Ecology Technical Note

Proposed Residential Development:	Hollins Cross Farm, Burnley
LPA Application Ref:	FUL/2022/0149
PINS Ref:	APP/Z2315/W/23/3325738
Date:	4th October 2023
Biora Ref:	SE0957-07_G03c_JO

1.0 Introduction

1.1 Biora has been instructed by Prospect GB to address the comments received from the Rule Six Party – Combined Residents Group and Burnley Council, submitted to assist the Planning Inspectorate.

2.0 Ecological Context

2.1 This site has been subject to numerous ecological and biodiversity surveys over the past four years, including:

Date	Scope of Ecological Work Undertaken	Ecologist
November 2019	Preliminary Ecological Appraisal survey and report	BWB Ecology
Spring/ Summer 2020	Breeding birds survey + report	BWB Ecology
Spring/ Summer 2020	Bat activity surveys and report	BWB Ecology
Spring/ Summer 2020	Bat activity surveys and report	BWB Ecology
Spring 2020	Great Crested Newt surveys and report	BWB Ecology
Spring/ Summer 2020	Water vole surveys and report	BWB Ecology
August 2021	Update Water vole survey and report	Biora
August 2021	Update botanical walkover and invasive species surveys and report	Biora
August 2021	Habitat Conditions Assessment and Biodiversity Net Gain (BNG) Plan – including pre- and post-development metrics + recommendations.	Biora
November 2021	Biodiversity Enhancements Plan (in line with BNG Recommendations)	Biora
Spring 2022	National Vegetation Classification (NVC) survey and report	Biora
May 2023	Biodiversity Net Gain Off-Site Mitigation Plan (to achieve required 10% minimum BNG)	Biora

2.2 The extent of survey, reporting, mitigation, avoidance and compensation for ecology has been proportionate to the proposed development scheme, as set out in the relevant British Standards. We believe the issue of proportionality is particularly important in relation to residential planning application schemes. The British Standard states that:

> *"The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation*

measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate."[1]

2.3 The issue of proportionality should be first determined by the professional ecological consultant, and we are satisfied that the scope of ecological works recommended at this site has been proportionate and has been implemented in full by the client and design team.

2.4 It is our professional opinion that the extent of survey, reporting, mitigation, avoidance and compensation for ecology employed at this site has been in line with best practice methodologies, and fully conforms to the latest British Standards[2]. In our professional opinion, no further ecological/ biodiversity surveys are required at this site prior to determination of the submitted planning application.

3.0 Comments Received from Burnley Borough Council

3.1 We welcome the responses by both GMEU and the LPA confirming their acceptance of the detailed ecological and biodiversity data submitted to support this planning application to date. We also welcome their confirmation that they have no further requests for information - or opposition to - the proposed scheme from an ecological/ biodiversity perspective. We agree and believe that it meets all current legal and planning policy requirements.

3.2 The reason for deferral from the Full Council Meeting on 7th July 2023 was given as follows:

"'Defer the matter to the DC Committee until the full report of the over winter survey on flooding has been received and considered by the relevant experts on the flooding together with a further report on the ecological and climate change effect of the removal of peat and a further ecological survey relevant to the nesting of birds through the whole breeding season of protected species and clarification on whether 'lowland fens' habitat is available."

The following sections address each of these ecological issues separately.

3.3 Nesting Bird Surveys

3.3.1 The following bird surveys have been carried out at this site over recent years, with associated results, recommendations and outcomes:

[1] BS:42020 (2013) Biodiversity. Code of practice for planning and development, British Standards Institute

[2] BS:42020 (2013) Biodiversity. Code of practice for planning and development, British Standards Institute; and BS:8683 (2021) Process for designing and implementing biodiversity net gain, British Standards Institute.

Date	Scope of Works	By	Findings	Recommendations	Outcome/ Notes
November 2019	PEA survey and report	BWB Ecology	No breeding birds recorded on site (survey took place well outside optimal bird breeding season). Small number of bird species recorded on site. No Species of Principal Importance for the conservation of biodiversity in England[3] recorded.	Recommended 4 x breeding bird surveys April to June.	4 x breeding bird surveys conducted during the next optimal survey season, see below.
April to June 2020	4 x Breeding bird surveys and report	BWB Ecology	29 species recorded present (not necessarily breeding) on site across all four surveys. These included nine Species of Principal Importance present on site. Of these nine, only two Species of Principal Importance were confirmed as breeding or recorded as probably breeding: • Skylark (one pair); and • Reed bunting (three pairs).	Bird mitigation measures including replacement bird boxes throughout site Planning condition to protect all active birds' nests from disturbance during core bird breeding season.	Biora went on to recommend that specific habitats to be lost on the development site (ie marshy grassland) should be re-created at the Biodiversity Net Gain offsite Compensation site, which should also be as geographically close to the development site as possible.

3.3.2 In addition, further ecological surveys have been conducted on site since 2020 for Great crested newt, bat species, Water vole and National Vegetation Classification communities. Although these were not specific breeding bird surveys, they were conducted by professional ecologists trained in breeding bird survey and following best practice methodologies and, during each survey, any bird species noted on or close to this site were recorded. All recommendations made above are considered sufficiently robust to mitigate/ compensate for loss of habitat to all breeding bird species recorded during all ecological surveys at this site.

3.3.3 In terms of overwintering birds, ecological survey reports submitted have acknowledged that land at this site is suitable to some degree for some overwintering bird species, although overwintering by species associated with the nearest SPA designation was found to be unlikely (BWB, Preliminary Ecological Appraisal, 2019). Again, the loss of habitat suitable for overwintering birds is specifically addressed in Biora's Biodiversity Net Gain recommendations.

3.3.4 Although some habitat will necessarily be lost on site for breeding birds, a biodiversity scheme has been designed that creates adequate compensatory habitat for similar and other breeding birds. In addition Biora's Biodiversity Net Gain recommendations set out specific compensation measures for notable bird species of conservation concern.

[3] Species listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as Species of Principal Importance for the conservation of biodiversity in England

3.3.5 In our professional opinion there is sufficient alternative suitable habitat nearby, and new Biodiversity Net Gain Compensation habitats to be created will provide further opportunities, such that the favourable conservation status of bird species will not be affected, even at the local level, by the proposed development.

3.3.6 To this end we have no outstanding concerns around the conservation of bird species at this site and no further ecological surveys for breeding or overwintering birds are required at this site prior to determination of the proposed planning application.

3.3.7 In summary we welcome the Council's position within the Statement of Case (Section 7) that matters on further ecological surveys have been conceded and that we support the view of GMEU (paragraph 7.2.3) that:

> *"GMEU unambiguously states that further bird surveys are not necessary, and that the existing survey is still valid. Further and alternatively, GMEU's response is clear that even if a further bird survey indicated an increased bird interest on the site, the appropriate response would be for increased post-development mitigation which could be dealt with by way of a condition."*

3.4 Lowland Fen

3.4.1 The initial Preliminary Ecological Appraisal (PEA) survey by BWB in 2019 identified the majority of the Hollins Cross site as semi-improved grassland with occasional strips of marshy grassland, largely associated with the drainage ditches. Additional detailed floristic survey by BWB in 2020 identified grassland across the site with frequent rushes and occasional wetland species (subsequently confirmed by Biora around the ditches). Field survey for a Net Gain Assessment and Botanical Walkover and Invasive Species Check in 2021 by Biora identified the majority of the site as 'neutral grassland' with very small areas of dense scrub and standing open water.

3.4.2 Best-practice update desktop survey by Biora in 2022 included interrogation of the UK's Multi-Agency Geographic Information for the Countryside (MAGIC) map. The MAGIC report referenced an area within this site's boundaries mapped as 'Lowland Fen'. As this designation did not fit with professional ecologist field survey results gathered to date (neither BWB's nor Biora's), a detailed review was undertaken by Biora into the survey and evaluation work behind this designation. This review highlighted that:

- the survey which assigned the designation of Lowland fen to this area was an historic Phase 1 Habitat Survey. The date range provided for this survey was wide, covering the period 1978 to 1991;
- this survey had reported the designation of Lowland fen with 'Low Confidence in the Main Habitat Classification';
- the size of habitat recorded during this survey had been "less than the Minimum Mappable Unit" for designation as Lowland fen; and
- no species information had been provided for this designation.

3.4.3 In 2022 Biora conducted a detailed National Vegetation Classification (NVC) survey of this full site, following best-practice methodology and using MAVIS[4] software to obtain a best-fit classification. This survey clearly identified this area as MG9 grassland and confirmed that, in 2022, there was no habitat within the boundaries of this site which fit the designation for Lowland fen. Our professional ecological opinion of this discrepancy in the MAGiC data is that either:

- the original survey (between 1978 and 1991) was flawed; or
- natural drainage of the site, normal agricultural usage or climate change (or a combination of all three) have changed the nature of the habitat in this area over the past 32–45 years since the original survey.

3.4.4 The former explanation was found to be most likely, as close examination of this habitat type during NVC (or any other ecological) survey found no trace of relict species associated with Lowland fen.

3.4.5 To this end we can confirm that it is our professional opinion that there is no Lowland fen habitat at this site.

[4] Modular Analysis of Vegetation Information System

3.5 Removal of Peat

3.5.1 The shallow deposit of peat at this location is relict from the former (defunct) drainage system across the site and is not part of a peat active bog or any similar peat-generating habitat. To this end, the peat deposit does not represent a valuable biodiversity resource at this site. As part of the proposed redevelopment its organic content could be gainfully used to enhance the organic content of the retained soils on site. The carbon within this peat is relatively stable and would help to impart structure to the clay soils across the site.

3.5.2 The Council's query on peat was as follows:

> *"The Council requires satisfactory clarification that the removal of this peat will not have an unacceptable impact on climate change as well as clarification of the ecological impact of the removal of this peat. It should also be demonstrated that any negative impacts can be adequately mitigated. This would ensure compliance with policies NE1 and NE5 of the Local Plan".*

3.5.3 We note that Natural England's response to consultation requests for this planning application have not been made on a site-specific basis. The following information is intended to provide more clarity about the ecological value of peat deposits specifically at the Hollins Cross site.

<u>Nature and Extent of Peat Deposits On Site</u>

3.5.4 To clarify the potential impacts of the removal of this peat, the nature of the peat reserve should first be described. In their letter of 22nd September 2023 to Mr G Humphreys of Prospect Homes, Coopers (Chester) Ltd described the peat as follows:

> *"The ground investigations identified the localised area of peat close to the former watercourse position, describing the peat to be 0.9m to 1.0m thick, as either a clayey pseudo-fibrous peat, or amorphous peat with pockets of silt, typically of alluvial peat deposited from the watercourse (termed alluvium) which include variations in silt and clay content associated with the depositional environment. The peat was identified in one location to be beneath a 0.3m layer of natural clay, with topsoil overlying the peat in 2 of the 3 positions, indicative the materials were deposited and subsequently covered by natural materials and soil formation processes in the past."*
>
> *"The peat deposits in this case are indicative alluvium, defined by the British Geological Survey (bgs.ac.uk….2023) as "The unconsolidated detrital material deposited by a river, stream or other body of running water… Normally soft to firm compressible silty clay, but can contain layers of silt, sand, peat and basal gravel.". As indicated on the geological maps, the area of alluvium is not widespread, relating to the positions relatively close to the watercourse."*

3.5.5 Peat is a stable form of organic soil, defined by Intergovernmental Panel on Climate Change (IPCC) as containing a minimum of 12% organic carbon. Coopers concluded that the peat deposits are "*localised, small scale associated with post-glacial landscape drainage*", and were associated with the Whin Scar Clough, which was diverted over 130 years ago. The peat largely lies beneath a topsoil on this site and is no longer 'active' – i.e. the peat formation is disconnected from the plants and the hydrology responsible for its creation. It currently forms an isolated pocket around 30cm below topsoil in the north of this site.

3.5.6 It should be noted that, according to the International Union for the Conservation of Nature UK Committee Peatland Programme, Briefing Note No 1 (Lindsay, R., Birnie, R & Clough, J. 2014):

> *"There is no single formal definition of 'peat' and 'peatland', differing interest groups having differing definitions. Thus ecologists use a minimum peat depth of 30 cm while geological surveys may use 1m as the threshold."*

3.5.7 "Deep peat" is defined according to UK Forestry Standards (UKFS) - largely in relation to the impacts such a layer will have on forestry activity - as a peat (primarily organic) layer which exceeds 50cm. As such, the layer of peat at the Hollin Cross Site could be defined as 'deep' following this standard. In this instance, while the 'deep' peat layer might be significant to forestry where tree planting was proposed for this area, in ecological terms the

peat is no longer part of an 'active' peat-producing habitat, is very limited in extent and is largely buried beneath a topsoil, so has very limited significance for the site ecology.

Potential Impacts of Peat Removal on Carbon and Biodiversity

3.5.8 Peat represents a body of 'stable' (i.e. largely, non-biodegradable) organic material, the product of anaerobic biological breakdown of formerly living materials (mosses, ferns, rushes, reeds etc). Small pockets of buried peat will hold little significance for biodiversity as they are no longer 'active' peat – the primary biodiversity value of peatlands is in their importance as a store of carbon and a medium that - under the right conditions (temperature/hydrology/water chemistry etc) - can support habitats such as bog and fen that are rich in biodiversity and which can continue to sequester carbon. It should be noted that there is no bog or fen present on this site and that the pocket of buried peat at Hollins Cross is small and subsequently of reduced value.

3.5.9 While 'active' peat habitat is a rare habitat, the 'inactive' peat deposit at Hollins Cross has long since been disconnected from the unique combination of physical and biological process (habitat) that created it. The conditions for peat formation are very specific and, to restore an 'active' peat-producing habitat at this location, an extensive, lengthy and expensive procedure would be required. This would include:

- removal of the existing topsoil to re-expose the peat substrate;
- re-establishment of a favourable hydrological regime (re-diversion of the watercourse);
- introduction of appropriate peat-forming plant species; and
- avoidance/ filtration of any nutrients in the drainage system which might otherwise encourage more aggressive plants that could displace the peat-forming species.

3.5.10 In summary then, the very limited size and ecological value of the small, isolated 'inactive' peat deposit on site make such a complex restoration project disproportionate and unrealistic.

3.5.11 Peat deposits at the Hollin Cross Farm site lie beneath topsoils and contribute very little to the habitats growing within the topsoils, other than as a subsoil rooting-zone and as a store of water accessible to the deeper-rooting plants. However, as this layer is likely to be acidic (having been formed in anaerobic conditions) and is also likely to be still saturated anaerobic, accessibility to root systems will be very limited in this instance. In this case, the removal of peat on this site would have very limited impact on the current site ecology other than that associated with the disturbance created in its removal, which has already been addressed in the Biodiversity Net Gain analysis.

3.5.12 Finally, in response to Paragraphs 6.2.3 and 6.2.6 of the Council's Statement of Case, we can confirm that, for this site, borehole samples have been taken and interpreted.

3.5.13 In summary, we are confident that sufficient evidence has been made available to "*determine the impacts on peat"* and to "*enable an understanding of the integrity of the peat".* The results of this assessment are that the peat at this site is not restorable, and that the removal of the peat will not, in itself or in the context of the wider site, have a negative impact on this site's ecological value.

3.6 Conditions

3.6.1 Our team has reviewed the draft planning conditions (set out below) as agreed between the Appellant and Council, in respect of ecological matters. We consider them to be necessary; relevant to planning; relevant to the development to be permitted; enforceable; precise; and reasonable in all other respects:

- Draft Condition 25 - Updated Preliminary Ecological Survey:
  a. New and/or updated phase two surveys determined as being necessary through an update to the approved Preliminary Ecological Appraisal (prepared by BWB and dated Nov 2019) and Additional Ecological Surveys Report (prepared by BWB and dated October 2020); and

b. avoidance, compensation or mitigation measures provided for any new ecological value or constraint not identified in the original reports. Any additional mitigation shall be provided in accordance with the approved additional surveys.

- Draft Condition 26 - Reasonable Avoidance Measures Method Statement: No development shall commence until a method statement detailing the Reasonable Avoidance Measures (RAMs) to be adopted in order to avoid and/or minimize any unforeseen disturbance impacts on local hedgehog, brown hare and common toad populations during the course of the development for that phase has been submitted to and approved in writing by the Local Planning Authority. The development shall only be carried out in accordance with the RAMs detailed in the approved method statement.

- Draft Condition 27 – Ecological Enhancements – Bird Nesting and Bat Roosting Features and Hedgehog Gaps: Prior to first occupation of any dwelling, details showing the type, location and timescale for implementation of bird and bat boxes/bricks and hedgehog gaps on site as recommended in the approved Preliminary Ecology Appraisal (prepared by BWB and dated Nov 2019) shall be submitted to and approved in writing by the Local Planning Authority. The approved bird and bat boxes and hedgehog gaps shall then be carried out in strict accordance with the approved details and retained in situ in perpetuity.

- Draft Condition 28 – Protection of Nesting Birds: No demolition, site works or removals of trees, hedges or shrubs on the site shall take place between the 1st March and 31st August inclusive in any year unless a qualified ecologist has inspected the area no more than 24 hours prior to the works/removal and provides written confirmation to the Local Planning Authority that no nests or breeding birds will be affected by the development.

4.0 Comments Received from the Rule Six Party

4.1 We have had sight of the Rule Six Party's email dated 30th August 2023, and Statement of Case Version 1.1, and Version 2 received on 27th September 2023. On the basis of the comments raised at points 4a and 4b of their email, these matters are addressed within our comment above in respect of the reasons for deferral identified by the Council.

4.2 With regard to the following additional points raised in the Statement of Case (3.1.2.2), in reference to the retention pond being included in the biodiversity offset claim that wildlife will be attracted:

- 3.1.2.2.1. "*Wildlife will not flourish where kids and dogs have access"* – it is our experience that there will be limited disturbance by children and dogs where the habitat is unfavourable to movement, eg where the ground is wet and muddy, amongst tall rushes etc. This relates to the permanently wet part of the basin, and the planting scheme for the predominantly dry areas reflects the mix of uses proposed.

- 3.1.2.2.2 "*Any aquatic wildlife will die if the claim of the developer is correct that this Retention Pond / Basin is not wet all the time"* – on the contrary, many amphibians and aquatic invertebrates spend a substantial part of their lifecycle on land. Newts, for instance, are mainly terrestrial, but migrate to ponds in the spring/ early summer to breed, leaving the ponds subsequently. It is important for amphibians that ponds do dry out occasionally as this removes any fish that might have established, which could otherwise predate their eggs. Notwithstanding this, in order to enhance biodiversity to on site, the basin has been designed to have a permanently wet area to the eastern end and will not therefore dry out entirely. The majority of the basin will only hold water during flood events and will therefore be predominantly dry.

- 3.1.2.2.3 "*How can a Retention Pond/Basin be classed as Recreational and part of the Bio-diversity offset at the same time*' – recreational areas are often designed to provide – and succeed in providing - biodiversity and recreational opportunities at the same time. A management plan is to be secured via the Section 106 Agreement, which will ensure that the quality habitats is maintained to the standards accounted for within the Biodiversity Net Gain calculations.

5.0 Summary

5.1 We believe that we have adequately covered all areas of concern here and that the above information clarifies the position in terms of ecology and biodiversity at this site, satisfying specific deferral points previously set out. In summary we believe that all ecology matters raised by both the Council and the Rule Six party have now been appropriately addressed.

5.2 As stated above, we welcome the responses by both GMEU and the LPA confirming their acceptance of the detailed ecological and biodiversity data submitted to support this planning application to date. We also welcome their assertion that they have no further requests for information - or opposition to - the proposed scheme from an ecological/ biodiversity perspective. We agree and believe that it meets all current legal and planning policy requirements. In our professional opinion no further ecological/ biodiversity surveys are required at this site prior to determination of the submitted planning application.

5.3 Biodiversity Net Gain (BNG) has also been fully designed into the scheme well in advance of the legal requirement. The BNG scheme proposed for this site includes detailed offsite compensation measures designed to provide new habitat suitable to support a number of species, particularly breeding and overwintering birds, to achieve a 10% biodiversity uplift.

5.4 It is our professional opinion that for this proposed development, the client team has followed ecological and biodiversity best practice at every stage and built all ecological and biodiversity recommendations into the scheme throughout the design process. In particular, all ecologist recommendations for further surveys, avoidance, mitigation and/ or compensation have been followed in full and we have seen a clear following of the mitigation hierarch, as well as a clear evolution of the design scheme to accommodate biodiversity enhancements over these years.

6.0 Author

6.1 I have a PhD in plant/soil relations (edaphology) and am Chair of the British Standards Institute AW020 Topsoils, Turf and Other Growing Media Committee. I co-founded Biora 15 years ago and have been Technical Director since it began. I also have over 30 years' experience of work on reclamation sites and in habitat design as a dual-qualified landscape architect and ecologist.

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