TECHNICAL NOTE: RESPONSE TO ECOLOGY COMMENTS

Land to the south of Dearne Valley Parkway, Goldthorpe

Equites Newlands (Goldthorpe) Limited

Oct. 2024

1.0 INTRODUCTION

1.1 This technical note looks to address the comments from Barnsley Metropolitan Borough Council (BMBC) and RSPB as well as outstanding issues relating ecological constraints to the proposed development at Land south of Dearne Valley Parkway, Goldthorpe.

1.2 Outstanding ecological issues were discussed at a meeting between Equites Newlands, BMBC, RSPB, and FPCR on 22nd August 2024 and this note also provides information and evidence as requested at the time of the meeting and within previous correspondence from BMBC and RSPB.

2.0 BAT RECORDS

2.1 BMBC requested that bat records were procured from South Yorkshire Bat Group (SYBG) to inform the bat surveys and Ecological Impact Assessment. Records of bats within 2km of the Site were requested from SYBG in March 2024.

2.2 The data received from SYBG did not identify any bat roosts within the Site boundary or immediately adjacent. A limited number of activity records were noted to be associated with the Site dated from 2020 and included common and widespread species of bat in the vicinity of Carr Dike, though this did include one record of Leesler's bat *Nyctalus leisleri* which is less recorded in Northern England but is not uncommon in the Yorkshire region.

2.3 The data provided was not considered to change the assessment of impacts to local bat populations due to the proposed development.

3.0 BNG AND CONDITION ASSESSMENTS

3.1 An updated BNG assessment has been carried out and removed any habitats within the development plots in the calculation so as to only assess shared open space throughout the Site. Development plots will be assessed separately prior to development and as such there will be additional net gain in habitats provided at a later date. The updated report includes the BNG metric spreadsheet and details of baseline condition assessments.

4.0 ANCIENT WOODLAND

4.1 Ancient woodland is considered to be areas of woodland which that have persisted since 1600. Ancient woodlands develop a complex ecosystem particularly in association with soils which develop over hundreds of years to provide a unique ecological resource. There are a number of species which are associated with ancient woodland (indicator species) but many of which may also be found in woodlands and other habitats not considered to be ancient woodland.

4.2 There is no woodland within the Site listed within the Natural England published inventory of Ancient woodland.

4.3 A review of publicly accessible historical maps was undertaken to determine whether any areas of woodland within the Site may be ancient showed that the oldest map with sufficient detail

of the Site was the Ordnance Survey Six inch map of 1849. In maps older than 1849 detail is not sufficient to accurately show woodland blocks or whether they were present at the Site.

4.4 In the map of 1849no stands of woodland are present within the Site although field boundaries are shown with lines of trees in some places, and Carr Dike has lines of trees on the banks. In the map of 1849 it is evident that the areas both north and south of Carr Dike within the Site were in agricultural usage. The Ordnance Survey map of 1938 no longer showed lines of trees on the banks of Carr Dike or within field boundaries though they may have still been present.

4.5 Publicly available historical aerial imagery (Google Earth pro) shows that the existing stands of woodland bounding Carr Dike were either not present or were still immature in 2002, with signs of establishment seen only around 2008.

4.6 Overall, there is no indication that the Site supports areas which have been wooded since 1600. The Site has been subject to agricultural usage since at least 1849. Any ancient woodland that may have been present within the Site before this period would have been lost to agricultural expansion and the soils (which are the most important resource of ancient woodland and considered to be irreplaceable) have been impacted by intensive agricultural cultivation.

4.7 As such, it is considered that no ancient woodland is present at the Site.

5.0 RECREATIONAL ACCESS

5.1 BMBC expressed concerns over potential impacts from recreational access to the ecological mitigation areas in the north and west of the Site.

5.2 The areas are within the proposed commercial development with residential areas at distance and public rights of way located in the eastern area of the Site. As such, recreational access from the public would not be expected to be significant.

5.3 To reduce impacts additional fencing and signage will be provided to secure those areas and reduce access further. Fences will be provided on updated drawings and provision for fences has been included in an update to the Framework LEMP.

6.0 BREEDING BIRDS

6.1 BMBC have requested that off-site compensation is sought in relation to breeding skylarks at the Site and have recommended that up to 8 plots are provided.

6.2 FPCR produced a Technical Note on the Impacts of Birds due to the proposed development in June 2024. Within this document it was stated "…published evidence suggests "that for cereal crops 0.108 territories[1] per ha would be expected. Given the site is around 80ha 8.64 territories would be expected and given the number of individuals sighted it is considered that the Site supports a low number of skylark territories".

6.3 Since publication FPCR's ornithologist has further analysed the breeding bird survey data from 2022 and determined that the actual number of observed skylark territories observed was six (6no.).

[1] Donald, P. F. and Vickery, J. A. (2000) The importance of cereal fields to breeding and wintering Skylark Alauda arvensis in the UK. Pp. 140–150 in N. J. Aebischer, A. D. Evans, P. V. Grice, and J. A. Vickery, eds, Proceedings of the 1999 BOU Spring Conference: ecology and conservation of lowland farmland birds. Tring, UK: British Ornithologists' Union

6.4 FPCR acknowledges that the proposed northern flood alleviation area will be isolated by new woodland planting and the proposed development and as such would be unlikely to provide breeding habitat for skylark.

6.5 The western flood alleviation area however is around 5ha in area and although a hedgerow will be present on the western boundary, it will be in continuity with the agricultural landscape (arable cereal cultivation) to the west. There are no allocations for development of the land to the west and it is reasonable to assume that it would remain in agricultural land-use for the foreseeable future.

6.6 The western flood alleviation area will be managed as an area of tussocky neutral grassland which is likely to take on characteristics of marshy grassland due to being seasonally damp or inundated. In addition scrapes are proposed throughout this area. Skylarks are known to use wetland areas (according to BTO information bogs and moorland areas are more frequently used by skylark than arable areas during the breeding season, with marsh, reedbed, and coastal areas such as saltmarsh also being widely used). Given that the area will not be subject to intensive agricultural management the habitat would be available and suitable for breeding skylarks for a longer period through the year. As such, it is considered likely that skylarks will continue to utilise this area for breeding.

6.7 It is acknowledged that the western flood alleviation area is also designed to mitigate impacts to marsh harriers. FPCR acknowledge that marsh harriers could potentially displace breeding skylark or predate skylarks, however skylarks and marsh harriers were both observed during the 2020 surveys (undertaken by Middleton Bell), only skylark were observed in 2022 (during FPCR surveys), and it is considered that skylark and marsh harriers are co-existing in the area without significant impact upon local populations. Additionally, skylark is able to lay up to four clutches per year in suitable habitats (often limited by agricultural practices) and it is possible that skylarks would be able to breed successfully within the western habitat area at times when marsh harriers are not present.

6.8 Although the western habitat area will be available and suitable for skylarks the estimated number of territories for a 5ha area is 0.54, based on 0.108 territories per ha., though other studies indicate that 0.25-2 territories per ha might be expected. Therefore, it is considered possible that one or two breeding pairs might occupy the western habitat area in a season; however, this will not be presumed to be the case within the proposed compensation.

6.9 Off-site compensation has been agreed to be secured however the number of plots has yet to be determined. Given the above information it is considered that off-site compensation should be sought for a maximum of six (6no.) skylark plots based on actual observed territories. Any use of the western habitat area by skylarks will be considered to be an additional incidental beneficial effect.

6.10 As off-site compensation will be secured previous proposals for supplementary winter bird feeding and forage crops are no longer proposed and have been removed from the Framework LEMP.

7.0 MARSH HARRIERS

7.1 Marsh harriers have been known to use the Site in the past for hunting/foraging (observed in 2020 by Middleton Bell) particularly within the south-western area of the Site, and the area to the west along Carr Dike (situated off-site). During the 2022 season marsh harriers were not

encountered on-Site during the period April-June (during the likely nesting period) though surveys did not extend into July and August (likely fledging period). Marsh harriers have not been known to breed in the area of the Site and habitats within the Site are not considered to be suitable for marsh harrier breeding.

7.2 Although the total area of the proposed development Site is greater than 80ha, the areas predominantly used by marsh harriers are much less extensive (as shown on the Heat Map diagram in the Middleton Bell report 2020) and much of the Site would be considered to be unsuitable or sub-optimal for marsh harriers during periods of intensive cultivation.

7.3 It is considered that areas in the south-west of the Site adjacent to Carr Dike are not habitats that marsh harriers are dependent on during nesting but may be considered to be additional supportive habitats particularly during the post fledging period.

7.4 During the meeting on 22nd August 2024 BMBC reported that three pairs of marsh harriers were breeding at RSPB Old Moor in 2024. It is acknowledged that this is an increase in the local population for this species. Regionally (Yorkshire and Humber) there are a number of other breeding sites for marsh harriers, and at a national scale the number of breeding pairs has increased significantly in recent years (according to British Trust for Ornithology there are now around 600 breeding pairs and over 36% increase from 2008-2018) as well as a significant expansion in the range of marsh harriers. Although three breeding pairs is considered to be significant at the local and district/county level, at the regional (Yorkshire and Humber) and national level they are less significant.

7.5 A previous FPCR Technical Note looked at a Literature and Evidence Review related to marsh harrier ecology and mitigation (FPCR April 2024). This document provided evidence from published studies that breeding marsh harriers are most likely to hunt/forage in close proximity to the nest (particularly females), publications identified that the presence of wetland habitat within 0.5km of a nest is important, marsh harriers will hunt in arable environments but will selectively opt for more suitable environments if present, and that marsh harriers can be generalist hunters adapting to a range of habitats.

7.6 The wider landscape to the west, north and south of the Site is of similar land-use and similar, if not greater, suitability for marsh harrier hunting/foraging (particularly within the Dearne Valley Wetlands SSSI). No other development allocations are assigned to these areas and as such it is considered reasonable to assume that the wider landscape will remain in a similar land-use and condition for the foreseeable future. As such, it is also considered likely that marsh harriers will continue to have access to these habitats throughout the proposed development, during construction and operation.

7.7 Marsh harriers are a Schedule 1 species and as such offered additional protection during the breeding season to nests and chicks. However, the Site is not a marsh harrier breeding/nesting site and as such the habitats within are not afforded any additional protection.

7.8 Original proposals for marsh harrier mitigation considered in the ES10 Masterplan Allocation were much more modest than those being proposed for the proposed development. Previous discussions with RSPB and BMBC have informed the proposed mitigation and in general all parties have accepted the proposals to mitigate for loss of habitats.

7.9 Additional assessment was requested for the impacts to marsh harriers during the construction phase of the development.

7.10 It is acknowledged that construction will result in clearance of habitats in the western area of the Site and disturbance (movement of machinery, stockpiling of materials and arisings etc.) that would displace marsh harriers from the western area of the Site (if using the Site).

7.11 As summarised above, evidence from literature indicates that, during nesting, habitats within closer proximity to the nest are most important, during 2022 marsh harriers were not observed at the Site during the likely nesting period, and the wider landscape is considered to remain available to marsh harriers for hunting/foraging and nesting. As such, the construction of the proposed development is not considered to be a risk to nesting marsh harriers and not considered to be a significant risk to unsuccessful breeding.

7.12 Equites Newlands have produced phasing plans to show the stages of the proposed Site works. The programme would include the following:

- Phase 1 – Archaeology;
- Phase 2 – Clearance of selected areas of vegetation;
- Phase 3a – Creation of ecological mitigation areas (earthworks);
- Phase 3b – Creation of development plateaus (earthworks);
- Phase 4 – Creation of screening bunds (earthworks);
- Phase 5 – Creation of on-site roads and PRoW diversion;
- Phase 6 – Landscaping to perimeter;
- Phase 7 – Build out of development plots.

7.13 The grassland areas adjacent to Carr Dike will be retained (and enhanced during Phase 3a and Phase 6 as necessary) and will remain available to marsh harriers throughout construction and operation.

7.14 The ecological mitigation area in the west of the Site is designed to provide suitable marsh harrier habitat for the future and provide a corridor for marsh harriers to disperse to the north. The area is currently comprised primarily of intensively managed cultivated arable agricultural land. The agricultural land would be lost from use by marsh harriers during the construction and establishment of the proposed habitats.

7.15 Phase 3a construction of the ecological mitigation areas will take approximately one month to complete earthworks. Seeding/planting of the area is estimated to take 5 weeks to complete and would be undertaken in the first available planting season following completion of the earthworks. Although the grassland would not be mature, it would be assumed to have become established within 12 months of seeding/planting and would be available to marsh harriers.

7.16 Timing for commencement of the proposed works cannot be determined at this stage.

7.17 It is considered to be highly unlikely that the construction (whether it commenced at any time of year) would result in the failure of marsh harriers to breed at Old Moor, or to significantly impact upon breeding success, given the distance to the breeding areas and abundance of other suitable intervening habitats.

7.18 There may be some impact to foraging marsh harriers during the post fledging stage. Given that marsh harriers have increased at Old Moor is an indication of an abundance of suitable habitat in the wider landscape given that the majority of the Site is not optimal for marsh harrier

foraging and the relatively small area of more suitable habitat along Carr Dike would not be expected to support three breeding pairs in their entirety.

7.19 Overall, construction impacts to marsh harriers are considered to be limited to supportive habitats (not functionally dependent habitats) primarily within the post fledging period, does not include the entire development Site (primarily the area around Carr Dike in the south-west of the Site), would be temporary (during construction), and that there would continue to be similar and suitable habitat available for marsh harriers in the wider landscape during the construction period (not allocated and unlikely to change use during this period). As such, the impacts would be considered to be minor adverse at the county level (negligible at the regional or national level) and not considered to be significant.

8.0 PEDESTRIAN IMPROVEMENTS – DEARNE VALLEY PARKWAY (NORTHERN FOOTPATH)

8.1 Improvements are proposed to the southern side of Dearne Valley Parkway, directly adjacent to the north of the proposed development, these are to be undertaken by BMBC and will include the creation of a new sealed surface footpath and verge.

8.2 The proposed improvements do not encroach within the Red Line boundary of the Site, at the nearest point they are approximately 1.5m north of the boundary. However, earthworks associated with the proposals may impact upon the existing hedgerow and trees on the Site boundary which are to be retained.

8.3 Should any hedgerow shrubs or trees, or any individual trees be lost due to impacts of the improvements these would be required to be replaced to ensure that proposed Biodiversity Net Gain habitats and habitat conditions are achieved.

8.4 Should the proposed improvement work impact upon the trees and hedgerows there would be some small reduction in the BNG units for hedgerows and area habitats from the loss of retained trees. However, if they are replaced there would be no change. As such, these works are considered unlikely to significantly affect the overall BNG units and a recalculation of BNG assessment is not recommended at this stage.

9.0 PEDESTRIAN IMPROVEMENTS – PUBLIC RIGHT OF WAY (SOUTHERN FOOTPATH)

9.1 The public right of way (PRoW) that enters the south-east of the Site is proposed to be upgraded with a new footway, street furniture, and lighting. The lighting columns are proposed to be 4m in height.

9.2 The area in the vicinity of the southern footpath was shown to have some bat activity during previous surveys (FPCR Bat Report August 2023), but not on all survey occasions. Numbers of bats recorded were considered to be relatively low and mostly comprised less light sensitive widespread species (common/soprano pipistrelle), activity was mostly foraging but some commuting behaviour was noted.

9.3 Existing habitats in the vicinity of the PRoW were generally considered to be of low potential to support foraging or commuting bats (intensive agriculture) with the boundary scrub/woodland planting on the Aldi site being moderate potential. This area is considered to be "supporting

habitat" (as defined in BCT and ILP Guidance note 8/23 Bats and Artificial Lighting at Night 2023[2]).

9.4 The existing vegetation (scrub) on the Aldi site is approximately 4-5m high. Proposed habitats As such, the vegetation would screen any additional light sources and the inclusion of 4m lighting columns should not significantly impact any areas outside of the Site to the north/north-east.

9.5 To minimise impacts to bats the following is recommended as per the BCT/ILP Guidance:

- LED luminaries are to be used;
- Warm white light source (2700 kelvin or lower);
- Peak wavelength >500nm;
- Focus light onto the footpath. Design of luminary (or use of cowls if necessary) to cut off light spill over the boundary or onto adjacent retained/created habitats;
- Luminaries to have negligible upward light spill and mounted horizontally with no upward tilt.

9.6 Overall, given the previous survey information, habitats present, and incorporation of lighting specifications to mitigate impacts the residual impact to local bat populations is not considered to be significant, and minor adverse at the local level at most.

10.0 CEMP

10.1 In correspondence dated 24th August 2024 BMBC requested clarification or changes to a number of areas of the Construction Environment Management Plan (CEMP) in relation to ecological features. These comments have now been addressed and an updated CEMP will be provided.

10.2 The following responses and changes have been provided:

- A section on pollution prevention including relevant best practice and guidance is already present within the CEMP and considered to be sufficient. No further changes have been made to provide additional measures for pollution prevention.
- Measures to allow for newly created landscape/habitat creation to be temporarily fenced for protection have been added to the CEMP.
- Further clarity has been provided to state that a suitably qualified/experienced ECoW will be appointed and will attend the Site at key stages if necessary and contacted for advice where required. It is not feasible to have an ECoW present at all times during construction.
- Otter and water vole are already covered by measures proposed in the CEMP for mammals and include a pre-commencement check for these species and measures for prevent any small mammals becoming entrapped within excavations.
- Bats are already included in the CEMP. Additional measures to include pre-commencement aerial assessment of two trees previously assessed with features of

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

moderate roost potential have been included given that time since survey requires further consideration of these trees.

- General measures for common/widespread amphibians will be added to CEMP.
- Some general measures for harvest mouse will be included in CEMP.
- Timing of works for marsh harriers has not been included as this cannot be determined at this stage.

11.0 FRAMEWORK LEMP

11.1 In correspondence dated 24th August 2024 BMBC requested clarification or changes to a number of areas of the Framework LEMP in relation to ecological features. These comments have now been addressed and an updated LEMP will be provided.

11.2 The following responses and changes have been provided:

- Timing of mowing grasslands amended to late September to avoid post fledged marsh harriers.
- Further specification and management prescriptions requested for tussocky grassland and conditions for small mammals. Additional inclusion of general specification of tussock meadow mix for the edges of wet grassland to provide a transitional zone between wet and dry areas. Wet grassland mixes already include some tussock forming species. There will be some natural succession into tussocky grassland in wet areas given the species in the mixes and likely to colonise, as well as the topography with scrapes and undulations from ground works, and over time as mammals colonise, they will also preferentially select more palatable grasses over tussocky species. Further specific detail can be provided in a more detailed HMMP document at a later stage or conditioned.
- Water requested to persist in features into summer to support breeding wildfowl for marsh harriers. Marsh harriers are already using the Site and there are limited water features. Carr Dike and the corridor will be retained. Proposed pond will remain wet in summer. Scrapes are not intended to be permanently wet. There will be opportunities for a range of fauna to use the habitat creation areas which may be marsh harrier prey, not just wild fowl. No action taken on this request.
- If required a hydrological study will be conducted by the drainage engineer for the purposes of creating the proposed ponds within the Site. However, ponds and drainage features will be engineered to hold water and therefore may not require any study. Hydrological study is not considered to be required for scrapes as they are not intended to permanently hold water.
- Ponds and other drainage features will be designed by a drainage engineer to hold water. Scrapes are not intended to permanently hold water. Plans will be provided for ponds and ditches by the drainage engineer.
- Soil testing is requested by BMBC. Acknowledge that soil testing is now becoming more standard to determine whether conditions are optimal for creation of certain habitats and conditions. The habitat creation areas will be subject to soil stripping and in the

flood basins this will include topsoil and subsoils. Soils will be used elsewhere on site in the development of site levels and development plateaus where appropriate. This will reduce nutrient load and make the success of the proposed habitats more likely. This has been included in the LEMP and soil testing prescribed prior to habitat creation to determine if any other measures would be required prior to planting/seeding.

- LEMP amended to state that ecologist will undertake monitoring against BNG condition targets.
- LEMP amended to state bat and bird boxes and willow tit enhancements will be checked every 5 years.
- Amended LEMP to include removal of tree guards.
- Use of green hay has been considered but will not be used. Recent training and discussions with RSPB habitat management team informed FPCR that green hay is usually only successfully used in a very short time period (must be laid on-site within 1-2 days of cut) and as such needs to be from a very local source and timing of cuts has to synchronize perfectly. Given the size of the site and required habitats it is considered unlikely that the logistics could be achieved to use green hay.
- The western boundary will not have any tree planting, but a hedgerow is proposed. Hedgerows are a part of the existing Site and wider landscape and considered unlikely to deter marsh harriers. Hedgerows have been said to be used opportunistically by some marsh harriers as ambush features during hunting. The hedgerows will be appropriately managed so as not to grow too high.
- LEMP includes general details of responsibilities. At this stage it is not possible to determine what company might be contracted for long term management. This can be further explored at a later stage and within a more detailed HMMP document.
- Supplementary winter bird feeding has been removed from the LEMP given that off-site compensation will be secured for farmland birds.
- Heat map is not included in the LEMP. The heat map was previously overlain with proposals but made the map difficult to interpret therefore not updated.
- Short paragraph has been added to LEMP to include fencing provided to deter public access of habitat creation areas in north and west of Site.

FPCR Environment and Design Ltd
Registered Office: Lockington Hall, Lockington, Derby DE74 2RH
Company No. 07128076. [T] 01509 672772 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk