[redacted]

12 January 2022

Dear [redacted]

Project Reference: 2021.1089 Site: S of Barugh Green Rd (MU1) Employment Appraisal: All Ecology information and BNG assessment 1.0

Wildscapes CIC Ltd have been appointed to provide an independent appraisal of the Ecological Information provided by Tetra Tech and associated documents. This document has been prepared by [redacted] Senior Ecologist ACIEEM FISC4, [redacted] MCIEEM Class 2 Bat licence (2016-24870-CLS-CLS) and [redacted] Ecology Manager/Principal Ecologist, MCIEEM Class 4 Bat licence (2018-37087-CLS-CLS) and Class 1 GCN survey Licence (2015-16847-CLS-CLS).

All appraisals are based on a paperwork exercise only, Wildscapes CIC Ltd have not conducted site visits to assess the veracity of the information provided within any of the independent reports. As such our appraisals are restricted to the information provided in backing documentation for the site. If there are gaps in the information provided these will be identified in the appraisal and where possible potential solutions recommended.

Table 1 Information used in this appraisal

Title	Type	Author	Date
Environmental Statement (ES) – Vol 1 Chapter 6 Fig 6.8 Landscape Masterplan [rev 06]	Plan	Gillespies	29/07/2021
Illustrative Masterplan P02	Plan	Bond Bryan	09/07/2021
Application 2 Site Boundary [P02]	Plan	Bond Bryan	21/05/2021
ES Vol 1 Chapter 7 Ecology	Report	Tetra Tech/Pegasus	July 2021
ES Vol 1 Figures 7.2a&b Phase 1 Habitat Plan	Plans	WYG/Tetra Tech	22/7/2021
ES Vol 1 Figure 7.3 Hedgerow Location Plan	Plan	WYG/Tetra Tech	11/12/2020
ES Vol 1 Figure 7.4 Bat Roost Assessment Plan	Plan	WYG/Tetra Tech	1/7/2021
ES Vol 2 Chapter 7 App. 7.1 Ecological Appraisal	Report	WYG/Tetra Tech	January 2021
ES Vol 2 Chapter 7 App. 7.3 Factual Bat Report	Report	WYG/Tetra Tech	January 2021
ES Vol 2 Chapter 7 App 7.4 Factual Breeding Bird Survey report	Report	WYG/Tetra Tech	January 2021
ES Vol 2 Chapter 7 App 7.5 Factual Badger and Hedgerow Survey Report	Report	WYG/Tetra Tech	January 2021
ES Vol 2 Chapter 7 App 7.6 Hedgerow assessment	Report	Tetra Tech	June 2021
Appendix D – badger data search	Summary	WYG/Tetra Tech	January 2021
866 Site UB2A Report	Report	Wildscapes	2014
Outline Biodiversity Enhancement and Management Plan	Report	Tetra Tech	June 2021
Barnsley West, Masterplan Framework MU1	Framework	Bond Bryan	15/11/19

Notes:
-WYG rebranded to Tetra Tech in January 2021; some reports are under one name and some are under the other.
- This is a Hybrid application. **The ecology surveys and 'Landscape Masterplan' cover the whole MU1 area as part of the Masterplan Framework. No detailed Landscape Masterplan is yet available for this outline application for the employment site.**
- Some of the content of this advice is the same as for 2021.1090 advice 1.0 as the applications share many documents as they are both hybrid applications within MU1.
-The timescale of future phases may mean that some ecology surveys need to be reviewed and potentially updated in line with best practice guidance.
-The Ecology reports refer to the 2019 update of the NPPF. Since the Ecology Reports were written, a July 2021 update to the NPPF has been published. Of particular significance is the amendment to para 175(d) of the NPPF 2019 (now para 180(d) of the NPPF 2021) – it now requires opportunities to incorporate biodiversity improvements in and around development, rather than simply making it optional, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Ecological Appraisal
Habitats

Masterplan Framework Requirements
The Barnsley West Masterplan Framework (MU1) states in 4.12 Ecology that the development will be expected to:

- Retain, buffer and manage the watercourse, grassland and woodland north-east of Hermit Lane;
- Retain, buffer and manage the species-rich hedgerows and boundary features. Where this is not possible transplant hedgerows including root balls and associated soils. A method statement for this should be provided and agreed prior to works commencing; and
- Create / retain wildlife corridors through/ across the site.

Development proposals will be justified against a Biodiversity Net Gain system in agreement with the Local Planning Authority which demonstrates a minimum 'net gain' of at least 10% following construction compared to the site's current ecological value.

Planning applications should be supported by preliminary ecology appraisals and where identified accompanied by detailed surveys. Ecological management plans will be required to demonstrate long term management and maintenance of existing, enhanced and proposed ecological features and habitats.

Section 4.8 Landscape requires that all the trees and groups of [trees] of high and moderate quality must be retained as part of the development unless it is clearly demonstrated and evidenced that this is not possible. Trees of low quality are also a constraint and must be fully considered as part of any proposal and retained where possible.

Section 4.9 Green Space and Recreation requires that the development provides appropriate and accessible public open space to meet local need.

The Green and Blue Infrastructure vision in Section 5.6 describes (among other elements) improving biodiversity by retaining and improving the woods and streams to the east of the site, and connecting them in to a proposed new wood called Gawber Forest that will surround the employment area to the

south. New ecology corridors with additional species-rich native hedgerows, meadows, trees and thickets will link open green spaces to the existing and new woodland. New 'meadow parks' will be created to provide water attenuation.

Biodiversity Net Gain

No Biodiversity Net Gain calculation has been provided. In order to demonstrate achievement of the Masterplan Framework Requirement for 10% Net Gain, and to comply with the recently revised NPPF guidance, a Biodiversity Net Gain calculation should be provided using DEFRA Metric 3.0, alongside an assessment of how net gain will be achieved for species. As this is a hybrid application it will be important to clearly demonstrate where net gains will be achieved across the site as a whole, and to put safeguards in place to avoid 'double counting' of gain as the development is phased in.

Baseline habitats

The baseline habitats for the Employment Area, identified within the Factual Ecological Appraisal, appear to be correct. Hedgerows have been surveyed following the correct methodology and we concur with the results of the assessment against the Hedgerow Regulations.

Proposed habitats

This application for the employment area covers full planning permission for the location of strategic landscaping and ecological areas, and outline planning permission for landscaping. Although we can comment on the suitability of the landscape masterplan in this area in general terms, Biodiversity Net Gain needs to be calculated using the DEFRA Metric 3.0 as stated above. As the loss/gain would be calculated on an outline proposal, a planning condition would be required stating the metric should be re-run with detailed landscape plans at the Reserved Matters stage to ensure the min 10% BNG policy requirement is being met.

<u>Outline Biodiversity and Ecological Management Plan</u>

The plan is unfinished, with very little detail regarding mitigation for species, and suggested habitat planting lists are missing. Section 1.6 Limitations says '*The information provided herein does not comprise detailed designs, specifications or landscaping strategies. It is assumed that subsequent detailed designs, specifications and /or strategies will be produced and provided to contractors with associated information and monitoring regimes. …it is recommended that this document is reviewed and updated as necessary, once further landscape details are provided for the scheme (either across the site or a plot-by-plot basis".* **This document should be completed.** It may make sense to do this in line with the BNG assessment. We have highlighted a couple of times in this advice the importance of monitoring for such a large development taking place over many years. This should be planned at an early stage in these documents.

<u>Woodland</u>

A small portion of the woodland south of Hermit Lane is included within the red line boundary for this application. This appears to be retained in the Landscape Masterplan. The Phase 1 map shows a stream flowing through this woodland; however, this is not shown on the Landscape Masterplan. **It should be confirmed whether this stream is to be retained.**

The ES states that 0.25ha of woodland will be lost, but it is unclear where this loss is located**,** although some looks to be outside of the red line boundary for this application. **We recommend additional information is provided on this 0.2ha and whether any of the loss is within the red line boundary.**

The Landscape Masterplan shows a proposed woodland planting mix that forms a wildlife corridor across the site from west to east and which forms the boundaries of the site to the east and south. This is presumably 'Gawber Forest' as mentioned in the Masterplan Framework Section 5.6. There is an

unexplained gap in the Landscape Masterplan between this new planting and the retained woodland to the northeast; **the plan for this area should be clarified.**

Part of the Forest is planted over the site of Important Hedgerows H17 and H28. If any parts of these hedgerows e.g. near the boundaries are not included in the cut and fill exercise, they could be left in situ and incorporated into the proposed planting.

Grassland

The existing grassland baseline within the proposed Employment Area is currently a mixture of improved and arable fields, with some areas of tall ruderals. Outside of the areas of proposed buildings and hard standing, the proposal will convert the grassland into areas of woodland (see previous section), rocky gorse/shrub, amenity grassland mix with landscape trees, permanent water bodies, wet meadows and wet scrub planting. There is an area to the east of the site where we are not clear on the proposed habitats – there are a number of light green rectangles surrounded by trees with red flashes which are not included in the key. **Proposals here should be clarified.**

The proposed habitats have the potential to form a valuable habitat mosaic. However, there will be a considerable loss of improved grassland/arable habitats, which will be largely replaced with hard standing and buildings or woodland and scrub. **This will be a net loss in grassland area habitats; this should be quantified in a Biodiversity Net Gain calculation.** We consider the retention or creation of at least some *non-amenity* species-diverse grassland to be important to support a range of invertebrates and other species. This ecological function of grassland could potentially be recreated by the introduction of extensive green roof areas on the proposed warehouse buildings.

Scattered mature trees

The Phase 1 report shows a number of hedgerows with trees and a few scattered trees currently present on site. Trees identified in the Factual Ecological Appraisal are stated to be almost entirely lost at the 'cut and fill' stage. However no map has been provided within the ecology section of the report cross-referencing any cut and fill plans with tree loss. **We are therefore unable to fully comment on the impact on trees within hedgerows or scattered mature trees until a plan showing the trees to be lost is cross referenced with the baseline Phase 1 map.** Please also see related comments in the bats section.

The proposed woodland planting across the site will compensate for the lost biomass of the trees, but some existing individual trees (particularly mature ash and oak) are likely to have features that support a range of species such as invertebrates, bats, hole-nesting birds etc. These features should be compensated for through provision of dead wood, bat and bird boxes. The Outline Biodiversity and Ecological Management Plan does not include any information on compensatory features for species; **this should be updated to illustrate how mitigation will take place.**

Hedgerows

Hedgerows have been assessed against the Ecological Criteria of the Hedgerow Regulations 1997 (Appendix 7.5). Planning permission will be required to remove those considered 'Important' under the regulations. Hedgerows have been identified as requiring removal in the 'cut and fill' exercise, however it is unclear which hedgerows (if any) will be retained; for example, the Landscape Masterplan shows a strip of woodland following the line of 'Important' hedgerow H17; is this hedgerow being retained, or lifted and replanted as part of the wildlife corridor? **We recommend that a plan showing the hedgerows to be lost during cut and fill is produced and cross referenced with the baseline Hedgerow map.**

Important hedgerows H23 and H28 will be lost to the development. There is a stated intention to transplant existing Important hedges elsewhere on the site within the Phase 1 residential development to the

northwest; however a detailed Hedgerow Translocation Method Statement has not yet been produced. **This method statement needs to be provided.**

General mitigation proposals within the Environmental Statement for loss of hedgerow habitat are good, particularly the aim to increase connectivity and to double the length of native species-rich hedgerow currently on site. **However, no new hedgerows appear to be proposed for the Employment Area. Native hedgerows could be planted as part of the 'arrival planting' around the roundabout, for example**.

Scrub

Very little scrub habitat is mapped within the site baseline; we consider that there will be adequate compensatory scrub provision within the post-development planting.

Drystone walls

A drystone wall has been mapped in the southwest of the site. Such walls can provide habitat for invertebrates, amphibians, small reptiles and small mammals. It is not clear if this wall is being retained.

Wildlife corridors

The Landscape Masterplan illustrates an extensive wildlife corridor along the eastern edge of the employment site, and the proposed 'Gawber Forest" will also create a strong corridor along the northern boundary of the employment site, with a smaller but still substantial corridor along the southern boundary. We consider that this gives good connectivity across the site and will increase the variety of habitats present. As there is likely to be considerable pressure on Public Open Space within the overall MU1 site when finished, due to the number of houses proposed, we consider it important to ensure that some elements of the green spaces are less accessible to people, to ensure that there are some areas where wildlife can thrive undisturbed. **Consideration should be given to amending the pathway network to exclude public access from some parts of the eastern edge** e.g. not having boardwalks across all parts of the ponds/wet meadows, with some edges prioritised for wildlife**.**

General

Two ponds are outlined in the centre of the employment area, more detail is required in order to make a judgement on their potential value for biodiversity.

No street trees or within-site planting is illustrated within the developed portion of the employment area. Landscaping within the development will need to be clarified as it will need to be included within Biodiversity Net Gain calculations.

Non-statutory designated sites – Local Wildlife Sites (ES 7.4.11-14 and 7.4.42-47 and 7.5.2-4)

We reviewed the potential impacts on Redbrook LWS and Wilthorpe Marsh and Canal LWS in our advice for 2021/1090 and highlighted concerns with potentially increased recreation pressures from large numbers of new residents. It is our view that additional pressures from the employment site is less of a concern but could be considered in the review of overall additional pressures.

Species

Bats and Birds

As we have already made detailed site-wide comments on bats and birds for 2021.1090, we refer to you to these as they are relevant for this application – these have been copied to appendix 1 at the end of this advice for ease of reference.

No plans for the installation of bat or bird boxes have been provided or discussed specifically for the Employment Area portion of the development. **We recommend information showing how these features**

have been considered should be provided e.g. a plan showing the location of bird/bat boxes, a document outlining what has been selected for where and why. Green roof habitat may also provide some compensation for birds.

For the employment site, if compensation bird habitat in the form of a green roof[1] could be considered.

Great crested newts, reptiles and badgers
We concur based on the information presented that great-crested newt, reptiles and badger are 'likely absent' from the Site.

We agree with the pre-cautionary recommendations in 7.5.35 of the Environmental Statement related to these species – these could be planning conditions.

This hybrid application has been subject to thorough ecological surveys, assessments and masterplanning. We have highlighted some areas which in our view require further information or clarification in order to meet policy requirements. This concludes our initial advice. Please contact us if you would like further information.

Yours sincerely

For and on behalf of Wildscapes

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[1] https://link.springer.com/chapter/10.1007/978-3-030-75929-2_2

Appendix 1 Detailed Comments on bats and birds

Bats

Methodology from Factual Bat Report

Desk top survey. The results of the data searches are presented in Section 3.1.1 but did not highlight the fact that a Leisler's bat roost was previously identified onsite - this is only apparent by looking at Figure 5 in the Appendix but is not mentioned in Table 6 or 7 or the accompanying text? **Can clarification be provided please on whether there is a recent record of a Leisler's bat roost on site (and if so whether this can be re-checked) or whether there is a mistake in Figure 5?**

The surveys were undertaken by experienced surveyors following good practice guidelines. The level of survey effort appears to be in line with good practice guidelines. However, see later comment about surveyor position not being provided.

It is noted that different bat detectors were used for the transect (Batlogger M detectors) and for the static monitoring (Anabat Express) elements of the bat activity surveys. The technology of an Anabat Express can result in an under-recording of bat activity, especially bats with weaker calls or those calling at lower frequencies[2]. The difference between the detectors used will likely have impacted the number and species of bat calls recorded between the transect and static monitoring element of the activity surveys. This was not mentioned as a potential bias.

Likewise, the interpretation of the results of the static activity surveys have not discuss activity in relation to sunset or activity across the different survey months. This information could indicate whether roosts are nearby or weather the site is more important for bats at different times of the year. This would affect the value of the site for bats in general. For example, the value of the site would likely be greater if a maternity roost was dependent on the site or if a species of high conservation value roosted close to the site.

Trees were assessed from the ground only. No potential roost feature (PRF) inspection surveys were carried out – instead one emergence and one re-entry per tree was carried out per moderate potential trees. Although this approach is in line with the Bat Conservation Trust Survey Guidelines as stated in the report – looking at the descriptive and photographic details of the trees in Appendix B and the levels of bat activity on-site, there is a risk that some trees (T10a-g/T14/T18) may have been undervalued from the ground level assessment alone and subject to no further survey. However, we have not assessed the trees in person so cannot be confident in this. **See later point that it has not been made clear enough which trees are going to be removed.** Hibernation suitability has been mentioned in the initial assessment of the trees and buildings but not clarified. **It is quite likely some of the PRF features in the trees are suitable for hibernating bats so we would recommend surveys and mitigation is designed to take account of this potential impact.**

The Bat Conservation Survey Guidelines were generally followed for the assessment, the emergence and re-entry surveys and the activity surveys. Twenty-two emergence and re-entry surveys were carried out

[2] Batlogger M is a broadband full spectrum bat detector that uses an omnidirectional microphone. The Anabat Express uses an omnidirectional microphone however uses frequency division to produce data files which can be analysed using Zero-Crossings Analysis. Zero crossing measures the time across a specified number of oscillations and produces an average frequency for each interval in the sound wave. Multiple frequency signals in zero-crossing can combine to produce a single signal. Unfortunately, multiple frequency signals are typical of real-world soundscapes. As such, this combination of signals can overpower weaker signals in the recording resulting in an under-recording the level of bat activity, especially from bats with weaker calls (if stronger signals are available in the soundscape to drown them out) or bats that produce calls at lower frequencies. Lower frequencies will produce fewer trend points using zero crossing as they have fewer oscillations, so the detail of the call can be missed and, as a result, not counted. Also, the start and end frequencies of calls, which use frequency-modulated sweeps (i.e., calls from Myotis bats), can be unreliable in zero-crossing, thus, limiting identification. Ref: R. Mark Brigham, Elisabeth K. V. Kalko, Gareth Jones, Stuart Parsons, Herman J. G. A. Limpens (2002) *Bat echolocation research tools and techniques and analysis – The properties of sound and bat detectors*.

by eight suitability qualified and experienced bat surveyors over the 2020 season. However there is no plan showing where the surveyors stood to survey the buildings and trees on what nights to allow us to review whether the coverage was adequate, although this is mitigated by the experience of the surveyors. No infra-red cameras were used to help avoid missing any later-emerging species. The limitations section does not mention the potential to have missed roost from late emerging species, especially in the trees with foliage which may have limited visibility and light conditions.

An exception to following the guidance was that no activity data was collected in April and May 2020 but the ecologists combined data from their own surveys in the 2018 season to help address this gap. **As WYG/Tetra Tech note in p13 of their report the bat report is valid until April 2022 at which point its validity will need to be reassessed**. They also note that the BCT guidelines say "*survey data should ideally be from the last survey season before a planning application is submitted".* With this in mind, it would have been preferable if additional activity surveys were carried out in April and May 2021 but as this has not been done, then the need for further surveys should be reassessed in March/April 2022 if work on the ground has not commenced. **As this is a hybrid application future phases may require re-survey as noted at the start of this advice.**

Results from Factual Bat Report (Vol 1 Chapter 7)
Seven buildings and 44 trees were considered to provide suitability for bats *(fig 7.4). "Buildings 1-8 (one low and one moderate suitability) are inside site parameter but not in phase 1 of the development and Buildings 9-17 (2 low, 2 moderate and 1 high)* ***just outside of the site parameter****."*

3.2.2 States "*no bats were seen to emerge from any trees or buildings during the surveys*". However this is misleading as Table 10 then details for B16 that a common pipistrelle was recorded entering and a potential soprano pipistrelle emergence was also noted on 21/7/20, followed by two potential common pipistrelle emergences from the same building on 15/9/20. However this is highlighted later in the report and in the summaries: "*Evidence of roosting bats was identified on Building 16 – up to three common pipistrelles, and a potential soprano pipistrelle emergence, were observed*."

ES – Vol1 Chapter 7 – Ecological Impact Assessment and recommendations - bats
Building 16 is just off site – and no mention is made of the potential bat roost(s) identified in Factual Bat Report (e.g. in 7.3.37). It is unclear from 7.3.17 whether these buildings were potentially going to be in the site boundary and this has changed? **As the site Parameter/Landscape Masterplan (which shows new landscaping right next to these buildings) extends very close to B16 – we would expect some assessment of potential likely impacts (especially during construction) and potential mitigation measures in this report.** For example, an assessment should be made on whether the construction and operational phases would negatively impact the feeding resource of the bats in B16 and if so what mitigation measures will be put in place.

We concur that the site offers **moderate suitability** to support foraging and commuting bats. This is backed up by the transect and static detector results. Due to barrier of the M1 to the west of the site, the site may be more importance locally (in the western section of the Barnsley District Parish) than the wider area (including the Parishes east of the M1).

7.3.42 States "*Bats on site were considered to be of* ***Local*** *Importance*" but there is little interpretation of the survey results in terms of which species have been recorded using the site including no reference to local data on bat populations in South Yorkshire which is readily available from the South Yorkshire Bat Group[3] and the Barnsley Biodiversity Trust LBAPS[4]. The potential bias of the data collected by the Anabats (highlighted earlier) has not been mentioned. **Local importance may be appropriate but we recommend that further justification should be provided.**

7.4.17 and 7.4.25-26 make it clear **that a number of trees (likely 18) would be lost as part of the development – but it would have been helpful to mark these on a map showing which of the moderate**

[3] www.sybatgroup.org.uk/bats-of-south-yorkshire
[4] www.barnsleybiodiversity.org.uk/mammals.html

potential trees are to be lost. Although none of the trees have been found to support roosting bats in the 2018/2020 surveys, we have already highlighted a potential risk around the trees and as it says in 7.4.27 "*bats can frequently move between roosts, particularly within trees, it is possible that bats could use trees within the Site on occasion*". **Therefore we agree with the mitigation measure in 7.5.21 (an ecologist should check all trees before felling) and this should be a planning condition.** This will help to mitigate the risks we identified earlier around the tree assessments.

We agree with the analysis in 7.4.28-30 that the substantial cut and fill exercise will result in probable **significant adverse effects** on foraging/commuting bats at a local level **over the construction period** that is likely to take **several years**, even with the recommended mitigation (which we support) 7.5.20-28. As discussed in the habits section there is not enough clarity at the moment on the retention of the existing green corridors, as opposed to reinstated. It is unclear how much of the existing green corridors will be retained (as per site policy) as opposed to reinstated. Although it may have been made available to a case officer, we have not seen a timetable outlining the construction and build plan for the whole MU1. Understanding this detail is important to assess whether the significant adverse effects are likely to be short-term only or longer term - see comments below.

We also concur that the proposed strategic green spaces and corridors across the site will likely support foraging/commuting bats once established. We agree with 7.4.55-57 that controlling the lighting of the new corridors is essential and recommend a specific planning condition requiring the early implementation of a **lighting strategy/plan** in line with the 'Bats and Artificial Lighting guidance'[5] which is not currently specified in 7.5.56.

Through the provision of external lighting contour plans and technical specifications, it must be clearly demonstrated that any lighting will not disturb or adversely affect the use of the site by bats and other species of wildlife. The strategy/plan should be informed and clearly demonstrated by the guidance above. All external lighting shall be installed in accordance with the specification and locations set out in the strategy and maintained as such. Any luminaries used should be of the LED type (with the LED lights, which emit a red light preferred), which provides a lower intensity of light. Lighting in the warm spectrum (preferably 2700Kelvin) should be adopted to reduce the blue/green or white light component with a wavelength exceeding 550nm. The lighting plan should also take into consideration the light spill from internal areas of the properties and commercial premises which could impact the proposed dark areas/wildlife corridors. Measures to reduce this light spill into this dark area should be adopted. Light spill from internal area can be achieved by using low light transmission glazing which should be used on windows adjacent to the tree-lined boundaries.

The report states (7.5.54-7.5.57) that in the operational phase *"With adoption of the above mitigation, there are considered to be **no significant effects** upon bats at a **local** level in the long-term. The confidence level of this is **near certain."*** **This is a very high level of confidence which we do not concur with**. As discussed on the previous page, due to the cut and fill proposals of the construction and timescales it is likely that the mitigation will take longer to achieve no significant effect, if it achieves it at all, as the loss of foraging habitat may cause (nearby off-site) roost abandonment during the construction period. The barriers effect of the M1 and the impact of the cut and fill could prevent the site being used at its current level in the operation phase. **Therefore, it is our view that there is insufficient information to say there will be no significant effects upon bats in the long term with near certainty.**

To help to mitigate the risks in the construction and operations phases (drawing on information on how bats use the site from the Factual Bat report and the proposed Landscape Masterplan), we recommend:

- **Retention of as many of the green corridors as possible (in line with site policy) with sufficient buffer zones and minimising construction impacts through a CEMP**
- **A lighting strategy for both construction and operational phases– see above for details.**

[5] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/

- M**onitoring of bats using the phase 1 development once it has been constructed and this data being used to inform future phases.**
- **A smaller N-S green corridor in the large block of potential housing** (which could be detailed in that phase of development) as the corridors along the road will be suboptimal for bats due to lighting and traffic, and
- **A smaller corridor through the proposed main business development at the south** (again which could be detailed in that phase of the development) as this area was highlighted as being important for bats.
- **That the bat boxes suggested are included in all phases of the development and that bat-friendly features (e.g. bat bricks and bat tiles) are integrated into the fabric of as many buildings as possible rather just relying on external boxes. It is our view that 50 boxes/features (proposed in 7.5.23) for a scheme of this size with its construction phase impacts is inadequate and we recommend a much higher number of features.** For Phase 1 alone 50 features may be appropriate and should be mapped on the detailed Phase 1 plans. It is worth noting that if features chosen will allow bats to access roof spaces then only bituminous roofing felt that does not contain polypropylene/polyethylene filaments should be used (e.g. bitumen felt type 1F)[6].

Birds

Methodology from the Factual Breeding Bird Survey Report (Vol 2 Chapter 7 Appendix 7.4)

In Section 1.1 it states that the report was prepared by a MCIEEM Senior Ecologist with nine years' experience of undertaking and reporting breeding bird surveys, but in Section 2.2.1 that it is stated that the field surveys were carried out by an ACIEEM Project Ecologist with four years' experience of undertaking bird surveys. It does say the Project Ecologist is experienced so we are not questioning their ability, it is just a little misleading the way the report is laid out.

Section 2.3 rightly points out that the limitations in the timing of the surveys. Four breeding bird surveys should be carried out monthly March-June, but due to late commissioning one survey was carried out in June 2020 and two were carried out in July 2020. In fact the majority of the surveys (2 out of 3) were actually carried out when a number of birds would already have finished their breeding cycles. The report considers that the data collected in 2018 *partially* negates this. The report says that this the data remains valid if an application is submitted before March 2022, but it would have been preferable to collect a full season's worth of data in the 2021 season due the limitations of the 2020 data. In Section 3.1.1 (page 11) the 2018 data are summarised: *"A total of 44 bird species were recorded during the suite of breeding bird surveys. Of these 44 species, a total of 11 BoCC Red List and seven BoCC Amber List species were recorded. Furthermore, a total of eight NERC Act species were recorded during the surveys".* The numbers are comparable to the 2020 data, but because of the 2020 survey limitations, it would have been helpful to see the 2018 species listed alongside the 2020 species in Table 5 to look at the datasets in total.

The 2020 results were "A total of 43 bird species were recorded. Of these, 33 species were considered to be breeding on site (or directly adjacent to the site boundaries) and ten were considered to be non-breeding. Of the 43 species recorded, eight were BoCC Red list species and seven were BoCC Amber list species. Furthermore, 11 of these species are listed as SPI under the NERC Act. There were no W&CA Schedule 1 listed birds observed during the breeding bird surveys; however, a single barn owl Tyto alba *flight was observed incidentally during a bat survey in October".*

We note that wintering birds have only been mentioned in passing; **we recommend that the site's suitability to support wintering birds should be explicitly assessed** so that its value to wintering birds can be determined. This could be through data analysis, wintering bird surveys or a combination of the two.

[6] https://www.bats.org.uk/advice/im-working-on-a-building-with-bats/things-to-consider-when-planning-works/roofing-membranes

From the ES 7.3.49 "*the bird assemblage on Site was considered to be of **Local** importance*" **but does not say how that significance has been concluded as there is no reference to local bird population information or the Barnsley BAP**. The CIEEM EcIA Guidelines[7] say (in 4.20) *"When determining the importance of a species population, contextual information about distribution and abundance is fundamental, including trends based on historical records. For example, a species could be considered particularly important if it is rare and its population is in decline."*

7.4.31-7.4.35 and 7.4.58-7.4.61 We concur that it is *"**probable** that there will be **significant adverse** effects upon birds at a **local** level"* during the construction phase. We concur that in the operational phase "*overall a change in the assemblage of birds would be expected, with an overall increase in garden/woodland edge and wetland bird species and a reduction in open farmland bird species onsite.*

However, the statement says that farmland bird species "*will be subject to greater stresses as a result of the habitat losses*." Paragraph 7.4.34 says it will take time for newly established habitats to be established - but it is clear that eventually all of the current farmland habitats will be lost to development. This is expanded on in 7.4.58 where the loss of territories for (S41 Species) lapwing, skylark, grey partridge and yellowhammer are detailed, although this appears to be taken from the 2020 data only (which was incomplete see earlier comments). The authors acknowledge that there will be "*a reduction in open farmland species onsite*" that skylark and lapwing "*may be pushed further from the Site in search of suitable/vacant breeding sites"* although conclude these impacts are not considered to be significant. However they have provided little justification for this conclusion nor analysis of where the farmland birds may go in the surrounding area.

The Authors conclude that "*it is considered probable that there would be **no significant negative impacts upon birds***" but they have provided little justification the conclusion of no significant negative impact. However we think the garden and farmland birds should be treated separately. We consider that although the proposed landscaping will increase habitats for common urban/woodland birds, **the impact of the loss of breeding habitat for farmland birds *is* likely be a significant for this suite of species**, particularly in the context of losses of farmland birds locally and nationally. With S41 Species of Principal Importance being specifically highlighted in Barnsley Local Plan Policy BI01**, we recommend that a more thorough analysis of the impacts on farmland birds is undertaken** (see limitations of data used to date), and consideration is given to creating 'skylark plots' or similar on adjacent farmland to help mitigate for habitat loss.

[7] https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-Sept-2019.pdf