



Waterman CPM
Environmental Planning & Design



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Pear Tree Lane, Oxford

Ecological Appraisal

C2839_01a

Quality Assurance – Approval Status

This document has been Prepared and checked in accordance with
Waterman CPM's IMS (BS EN ISO 9001: 2000 and BS EN ISO 14001: 2004)

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Approved DJM

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PLAN

Ecological Features
(2839/01 04/08 DM/LS)

Section 1 Introduction

- 1.1 This report has been prepared by Waterman CPM Ltd (WCPM) on behalf of Kier Property Developments Ltd. It sets out the results of a desk based assessment, an extended Phase I habitat survey and a bat activity survey carried out between July 2006 and October 2007. The site is centred on National Grid Reference SP 496 106, hereafter referred to as 'the Site'.
- 1.2 The Site is proposed for development.
- 1.3 This ecological assessment seeks to:
 - Collate relevant biological records and assess their significance;
 - Describe and evaluate the habitats present within the Site;
 - Identify and investigate potential protected species issues that may exist;
 - Assess possible ecological constraints and opportunities to development and make recommendations for mitigation and enhancement; and
 - Assess the consequences in relation to national and local policy.

Section 2 Methodology

Desk Study

- 2.1 The aim of the desk study is to collate existing ecological records for the Site and adjacent area. Protected species records and designated Sites of Nature Conservation Interest (SNCI) were collated for an area of 2km surrounding the Site, with a wider search of 5km conducted for any International or National designated SNCI. This area of search is considered to cover the potential Zone of Influence (Zoi) of the proposed development.
- 2.2 The desktop data trawl was conducted in September 2007. The agencies, organisations and sources contacted were as follows:
- Thames Valley Environmental Record Centre;
 - Environment Agency;
 - The local British Trust for Ornithology (BTO) recorder;
 - The Botanical Society of the British Isles (BSBI) county recorder; and
 - Ordnance Survey Explorer Map 180.
- 2.3 The relevant information supplied by these organisations has been incorporated into this report with due acknowledgement made.
- 2.4 With respect to statutory designations, Natural England (NE) (formerly English Nature) recommends consulting the Government's 'Multi-agency Geographic Information for the Countryside' (MAGIC) website (www.magic.gov.uk). This source was consulted as part of the desk study.
- 2.5 The NE Natural Area profile was consulted for contextual information regarding the habitats and species of value in the area. The national and local Biodiversity Action Plans (BAPs) were also consulted to identify those features where nature conservation action is being targeted.
- 2.6 This consultation exercise is invaluable in identifying past records and nature conservation designations that may be relevant to any proposal for a specific site. Understanding nature conservation issues within the region helps in the assessment of the value of a site and the habitats and species that it supports.

Field Study

Habitats

- 2.7 The site was surveyed in 20 July 2006 using a technique based upon Phase I survey methodology¹. This 'extended' Phase I 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. The vegetation present was clearly visible and allowed an accurate assessment to be made.

Fauna Surveys

- 2.8 The extended Phase I survey recorded very limited opportunities for protected species and the only recommended Phase II level survey work was for bats. Whilst the Phase I did not highlight any potential for roosting bats within the Site, such opportunities are present in land to the east and south, therefore, bat activity surveys were conducted to check if the Site was being used as a commuting route or foraging area.
- 2.9 Activity surveys involved walking the Site boundaries, with regular point counts being undertaken for three minutes to record the number of passes of any bats and the species. Conditions during the surveys are set out in the table below.

Date	Time	Weather Conditions
07/08/07	20:35(start)	Sunset at 20:48. Air temperature 24°C, light wind, 4/8 cloud cover, dry.
	23:50 (finish)	Air temperature 21°C, light wind, 4/8 cloud cover, dry.
09/09/07	19:25 (start)	Sunset at 19:39. Air temperature 22°C, light wind, 8/8 cloud cover, dry.
	21:40 (finish)	Air temperature 18°C, light to moderate wind, 6/8 cloud cover, dry.

- 2.10 During the surveys, BatBox Duet ultrasonic bat detectors were used, with the frequency division output being recorded on iriver T30 mp3 recorders, which would allow any unidentified calls to be subsequently analysed through the computer programmes BatSound and BatScan, if required. During the surveys, the frequency division output was listened to through one headphone to ensure that bats with higher (such as horseshoe bats) or lower call frequencies were not missed whilst listening solely to the heterodyne output. With the entire survey output being recorded, there would then be the opportunity to go back and identify such occurrences.

¹ Joint Nature Conservation Committee (2007). *Handbook for Phase 1 habitat survey - a technique for environmental audit*. JNCC, Peterborough.

Evaluation

- 2.11 The habitats and species evaluations are based on the guidance from the Institute of Ecology and Environmental Management (IEEM)². The level of value of specific ecological receptors is assigned using a geographic frame of reference, with international value being most important, then national, regional, county, district, local and lastly, within the Site only.
- 2.12 Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as Sites of Special Scientific Interest (SSSI)), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource. In terms of the latter, 'quality' can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

² Institute of Ecology and Environmental Management (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom* (version 7 July 2006). <http://www.ieem.org.uk/ecia/index.html>. Institute for Ecology and Environmental Management, Winchester

Section 3 Legislation and Planning Policy

Legislation

International and National

- 3.1 The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive, list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation (Natural Habitats &c.) Regulations, 1994.
- 3.2 In Britain, the Wildlife and Countryside Act (WCA) 1981 (as amended) forms the key legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants. The Countryside and Rights of Way (CROW) Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a place of rest, or shelter, of a protected animal or nest site.

Planning Policy

National Planning Policy

- 3.3 Planning Policy Statement 9 (PPS9) published in August 2005, reaffirms the Government's commitment to the conservation of wildlife and natural features. PPS9 supersedes Planning Policy Guidance 9 (PPG9) and differs insofar as there is an emphasis on restoration and enhancement of features of ecological value. The policies and guidance within PPSs are material consideration in planning applications.

Regional Planning Policy

- 3.4 The Oxfordshire Structure Plan was adopted on 25 October 2005 and has one policy relating to nature conservation:
- 3.5 Policy EN2 – **"The following sites of at least national importance will be protected from damaging development:**

- **Special Areas of Conservation;**
- **National Nature Reserves and Sites of Special Scientific Interest; and**
- **Sites which support specially protected species.**

On other sites of acknowledged nature conservation importance, development will be permitted only if there is an overriding need or if damage to the ecological interest can be prevented by the use of conditions or planning obligations. In determining proposals for development Local Planning Authorities will seek environmental measures and promote the use of conditions and management agreements to help protect, manage and expand the biodiversity resource of the county, in particular priority habitats and species.”

Local Planning Policy

3.6 The Oxford Local Plan 2001-2016 was adopted on 25 November 2005. The policies relating to ecology and biodiversity can be seen in full in **Appendix 1**. These are:

- Policy NE.15, which refers to the loss of trees and hedgerows;
- Policy NE.17, which refers to biodiversity as a whole;
- Policy NE.18, which refers to Special areas of Conservation (SAC) and SSSI;
- Policy NE.19, which refers to Sites of Local Importance for Nature Conservation (SLINC) and Local Nature Reserves (LNR);
- Policy NE.20, which refers to wildlife corridors;
- Policy NE.21, which refers to species protection;
- Policy NE22, which refers to independent assessment; and
- Policy NE23, which refers to habitat creation in new developments.

Biodiversity Action Plans (BAPs)

- 3.7 Following the Convention on Biological Diversity (1992), the UK BAP was published in 1994 to guide national strategy for the conservation of biodiversity through Species Action Plans (SAPs) and Habitat Action Plans (HAPs), which set conservation targets and objectives. Most areas now possess a local BAP to complement the national strategy where priority habitats and species are identified and targets set for their conservation. BAPs are the key nature conservation initiative in the UK, working at national, regional and local levels.
- 3.8 The Oxfordshire BAP has 25 SAPs including 'Neutral grassland' and 'Ponds' and 20 HAPs including 'Daubenton's Bat', 'Water Vole' and 'Red-tipped Cudweed'.

Section 4 Ecological Description and Evaluation

- 4.1 The following collates the results of the desk based assessment, Phase I survey and bat activity survey.

Site Context

- 4.2 The Site lies to the north of the city of Oxford and to the south east of the Pear Tree interchange roundabout. It is bordered to the west and south by the A44 dual carriageway, to the north by retail development and to the east by a disused railway line and residential housing. There is also a large water body approximately 35m to the east of the Site boundary beyond the railway line.
- 4.3 The Site lies within the Thames and Avon Vales Natural Area (Number 63). Natural Areas have been developed by NE and group together areas of similar biogeographic character, often with a similar geology, landscape or land-use, over the whole of England.
- 4.4 The Natural Area is a river valley landscape of low-lying land running through south central England. It consists of a mixture of arable and grass field floodplains surrounded by thick hedgerows with many crack willows. The rare native black poplar also has a national centre of distribution in the Vale of Aylesbury, and is associated with ditches and stream-sides. Woodland is common on the slightly higher ground and there are also a series of flooded gravel pits, which form a series of wetlands of high nature conservation value.

Designated Sites

- 4.5 The Site is not covered by any statutory or non-statutory nature conservation designation.

Statutory Sites

- 4.6 There is one SAC and ten SSSIs within 5km of the site boundary. Some of the closest of these sites include:

- Oxford Meadows SAC, designated on account of its lowland hay meadows which supports creeping marshwort *Apium repens*, approximately 0.6km to the south west of the Site boundary;
- Port Meadow with Wolvercote Common and Green SSSI, designated due to its unique status on account of its constant grazing over a millennia, approximately 0.4km to the south west of the Site boundary;
- Hook Meadow and the Trap Grounds SSSI, designated due to its unimproved neutral grassland, approximately 0.9km to the south of the Site boundary;
- Pixey and Yarnton Meadows SSSI, designated due to its unimproved neutral grassland, approximately 1km to the west of the Site boundary;
- Wolvercote Meadows SSSI, designated on a account of its improved and semi-improved neutral grassland, approximately 1km to the south west of the Site boundary; and
- Wytham Woods SSSI, designated due to its complex mixture of ancient woodland, wood pasture, common land and limestone grassland, approximately 2.8km to the south west of the Site boundary.

Non-statutory Sites

4.7 There are seven non-statutory County Wildlife Sites (CWS) and seven Sites of Local Importance for Nature Conservation (SLINC) within 2km of the Site boundary. The closest of these include:

- Canalside Meadow/Oxford Canal Marsh CWS and SLINC, approximately 0.5km to the west of the Site boundary;
- Meadow north of Goose Green CWS, approximately 0.5km to the south west of the Site boundary;
- Dukes Meadow SLINC, approximately 0.7km to the west of the Site boundary;
- Duke Lock Pond CWS, approximately 0.7km to the west of the Site boundary;
- Loop Farm Flood Meadows CWS, approximately 0.8km to the west of the Site boundary; and
- Wet wood and Swamp near Yarnton CWS, approximately 0.9km to the north west of the Site boundary.

Habitats

4.8 All habitat descriptions should be read in conjunction with **Plan 2839/01**.

4.9 The northern area of the Site comprises of a triangular area of hardstanding, with some ornamental planting areas, that is currently used as a car park. The car park is of negligible value.

- 4.10 Along the western edge of the car park is a group of semi-mature ash *Fraxinus excelsior* and cherry *Prunus avium* trees with ground flora consisting of nettle *Urtica dioica*, herb Robert *Geranium robertianum*, yarrow *Achillea millefolium*, hogweed *Heracleum sphondylium* and dandelion *Taraxacum officinale* agg. There is also an area of ornamental amenity grassland dominated by Yorkshire fog *Holcus lanatus*, perennial rye grass *Lolium perenne* and cock's-foot *Dactylis glomerata*.
- 4.11 At the very northern point of the Site is an area of vegetation consisting of crack willow *Salix fragilis*, elder *Sambucus nigra*, hawthorn *Crataegus monogyna*, bramble *Rubus fruticosus*, great willowherb *Epilobium hirsutum* and field bindweed *Convolvulus arvensis*. The eastern boundary of the car park consists of wire fencing bordered with bramble, hawthorn and blackthorn *Prunus spinosa* scrub.
- 4.12 The car park is bounded to the south by a managed hedgerow of hawthorn, elder *Sambucus nigra* and bramble. The vegetation around the car park is of value within the Site only.
- 4.13 A small ditch is present on the northern boundary, which was dry at the time of the survey, though may flow at other times. The ditch is culverted on the western side as it runs underneath the A44. The ditch is of negligible value.
- 4.14 The area to the south of the car park comprises of grazed improved/species-poor semi-improved grassland dominated by perennial rye grass, cock's-foot, yarrow, greater plantain *Plantago major* and creeping thistle *Cirsium arvense*. The grassland is of negligible value.
- 4.15 The western boundaries of the grassland consist of fencing and a gappy hedgerow dominated by hawthorn. The southern part of the eastern boundary has ground flora including dog rose *Rosa canina*, nettle, bramble, thistle young sycamore *Acer pseudoplatanus* and broad-leaved dock *Rumex obtusifolius*. The southern boundary comprises of elder and bramble scrub and a pollarded ash *Fraxinus excelsior* tree in the south eastern corner. The hedgerows are of value within the Site only.

Fauna

Bats

- 4.16 The Thames Valley Environmental Record Centre and Oxfordshire Bat Group hold no records of bat species within 2km of the site boundary. However owing to the possible foraging opportunities provided by the hedgerows on site and the disused railway and lake to the east along with the possibility of roosting opportunities in nearby residential housing, a bat activity survey was conducted.
- 4.17 Bat activity was very low with no records of bats on the 9th September survey visit. During the 7th August visit, four foraging passes of common pipistrelle *Pipistrellus pipistrellus* were recorded along the eastern boundary with the railway. The Site appears to be of negligible value to bats.

Badgers

- 4.18 The Thames Valley Environmental Record Centre holds one record for a badger 1.5km to the west of the Site boundary.
- 4.19 A number of mammal tracks were noted across the Site but these are presumed to be rabbit as a number of rabbit burrows were also found. No evidence of badgers was found on the Site.

Birds

- 4.20 A number of notable species records within 2km of the Site boundary were returned by the local BTO recorder and Thames Environmental Record Centre. This included a Montagu's Harrier *Circus pygargus* observed adjacent to the Site, Barn owl foraging along the A44 adjacent to the Site, a goshawk *Accipiter gentiles* to the south west of the Site, and a kingfisher *Alcedo atthis* to the south west of the Site. None of the habitats within the Site would support these species.
- 4.21 During the Phase I survey, feral pigeon *Columba livia*, woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes*, robin *Erithacus rubecula*, blackbird *Turdus merula*, blue tit *Cyanistes caeruleus*, great tit *Parus major*, magpie *Pica pica*, rook *Corvus frugilegus*, chaffinch *Fringilla coelebs* and greenfinch *Carduelis chloris* were recorded using the Site.
- 4.22 Nesting and foraging habitat is largely confined to the peripheries of the Site. A full bird survey was not recommended and from an examination of the type and extent of the habitats present on Site, and the bird assemblage is likely to be of between negligible value and value within the Site only.

Great Crested Newts

- 4.23 The great crested newt *Triturus cristatus* is listed under Schedule 2 of the Habitat and Species Directive and on Schedule 5 of WCA 1981 (as amended). Together these make it illegal to intentionally kill, injure, disturb or take a great crested newt, take or disturb their eggs or internationally or recklessly damage, destroy or obstruct access to breeding or resting sites.
- 4.24 The closest water body is the lake to the east of the Site, which lies beyond the railway. The lake does not form optimal habitat for great crested newts being large (very approximately 20,000m²) and supporting waterfowl, which predate newt larvae, and it is considered unlikely that great crested newts would be present within it.
- 4.25 Even if present, great crested newts would be unlikely to utilise the Site, owing to a combination of the lack of suitable habitat within the Site and the presence of barriers to movement around it (deep railway cutting and main roads).
- 4.26 Thames Valley Environmental Record Centre holds no records of great crested newt within 2km of the Site boundary.

Other Species

- 4.27 Other records of notable species within 2km of the Site boundary include several records of water vole in the Oxford Canal, to the west of the Site boundary, common

lizard *Zootoca vivipara* and adder *Vipera berus* to the west of the Site and white letter hairstreak *Satyrrium w-album* to the west of the Site boundary. Owing to the lack of suitable habitat these species are unlikely to be present on Site.

- 4.28 No signs of water vole *Arvicola terrestris* were recorded along the ditch in the northern part of the Site.

Section 5 Discussions and Recommendations

- 5.1 There are several statutory and non-statutory sites within 5km of the Site boundary. However owing to the proximity to Oxford, the urban nature of the surrounding area and the distances involved, no impacts are predicted on any designated wildlife site.
- 5.2 The existing Site is deemed to support habitats of between negligible and Site ecological value. The development of this land for a mixed use scheme would have negligible impacts.
- 5.3 It is likely that most of the scrub, trees and hedgerows will be kept, as they are positioned around the margins of the Site. The loss of minor areas of these habitats are likely to result in non-significant adverse impacts, but should be replaced through new planting to result in no net loss of habitat.
- 5.4 Vegetation clearance should be undertaken outside of the nesting season, as all wild birds (with a few exceptions), their nests and eggs are afforded protection under the WCA 1981 (as amended). The breeding season is generally regarded as March to August, inclusive, though this is not defined in legislation. Birds can also nest outside of this time.
- 5.5 Delivering ecological enhancements to the Site, as required by PPS9, should primarily be delivered through the landscaping of the Site, where increasing the amount of native fruit/berry bearing tree and shrub species could provide beneficial opportunities for nesting birds.
- 5.6 Installing bird boxes on buildings and trees would help provide additional opportunities whilst the landscaping scheme matures.

Section 6 Conclusions

- 6.1 On the basis of the field survey undertaken and the background records received, there is no evidence to suggest that the Site supports ecological interest sufficient to prevent the principle of development.
- 6.2 With the removal of the habitats of between negligible and Site ecological value and enhancements provided by native planting and provision of bird boxes the proposed development would be accordance with legislation and policy.

Appendix 1 Planning Policy

Appendix 1 Planning Policy

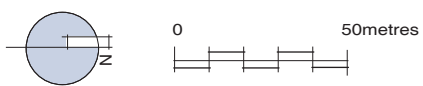
Oxford Local Plan

- A1.1 Policy NE.15 – Loss of trees and hedgerows. **“Planning permission will not be granted for development proposals which include the removal of trees, hedgerows and other valuable landscape features that form part of a development site, where this would have a significant adverse impact upon public amenity or ecological interest. Planning permission will be granted subject to soft landscaping, including tree planting, being undertaken whenever appropriate. Landscaping schemes should take account of local landscape character and should include the planting of indigenous species where appropriate. Where necessary, the City Council will seek long-term management plans, which will be secured through planning conditions or a planning obligation.”**
- A1.2 Policy NE.17 – Biodiversity **“Planning permission will not be granted for development that fails to safeguard, maintain or enhance features of ecological and geological importance, in particular priority habitats/species and species of conservation concern. In exceptional circumstances where this is not possible and the proposed development would have a significant adverse impact on local biodiversity, planning permission will only be granted subject to the creation of a new replacement habitat on site or the creation/enhancement of a similar ecological feature of an appropriate scale and kind on a nearby site. Developers will be required to take measures during the development process to prevent the disturbance of wildlife and to make provision for the protection and subsequent retention of natural features such as ponds, hedgerows, ditches and trees which are to be retained. Where necessary, the City Council will seek long-term management plans, which will be secured by planning conditions or a planning obligation.”**
- A1.3 Policy NE.18 – Special areas of Conservation (SAC) and Site of Special Scientific Interest (SSSI) **“Planning permission will not be granted for development that will have a significant adverse impact, either directly or indirectly, upon a Special Area of Conservation (SAC) or a Site of Special Scientific Interest (SSSI). SACs and SSSIs are identified on the Proposals Map.”**
- A1.4 Policy NE.19 – Sites of Local Importance for Nature Conservation (SLINC) and Local Nature Reserves (LNR) **“Planning permission will not be granted for any development that would have a significant adverse impact on a Site of Local Importance for Nature Conservation (SLINC) or Local Nature Reserve (LNR) either directly or indirectly, unless it is possible to compensate for the damage caused so there is no overall loss of ecological value. SLINC and LNRs are identified on the Proposals Map.”**

- A1.5 Policy NE.20 – Wildlife corridors **“Planning permission will not be granted for developments that would sever or harm the viability of wildlife corridors unless it is possible to create an equivalent corridor of equal or greater ecological value which can be secured as part of the proposal. Wildlife Corridors are identified on the Proposals Map.”**
- A1.6 Policy NE.21 – Species protection **“Planning permission will not be granted for developments that would harm plant and animal species specially protected by law unless the harm can be overcome by appropriate mitigation through compliance with planning conditions or planning obligations.”**
- A1.7 Policy NE.22 – Independent Assessment **“Where a planning application relates to a SAC, SSSI, SLINC or LNR or could have an adverse impact on such a site, or relates to a site that contains or is likely to contain a protected species or a UK Biodiversity Action Plan priority habitat/species or species of conservation concern, the City Council will require the submission of: a. an independent ecological survey; b. an assessment of the likely impact of the proposed development; c. details of any measures the developers propose to mitigate any harmful effects (including the protection of part of the site or, where appropriate, the provision of a replacement habitat elsewhere); and d. details of any measures to create or enhance habitats which the developers propose.”**
- A1.8 Policy NE.23 – Habitat Creation in new developments. **“The City Council will seek the creation of new habitats and habitat enhancement measures as part of new development proposals, particularly: a. in parts of Oxford where there is a shortage of ecologically important habitats; b. where sites abut an area designated as being of ecological importance; or c. on sites that have the potential to extend Oxford’s wildlife corridors and in relation to the Biodiversity Action Plan, protect priority habitats/species and species of conservation concern.”**

Plan

Ecological Features
(2839/01 04/08 DM/LS)



- Site boundary
- Hardstanding
- Pasture
- Trees, scrub and hedgerows
- Seasonal ditch

Drawing Title

- Client** Kier Property Developments Ltd
- Project** Pear Tree Lane, Oxford
- Scale** As shown
- Drawing No** 2839/01
- Date** 04/08 DM/LS
- Checked**

Ecological Features

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