habitat for birds and would more than compensate for the hedgerow losses within the site. All native wild birds are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). Work to remove the sections of hedgerow or any other woody vegetation clearance should not be undertaken during the active bird nesting season, between March and August inclusive. If this is not possible then works should be preceded by a check for active nests by an ecologist. If a nest is found an appropriate buffer will need to be left undisturbed until the chicks have fledged, as confirmed by an ecologist.



Amphibians

- 5.22 No adverse impacts are predicted. The retention and enhancement of existing ponds within the site together with the creation of new ponds will ensure that suitable habitat resources for amphibian are retained within the proposed development.



Section 6: Residual Impacts

6.1. Table 6.1 below provides an assessment of impacts on the ecological features identified, taking into account the proposed mitigation and enhancement strategy.

Ecological Feature (and value)	Impact	Mitigation / Compensation / Enhancement Measures	Predicted Residual Impact
Protected Sites			
Bowland Fells Important Bird Area (IBA) (international ecological value)	None	N/A	Negligible
Alston Reservoirs BHS 63NW01 (county ecological value)	None	N/A	Negligible
College Wood BHS 63NW02 (county ecological value)	None	N/A	Negligible
Spade Mill Reservoirs BHS 63NW03	None	N/A	Negligible
Habitats within the Site			
Species poor semi-improved grassland (negligible ecological value)	Loss of 22 ha	No specific mitigation required, however, land within the site boundary totalling some 2.8 ha will become low intensity grazing pasture.	Negligible
Amenity grassland (negligible ecological value)	Loss of 1 ha	No mitigation required	Negligible
Hedgerows (local ecological value)	Loss of 445m of hedge	Loss of hedge lengths will be mitigated by providing new species rich hedgerow planting within the site totalling 1,264m in length. Existing hedges retained within the site would receive management to improve their nature conservation value.	Beneficial within the context of the site
Mature trees (local ecological value)	Five mature hedgerow trees would be lost	Losses would be compensated through provision of the new hedgerow planting which will also include standard trees.	Temporary (mid-term) adverse within the context of the site. Losses would become negligible within 30 - 40 years.

Ditches (ecological value within the context of the site)	Approximately 40m of ditch would be culverted	Loss would be compensated through better management of retained ditches within the site	Negligible
Ponds (ecological value within the context of the site).	No ponds would be lost existing ponds to be managed to enhance wildlife value.	Creation of three new wildlife ponds	Beneficial within the context of the site
Buildings (negligible ecological value)	Three cricket club buildings would be lost	None required	Negligible
Habitats on Adjacent Land			
Consisting of species poor semi-improved grassland, hedges with mature trees and ponds and a dry stone wall (of local ecological value or of value within the context of the site)	No adverse impacts are predicted	None Proposed	Negligible
Protected Species			
Badger (negligible ecological value)	Reduction in available foraging habitat. No badger setts would be affected by the proposed development	Habitat improvements within the site would compensate for any habitat losses.	Negligible
Bats	Dealt within in separate ecology addendum		
Birds (local ecological value).	Loss of breeding habitat (130m of hedge); potential disturbance to nesting if site is cleared during the breeding season.	Retention and management of hedgerows and trees. Creation of new habitats including scattered trees, gardens, SUDS, will improve foraging opportunities. Habitat clearance will avoid the bird breeding season.	Positive within the context of the site
Amphibians (ecological value within the context of the site).	If present, potential loss of terrestrial habitat approximately 1.17 ha of intermediate and 2.42 ha of distant habitat	Creation of 2 new ponds. Creation of 0.6 ha of immediate and 2.2 ha of intermediate habitat terrestrial habitat of high quality.	Positive within the context of the site



Terrestrial Invertebrates (of ecological value within the context of the site)	Loss of hedgerow sections would not significantly reduce habitat resources for terrestrial invertebrates	Creation of new hedges, native structure planting, SUDS and ponds and will increase habitat resources for invertebrates.	Positive within the context of the site
Other mammals - hedgehog (of ecological value within the context of the site)	Loss of hedgerow sections would not significantly reduce habitat resources for hedgehog	Creation of new hedges and native structure planting will increase habitat resources for hedgehogs.	Positive within the context of the site



Section 7: Summary and Conclusions

- 7.1. For the reasons stated in the previous Section (5 - para 5.5) development proposals are not likely to result in any adverse impacts to statutory or non- statutory nature conservation designations.
- 7.2. Some loss of habitat in connection with any proposed residential development is inevitable but could be largely confined to poor semi-improved grassland of negligible ecological value. Species-rich hedges, trees and ponds are the most valuable resources and would be largely retained within green infrastructure with protective buffers to avoid degradation. Any losses would be kept to a minimum, with compensation through replacement planting.
- 7.3. In terms of protected species surveys have determined that:
- Ponds present on land within 250m of the site not support GCN but do support a small population of common frogs;
 - Hedges are also likely to provide habitat for nesting birds, in particular woodland passerines. These may include priority bird species such as dunnock and song thrush;
 - Other species such as hedgehog and a range of common terrestrial invertebrate species may also be present.
- 7.4. Notwithstanding the need to consider potential impact of development on bats (considered in a separate ecology addendum) it is considered that the above species can be accommodated by the implementation of mitigation outlined in Section 5.
- 7.5. Given the land available there can be confidence that any impacts to protected species (bats and breeding birds) can be accommodated within the proposed development. Where necessary, detailed mitigation proposals will be informed by further surveys currently underway and can be controlled by planning conditions.
- 7.6. Recommendations made in connection with tree and hedgerow planting and pond creation will contribute to local BAP targets.
- 7.7. In conclusion, whilst some detailed surveys have yet to be completed, given the land available for ecology mitigation there can be confidence that development of the site can be in conformity with relevant planning policy that seeks to protect and enhance ecological resources.



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Appendix 1: Legislation and Planning Policy Context



Appendix 1: Legislation and Planning Policy Context

Legislative Context

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2010 (as amended);
 - The Countryside and Rights of Way (CRoW) Act 2000;
 - The Hedgerows Regulations 1997;
 - The Protection of Badgers Act 1992; and
 - The Natural Environment and Rural Communities Act (NERC) 2006.
- A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2010 (as amended).
- A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.
- A1.4. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

Species and Habitats of Principal Importance and the UK Biodiversity Action Plan

- A1.5. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the



UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

- A1.6. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

National Planning Policy

National Planning Policy Framework (NPPF), March 2012

- A1.7. The National Planning Policy Framework (NPPF) was published on 27th March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. It replaces all the Planning Policy Statements and Guidance (PPSs and PPGs) (of relevance PPS9: Biodiversity and Geological Conservation).

- A1.8. Paragraph 14 states that:

"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."

- A1.9. Under the 12 'Core Planning Principles' within the NPPF, those of relevance to nature conservation state that planning should:

"contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;

encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value; and

promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production)"

- A1.10. Section 11 of the NPPF (paragraphs 109 to 125) considers the conservation and enhancement of the natural environment.



- A1.11. Paragraph 109 states that the planning system should contribute to and enhance the natural and local environment through inter alia recognising the wider benefits of ecosystem services; minimising impacts on biodiversity; and providing net gains in biodiversity (including provision of coherent ecological networks that are more resilient to current and future pressures).
- A1.12. Paragraph 113 states that Local Plans should set criteria based policies against which proposals for development on or affecting wildlife sites should be judged and that distinctions should be made between the hierarchy of international, national and local sites and the weight of their importance.
- A1.13. Paragraph 114 states that Local Authorities should plan positively for creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- A1.14. To minimise impacts on biodiversity and geodiversity, Paragraph 117 states that planning policies should:

"plan for biodiversity at a landscape-scale across local authority boundaries;

identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;

aim to prevent harm to geological conservation interests; and

where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas"

- A1.15. When determining planning applications, Paragraph 118 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

"if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the



features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;

opportunities to incorporate biodiversity in and around developments should be encouraged;

planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and

the following wildlife sites should be given the same protection as European sites:

potential Special Protection Areas and possible Special Areas of Conservation;

listed or proposed Ramsar sites; and

sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."

A1.16. Paragraph 119 states that the presumption in favour of sustainable development in Paragraph 14 does not apply in relation development requiring appropriate assessment under the Birds or Habitats Directives.

A1.17. Paragraph 125 states that planning policies and decisions should limit the impact of light pollution from artificial light on nature conservation by encouraging good design.

Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

A1.18. ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.

A1.19. ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).



A1.20. Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

A1.21. Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

Local Planning Policy – Ribble Valley Countywide Local Plan

POLICY ENV3 – Open Countryside

In the open countryside outside the AONB and areas immediately adjacent to it, development will be required to be in keeping with the character of the landscape area and should reflect local vernacular, scale, style, features and building materials. Proposals to conserve, renew and enhance landscape features, will be permitted, providing regard has been given for the characteristic landscape features of the area.

Although the Bowland area has received national recognition the adjacent area of countryside is also of high quality, in places matching that of the Area of Outstanding Natural Beauty. This policy recognises that the open countryside is all worthy of conservation and enhancement. The detailed landscape assessment included in Appendix 2 will be used in the determination of any planning application. Whilst the Borough Council has no wish to unnecessarily restrict development it is essential that only development which has benefits to the area is allowed. Even when such development is accepted it must acknowledge the special qualities of the area by virtue of its size, design, use of materials, landscaping and siting.

The Council will ensure the protection and enhancement of those areas outside both the AONB and areas immediately adjacent to it with an approach to conservation which gives a high priority to the protection and conservation of natural habitats and traditional landscape features. It will protect statutory designated areas and sites of biological interest and ancient woodland sites throughout open countryside areas. It will continue to improve the extent and quality of the tree cover and associated flora/fauna throughout the open countryside. It will determine and identify landscape character in relationship to the future landscape potential and will act to enhance landscape character of the open countryside. The Borough Council is also committed to protecting key elements of the landscape character of any site affected by proposed development and would make the siting, scale and form of any landscape proposal that forms part of any planning application a priority.

Open recreational uses will be assessed in terms of their impact on the site and on the wider value of the landscape, together with any social benefits arising.

This policy will be implemented through the development control process

POLICY ENV7 - SPECIES PROTECTION

Development proposals which would have an adverse effect on wildlife species protected by law will not be granted planning permission, unless arrangements can be made through planning conditions or agreements to secure the protection of the species.



The presence of a protected species is a material consideration when a local planning authority is appraising a development proposal which if carried out would be likely to result in harm to the species or its habitat. Matters likely to be of concern to the Borough Council in implementing the policy, if development is considered possible, will be to facilitate the survival of individual members of the species, to reduce disturbance to a minimum, and to provide adequate habitats to sustain at least the current levels of populations.

POLICY ENV9 - OTHER IMPORTANT WILDLIFE SITES

Development proposals within or adjacent to a County Biological Heritage Site or other site of local nature conservation importance identified on the proposals map will be permitted, provided the development would not significantly harm the features of interest which led to the identification of the site or other material factors outweigh the conservation interests of the site.

The County Biological Heritage Sites have been identified jointly by Lancashire County Council, English Nature and the Lancashire Wildlife Trust. They are shown on the proposals map and listed in Appendix 3.

Wildlife corridors and links are shown on the proposals map. They are linear areas of countryside which are usually sandwiched between built-up areas, or follow geographical features such as rivers and streams, or man-made features such as railway lines. They provide important resources for wildlife; links that allow movement of wildlife between town and country and important educational and recreational resources. The Council recognises that other linear areas of countryside such as those associated with streams and rivers shown as wildlife corridors/links in Appendix 4 provide important resources for wildlife. It also recognises the need to protect wildlife corridors/links from any development which may cause harm or damage to a species/habitat. It will also protect against a reduction in the length of, against any new obstacles and against the contamination of any wildlife corridors/links.

These designations represent an important part of the Borough's heritage, which it is necessary to protect. They are valuable both as habitats for plants and animals. There is sufficient land available for all uses without the need to damage such sites.

There may be occasions where some development associated to these sites may be justified. This may be a reflection of a clear local need which can be identified and justified.

The designation of sites protected by this policy is not comprehensive, and it is possible that other sites will be discovered and possibly created in the plan period. The Borough Council will consult with the relevant organisations on all applications. Where new sites are identified they will be protected by this policy and incorporated into the plan at the earliest opportunity. This policy will be implemented through the development control process and by negotiation with English Nature and the Lancashire Wildlife Trust.

POLICY ENV10 – NATURE CONSERVATION

Where permission is granted for development affecting the nature conservation value of sites, including those referred to in Policies ENV8 and ENV9, conditions may be imposed or agreements sought:

- (a) to avoid damage to wildlife habitats or physical features of the nature conservation interest;**
- (b) to secure the retention or enhancement of wildlife habitats; and**
- (c) in appropriate cases, to require the re-creation of habitats once the development has ceased.**

Where such development is allowed, damage to nature conservation interests must be kept to a minimum. The most sensitive areas of any site must be protected in the long term, and any valuable areas of habitat must be re-created elsewhere on site wherever possible. In cases where development proposals are considered to possibly affect such sites, the Council will require a full detailed flora and fauna survey. These bodies may be particularly useful; Lancashire County Council Ecology Unit; or bona fide professional landscape/wildlife consultants. The costs of survey works will be met by the applicants. There may be occasions where development of part of the whole of these sites may be justified and in such cases the Council will ensure that damage to the nature conservation interest of the site or feature be kept to a minimum. Where possible the Council will seek to negotiate with the developer to preserve the nature conservation interest, and will consider using conditions and/or planning agreements to provide appropriate compensatory measures.



POLICY ENV13 - LANDSCAPE PROTECTION

The Borough Council will refuse development proposals which harm important landscape features including traditional stone walls, ponds, characteristic herb rich meadows and pastures, woodlands, copses, hedgerows and individual trees other than in exceptional circumstances where satisfactory works of mitigation or enhancement would be achieved, including rebuilding, replanting and landscape management.

It is important to protect the existing landscape features which add to the character of the Borough. The woodland coverage of the borough whether large woods, small groups, or individual trees, together with hedgerow coverage forms an important part of the landscape quality. In addition valuable ecological, recreational and economic functions arise from these features.

Table A1.1 – Ribble Valley Countywide Local Plan



Appendix 2: Great Crested Newt Surveys



25th June 2014

Land at Bowland
Meadows and Higgins
Brook, Longridge, Ribble
Valley

Great Crested Newt
Survey

Report Number: 2001_R07_JM_AS

Author: John Moorcroft MCIEEM
CEnv

Checked: Simon Holden MCIEEM



Tyler Grange

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Appendix

Appendix 1 - Habitat Suitability Index Results

Plan

Habitat Features Plan 2001/P04a JM/JE June 2014

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Section 1: Introduction

Background

- 1.1 Tyler Grange LLP has been commissioned by Barratt Homes Manchester to undertake an ecological assessment in relation to the proposed development of land north of Longridge, Ribble Valley (hereafter referred to as the 'site'). The site is approximately 15.4 ha and is centred on Ordnance Survey (OS) grid reference SD 6038 3811. An outline planning application is to be submitted for the development of the site for up to 150 dwelling units including access and associated infrastructure. The development will proceed in a phased manner with Phase 1 'Bowland Meadows' comprising the two field units to the far west of the site. This has been subject to a separate planning application informed by an Ecological Assessment Report (TG Ref: 2001_R06).
- 1.2 As part of the ecological assessment, surveys for great crested newt *Triturus cristatus* (GCN) have been undertaken, which cover both development phases. This report presents the findings of the GCN surveys.

Site Description

- 1.3 The site comprises pastoral fields consisting of species poor semi-improved grassland separated by hedgerows with occasional scattered trees. The land is more or less flat and is to the north of Longridge, Ribble Valley. The site is bordered by residential developments and a Sainsbury's supermarket to the south, Chipping Lane, further pastoral fields and Longridge Cricket Ground to the west and by further pastoral land to the north and east.

Legislation and Conservation Status

- 1.4 As a European Protected Species GCN receives legal protection in England under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended). In addition, planning policy requires planning authorities to consider GCN when determining planning applications and to ensure that development proposals do not lead to adverse effects on the conservation status of GCN.
- 1.5 Although GCN still maintains a widespread distribution in England, the species is in decline, notably through loss of breeding ponds. A greater decline has been noted across the European range of the GCN. The UK holds a large proportion of the world population of the species. GCN is listed as a Species of Principal Importance (SoPI) under Section 41 of the Natural Environment and Rural Communities Act 2006. It is also listed on the Lancashire Local BAP.



Section 2: Methodology

Scope of GCN Survey

- 2.1 The distribution of ponds within the site and on adjacent land assessed as part of the surveys is shown on Habitat Features Plan. 2001/P04a.

Habitat Suitability Index (HSI)

- 2.2 A Habitat Suitability Index (HSI) was calculated for each water body in accordance with the methodology outlined by NE¹. A score is given to each water body between 0 and 1, with scores closer to 0 having lower probability of GCN occurrence. The HSI cannot be used as confirmation of GCN presence or absence, but is used as a guide to assess the habitat in terms of its potential to support great crested newts. It also provides useful information that can inform pond management and enhancement programmes.
- 2.3 The NE HSI classifications are provided below:

- < 0.5 Poor;
- 0.5 – 0.59 Below average;
- 0.6 – 0.69 Average;
- 0.7 – 0.79 Good; and
- 0.8 Excellent.

Great Crested Newt Survey

- 2.4 Surveys were undertaken using in accordance with published guidelines². The guidance recommends that four survey visits should be undertaken between mid-March and mid-June, and that at least two of the visits should be undertaken between mid-April and mid-May.
- 2.5 Ponds found to contain GCN during the first four visits receive two additional visits, i.e. are visited a total of six times, in order assess the 'Population Size Class', as defined by NE.
- 2.6 The following methods were employed on each visit in order to detect the presence of GCN:
- Egg searching: Although the data cannot be used to estimate population size it can indicate the presence of breeding adults. All suitable submerged vegetation was searched for GCN eggs. Newt eggs are characteristically wrapped individually in the submerged leaves of aquatic vegetation;

¹ Natural England Licensing Advice great crested newts: <http://www.naturalengland.org.uk/conservation/wildlife-management-licencing/docs/WML-A14-2.xls>

²English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough



- Bottle trapping: Setting of bottle traps (where conditions allow). This involved the use of funnel traps (made from 2L clear plastic bottles) that were secured in the water at 2m intervals around the pond margin. Traps were set in the evening before dark and left overnight to be checked the following morning; and
- Torch survey: The accessible margins of the water body were slowly walked once, searching the margins by torchlight (Cluson CB2 one million candlepower) for GCN.

2.7 If present, all GCN observed were counted and, where possible identified as males, females and juveniles. Survey dates and conditions are shown in Table 2.1 below.

Visit Number	Date	Weather Conditions	Air Temp	Water Temp	Lead surveyor
1	19 th March 2014	Light breeze, 70 % cloud, dry	9 ^o C	9.5 ^o C	Paul Moody
2	7 th April 2014	Light breeze, 80 % cloud, dry	9 ^o C	10 ^o C	Paul Moody
3	24 th April 2014	Light breeze, 80 % cloud	12 ^o C	11 ^o C	Paul Moody
4	1 th May 2014	Moderate breeze. 100% cloud and dry	12 ^o C	9.5 ^o C	Simon Holden

Table 2.1: Dates and weather conditions for newt surveys

Limitations

Habitat Suitability Index

2.8 January is not the ideal time to conduct HSI assessments as macrophyte cover may not be readily evident. It is therefore possible that these ponds would receive a higher score if surveyed at a more optimal time of year. However Ponds 1, 2 and 4 were assessed as 'good' by the HSI and were surveyed for GCN. The factor which is limiting Pond 3 for its suitability to support GCN is water quality; it had a high level of apparent hydrocarbon pollution, and low water levels which suggested that it dries on an annual basis. As the assessment of these factors is not dependant on the time of year, the timing of the HSI survey is not considered a major limitation.

Great crested Newt Survey

2.9 Surveys were conducted in accordance with the methods stated above, during appropriate weather conditions and there is a high degree of confidence in the survey results.

Quality Control

2.10 All ecologists at Tyler Grange LLP are members of CIEEM³ and abide by the Institute's Code of Professional Conduct.

³ The Chartered Institute of Ecology and Environmental Management



Section 3: Survey Results

Habitat Suitability Index

- 3.1. The HSI results for the four ponds are as follows:
- Pond 1 - 0.75 – good
 - Pond 2 – 0.71 - good
 - Pond 3 – 0.42 - poor; and
 - Pond 4 - 0.7 – good
- 3.2. Further details and a breakdown of calculations are provided in **Appendix 1**.

GCN Survey Results

- 3.3. No GCN were found to be present during the surveys. No smooth or palmate newts were recorded. Common frog *Rana temporaria* was recorded.



Section 4: Conclusion and Recommendations

Survey Conclusion



- 4.1. The surveys undertaken in 2014 found **no evidence of GCN in the ponds** and it is therefore highly unlikely that they occur within the site.
- 4.2. **No impacts to GCN are likely** and no mitigation is required in respect of the proposed development. The ponds will be retained and will therefore continue to support populations of common frog.
- 4.3. Legislation and planning polices relating to GCN and ponds would therefore not be triggered due to the development.

Recommendations


- 4.4. Development proposals provide an opportunity to enhance the ecological value of ponds. It is recommended that existing ponds are retained wherever possible and managed to restore and maintain their value as breeding habitat for amphibians and other pond life.
- 4.5. New ponds wildlife ponds should also be created (in addition to any SUDS ponds), preferably in close proximity to existing ponds retained within the development so that habitat resources for existing amphibians (namely common frog) and other aquatic fauna can be increased as a result of the proposed development.




Appendix 1 Habitat Suitability Index Results

Pond 1			Pond 2		
Indices			Indices		
Grid Reference	SD 6039 3818		Grid Reference	SD 6048 3815	
Distance to Site	On site		Distance to Site	On site	
Description	Field pond/marl pit, partially shaded by willows and alder, fringed with soft rush <i>Juncus effusus</i> , some floating sweet grass <i>Glyceria fluitans</i> and foos water cress. <i>Apium nodosum</i>		Description	Field Pond/marl pit. Partially shaded by willows. Soft rush, reed canary grass <i>Phalaris arundinacea</i> , foos water cress, marsh marigold <i>Caltha palustris</i> and floating sweet grass present in margins.	
Photograph			Photograph		
SI₁ - Location	Zone A, optimal	1	SI₁ - Location	Zone A, optimal	1
SI₂ - Pond area	350 m ²	0.7	SI₂ - Pond area	100 m ²	0.2
SI₃ - Pond drying	Sometimes	0.5	SI₃ - Pond drying	Sometimes	0.5
SI₄ - Water quality	Moderate	0.67	SI₄ - Water quality	Moderate	0.67
SI₅ - Shade	5%	1	SI₅ - Shade	50%	1
SI₆ - Fowl	Absent	1	SI₆ - Fowl	Absent	1
SI₇ - Fish	Absent	1	SI₇ - Fish	Absent	1
SI₈ - Ponds	9	0.95	SI₈ - Ponds	9	0.95
SI₉ - Terrestrial habitat	Moderate	0.67	SI₉ - Terrestrial habitat	Moderate	0.67
SI₁₀ - Macrophytes	10%	0.4	SI₁₀ - Macrophytes	50%	0.8
HSI Scores	Good	0.75	HSI Scores	Good	0.71



Pond 3		
Indices		
Grid Reference	SD 6059 3794	
Distance to Site	on site	
Description	Flooded area along hedgerow, large amount of hydrocarbon pollution evident.	
Photograph		
SI ₁ - Location	Zone A, optimal	1
SI ₂ - Pond area	14m ²	0.05
SI ₃ - Pond drying	Annually	0.1
SI ₄ - Water quality	Poor	0.33
SI ₅ - Shade	80%	0.6
SI ₆ - Fowl	Absent	1
SI ₇ - Fish	Absent	1
SI ₈ - Ponds	9	0.95
SI ₉ - Terrestrial habitat	Moderate	0.67
SI ₁₀ - Macrophytes	0%	0.3
HSI Scores	Poor	0.42

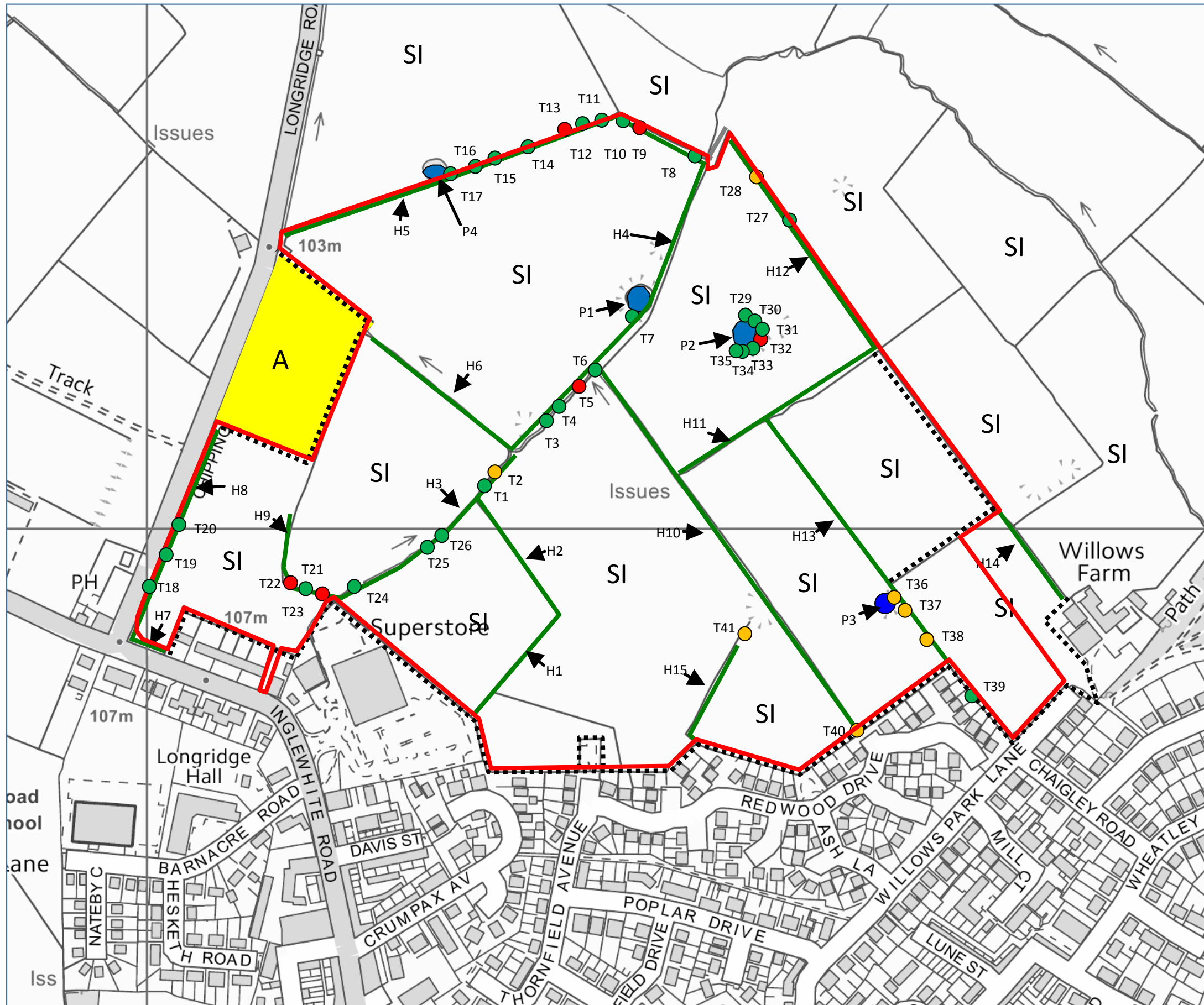
Pond 4		
Indices		
Grid Reference	SD 6022 3828	
Distance to Site	0m	
Description	Shallow pond at edge of field, partially shaded by trees, some reed canary grass, soft rush and floating sweet grass present in margins.	
Photograph		
SI ₁ - Location	Zone A, optimal	1
SI ₂ - Pond area	150m ²	0.3
SI ₃ - Pond drying	Sometimes	0.5
SI ₄ - Water quality	Moderate	0.67
SI ₅ - Shade	15%	1
SI ₆ - Fowl	Absent	1
SI ₇ - Fish	Absent	1
SI ₈ - Ponds	9	0.95
SI ₉ - Terrestrial habitat	Moderate	0.67
SI ₁₀ - Macrophytes	15%	0.45
HSI Scores	Good	0.7



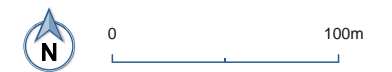
Plan

2001/ P01 æHabitat Features Plan/ART BOR } ^/GEI





- SI Species Poor
Semi-improved Grassland
- A Amenity Grassland
- Pond
- Category 1 tree
- Category 2 Tree
- Category 3 Tree
- Hedgerow
- Dry stone wall
- Fence
- Site boundary
- T1 Tree number
- H1 Hedge number
- P1 Pond number



Project | Bowland Meadows and Higgins Brook, Land East of Chipping Lane, Longridge

Drawing Title | **Habitat Features Plan**

Scale | As Shown (Approximate)

Drawing No. | 2001/P04a

Date | June 2014

Checked | JM/JE



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Appendix 3: Hedgerows Regulations

Assessment Estimate

A3.1. Hedgerow surveys were conducted on all hedgerows on 29th November 2013 by Paul Moody (Ecologist, Tyler Grange) an experienced field ecologist and Hayley Care (Graduate Ecologist Tyler Grange) a graduate member of the Chartered Institute of Ecology and Environmental Management (CIEEM). The methodology employed followed the requirements of the Hedgerows Regulations 1997 as outlined below:

- 1) Each hedgerow was surveyed as follows:
 - a. If it did not exceed 30 metres, the whole hedgerow was surveyed; or
 - b. If it exceeded 30 metres, but did not exceed 100 metres, the central stretch of 30 metres was surveyed; or
 - c. If it exceeded 100 metres, but did not exceed 200 metres, the central stretch of 30 metres within each half of the hedgerow (the aggregate of woody species recorded was later divided by two) was surveyed; or
 - d. If it exceeded 200 metres, the central stretch of 30 metres within each third of the hedgerow was surveyed (the aggregate of woody species recorded was later divided by three).
- 2) For each hedgerow, the number of woody species was recorded;
- 3) For each hedgerow the number of 'additional features' present was recorded namely:
 - a. a bank or wall which supports the hedgerow along at least one half of its length;
 - b. gaps which in aggregate do not exceed 10% of the length of the hedgerow;
 - c. where the length of the hedgerow does not exceed 50 metres, at least one standard tree;
 - d. where the length of the hedgerow exceeds 50 metres but does not exceed 100 metres, at least 2 standard trees;
 - e. where the length of the hedgerow exceeds 100 metres, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres;
 - f. at least 3 woodland species within one metre, in any direction, of the outermost edges of the hedgerow;
 - g. a ditch along at least one half of the length of the hedgerow;
 - h. connections to other hedgerows (1 point) and pond or broadleaved woodland (2 points) with a summed score of 4 points or more; and
 - i. a parallel hedge within 15 metres of the hedgerow.



A3.2. Each hedgerow was then classified as 'important', 'borderline' or not important based on the following criteria:

- 1) An Important hedgerow:
 - a. includes at least 7 woody species; or
 - b. includes at least 6 woody species, and has associated with it at least 3 of the additional features; or
 - c. includes at least 6 woody species, including one of the following—black-poplar tree; large-leaved lime; small-leaved lime; wild service-tree; or
 - d. includes at least 5 woody species, and has associated with it at least 4 additional features; or
 - e. includes at least 4 woody species and at least 2 additional features and is adjacent to a bridleway or footpath, a road used as a public path, or a byway open to all traffic.
- 2) Borderline hedgerows:
 - a. have one less woody species and/or additional feature than required to meet the qualifying criteria as 'important'.
- 3) Not important hedgerows:
 - a. Do not meet the qualifying criteria as important or borderline hedgerows.

Limitations

A3.3. January is not the ideal time to conduct a Hedgerows Regulations assessment as it is not possible to assess to fully assess plant species due to seasonal dieback, especially, woodland herbs present within the hedgerow. As such the following results represent an approximation of hedgerow importance.



Results

Hedgerow Number	Length (m) *	Height and width (m)	Woody Species Present**	Woodland and Understory Species Present**	Additional Features	Management	Approximation of Importance of Hedge under Hedgerow Regs. 1997
H1	100m	3m x 2 m	<ul style="list-style-type: none"> • Hawthorn • Blackthorn • Dog rose • Elder 	<ul style="list-style-type: none"> • Common nettle • Bramble • Holly 	<ul style="list-style-type: none"> • Dry ditch (D1) on eastern length 	<ul style="list-style-type: none"> • Unmanaged • Grazed at base • Gappy 	Unimportant
H2	100m	3.5m x 3.5m	<ul style="list-style-type: none"> • Hawthorn • Blackthorn • Hazel • Holly • Crab apple • Elder 	<ul style="list-style-type: none"> • Male fern • Common nettle • Bramble • Cleavers • Soft rush • Bitter sweet • Creeping buttercup 	<ul style="list-style-type: none"> • Damp ditch (D2) along base • Connects with H1 and H3 	<ul style="list-style-type: none"> • Unmanaged • Laid >10yrs past • Untrimmed with outgrowth • Grazed at base • Gappy 	Borderline importance
H3	316m	4m x 4m	<ul style="list-style-type: none"> • Hawthorn • Beech • Ash • Blackthorn • Hazel • Holly • Alder 	<ul style="list-style-type: none"> • Common nettle • Bramble • Thistle • Fern • Soft rush • Reed canary grass 	<ul style="list-style-type: none"> • 6 standard trees present • Wet ditch (D3) running along whole length • Connects with H2, H4, H6, H9 & H10 	<ul style="list-style-type: none"> • Unmanaged • Untrimmed with outgrowth 	Important
H4	180m	4m x 2m	<ul style="list-style-type: none"> • Alder • Hawthorn • Holly • Rose Spp. 	<ul style="list-style-type: none"> • Bramble • Soft rush 	<ul style="list-style-type: none"> • Hedge on bank • Dry ditch (D4) along base • Connect to H3 & H10 • Connects to pond P1 	<ul style="list-style-type: none"> • Unmanaged • Tall and leggy • Laid >10yrs past 	Unimportant



Hedgerow Number	Length (m) *	Height and width (m)	Woody Species Present**	Woodland and Understory Species Present**	Additional Features	Management	Approximation of Importance of Hedge under Hedgerow Regs. 1997
H5	367m	3m x 3m	<ul style="list-style-type: none"> • Hawthorn • Beech • Ash 	<ul style="list-style-type: none"> • Grassland understory (as field) 	<ul style="list-style-type: none"> • Defunct • Connects to pond P4 • Connects with H4 • At least 7 standard trees present 	<ul style="list-style-type: none"> • Tall and leggy • Unmanaged • Grazing of hedge base 	Unimportant
H6	150m	3m x 3m	<ul style="list-style-type: none"> • Alder • Hazel • Hawthorn • Blackthorn • Elder 	<ul style="list-style-type: none"> • Ferns • Bramble • Nettle • Common sorrel • Hogweed • Red campion • Creeping buttercup • Cocksfoot • Perennial rye grass 	<ul style="list-style-type: none"> • No gaps in aggregate >10% of hedgerow length • Ditch present along half of length • Connects to H3 	<ul style="list-style-type: none"> • Untrimmed with outgrowth • Unmanaged • Hedge bottoms grazed 	Unimportant
H7	10m	1.5m x 1m	<ul style="list-style-type: none"> • Hawthorn 	<ul style="list-style-type: none"> • Ivy • Cleavers 		<ul style="list-style-type: none"> • Trimmed and dense • Flail cut 	Unimportant
H8	170m	1m x 1m	<ul style="list-style-type: none"> • Hawthorn • Ash • Holly • Sycamore 	<ul style="list-style-type: none"> • Bramble • Ivy • Common nettle • Cleavers • Cocksfoot 	<ul style="list-style-type: none"> • No gaps in aggregate >10% of hedgerow length • Parallel hedge present within 15m • Adjacent to public road 	<ul style="list-style-type: none"> • Flail cut • Laid >10 yrs ago • Trimmed and dense 	Borderline importance
H9	132m	3m x 2m	<ul style="list-style-type: none"> • Alder • Hawthorn • Ash 	<ul style="list-style-type: none"> • Common nettle • Thistle • Bramble 	<ul style="list-style-type: none"> • No gaps in aggregate >10% of hedgerow 	<ul style="list-style-type: none"> • Untrimmed with outgrowth • Laid >10 yrs ago 	Important



Hedgerow Number	Length (m) *	Height and width (m)	Woody Species Present**	Woodland and Understory Species Present**	Additional Features	Management	Approximation of Importance of Hedge under Hedgerow Regs. 1997
			<ul style="list-style-type: none"> Holly Blackthorn Elder 	<ul style="list-style-type: none"> Cocksfoot 	<ul style="list-style-type: none"> length At least 1 standard tree per 50m of hedgerow Wet ditch present Connects to H3 Inundation area present 	<ul style="list-style-type: none"> Hedge bottoms grazed 2 – 10 yrs ago 	
H10	350m	1.5m x 1m	<ul style="list-style-type: none"> Hazel Hawthorn Ash Holly Blackthorn 	<ul style="list-style-type: none"> Soft rush Common nettle Thistle Bramble Cocksfoot 	<ul style="list-style-type: none"> Wet ditch present Connects to H4 and H11 	<ul style="list-style-type: none"> ? 	Borderline importance)
H11	150m	1m x 1m	<ul style="list-style-type: none"> Hawthorn Ash Holly Hazel 	<ul style="list-style-type: none"> Common nettle Cocksfoot Bramble 	<ul style="list-style-type: none"> Drainage ditch on west side Connects to H10 and H12 	<ul style="list-style-type: none"> Grazed base Defunct Gappy Trimmed and laid in the past 	Unimportant
H12	200m	2m x 1m	<ul style="list-style-type: none"> Hawthorn Holly Hazel Dog rose Pedunculate oak Ash 	<ul style="list-style-type: none"> Common nettle Bramble Great willowherb Soft rush 	<ul style="list-style-type: none"> Drainage ditch on south side Connects to H11 Standard trees present 	<ul style="list-style-type: none"> Managed Flail trimmed Defunct 	Borderline importance
H13	300m	1.5m x 1m	<ul style="list-style-type: none"> Hawthorn Ash Holly Pedunculate oak 	<ul style="list-style-type: none"> Bramble Soft rush 	<ul style="list-style-type: none"> No gaps in aggregate >10% of hedgerow length Wet ditch present 	<ul style="list-style-type: none"> Intensively managed Flail trimmed Laid in past 2 to 10 yrs Hedge bottom grazed 	Unimportant



Hedgerow Number	Length (m) *	Height and width (m)	Woody Species Present**	Woodland and Understory Species Present**	Additional Features	Management	Approximation of Importance of Hedge under Hedgerow Regs. 1997
			<ul style="list-style-type: none"> Blackthorn 		<ul style="list-style-type: none"> Connects to H11 Inundation area present 		
H14	25m	1.5m x 1m	<ul style="list-style-type: none"> Hawthorn 	<ul style="list-style-type: none"> Common nettle Bramble 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Intensively managed Flail cut 	Unimportant
H15	100m	1.5m x 1m	<ul style="list-style-type: none"> Hawthorn 	<ul style="list-style-type: none"> Common nettle Bramble 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Defunct 	Unimportant
<ul style="list-style-type: none"> * Measured using Google earth ** Due to time of year (Nov) all species may not be picked up due to seasonal dieback (esp. woodland species) 							



Appendix 4: Badger Survey

A4.1. A badger survey was conducted during the Phase 1 Habitat Survey. The survey followed standard methodology (Harris *et al* 1989). A thorough search for badger activity was carried out. The survey area covered the site and extended to the accessible land within a radius of 100 metres from the site boundary. Particular attention was given to Harper Woods situated immediately to the south of the site. Private gardens were excluded from the survey.

A4.2. The following signs of badger activity were searched for: -

- 'D' shaped sett entrances at least 0.25 metre wide and wider than they are high with large spoil mounds;
- Discarded bedding at sett entrances (this includes grass and leaves);
- Scratching posts on shrubs and trees close to a sett entrance;
- The presence of badger hairs which are coarse, up to 0.1 metre long with a long black section and a white tip;
- Dung pit latrines and footprints;
- Trampled pathways through vegetation and beneath fences; and
- Feeding signs.

Results

A4.3. No evidence of badger was recorded during the survey.



Appendix 5: Proposed Development Layout





Key

- Application Site Boundary
- Homes
- Avenue
- Village Streets
- Village Lanes
- Squares & Mews
- Existing Trees (Retained)
- Existing Hedgerows (Retained & enhanced)
- Proposed Trees & Hedgerows
- Sustainable Urban Drainage Network
- Play Area - Locally Equipped Area for Play
- Play Area - Neighbourhood Equipped Area for Play

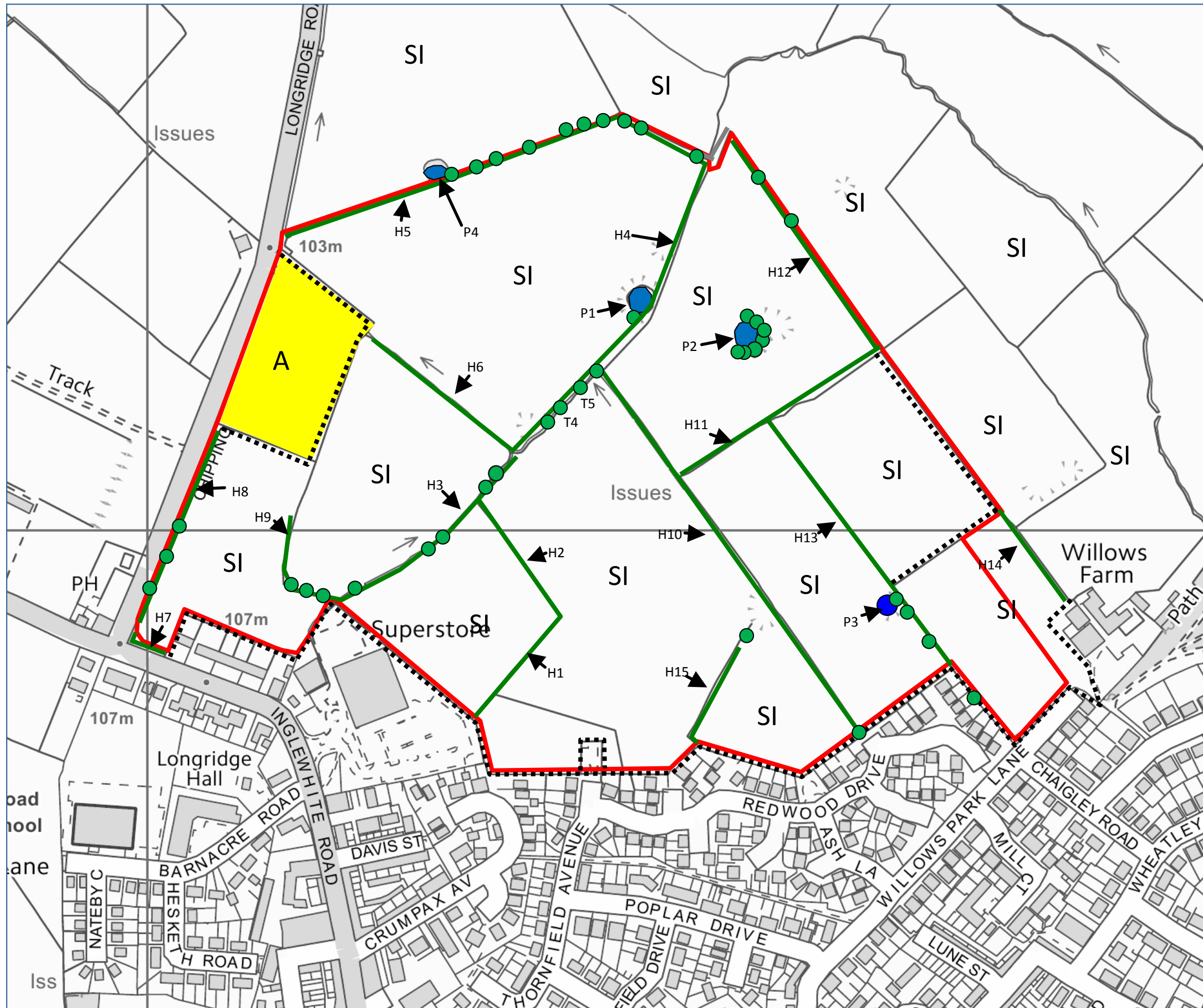
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 e*SCAPE Job No.
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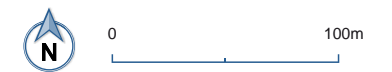
Plan

Habitat Features Plan 2001/P04b August 2014 JM/JE





- SI Species Poor
Semi-improved Grassland
- A Amenity Grassland
- Pond
- Mature Hedgerow Trees
- Hedgerow
- Dry stone wall
- Fence
- Site boundary
- H1 Hedge number
- P1 Pond number



Project | Bowland Meadows and Higgins Brook, Land East of Chipping Lane, Longridge

Drawing Title | **Habitat Features Plan**

Scale | As Shown (Approximate)

Drawing No. | 2001/P04b

Date | August 2014

Checked | JM/JE



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