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LONGFORD PARK, BANKSIDE
BANBURY

**Ecological Appraisal
(Canal Basin)**

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1. INTRODUCTION

1.1. Background & Proposals

- 1.1.1. A planning application was submitted to Cherwell District Council (Ref:05/01337/OUT) in July 2005 for the development of a large area of land to the east of Bankside, Banbury to provide new residential homes and associated facilities including a school and playing fields. The application was supported by an Environmental Statement (ES), which included an Ecological Impact Assessment (EclA).
- 1.1.2. Outline planning permission for the above development was granted by Cherwell District Council in September 2009.
- 1.1.3. Aspect Ecology were commissioned by Barratt Homes, Bovis Homes and Taylor Wimpey in 2013 to undertake an ecological assessment in respect of a number of fields located to the east of Oxford Road. The findings of which have been reported in Aspect Ecology's reports entitled 'Longford Park, Bankside Banbury – Ecological Assessment: Phase 1 – May 2013' and 'Longford Park, Bankside Banbury – Ecological Assessment: Spine Road Application – May 2014'.
- 1.1.4. Aspect Ecology has been subsequently commissioned by Barratt Homes, Bovis Homes and Taylor Wimpey in July 2014 to undertake an ecological assessment in respect of the land which makes up the 'Canal Basin' area of the development, hereafter referred to as 'the site' (centred at grid reference SP 469 391). The proposals are for the creation of a 30 berth marina with associated car parking and landscaping.

1.2. Site Characteristics

- 1.2.1. The site is situated in a semi-rural context and is bound to the north and west by grassland, to the east by the Oxford Canal and to the south by a hedgerow (see Plan 3266/ECO1). The site itself comprises improved grassland.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site as a whole. The importance of the habitats and species present is evaluated. Where necessary, mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and where appropriate, opportunities for ecological enhancement are proposed with reference to local Biodiversity Action Plans (BAPs).

2. SURVEY AND EVALUATION METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three main areas: a desktop study, habitat survey, and faunal survey. These are discussed in more detail below.

2.2. Desktop Study

2.2.1. The desk study undertaken for the 2005 ES and the desk studies undertaken by Aspect Ecology in 2013 were reviewed. The following organisations were contacted, English Nature, English Nature (Invertebrate Site Register), Environment Agency, Berkshire Buckinghamshire and Oxford Wildlife Trust, Northamptonshire Wildlife Trust, The Thames Valley Environmental Records Centre, Banbury Ornithological Society Bird Recorder, The Royal Society of the Protection of Birds – Central England Office, Oxfordshire Bat Group, Oxfordshire Badger Group and Oxfordshire Amphibian and Reptile Recorder.

2.2.2. Information on statutory designated sites was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, which utilises data provided by Natural England.

2.3. Habitat Survey

2.3.1. The site was surveyed by Aspect Ecology in July 2014 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats present.

2.3.2. The site was surveyed based on Phase 1 Habitat Survey methodology¹, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal² to record details on the actual or potential presence of any notable or protected species or habitats.

2.3.3. Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

2.3.4. All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. The survey work was conducted within the accepted survey season, and it is therefore considered that a satisfactory survey and robust assessment of the habitats present have been undertaken.

¹ Joint Nature Conservation Committee (2010) *“Handbook for Phase 1 habitat survey: A technique for environmental audit.”*

² Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) *“Guidelines for Preliminary Ecological Appraisal.”*

2.4. Faunal Surveys

- 2.4.1. General faunal activity, such as mammals or birds observed visually or by call during the course of the survey was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species.

2.5. Principles of Ecological Evaluation

- 2.5.1. The evaluation of ecological features and resources should be based on sound professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described in 'Guidelines for Ecological Impact Assessment in the United Kingdom' published by the Institute of Ecology and Environmental Management (IEEM), 2006. In evaluating ecological features and resources the following key factors are taken into account:

Geographic Frame of Reference

- 2.5.2. The value of an ecological feature or resource is determined within a defined geographical context using the following frame of reference:

- International
- National
- Regional
- County (or Metropolitan)
- District (or Unitary Authority, City or Borough)
- Local (or Parish)
- At the Site level only

- 2.5.3. Within this frame of reference, certain sites may carry a statutory ecological designation, e.g. Special Area of Conservation (SAC) for internationally important sites or Site of Special Scientific Interest (SSSI) for sites of national importance.

- 2.5.4. Sites of more localised nature conservation importance do not receive statutory protection but may be designated by Local Planning Authorities or other bodies, e.g. Wildlife Trusts. Such non-statutory designations or "Local Sites"³ include County Wildlife Sites (CWSs) and Sites of Nature Conservation Interest (SNCIs), for example.

Biodiversity Value

Habitats

- 2.5.5. In certain cases, the value of a habitat can be measured against known selection criteria, e.g. SAC selection criteria, "Guidelines for the selection of biological SSSIs" and the Hedgerows Regulations 1997. However, for the majority of commonly encountered sites, the most relevant habitat evaluation will be at a more localised level and based on relevant factors such as antiquity, size, species-diversity, potential, naturalness, rarity, fragility and typicalness (Ratcliffe, 1977). The ability to restore or re-create the habitat can also be an important consideration, for example in the case of ancient woodland.

³ DEFRA (2006) "Local Sites – Guidance on their Identification, Selection and Management"

- 2.5.6. Regard should also be given to habitats listed as priorities for conservation in accordance with Section 41 of the NERC Act, 2006, so called “Priority Habitats”, as the likely effect of a development on such habitats is a potential material consideration within the planning process. Certain habitats may also be listed within more regionally or locally specific BAPs, albeit the listing of a particular habitat under a BAP does not in itself imply any specific level of importance.

Species

- 2.5.7. The assessment of the value of a species is based on factors including distribution, status, historical trends, population size and rarity. With respect to rarity, this can apply across the geographic frame of reference and particular regard is given to populations where the UK holds a large or significant proportion of the international population of a species.
- 2.5.8. For certain species groups, e.g. waterfowl, there are established criteria that can be used for defining nationally and internationally important populations.
- 2.5.9. Regard should also be given to species listed as priorities for conservation in accordance with Section 41 of the NERC Act 2006, so called “Priority Species”. Certain species may also be listed within more regionally or locally specific BAPs, albeit as with habitats the listing of a particular species under a BAP does not in itself imply any specific level of importance.

Secondary or Supporting Value

- 2.5.10. Some habitats or features that are of no intrinsic biodiversity value may nonetheless perform an ecological function, e.g. as a buffer. In addition, certain features of the landscape which by virtue of their linear or continuous nature (e.g. rivers) or their function as “stepping stones” (e.g. small woods) may be of value for the migration, dispersal and genetic exchange of wild species.

Other Value

- 2.5.11. Other tertiary factors may also be relevant in evaluating the value of a particular ecological receptor including social and economic factors.

2.6. The Five Point Approach

- 2.6.1. The National Planning Policy Framework (NPPF)⁴ describes the Government’s national policies on the protection of biodiversity [and geological] conservation through the planning system. NPPF emphasises the need for planning authorities to ensure that the potential effects of planning decisions on biodiversity conservation are fully considered. A five-point best practice approach^{5,6,7} to the assessment of such effects within the development control process is recommended:

⁴ Department for Communities and Local Government (2012) “*National Planning Policy Framework*”

⁵ Royal Town Planning Institute (1999) “*Planning for Biodiversity – Good Practice Guide*”

⁶ ODPM (2006) “*Planning for Biodiversity and Geological Conservation – A Guide to Good Practice*”

⁷ PAS 2010 “*Planning to Halt the Loss of Biodiversity, Biodiversity Conservation Standards for Planning in the United Kingdom – Code of Practice.*”

1. **Information** – gathering a sufficient evidence base on which to make sound planning decisions
 2. **Avoidance** – adverse effects on habitats and species should be avoided where possible
 3. **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects
 4. **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm
 5. **New benefits** – many planning decisions present the opportunity to deliver enhancements for habitats or species
- 2.6.2. The assessment of ecological effects set out within this report are based on the above five-point approach, where appropriate.
- 2.7. **Survey Constraints/Limitations**
- 2.7.1. No significant constraints or limitations to the survey were encountered.

3. ECOLOGICAL DESIGNATIONS

3.1. Statutory Designations

3.1.1. The nearest statutory designation is Adderbury Lakes Local Nature Reserve (LNR), located approximately 3.6km to the south-east of the site. The next nearest statutory designation is Neithrop Fields Cutting Site of Special Scientific Interest (SSSI), located approximately 3.6km to the north-west of the site, albeit it is designated for geological interest and is not therefore considered further within this report.

3.1.2. All statutory designations in the local area are well separated from the site by existing development and farmland, and will not therefore be affected by the proposals.

3.2. Non-statutory Designations

3.2.1. No non-statutory designations that occur in Oxfordshire are present within 5km of the site. No information was obtained regarding non-statutory designations in Northamptonshire, however the boundary with Northamptonshire lies along the M40 corridor to the east of the site. Therefore, any non-statutory designations that do occur within Northamptonshire are well separated from the site by the M40 and are unlikely to be affected.

3.2.2. All non-statutory designations in the local area are therefore well removed and separated from the site, and will not be affected by the proposals.

Name	Designation	Brief Description	Approximate Distance & Direction
Statutory Designations			
Adderbury Lakes	LNR	Two interlinked lakes with small areas of botanically rich surrounding woodland, supporting a wider diversity of birds, mammals and invertebrates.	3.6km SE
Neithrop Fields Cutting	SSSI	Designated for geological reasons	3.6km NW
Farthinghoe	LNR	A former landfill site now supporting a mosaic of botanically rich habitats including grassland, developing woodland and ponds.	4.6km NE
Non-statutory Designations			
		No non-statutory ecological designations located within 5km of the site in Oxfordshire.	

Table 1: Statutory and Non-Statutory Designations situated within the local vicinity

3.3. Summary

3.3.1. The site itself is not subject to any statutory or non-statutory nature conservation designation. All such designations in the local area are well separated from the site and will not therefore be affected by the proposals.

4. HABITATS, ECOLOGICAL FEATURES AND EVALUATION

4.1. The following main habitats/features were identified at and adjacent to the site:

- Improved Grassland
- Rough Grassland, Herb and Tall Ruderal Margin
- Canal
- Hedgerow
- Ditch

4.2. The locations of these habitat types and features are represented on Plan 3266/ECO3, and the composition and structure of each habitat is summarised below, with an account of the representative plant species present where appropriate. In addition, the habitats are evaluated in terms of ecological value and any potential effects arising from the proposals assessed.

4.3. Improved Grassland

Description of the Habitat

4.3.1. The majority of the site comprises part of a single improved grassland field (see Photograph 1). At the time of survey the grassland had been recently cut and the arisings had been left to dry and were being collected into bails. The grassland is dominated by common grass species such as Perennial Rye-grass *Lolium perenne*, Yorkshire-fog *Holcus lanatus*, Cock's-foot *Dactylis glomerata* and False Oat-grass *Arrhenatherum elatius*. A relatively low number of herb and tall ruderal species are also present including, White Clover *Trifolium repens* and Greater Plantain *Plantago major*. A small area of grassland located at the east of the site, at the lowest point of the wider field, has a different composition to the majority of the grassland field. This area comprised a high proportion of dry and cracked bare earth and is probably liable to inundation during periods of high rainfall. The species present in this area included frequent Scentless Mayweed *Tripleurospermum inodorum* as well as White Clover, Toad Rush *Juncus bufonius*, Redshank *Persicaria maculosa*, Greater Plantain, Prickly Sow-thistle *Sonchus asper*, Knotgrass *Polygonum aviculare*, Shepherd's-purse *Capsella bursa-pastoris*, *Crassula* sp., Bent *Agrostis* sp. and Timothy *Phleum pratense*. A farm track runs along the southern boundary of the site. The track is approximately 3m wide and the areas exposed to regular farm vehicle movements comprise bare earth and hard-core. The central section of the track comprises Perennial Rye-grass, Meadow-grass *Poa* sp., Scentless Mayweed, Greater Plantain and White Clover.

Evaluation

4.3.2. The improved grassland appears to receive relatively intensive agricultural management and exhibits a limited species diversity. In considering Natural England's FEP Manual guidance⁸, based on the species abundance and diversity, the grassland is considered to be 'species-poor' improved

⁸ Based on guidance in: Natural England (March 2010). "Higher Level Stewardship Farm Environment Plan (FEP) Manual - Third Edition"

grassland. Under the same guidance, and the definition in the UK Biodiversity Action Plan – Priority Habitat Descriptions⁹, the grassland does not qualify as a Priority Habitat. This habitat is therefore considered to be of no more than low ecological value at the local level. The loss of this habitat to the proposals is therefore considered to be of negligible ecological significance and will be more than offset by the extensive new native wildflower grassland proposed within the adjacent Community Park.

4.4. **Rough Grassland, Herb and Tall Ruderal Margin**

Description of the Habitat

- 4.4.1. A margin of rough grassland, herb and tall ruderal forms the eastern boundary of the site between the improved grassland and the canal (see Photograph 2). The margin varies in width from approximately 3m-9m. The proportion of grass, herb and tall ruderal species varies throughout its length, with some patches dominated by grass species with a minimal presence of tall ruderal and other areas *vice versa*. A low abundance and diversity of herbs is present throughout the margin. The most frequently occurring species are False Oat-grass and Common Nettle *Urtica dioica*, other species include Cock's-foot, Wild Oat *Avena fatua*, Cow Parsley *Anthriscus sylvestris*, Creeping Thistle *Cirsium arvense*, Smooth Sow-thistle *Sonchus oleraceus*, Common Ragwort *Senecio jacobaea*, Hogweed *Heracleum sphondylium*, Rosebay Willowherb *Chamerion angustifolium*, Ivy *Hedera helix*, Perforate St John's-wort *Hypericum perforatum*, White Campion *Silene latifolia*, Bindweed *Convolvulus* sp., Cleavers *Galium aparine*, Broad-leaved Dock *Rumex obtusifolius*, Ribwort Plantain *Plantago lanceolata*, Wood Avens *Geum urbanum*, Smooth Hawk's-beard *Crepis capillaris*, Hedge Woundwort *Stachys sylvatica*, Ground-ivy *Glechoma hederacea*, Cut-leaved Crane's-bill *Geranium dissectum* and Bittersweet *Solanum dulcamara*.

Evaluation

- 4.4.2. The margin habitat appears to receive relatively less intensive management than the adjacent improved grassland and therefore exhibits a greater species diversity. However, in considering Natural England's FEP Manual guidance⁸, based on the species abundance, diversity and lack of a sufficient number of indicator species, the habitat is considered to be species-poor semi-improved grassland. Under the same guidance, and the definition in the UK Biodiversity Action Plan – Priority Habitat Descriptions, the grassland does not qualify as a Priority Habitat. This habitat is therefore considered to be of no more than low ecological value at the local level. The majority of the loss of this habitat to the proposals will be temporary with only a small section to be permanently lost. The effect of the proposals on this habitat is therefore considered to be of negligible ecological significance and will be more than offset by the extensive wildflower grassland creation within the adjacent Community Park.

⁹ UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) 2008. (Updated 2011)

4.5. Canal

Description of the Habitat

- 4.5.1. A short stretch of the Oxford Canal is situated adjacent to the eastern boundary of the site (see Photograph 3). The channel is straight and uniform in width (estimated to be approximately 12m wide) and depth (estimated to be approximately 2m deep). The majority of the length of the bank is composed of a relatively steep earth slope. The base substrate of the channel could not be determined given the high turbidity of the water, however this in itself would suggest that the base substrate is likely to be composed of silt for the most part. The flow rate at the time of survey was negligible.
- 4.5.2. The majority of the channel is open and not subject to shading effects of nearby vegetation, however this stretch of the Canal appears to be well used by barges, and thus the coverage of submerged and emergent aquatic vegetation is greatly limited by their passage.
- 4.5.3. A narrow strip of emergent and marginal plants was recorded fringing the canal which includes Common Reed *Phragmites australis*, Hard Rush *Juncus inflexus*, Water Dock *Rumex hydrolapathum*, Soft-rush *Juncus effusus*, Sedges *Carex* spp., Reed Canary-grass *Phalaris arundinacea*, Water Mint *Mentha aquatica* and Meadowsweet *Filipendula ulmaria*.

Evaluation

- 4.5.4. The stretch of canal adjacent to the site is subject to relatively heavy human boat traffic, and as such the aquatic/emergent vegetation is relatively limited in extent and diversity. Accordingly, the stretch of canal adjacent to the site is considered to be of no more than low ecological value in the local context, although it does form part of a larger habitat of greater ecological value.
- 4.5.5. The majority of the marginal habitat associated with the western side of the canal bank will be lost to the proposals. However, it will be replaced by a habitat of enhanced ecological value (see Section 6). In any event, the effect of the proposals on the canal will be very minimal and temporary, and adjoining sections of the canal will be fully protected during the construction period under the recommendations outlined below.

Recommendation

- 4.5.6. There is a possibility that the adjacent canal could suffer indirect adverse effects in terms of pollution and changes in hydrology, in the event that safeguards are not implemented to protect it during the site development process. As such, best management practice will be followed in accordance with the advice issued by the Environment Agency in their Pollution Prevention Guidelines (PPG)¹⁰ or relevant updated documents, which will essentially reduce potential pollution impacts to nil. Of particular relevance are PPG 1: General guide to the prevention of pollution, PPG 5: Works and maintenance in or near water, PPG 6: Working at construction and demolition sites, PPG 7: Refuelling facilities, PPG 13: Vehicle washing and cleaning, and PPG 21: Pollution incident response planning.

¹⁰ Accessed from: <https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg>

4.5.7. The following key safeguards will be implemented:

- During all construction works, good site management will ensure that pollution incidences are kept to a minimum. This will include checking all machinery for any oil-leaks and installing drip trays as required.
- Appropriate spillage kits or absorbent materials should be held on-site and staff informed of what to do in an emergency. An up-to-date drainage plan should be maintained, hazards identified and a contingency plan drawn up, giving advice on what action to take and who to inform.
- Storage areas for chemicals, fuels, etc. should be sited well away from the canal, and stored on an impervious base within an oil-tight bund with no drainage outlet;
- Where possible, and with prior agreement of the sewage undertaker, silty water, and water should be disposed of to the foul sewer. Discharges to the canal could cause lasting damage to aquatic life and processes and should therefore be avoided;
- Water washing of vehicles, particularly those carrying fresh concrete and cement, mixing plant, etc. should be carried out in a contained area as far from the canal as practical;
- Refuelling of plant should take place in a designated area, preferably on an impermeable surface.

4.6. **Hedgerow**

Description of the Habitat

- 4.6.1. A single hedgerow is located adjacent to the southern boundary of the site labelled H7 on Plan 3266/ECO3 and described below.
- 4.6.2. Hedgerow **H7** is approximately 2m in height and 3-4m wide (see Photograph 4). The hedgerow is largely continuous and appears to have been historically laid and is managed by flailing although not recently. A stock fence is present within the centre of the hedge. The hedgerow consists of frequent Hawthorn *Crataegus monogyna* and Blackthorn *Prunus spinosa*, as well as Elm *Ulmus* sp., Ash *Fraxinus excelsior*, Apple *Malus* sp., Field Maple *Acer campestre*, Hazel *Corylus avellana*, and Elder *Sambucus nigra*. The hedgerow continues south-westerly away from the site. This section includes a number of semi-mature to mature trees and dead trees mainly comprising Ash with a single semi-mature Willow *Salix* sp. The few gaps present at the far western end of the hedgerow are filled with dense Bramble *Rubus fruticosus* agg. The ground flora includes Soft-brome *Bromus hordeaceus*, Barren Brome *Anisantha sterilis*, Yorkshire-fog, Hawk's-beard *Crepis* sp., Broad-leaved Dock, Cleavers, Great Willowherb *Epilobium hirsutum*, Bedstraw *Galium* sp., Creeping Thistle, Common Nettle, Hedge Woundwort, Lords-and-Ladies *Arum maculatum*, Hogweed, Black Bryony *Tamus communis*, Curled Dock *Rumex crispus*, Winter-cress *Barbarea vulgaris*, Scentless Mayweed, Bristly Oxtongue *Picris echioides*, Nipplewort *Lapsana communis*, Shepherd's-purse, Prickly Sow-thistle, Horsetail *Equisetum* sp., Goosefoot *Chenopodium* sp. and Bramble. A wet drainage ditch runs along the length of the southern side of the hedgerow, as described below.

Evaluation

- 4.6.3. Hedgerow **H7** has the potential to qualify as ecologically 'important' under the Hedgerows Regulations (1997) criteria due to the diversity of woody species present and additional features namely the wet ditch and trees.
- 4.6.4. Hedgerows are listed as a Priority Habitat under Section 41 of the NERC Act 2006 and referred to in the Oxfordshire Biodiversity Action Plan. On this basis hedgerow **H7** is likely to qualify as a Priority Habitat and Local BAP habitat.
- 4.6.5. Hedgerows are a common feature in the surrounding agricultural landscape. On balance, therefore hedgerow **H7** is considered to be of no more than moderate ecological value at the local level. Nonetheless, hedgerow **H7** will not be affected by the proposals and will be protected by adherence to standard arboricultural best practice guidelines (BS5837) during construction.

4.7. **Ditch**

Description of the Habitat

- 4.7.1. A ditch labelled **D3** on Plan 3266/ECO3 is located adjacent to the southern side of Hedgerow H7. The ditch is approximately 1m wide, with banks 1-1.5m high. The banks and bed comprise a mixture of bare earth and leaf litter. The channel is approximately 5cm deep and has no associated aquatic vegetation. The ditch appears to be supplied by a land drain at the southern-most section of the ditch.

Evaluation

- 4.7.2. The ditch does not appear likely to hold substantial volumes of water at any time of year. In addition, the extent of accumulation of natural debris and encroachment from hedgerow vegetation indicates that the condition of the ditch is deteriorating, such that overall it is considered to be of no more than low ecological value at the site level. Nonetheless the ditch will not be affected by the proposals and the recommendations outlined above for the protection of the Canal will equally serve to protect the ditch.

4.8. **Summary**

- 4.8.1. Overall, the vast majority of the site (improved grassland and poor-semi-improved grassland) is considered to be land of no more than low ecological value at the local level, the majority of which will be lost to the proposals. The canal, hedgerow and ditch are of elevated ecological value. A small section of the canal will be temporarily effected by the proposals and the remaining habitat will be retained and protected throughout the construction period with the implementation of standard construction and arboricultural protection measures.
- 4.8.2. The loss of habitat to the proposals will be more than offset by the proposed landscape planting of trees and shrubs and the extensive new native wildflower grassland and woodland planting proposed within the adjacent Community Park.

5. FAUNAL USE OF THE SITE AND EVALUATION

5.1. General observations were made during the surveys of any faunal use of the site, with specific surveys conducted in respect of bats. Below, the potential presence of protected species within the site is evaluated, along with an assessment of any potential effects arising from the development.

5.2. **Bats**

Potential Use of the Site

5.2.1. **Roosts:** No buildings or trees are present within or immediately adjacent to the site that may offer potential opportunities for roosting bats.

5.2.2. **Foraging/Commuting.** The adjacent hedgerow and canal are likely to offer potential foraging/commuting features for bats. The grassland within the site, however, offers negligible foraging/commuting opportunities for bats.

Evaluation - Foraging/Commuting

5.2.3. The majority of the site, which comprises improved and poor-semi-improved grassland, is considered to be of negligible to low value to foraging/commuting bats at the site level. The hedgerow and canal are considered to be of moderate to low value to foraging/commuting bats at the local level and will be retained under the proposals.

5.2.4. Connectivity for foraging/commuting bats will essentially be unaffected by the proposed development. The small gap created in the western bank of the canal is unlikely to significantly impair the use of the site by bats for foraging or as a commuting route, subject to the recommendations on lighting set out below. On the contrary, the proposed Canal Basin will provide an increase in aquatic habitat, which may be beneficial to foraging bats.

Recommendations

5.2.5. Any lighting should be positioned in order to avoid excessive illumination of the adjacent hedgerow, proposed landscape planting and in particular the adjacent canal, so as to maintain the long-term potential of these habitats to provide, foraging and commuting opportunities for bats. Directional lighting, reduced wattage lamps and louvres can be fitted to reduce night-time illumination of these areas further, if required.

Summary

5.2.6. Subject to implementation of the recommendations outlined above, it is considered that there will be no negative effect on the local population status of bats as a result of the development. On the contrary, the proposed development and Community Park proposals will result in net gains for local bats in terms of both foraging, commuting and roosting habitat.

5.3. **Badger (*Meles meles*)**

Use of site

- 5.3.1. No Badger setts or other signs of foraging or commuting activity were recorded within the site.
- 5.3.2. Badger activity in the form of setts (over 30m away) and signs of foraging and commuting behaviour has been recorded in the vicinity of the site mostly associated within hedgerows.

Evaluation

- 5.3.3. The habitats within the site, namely improved grassland and rough grassland afford some limited potential foraging for Badger, however, no evidence of use by Badger was recorded within the site. However, given the ability of this species to rapidly establish setts, it is recommended that an update survey for Badger is conducted at the site leading up to site preparation to monitor any changes in activity levels. In addition standard construction safeguards will be implemented to minimise risk/disturbance to Badger, as set out below:
- Contractors and all other site personnel will be briefed that no works, movements of machinery, storage of equipment/materials/waste or other activities should be undertaken within 20m of any Badgers setts, unless at the discretion of, and where necessary, in the presence of the supervising ecologist.
 - Any trenches or deep pits within the development site that are to be left open overnight will be provided with a means of escape (e.g. roughened plank of wood) should a Badger enter.
 - Any trenches/pits will be inspected each morning to ensure no Badgers have become trapped overnight. Should a trapped Badger be encountered Aspect Ecology should be contacted immediately for further advice.
 - The storage of topsoil or other 'soft' building materials on-site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and any essential mounds subject to daily inspections with consideration given to fencing off/covering over any such mounds to deter Badgers.
 - The storage of any chemicals on-site will be well away from any setts and contained in such a way that they cannot be accessed or knocked over by any roaming Badgers.
 - Fires should only be lit in secure compounds away from areas of Badger activity and not allowed to remain lit during the night.
 - Food and litter should not be left within the working area overnight.

5.4. **Water Vole, Otter and Other Mammals**

Potential use of site and Evaluation

- 5.4.1. Habitats along the stretch of Oxford Canal surveyed are generally sub-optimal for protected riparian mammals such as Water Vole and Otter,

being subject to frequent human disturbance, with little or no shelter provided by adjacent habitats, and with limited aquatic or emergent vegetation.

5.4.2. Nevertheless, there are records of Water Vole and Otter that originate from within relatively close proximity to the stretch of canal surveyed (see Aspect Ecology's report entitled 'Longford Park, Bankside, Banbury: River Corridor Survey Report 2013'), and individual Water Vole and Otter may therefore pass through the area surveyed on route to better quality habitat. However, no signs of Water Vole, such as burrows, faeces, prints or feeding stations were recorded. Equally no signs of Otter, such as prints, spraints, holts or couches, were identified within the stretch of the canal surveyed.

5.4.3. In conclusion, although no direct evidence was recorded to indicate use of the area by Water Vole or Otter, it remains possible that small numbers of these species may pass through the site from time to time. Accordingly, a number of measures are set out below to safeguard any individual Water Vole and Otter passing through this area.

5.4.4. No evidence of any other protected, rare or notable mammal species was recorded within the site.

Recommendation

5.4.5. **Prior to Construction.** The following measures should be undertaken in order to safeguard any Water Vole or Otters utilising the affected area:

- An update Water Vole and Otter survey should be undertaken by a suitability experienced ecologist immediately prior to any clearance works;
- The bank-side vegetation on and around the area to be affected should then be subject to a strimming exercise, supervised by an ecologist in order to create unattractive habitat for any passing Water Vole and Otter. This exercise should include all areas of affected bank and any areas of taller grassland/ vegetation that lie within the construction envelope;
- Construction works to the area can then commence immediately;
- In the unlikely event any Water Vole burrows or Otter holts are identified during the pre-works updated survey, an appropriate mitigation strategy will be drawn up by Aspect Ecology, based on current best practice guidance, including consideration of the need for a Natural England licence.

5.4.6. **During Construction.** The measures recommended to safeguard the Canal in section 4.5.7 above will equally serve to protect passing Water Vole and Otter.

5.5. **Amphibians**

Potential use of site

5.5.1. No ponds are present within the site. Typically Great Crested Newts (GCN) use terrestrial habitats within 0.25km of their breeding ponds and occasionally range as far as 0.5km, although in rare cases Newts may disperse 1km or more. The nearest pond to the site is located approximately 1km north-east of the site, however the River Cherwell and Oxford Canal

are situated between this pond and the site and are therefore likely to be a barrier to dispersal if any GCN are located within this pond.

- 5.5.2. The adjacent ditch was noted to be generally over-shadowed and encroached by hedgerow vegetation with very little or no aquatic/emergent vegetation. The ditch is also unlikely to hold substantial volumes of water at any time of year.
- 5.5.3. It is therefore considered extremely unlikely that the ditch adjacent to the site supports a resident population of GCN.
- 5.5.4. The habitats within the site, namely the improved grassland and poor-semi-improved grassland offer potential terrestrial habitat for amphibians.

Evaluation

- 5.5.5. The majority of the site is considered to offer potential terrestrial habitat for amphibians including GCN. However, given that the nearest potential breeding site with no barrier to dispersal is located almost 2km away, it is considered unlikely that the proposals would lead to any significant effects on the conservation status of GCN. No specific reasonable avoidance measures for GCN are therefore required. However, the reasonable avoidance measures recommended for reptiles below will equally serve to protect amphibians such as GCN in the unlikely event any are utilising the site.
- 5.5.6. New habitat will be created at the site and as part of the Community Park proposals including new ponds, species-rich wildflower grassland and woodland (see Chapter 6 below), as well as additional planting of trees and shrubs which will enhance the existing habitat on-site and provide a net gain of aquatic and terrestrial habitat for amphibian species.

5.6. **Reptiles**

Legislation

- 5.6.1. All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, a higher level of protection is afforded to Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* than to Adder *Vipera berus*, Grass Snake *Natrix natrix*, Slow-worm *Anguis fragilis* and Common Lizard *Lacerta vivipara*.
- 5.6.2. For all British reptile species, Section 9 of the Wildlife and Countryside Act 1981 (as amended) contains provisions making it an offence to intentionally:
- Kill or injure; or to
 - Sell, offer for sale or trade any British reptile.
- 5.6.3. Because Slow-worm, Common Lizard, Grass Snake and Adder are relatively widespread British species, their habitat is not directly protected. Nevertheless, because of their partial protection, disturbing or destroying their habitat whilst they are present may lead to an offence.

Potential use of site

- 5.6.4. The habitats within the site, namely the improved grassland and poor-semi-improved grassland offer potential terrestrial habitat for reptiles.

Evaluation

- 5.6.5. The management of the improved grassland (cutting for hay), lowers the overall suitability of this habitat and will cause any reptiles present to disperse away from the site during times when the sward is short. The site is therefore considered unlikely to support a resident reptile population, albeit it is possible that individual common species, such as Grass Snake, may make sporadic use of the site which would likely be confined to hedgerow margins and the habitat adjacent to the canal.
- 5.6.6. The proposals will involve the loss of the improved grassland and poor semi-improved grassland. However, new habitat will be created on-site and as part of the Community Park proposals including species-rich wildflower grassland, ponds, brash piles and woodland (see Chapter 6), as well as additional planting of trees and shrubs which will enhance the existing habitat on-site and provide a net gain of habitat for reptiles. It is therefore considered that the proposals are unlikely to adversely affect the conservation status of any reptile populations. On balance, there will be no negative effect on local populations of reptile as a result of the proposals.

Recommendation

- 5.6.7. The following reasonable avoidance measures will be employed prior to site clearance:
- A habitat manipulation exercise (i.e. strimming) of any suitable grassland habitat within the construction area will also be conducted under the supervision of a suitably experienced ecologist.
 - Prior to any strimming/habitat manipulation, a fingertip search of the ground vegetation will be carried out by the ecologist, paying particular attention to crevices within the soil and around roots, and the areas beneath any rocks, logs or other refugia.
 - The suitable grassland will then be strimmed to a height of approximately 150mm working towards the field boundaries, and the arisings carefully raked off whilst searching for any reptiles.
 - The strimming will then be repeated to a height of approximately 20mm, and the arisings again raked off, thereby removing any suitable foraging/sheltering habitat.
 - The vegetation will subsequently be maintained at this short sward height, in order to minimise its suitability to reptiles, until site clearance works commence.
 - In the event that any reptiles are encountered, these will need to be relocated to a suitable location within the wider site.

5.7. Birds

Legislation

5.7.1. Section 1 of the Wildlife & Countryside Act 1981 (as amended) is concerned with the protection of wild birds. With certain exceptions, all wild birds are protected such that it is an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird whilst in use* or being built;
- Take or destroy an egg of any wild bird.

* The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. Golden Eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not.

5.7.2. Species listed under Schedule 1 of the Act receive greater protection such that they are also protected against intentional or reckless disturbance whilst building a nest or whilst they are in, on or near a nest containing eggs or young. The dependent young of Schedule 1 birds are also protected against intentional or reckless disturbance. Offences in respect of Schedule 1 species are subject to special, i.e. greater, penalties.

5.7.3. **Conservation Status.** The RSPB categorise British bird species in terms of conservation importance based on a number of criteria including the level of threat to a species' population status¹¹. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and or experiencing a high/rapid level of population decline ($\geq 50\%$ over the past 25 years).

Use of site

5.7.4. Bird species recorded at the site include Red Kite *Milvus milvus* (flying over) listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Other birds observed during the survey are all common and widespread and included Sparrow *Passer* sp. (Priority species), Wood Pigeon *Columba palumbus*, Collared Dove *Streptopelia decaocto*, Blackbird *Turdus merula*, Greenfinch *Charduelis chloris*, Magpie *Pica pica*, Chaffinch *Fringilla coelebs* and Great Tit *Parus major*.

Evaluation

5.7.5. The habitat within the site that offer the greatest foraging and nesting opportunities for birds is the bankside vegetation. The improved grassland within the site is unlikely to provide nesting habitat for ground nesting birds due to its relatively frequent cutting for hay. The on-site habitats are mirrored in the surrounding countryside by similar habitat that likely affords equivalent foraging and nesting opportunities.

5.7.6. Although Red Kite is listed under Schedule 1 the population of the species has increased from being extinct in England and only a handful of breeding pairs present in Wales in 1871 to approximately 1,800 breeding pairs

¹¹ RSPB "The population status of birds in the UK - *Birds of Conservation Concern: 2009*"

today¹² and is now an Amber List species only due to its historical decline. The site is unlikely to be of significant value to foraging Red Kite as they tend to favour pasture. In addition, no Red Kite nests were observed during the survey, which is unsurprising as the species typically breeds in mature woodland.

- 5.7.7. The proposals will involve the loss of the improved grassland and poor semi-improved grassland. However, new habitat will be created at the site and as part of the Community Park proposals including a species-rich wildflower grassland and woodland (see Chapter 6 below), as well as additional planting of trees and shrubs which will enhance the existing habitat on-site and provide a net gain of habitat for local birds.

Recommendations

- 5.7.8. It is recommended that any clearance of potential nesting habitat (e.g. bankside vegetation adjacent to the canal) be undertaken outside of the nesting season (i.e. outside March to August inclusive). Should this not be practicable, it is recommended that a suitably qualified ecologist first checks any suitable habitat to be cleared in order to determine the location of any active nests before removal. Any active nests identified should be cordoned off and protected until the end of the nesting season or until the nests are no longer active.

Summary

- 5.7.9. Subject to implementation of the recommendations outlined above, it is considered likely that there will be no negative effect on the local population status of birds as a result of the development.

5.8. **Invertebrates**

Potential use of site and Evaluation

- 5.8.1. A number of invertebrates were observed at the site including the caterpillars of Cinnabar Moth *Tyria jacobaeae* (Priority Species) and Small Tortoiseshell *Aglais urticae* and adult butterflies including Small Tortoiseshell, Cabbage White *Pieris rapae*, Meadow Brown *Maniola jurtina*, Small Heath *Coenonympha pamphilus* (Priority Species) and Skipper *Thymelicus* sp.
- 5.8.2. The habitats present within the site are likely to support an assemblage of common and widespread invertebrates. The habitat within the site is unlikely to support any significant populations of protected, rare or notable invertebrate species, due to the uniform topographic, edaphic and hydrological features of the site. Nonetheless, the habitats are mirrored in the surrounding countryside by similar habitat that likely affords equivalent opportunities for invertebrates.
- 5.8.3. Overall, given the relatively small area of largely uniform habitat within the site, and the local abundance of similar habitat, the site is considered to be of low value to invertebrates at the local level. Accordingly, no specific

¹² <http://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/birdguide/name/r/redkite/population.aspx>

safeguards or mitigation measures with regard to invertebrates are required. Nonetheless, new habitat will be created at the site and as part of the Community Park proposals including species-rich wildflower grassland, woodland and new wetland habitat (see Chapter 6), as well as additional planting of trees and shrubs. 'Bee Banks' and soil scrapes will also be created. These will provide topographic variation and will create habitat for thermophilic ground nesting invertebrates. These features will enhance the existing habitat and provide a net gain of habitat for invertebrates.

6. ECOLOGICAL ENHANCEMENTS

- 6.1. The National Planning Policy Framework (NPPF) requires developments to maximise the opportunities for biodiversity by building in enhancement measures. The proposals present the opportunity to deliver ecological enhancements for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of the Natural Environment and Rural Communities Act (NERC) 2006 and Local Biodiversity Action Plan (LBAP). A range of enhancement proposals are set out below.
- 6.2. **Tree and Shrub Planting.** New tree and shrub planting within the site will incorporate native species of local occurrence.
- 6.3. **Management.** It is recommended that all new and existing planting on-site be subject to ongoing management according to ecological principles to maximise the value of these habitats to wildlife. Such an approach would involve minimising use of pesticides and vegetation removal/pruning works to take place outside of the nesting bird season.
- 6.4. A number of enhancements are proposed for the wider development, in particular within the Community Park, and are described in detail in Aspect Ecology's and Aspect Landscape's 'Habitat Creation and Management Plan 2014'. The new habitats to be created are listed below:
- Hedgerows
 - Native shrub planting
 - Woodland copses
 - Broadleaved woodland
 - Orchard
 - Dry wildflower grassland
 - Wet wildflower grassland
 - Ponds
 - Bee banks and soil scrapes

7. SUMMARY AND CONCLUSIONS

- 7.1. Aspect Ecology was commissioned by Barratt Homes, Bovis Homes and Taylor Wimpey in July 2014 to undertake an ecological assessment in respect of the land which makes up the 'Canal Basin' area of the development, hereafter referred to as 'the site'.
- 7.2. The site was surveyed in July 2014 based on extended Phase 1 methodology as recommended by Natural England. In addition, a general appraisal of faunal species was undertaken to record the potential presence of any protected, rare or notable species.
- 7.3. **Ecological Designations.** The site itself is not subject to any statutory or non-statutory designations. The nearest statutory designation is Adderbury Lakes Local Nature Reserve (LNR), located approximately 3.6km to the south-east of the site. All ecological designations in the local area are well separated and removed from the site and it is therefore considered unlikely that any designations will be adversely affected by the proposals.
- 7.4. **Habitats.** Overall, the vast majority of the site (improved grassland and poor-semi-improved grassland) is considered to be land of no more than low ecological value at the local level. This habitat will be lost to the proposals. However, as part of the landscape strategy, a proportion of these areas will be replaced by a habitat of enhanced ecological value. The habitats of elevated value (namely the hedgerow, ditch and canal) will be largely unaffected by the proposals.
- 7.5. To prevent any potential negative effects on the adjacent canal and ditch, best management practice will be followed which will essentially reduce potential pollution impacts to nil. The adjacent hedgerow will be protected during construction by adherence to standard arboricultural best practice guidelines (BS5837).
- 7.6. **Protected Species.** The habitats within and adjacent to the site provide varying degrees of potential for Badger, Water Vole, Otter, reptiles and common birds, therefore the following mitigation/precautions are to be implemented:
- *Badger.* An update Badger survey should be undertaken by a suitability experienced ecologist leading up to site preparation to monitor any changes in activity levels.
 - *Water Vole and Otter.* Otter may make occasional use of the adjacent canal. An update Water Vole and Otter survey should be undertaken by a suitability experienced ecologist immediately prior to any clearance works adjacent to the canal. The bank-side vegetation on and around the area to be affected should then be subject to a strimming exercise, supervised by the ecologist in order to create unattractive habitat for any passing Water Vole and/or Otters.
 - *Reptiles.* Reptiles may make occasional use of the site but this will largely be located at the perimeter of the site. The site should be maintained at its current level of management prior to development. Prior to any ground works taking place to remove the grassland, a

suitably qualified ecologist will 'finger-tip' search the ground. The area can then be cleared under the supervision of the suitably qualified ecologist through a phased strimming exercise.

- *Common Birds*. Common birds may use habitats within the site for nesting, and as all wild birds receive protection whilst nesting, in order to avoid a potential offence it is recommended that any clearance of nesting habitat is undertaken outside of the bird nesting season (i.e. outside March to August inclusive).

7.7. **Conclusion.** Based on the evidence obtained from detailed ecological survey work and with the implementation of the recommendations set out in this report, there is no reason to suggest that any ecological designations or habitats of nature conservation interest will be significantly harmed by the proposals.

PLANS

PLAN 3266/ECO1

Site Location



KEY:



SITE LOCATION

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LONGFORD PARK, BANKSIDE,
 BANBURY - CANAL BASIN

PROJECT

SITE LOCATION

TITLE

3266/ECO1

DRAWING NO.



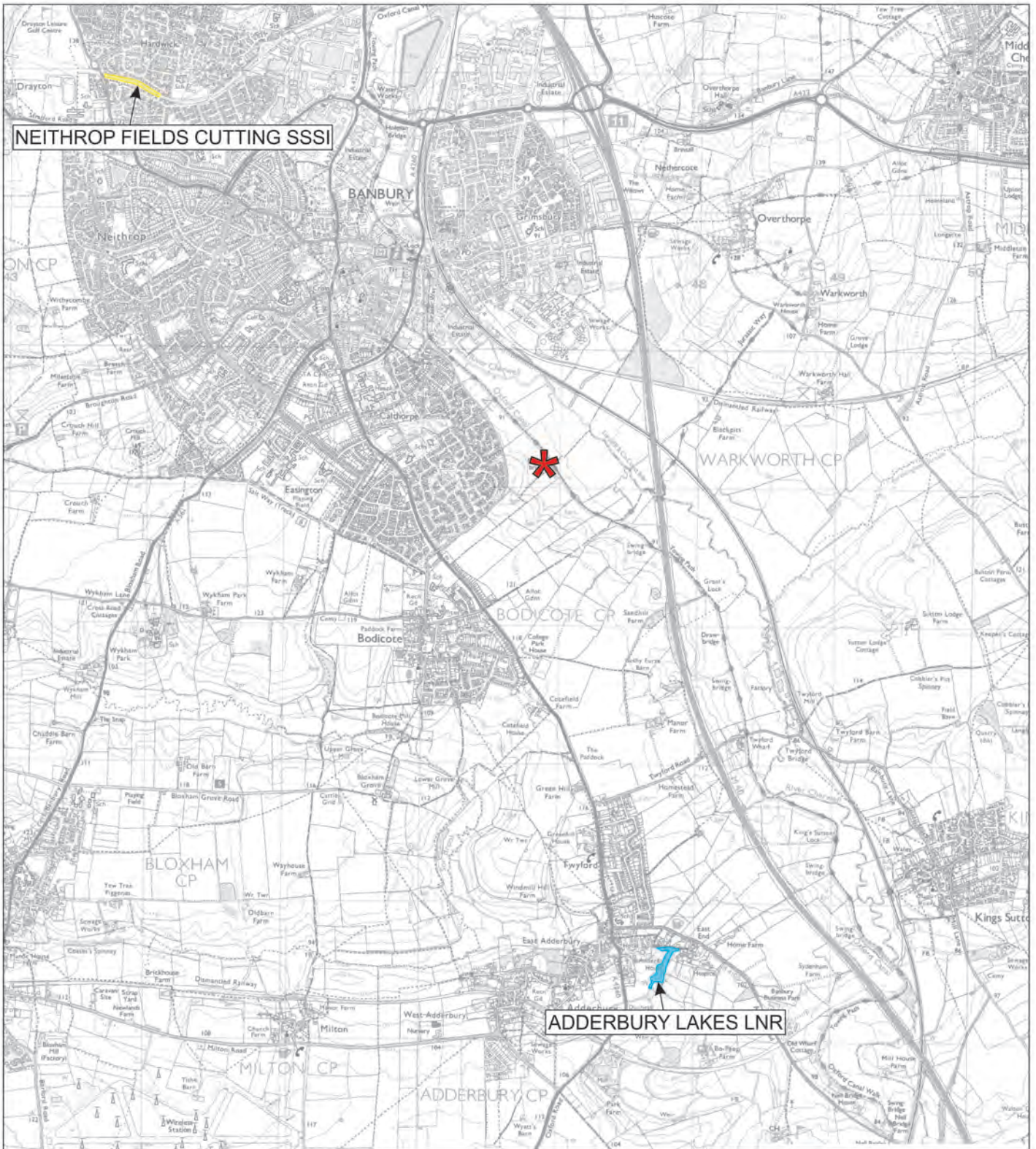
REV.

NOVEMBER 2014

DATE

PLAN 3266/ECO2

Ecological Designations



NEITHROP FIELDS CUTTING SSSI



ADDERBURY LAKES LNR

KEY:



SITE LOCATION



SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)



LOCAL NATURE RESERVE (LNR)



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LONGFORD PARK, BANKSIDE,
 BANBURY - CANAL BASIN

PROJECT

ECOLOGICAL DESIGNATIONS

TITLE

3266/ECO2

DRAWING NO.



REV.

NOVEMBER 2014








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PLAN 3266/ECO3

Habitats & Ecological Features



KEY:

-  SITE BOUNDARY
-  IMPROVED GRASSLAND
-  AREA LIABLE TO INUNDATION
-  ROUGH GRASSLAND / HERB / TALL RUDERAL
-  HEDGEROW
-  WET DITCH
-  CANAL

LONGFORD PARK, BANKSIDE,
BANBURY - CANAL BASIN

PROJECT

HABITATS AND ECOLOGICAL
FEATURES

TITLE

3266/ECO3

DRAWING
NO.

NOVEMBER 2014

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DATE



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PHOTOGRAPHS

PHOTOGRAPH 1: Improved Grassland



PHOTOGRAPH 2: Rough Grassland, Herb and Tall Ruderal Margin



PHOTOGRAPH 3: Canal



PHOTOGRAPH 4: Hedgerow H7



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