

Technical Briefing Note

Project: North West Bicester, Exemplar Phase, Bicester Eco

Town

Technical Briefing Note: Ecological Summary

Date: 28 May 2019

1. Background and Introduction

- 1.1. Aspect Ecology Ltd. has been commissioned by A2Dominion Developments Ltd. to undertake an ecological walkover of land at Bicester North, Exemplar Phase, Bicester Eco Town (as shown on the attached Appendix 5582/TN1) to inform an upcoming planning application. The proposals are for the construction of a new local centre comprising retail, commercial and community floorspace and 38 residential units within the 0.6715ha site.
- 1.2. The site forms part of the Exemplar phase of the Bicester Eco Town and was previously granted full planning permission An ecological survey of the Exemplar study area, undertaken by a third party consultant, was submitted as part of the environmental statement. In July 2012, the applicant secured planning permission (LPA reference 10/01780/HYBRID) for the Exemplar site for the following:

'Development of Exemplar phase of NW Bicester Eco Town to secure full planning permission for 393 residential units and an energy centre (up to 400 square metres), means of access, car parking, landscape, amenity space and service infrastructure and outline permission for a nursery up to 350 square metres (use class D2), a community centre of up to 350 square metres (sui generis), 3 retail units of up to 770 square metres (including but not exclusively a convenience store, a post office and a pharmacy (use class A1)), an Eco-Business Centre of up to 1,800 square metres (use class B1), office accommodation of up to 1,100 square metres (use class A4) and a primary school site measuring up to 1.34 hectares with access and layout to be determined.'

1.3. With regard to the site which is the subject of this application, in July 2016, full planning permission (LPA reference 15/00760/F) was granted for:

'Development of a new Local Centre comprising a Convenience Store (use class A1), Retail Units (flexible class A1/A3/A5), Pub (use class A4), Community Hall (use class D1), Nursery (use class D1), Commercial Units (flexible use class A2, B1, D1) with associated Access, Servicing, Landscaping and Parking with a total GEA of 3,617 sqm.'

1.4. It is understood that a revised scheme for the site has been developed which may fall outside of the approved parameters. A new, more flexible, planning permission is hereby sought for Elmsbrook Local Centre for:



'Development of a new Local Centre comprising Retail, Commercial and Community floorspace (flexible Use Class A1/A2/A3/B1/D1), with a total GEA of 1,476 sqm, and 38 residential units (use class C3) with associated access, servicing, landscaping and parking.'

2. Methodology

- 2.1. Information on statutory designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, which utilises data provided by Natural England, with an extended search radius (15km). In addition, the MAGIC database was searched to identify the known presence of any Priority Habitats within or adjacent the site. The Woodland Trust database was searched for any records of ancient, veteran or notable trees within or adjacent to the site.
- 2.2. Information regarding non-statutory designations relevant to the current application site was obtained from information provided in the Environmental Statement¹ for the wider Exemplar study area.
- 2.3. The site was surveyed in February 2019 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats and ecological features present.
- 2.4. The site was surveyed based on standard Phase 1 Habitat Survey methodology, 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 if required. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal to record details on the actual or potential presence of any notable or protected species or habitats.
- 2.5. 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. The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) Checklist.

3. Survey Results

Ecological Designations

3.1. Statutory Designation. No statutory designations are present within or adjacent to the site boundary. The nearest statutory designation is Bure Park Local Nature Reserve (LNR) located approximately 0.6km to the south of the site. The LNR comprises the River Bure, several ponds, mature hedgerows and trees, scrub and meadow habitat. The River Bure and one of its tributaries converges in the centre of the wider Exemplar study area and flows south towards the LNR. However, the River and its tributaries are separated from the application site by existing greenspace and a public footpath. Given the nature and scale of the proposals, it is considered that, subject to the implementation of standard pollution prevention measures, the LNR and other statutory designations within the local area are unlikely to be affected by the proposals.

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¹ Hyder Consulting (UK) Limited 2010. Environmental Statement Volume 1: Main Text. Exemplar Phase, NW Bicester Eco Development



- 3.2. Three further statutory designated sites are present within 5km of the site boundary, these comprise three Sites of Special Scientific Interest (SSSI's), although all of these are designated for geological reasons. The site lies within the SSSI Impact Risk Zone (IRZ) for one such SSSI, Ardley Cutting and Quarry. However, the identified risks do not apply to the proposed development.
- 3.3. **Non-statutory Designations.** No non-statutory designations are present within or adjacent to the site. The nearest non-statutory designation is a component of Tusmore and Shelswell Parks Conservation Target Area (CTA), identified through the Oxfordshire Biodiversity Action Plan (BAP), situated approximately 1.9km to the north-west of the site boundary. The CTA encompasses the parks and woodlands at Tusmore and Shelswell parks and areas of ancient woodland near Stoke Lyne. The CTA is well separated from the site by existing and ongoing development and arable land. As such, it is considered that this and other non-statutory designations mapped within the local area are unlikely to be affected by the proposals.
- 3.4. **Priority Habitats, Ancient Woodland and Notable Trees.** No priority habitats, ancient woodland or notable / veteran trees are present within or adjacent to the site boundary. All Priority Habitats, ancient woodland and notable trees mapped within the local area are well separated from the site by existing residential development and infrastructure. As such, it is considered that these habitats are unlikely to be affected by the proposals.

Habitats and Ecological Features

- 3.5. The site comprises two parcels of land situated to the north and south of Charlotte Avenue, and Charlotte Avenue itself which runs through the centre of the site. A site plan is provided at Appendix 5582/TN2.
- 3.6. **Northern Parcel.** The northern parcel of the site is dominated by hardstanding which comprises a mixture of tarmac, hard core and gravel. The hard core and gravel supported a small assemblage of colonising species including Yorkshire-fog *Holcus lanatus*, Yarrow *Achillea millefolium*, White Clover *Trifolium repens*, Greater Plantain *Plantago major*, Bristly Oxtongue *Picris echioides*, Ribwort Plantain *Plantago lanceolata*, Spear Thistle *Cirsium vulgare*, Willowherb *Epilobium* sp., Broad-leaved Dock *Rumex obtusifolius*, Cleavers *Galium aparine*, Fescue *Festuca sp.*, Common field-speedwell *Veronica persica*, Cut-leaved Crane's-bill *Geranium dissectum* and Groundsel *Senecio vulgaris*. The tarmac areas were in relatively good condition with no cracks supporting colonising vegetation.
- 3.7. A number of man-made spoil piles are present in the west of the northern parcel. The spoil piles supported a small assemblage of species similar to that recorded within the surrounding hardstanding, dominated by Cut-leaved Crane's-bill, White Clover and Common Field-speedwell.
- 3.8. In the north-west of the northern parcel, several small areas of rough grassland dominated by Fescue sp., with occasional False-Oat Grass Arrhenatherum elatius, Cocks-foot Dactylis glomerata, Common Nettle Urtica dioica, Dock Rumex sp., Dandelion Taraxacum officinale agg. and Scentless Mayweed Tripleurospermum inodorum are present. A recently planted Cherry Prunus avium sapling is also present in the centre of this area. A tarmac road forming Charlotte Avenue separates the northern parcel from the southern parcel.
- 3.9. **Southern Parcel.** The southern parcel of the site was in-use as a site compound at the time of survey. The parcel is dominated by hardstanding which comprises a mixture of tarmac and hard core. The hardstanding was in poor condition at the time of survey, with a number of cracks supporting tall ruderal species including Meadow Grass *Poa* sp., Willowherb sp., Dandelion,



Bristly Oxtongue, Dock sp., White Clover, Prickly Sow-thistle *Sonchus asper*, Greater Burdock *Arctium lappa*, Spear Thistle *Cirsium vulgare* and Fescue sp..

- 3.10. An area of tall ruderal vegetation and a man-made spoil heap is present in the west of the southern parcel. These areas support a similar assemblage of species recorded within the adjacent hardstanding, with occasional Dove's-foot Crane's-bill *Geranium molle*, Broad-leaved Dock, Common field-speedwell, Common Nettle, Red Dead-nettle *Lamium purpureum*, Vetch *Astragalus* sp., Butterfly Bush *Buddleja davidii*, Cow Parsley *Anthriscus sylvestris*, Teasel *Dipsacus fullonum*, Ribwort Plantain and Cock's-foot also recorded.
- 3.11. An off-site hedgerow is present adjacent to the southern site boundary. The hedgerow measures approximately 6m in height and 3m wide and was unmanaged at the time of survey. The hedgerow is dominated by English Elm *Ulmus minor* and Bramble *Rubus fruticosus* agg. with occasional Ash *Fraxinus excelsior* and Elder *Sambucus nigra*.
- 3.12. Conclusion. The two parcels within the site are dominated by hardstanding with occasional areas of rough grassland and tall ruderal vegetation. No protected or notable plant species were recorded to be present within the site during the walkover survey. The species recorded are common and widespread species that frequently colonise bare or disturbed ground. As such, the botanical species and habitats present within the site are not considered to constitute an important ecological feature and are considered to be of negligible ecological value.
- 3.13. The off-site hedgerow to the south of the site is likely to qualify as a Priority Habitat based on the standard definition², which includes all hedgerows (>20m long and <5m wide) consisting predominantly (≥80%) of at least one native woody species. It has been estimated that approximately 84% of countryside hedgerows in GB qualify as a Priority Habitat under this definition.² Accordingly, the off-site hedgerow is considered to constitute an important ecological feature and is considered to be of value at the local level. However, it is understood that the off-site hedgerow will be fully retained and protected under the current proposals and as such, will not pose a constraint.

Fauna

- 3.14. **Bats.** No buildings or trees able to support roosting bats are present within the site. As such, the site is considered to be of negligible ecological value to roosting bats and roosting bats do not constitute an important ecological feature.
- 3.15. The site is dominated by hardstanding with occasional areas of rough grassland and tall ruderal vegetation which is considered sub-optimal habitat for foraging and commuting bats. An off-site hedgerow is present to the south of the site which provides suitable foraging and commuting habitat. It is understood that this hedgerow is to be retained under the proposals and, subject to the implementation of standard tree / hedgerow protection measures, it is anticipated that the hedgerow will be fully safeguarded under the proposals. Provision should be made to implement a sensitive lighting scheme within the site to avoid unnecessary light spill onto the retained hedgerow. Following the implementation of these measures, it is anticipated that foraging and commuting bats will be unaffected by the proposals.
- 3.16. **Badger.** Badger *Meles meles* are known to be present along the banks of the River Bure having been recorded during survey work undertaken for the wider hybrid application. The site itself comprises habitat which is considered sub-optimal for Badger and no evidence of Badger

² Based on: Biodiversity Reporting and Information Group (2011) 'UK Biodiversity Action Plan (BAP) Priority Habitat Descriptions', ed. Ant



occupation (e.g. a sett) or activity (e.g. latrines, push-throughs etc.) was recorded during the walkover survey. The site is well separated from the River Bure and its tributaries by areas of grassland and existing / ongoing development. As such, Badger are considered unlikely to make use of the site.

- 3.17. **Other Mammals.** The site does not support habitat suitable for Water Vole *Arvicola amphibius* or Otter *Lutra lutra*. As such, these species are likely absent from the site and are not considered further in the context of the current proposals.
- 3.18. Evidence of domestic cat in the form of footprints and droppings was recorded to be present in the northern portion of the site. In addition, the off-site hedgerow to the south of the site provides suitable habitat for the Priority Species Hedgehog *Erinaceus europaeus*. As such, it is recommended that general mammal safeguards are implemented during the construction phase in the event a mammal may enter the site.
- 3.19. **Amphibians.** The results of the previous survey work undertaken for the wider hybrid development concluded that Great Crested Newt *Triturus cristatus* are likely absent from the Exemplar development area, although a breeding population was recorded to be present within ponds in the local area.
- 3.20. No ponds are present within or adjacent to the site boundary. Three ponds were identified within 250m of the site boundary. Of these ponds, two appear to have been recently created as part of the wider hybrid development. The newly created ponds were recorded to be devoid of aquatic or emergence vegetation and surrounded by bare earth and newly sown grassland at the time of survey, which reduces their suitability for Great Crested Newt. The third pond comprises a small waterbody associated with an ephemeral watercourse located approximately 0.2km to the west of the site boundary. The small waterbody associated with the watercourse was recorded to be present during the survey work undertaken to inform the wider hybrid application, however, this waterbody was recorded to be dry in early May and as such, was deemed unsuitable for breeding Great Crested Newt.
- 3.21. The site itself is dominated by hardstanding and is isolated from other areas of suitable terrestrial habitat by existing and ongoing development and infrastructure. Given the suboptimal terrestrial habitat present within the site, it is considered that Great Crested Newt are likely absent from the site.
- 3.22. Reptiles. Low populations of Common Lizard Zootoca vivipara and Grass Snake Natrix natrix were recorded to be present within the wider hybrid application study area during previous survey work. The site itself is dominated by hardstanding which is considered sub-optimal habitat for reptiles. In addition, the site is isolated from areas of suitable reptile habitat by existing and ongoing development and infrastructure. Given the sub-optimal habitat present within the site and its isolated nature, it is considered likely that reptiles are likely absent from the site.
- 3.23. Birds. The site itself does not contain favourable bird nesting habitat. However, a number of bird boxes were recorded to be present on the off-site commercial building to the east of the southern parcel of the site and the off-site hedgerow to the south of the site provides suitable habitat for nesting birds. It is understood that the hedgerow will be fully retained under the current proposals and it is recommended that consideration is given to the existing bird boxes on the adjacent building to ensure they are not obstructed by the proposed units. Subject to the implementation of these recommendations, it is anticipated that the proposed development will not have a detrimental impact on nesting birds.



3.24. Invertebrates. No evidence of notable or protected invertebrates was recorded during the walkover survey. The site comprises hardstanding with occasional areas of rough grassland and tall ruderal vegetation surrounded by existing and ongoing residential and commercial development. As such, the site is likely to support a small assemblage of common and widespread invertebrate species which are not considered to be an important ecological feature.

4. Mitigation and Enhancement

4.1. Based on the habitats, ecological features and associated fauna identified within / adjacent to the site, it is proposed that the following mitigation measures are implemented under the proposals. Further, detailed mitigation strategies or method statements can be secured via suitably-worded planning conditions, as recommended by relevant best practice guidance (BS 42020:2013). A number of ecological enhancements, which are further detailed within the Environmental Impact Assessment Screening report (2019), are also provided below.

Mitigation

- 4.2. **Hedgerow and Tree Protection.** The off-site hedgerow to the south of the site, to be retained under the current proposals, shall be protected during construction in line with standard arboriculturalist best practice (BS5837:2012) or as otherwise directed by a suitably competent arboriculturalist. This will involve the use of protective fencing or other methods appropriate to safeguard the root protection areas of retained trees / hedgerows.
- 4.3. **Pollution Prevention Measures.** In order to safeguard the off-site watercourse to the west of the site against any potential run-off or pollution events during construction, the following safeguards will be implemented:
 - Storage areas for chemicals, fuels, etc. will be sited well away from the watercourse (minimum 10m), and stored on an impervious base within an oil-tight bund with no drainage outlet. Spill kits with sand, earth or commercial products approved for the stored materials shall be kept close to storage areas for use in case of spillages;
 - Where possible, and with prior agreement of the sewage undertaker, silty water should be disposed of to the foul sewer or via another suitable form of disposal, e.g. tanker off-site;
 - Water washing of vehicles, particularly those carrying fresh concrete and cement, mixing plant, etc. will be carried out in a contained area as far from the watercourse as practicable (minimum 10m), to avoid contamination; and
 - Refuelling of plant will take place in a designated area, on an impermeable surface, away from the watercourse (minimum 10m).
- 4.4. Post-development, the drainage system for the development will ensure the watercourse is not subject to adverse changes in surface water run-off or quality.
- 4.5. **Sensitive Lighting.** Light-spill onto retained and newly created habitat, in particular the off-site hedgerow and nearby watercourse, will be minimised in accordance with good practice guidance³ to reduce potential impacts on light-sensitive bats (and other nocturnal fauna). This

Stone, E.L. (2013) 'Bats and lighting: Overview of current evidence and mitigation guidance.' ILP (2011) 'Guidance notes for the reduction of obtrusive light' Institution of Lighting Professionals, GN01:2011; and Bat Conservation Trust (2014) 'Artificial Lighting and Wildlife – Interim Guidance: Recommendations to help minimise the impact of artificial lighting'.



may be achieved through the implementation of a sensitively designed lighting strategy, with consideration given to the following key factors:

- **Light exclusion zones** ideally no lighting should be used in areas likely to be used by bats. Light exclusion zones or 'dark corridors' may be used to provide interconnected areas free of artificial illumination to allow bats to move around the site;
- Variable Lighting Regimes VLRs can be employed, which involve switching off/dimming lights for periods during the night, for example when human activity is generally low (e.g. 12.30 5.30am). The use of VLRs may be particularly beneficial during the active bat season (April to October). Motion sensors can also be used to limit the time lighting is operational;
- **Light barriers** new planting (e.g. hedgerows and trees) or fences, walls and buildings can be strategically positioned to reduce light spill;
- Spacing and height of lighting units increasing spacing between lighting units will minimise the area illuminated and allow bats to fly in the dark refuges between lights. Reducing the height of lighting will also help decrease the volume of illuminated space and give bats a chance to fly over lighting units (providing the light does not spill above the vertical plane). Low level lighting options should be considered for any parking areas and pedestrian / cycle routes, e.g. bollard lighting, handrail lighting or LED footpath lighting;
- **Light intensity** light intensity (i.e. lux levels) should be kept as low as possible to reduce the overall amount and spread of illumination. The type of light should also be considered, for example lights with high ultraviolet content (e.g. metal halide or mercury lights) should be avoided or fitted with UV filters; and
- **Directionality** to avoid light spill lighting should be directed only to where it is needed. Particular attention should be paid to avoid the upward spread of light so as to minimise trespass and sky glow.
- 4.6. **General Mammal Safeguards.** In order to safeguard mammals should they enter the site during construction works, the following measures will be implemented:
 - Any trenches or deep pits within the site that are to be left open overnight will be provided with a means of escape should a mammal enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water;
 - Any temporarily exposed open pipes (>150mm outside diameter) should be blanked
 off at the end of each working day so as to prevent mammals gaining access as may
 happen when contractors are off-site;
 - Any trenches/pits will be inspected each morning to ensure no mammals have become trapped overnight. Should a mammal such as a Badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped mammal be encountered a suitably qualified ecologist will be contacted immediately for further advice;
 - The storage of topsoil or other 'soft' building materials in the site will be given careful consideration. Mammals such as 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 temporarily fencing any such mounds to exclude mammals;



- The storage of any chemicals at the site will be contained in such a way that they cannot be accessed or knocked over by any roaming mammals;
- Fires will only be lit in secure compounds away from areas of mammal activity and not allowed to remain lit during the night; and
- Unsecured food and litter will not be left within the working area overnight.

Enhancement

- 4.7. New Planting. It is recommended that where practicable, new planting within the site be comprised of native species of local provenance, including trees and shrubs appropriate to the local area. Suitable species for inclusion within the planting could include native trees such as Oak Quercus robur, Birch Betula pendula and Field Maple Acer campestre, whilst native shrub species of particular benefit would likely include fruit and nut bearing species which would provide additional food for wildlife, such as Blackthorn Prunus spinosa, Hawthorn Crataegus monogyna, Crab Apple Malus sylvestris, Hazel Corylus avellana and Elder. Where non-native species are proposed, these should include species of value to wildlife, such as varieties listed on the RHS' 'Plants for Pollinators' database, providing a nectar source for bees and other pollinating insects.
- 4.8. **Bat Boxes.** A number of bat boxes will be incorporated within the proposed development. The provision of bat boxes will provide new roosting opportunities for bats in the area, such as Soprano Pipistrelle, a national Priority Species. Where architectural design allows, a number of integrated bat boxes / bricks should be incorporated into a proportion of the new build. The precise number and locations of boxes / bricks should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.
- 4.9. **Bird Boxes.** A number of bird nesting boxes are to be incorporated within the proposed development, thereby increasing nesting opportunities for birds at the site. Where architectural design allows, a number of integrated bird boxes (e.g. Swift *Apus apus* boxes) should be incorporated into a proportion of the new build. The precise number and locations of boxes should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.
- 4.10. **Invertebrate Hotels.** A number of invertebrate hotels will be incorporated into the proposed development, creating opportunities for invertebrate species such as solitary bees. The precise number and locations of the invertebrate hotels will be determined by a competent ecologist post-planning once the relevant final development design details have been approved.
- 4.11. Green / Sedum Roof. As set out above, it is considered that the site is unlikely to be of value in terms of invertebrates, in its current condition. However, there are opportunities for creation of new foraging and nesting habitat as part of the proposals through provision of green / sedum roofs, which could deliver an increase in the diversity and quality of habitats present for invertebrates and other fauna.

5. Conclusions

5.1. The site is dominated by hardstanding with occasional areas of rough grassland and tall ruderal vegetation. No protected or notable botanical species were recorded to be present and the habitats present within the site do not constitute important ecological features.



- 5.2. The site itself is considered sub-optimal habitat for protected or notable faunal species and as such, these are considered likely absent from the site. The off-site hedgerow to the south of the site provides potentially suitable habitat for foraging and commuting bats, Hedgehog and nesting birds. However, it is understood this hedgerow is to be fully retained and protected under the proposed development.
- 5.3. In conclusion, the opportunity exists under the proposed development to minimise impacts and subject to the implementation of appropriate precautionary mitigation measures, it is considered unlikely that any future proposals will result in significant harm to biodiversity. On the contrary, the opportunity exists to provide a number of biodiversity benefits as part of the proposals.

Appendix 5582/TN1:

Site Location

This line should measure 100mm along x and y axis when printed

Site Boundary:
Please note the site boundary position identified on this drawing remains subject to confirmation from Land Registry / verification with the land owner's title deed; ADP take no responsibility for the reliability/accuracy of this survey information

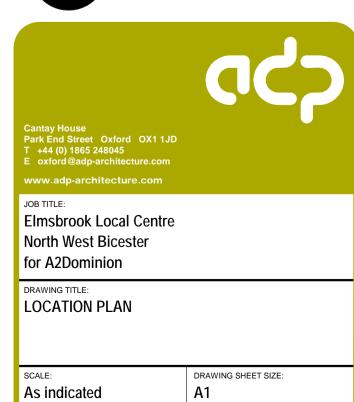
SITE BOUNDARY OWNERSHIP BOUNDARY

14.02.19 FOR INFORMATION 15.02.19 Blue line ownership boundary included 19.02.19 Blue Line Ownership Boundary amended 07.03.19 Updates to red line boundary 07.03.19 Draft Planning 28.05.19 Draft Planning S1 P 6

CHECK ALL DIMENSIONS AND VERIFY ON SITE. REPORT ANY ERRORS OR OMISSIONS



25m 50m



ADP-00-XX-DR A-0800 S1 P 6

Appendix 5582/TN2:

Habitats, Ecological Features and Photographs



landscape planning • ecology • arboriculture



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