

6.0 BIODIVERSITY

Introduction

- 6.1 This chapter of the ES assesses the likely significant effects of the Development on the environment in respect of Biodiversity.
- 6.2 The chapter has been prepared by Tyler Grange Group Ltd ACIEEM on behalf of Packaged Living Ltd, as required by the 2017 EIA Regulations (as amended). The preparation of this chapter has been led by Joseph Dance (BSc MSc). Joseph is a Regional Ecology Director with Tyler Grange and has worked in environmental consultancy for over 10 years, including the preparation of Environmental Statements.

Policy Context

National Planning Policy

- 6.3 National Planning Policy Framework (NPPF), December 2023
- 6.4 The updated National Planning Policy Framework (NPPF) was published in December 2023 and sets out the Government's planning policies for England and how these should be applied. It replaces the first National Planning Policy Framework published in March 2012.
- 6.5 Paragraph 11 states that:

"Plans and decisions should apply a presumption in favour of sustainable development."

- 6.6 For plan-making this means that:
- a) "all plans should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; mitigate climate change (including by making effective use of land in urban areas) and adapt to its effects;
 - b) strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas, unless:
 - I. the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area; or
 - II. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."
- 6.7 For decision-taking this means:
- c) "approving development proposals that accord with an up-to-date development plan without delay; or
 - d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:
 - I. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
 - II. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."

- 6.8 Section 11 of the NPPF, paragraph 124, sub-section b states that planning policies and decisions should:
- b) “recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production;”
- 6.9 Section 15 of the NPPF (paragraphs 180 to 194) considers the conservation and enhancement of the natural environment.
- 6.10 Paragraph 180 states that planning and decisions should contribute to and enhance the natural and local environment by:
- a. *“protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - b. *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
 - c. *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
 - d. *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
 - e. *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
 - f. *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*
- 6.11 Paragraph 181 states that plans should: “distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.”
- 6.12 Paragraph 185 states that in order to protect and enhance biodiversity and geodiversity, plans should:
- a. *“Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
 - b. *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*
- 6.13 When determining planning applications, Paragraph 186 states that local planning authorities should apply the following principles:

- a) “if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

6.14 As stated in paragraph 187 the following should be given the same protection as habitats sites:

- a) “potential Special Protection Areas and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”

6.15 Paragraph 188 states that “the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”

Local Planning Policy – Reading Borough Council

EN11: Waterspaces

- 6.16 Reading’s waterspaces will be protected and enhanced, so that they can continue to contribute to local and regional biodiversity and ecology, flood mitigation, local character, heritage and visual amenity, the provision of accessible leisure and recreational opportunities and, where appropriate, navigation. There will be no adverse impact on the functions and setting of any watercourse and its associated corridor. Where development in the vicinity of watercourses is acceptable, it will:-
- 6.17 Provide appropriate, attractive uses and buildings that enhance the relationship of buildings, spaces and routes to the watercourse, including through creating or enhancing views of the watercourse, and create a high quality public realm;
- 6.18 Make positive contributions to the distinct character, appearance, historic significance, landscape and amenity of the watercourses;
- 6.19 Provide a strengthened role for watercourses as important landscape features, wildlife corridors, historic features and recreation opportunities;
- 6.20 Wherever practical and consistent with its biodiversity role, provide good, level access to and along the waterside for all those who want to use it;
- 6.21 Be set at least ten metres back from the watercourse wherever practicable and appropriate to protect its biodiversity significance;

- 6.22 Improve the quality of watercourse environment through protecting and enhancing habitats and ensuring that habitat creation is balanced with access and urban uses; and
- 6.23 Pursue opportunities for de-culverting of watercourses.
- 6.24 EN12: Biodiversity and the Green Network
- a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:
- 6.25 Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and
- 6.26 Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.
- 6.27 New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.
- 6.28 b) On all sites, development should not result in a net loss of biodiversity and geodiversity and should provide a net gain for biodiversity wherever possible. Development should:
- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
 - Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.
- 6.29 In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.
- 6.30 EN14: Trees, Hedges, Woodlands
- 6.31 Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading’s vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.
- 6.32 New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.

Assessment Methodology

Desk Study

- 6.33 A desk study was undertaken for the Development on 11th November 2023. The desk study was undertaken by Hankinson Duckett Associates (HDA) with a 10km radius for Natura 2000 sites, 5km for national designated sites, and 2km for both non-statutory designated sites and protected/priority species. Records were obtained from Thames Valley Ecological Records Centre (TVERC) in November 2023. A desk-based study was conducted whereby freely available records of designated sites were reviewed by Tyler Grange, along with the data that was provided to HDA by TVERC in February 2024.

Field Surveys

'Extended' Phase I Survey

- 6.34 An 'Extended' Phase Iⁱ survey consisting of a habitat survey and a Preliminary Bat Roost Assessment (PBRA) of all trees and buildings within the Site was undertaken by HDA on 31st October 2022 by Clare Bird MCIEEM (see Appendices 6.1 and 6.2). The 'Extended' Phase I survey lasted for two hours with the weather conditions being optimal.
- 6.35 The habitat survey involved walking over the Site and mapping the habitat types present on Site. Habitat features, flora species, and a qualitative assessment of relative abundance were recorded where appropriate.
- 6.36 All buildings within the Site were subject to an external/internal Preliminary Bat Roost Assessment (PBRA). Buildings were inspected externally from ground level to identify any potential entry emergence/re-entry points, and to identify for evidence of emergence/re-entry such as staining and discolouration. Buildings were searched internally where possible to search for evidence of bats either currently using the buildings or any previous use by bats.
- 6.37 All trees within the Site and immediately adjacent were subject to a PBRA. All trees were inspected from ground level for potential for use by roosting bats.
- 6.38 In accordance with best practice guidelinesⁱⁱ which were valid at the time of survey, buildings and trees were categorised into negligible, low, moderate, high or confirmed roost suitability. Two trees were found to be of 'low' suitability for roosting bats, with the remaining buildings and trees being considered 'negligible' suitability for roosting bats.
- 6.39 The evaluation of the Site and habitats within it was based on the field surveys carried out, any designations pertaining to the Site, and any historical ecological information identified during the desk study, see Appendices 6.1 and 6.2.

Tyler Grange Update Phase I Survey

- 6.40 An update 'Extended' Phase I survey was carried out, along with an update external PBRA, on 9th February 2024 by Christian Cairns, a suitably experienced ecologist. The weather conditions for the survey were optimal, with all habitats being surveyed. The results of the survey are detailed within this ES Chapter.
- 6.41 The update external PBRA followed updated bat survey guidelinesⁱⁱⁱ. The update 'Extended' phase I found that there was no change to the Development habitats from the original results presented in Appendices 6.1 and 6.2. The update external PBRA found that the two trees which were identified as being 'low' suitability were re-assessed as being of 'negligible' suitability for bats, with the buildings within the Development also being considered 'negligible'.

Limitations and Assumptions

- 6.42 This report has been written by Tyler Grange Group Ltd who did not carry out the site surveys and did not write the original Ecological Impact Assessments (EclA) for the Development. The ecological surveys carried out on Site and subsequent EclA reports were carried out and written by HDA. Tyler Grange

cannot guarantee the validity of this data, but have undertaken an updated Site visit to confirm the baseline position is as reported in the existing documentation for the Site. This report has used the findings of the site surveys and EclA reports to inform this Chapter. It was confirmed by Reading Borough Council that the Development would require an Environmental Statement Chapter 'Accordingly, in exercise of the powers conferred by Regulation 6 (6) (b) of the EIA Regulations 2017, the Council hereby considers that the proposed development described in your request and the documents submitted with it is 'EIA development', within the meaning of the EIA Regulations 2017, and hence a positive screening opinion is hereby adopted.' See Appendix 1.2 for RBC's full decision.

6.43 The Development may result in loss and disturbance to some existing habitats and associated opportunities for fauna species within the Site boundary, and potentially outside of it. Consideration was given to the following potentially significant effects:

- Potential fragmentation of local habitat networks as a result of the Development;
- Disturbance to ecological features in relation to noise during the construction phase of the Development;
- Disturbance to ecological features within receiving range of dust and light during the construction and operational phase of the Development;
- Disturbance to ecological features within receiving range of increased light during the operational phase of the Development; and
- Disturbance to ecological features within walking distance of people and pets during the operational phase of the Development.

6.44 The evaluation of habitats and features is made with reference to the guidance on Ecological Impact Assessment published by the Chartered Institute for Ecology and Environmental Management (CIEEM)^{iv}

6.45 This process includes:

- Identifying those ecological features likely to be affected;
- Evaluating the features to identify those of importance i.e. those which, if their integrity or conservation status were to be affected, would result in specific provisions within national or local policies (or in some cases legislation) being triggered;
- The level of importance of specific ecological features is assigned using a geographic frame of reference using the following terms: International; National; Regional; County; District; Local; and / or within the Application Site boundary only; and
- To be in line with other chapters of this Environmental Statement (ES), the scale of the ecological feature's sensitivity is also described in Table 6.1 below.

Table 6.1: Sensitivity Descriptors

Value (Sensitivity)	Descriptor (CIEEM Equivalent)
High	International / National
Medium	Regional, County
Low	District, Local, within the Application Site boundary only
Negligible	Negligible

6.46 Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. 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.

- 6.47 Prediction of the likely significant effects arising from a development considers the different stages and activities within the development process, and the inherent mitigation built into a development (as well as the requirement or otherwise for additional mitigation to respond to an identified significant impact). Therefore, the assessment considers the existing (and future) baseline and the effects on the baseline in a systematic way, considering the various aspects of ecology, nature conservation and biodiversity as follows:
- The baseline is defined, i.e. an assessment of the Application Site in its current status and condition (noting the limitations below) with consideration also given to known likely changes to this baseline before the Development commences ('future baseline');
 - The potential effect(s) and source(s) of effect on ecological features are defined and quantified, where possible, in terms of magnitude and duration. Effects resulting from the Development are assessed for both the construction and operational phases; and
 - The significance of effects is assessed, having regard to the considerations outlined in the section below and where effects are significant, mitigation measures are described, and residual effects assessed.
- 6.48 In accordance with the CIEEM guidance and terminology, a significant effect, in ecological terms, is defined as an effect (adverse or beneficial) on the integrity of a defined Site or ecosystem(s) and/or the conservation status of habitats or species within a given geographical area, including cumulative effects. Insignificant effects are those that would not result in such changes.
- 6.49 The importance of any feature that would be significantly affected is then used to identify geographical scales at which the effect is significant. This importance relates directly to the consequences, in terms of legislation, policy and/or development control at the appropriate level. A significant negative effect on a feature of importance at one level would be likely to trigger related planning policies and, if permissible, generate the need for development control mechanisms as described in those policies.
- 6.50 Significant effects on features of ecological importance should be mitigated (or compensated for) in accordance with the guidance derived from policies applied at the scale relevant to the feature or resource.

Determining Effect Significance

- 6.51 The following factors are considered in determining whether ecological effects are significant:
- Extent - this is the area over which an effect occurs;
 - Magnitude of Impact - the size or amount of an effect, determined on a quantitative basis where possible. Table 6.3 provides details of the magnitude of the impact and description of the impact;
 - Duration - the time for which an effect is expected to last prior to recovery or replacement of the resource or feature;
 - Reversibility – an irreversible (permanent) effect is defined as one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) effect is one from which spontaneous recovery is possible or for which effective mitigation is both possible and enforceable; and
 - Timing and frequency - some effects are only likely if they happen to coincide with a critical life-stage or seasons. Others may occur if the frequency of an activity is sufficiently high.

Table 6.2. Magnitude of Impact and Description

Scale of Impact (Change)	Nature of Impact Change	Description
Major	Adverse	Permanent/irreversible damage to a biodiversity resource; and The extent, magnitude, frequency, and/or timing of an impact negatively affects the integrity or key characteristics of the resource.
	Beneficial	Permanent addition of, improvement to, or restoration of a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact positively affects the integrity or key characteristics of the resource.
Moderate	Adverse	Temporary/reversible damage to a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact negatively affects the integrity or key characteristics of the resource.
	Beneficial	Temporary addition of, improvement to, or restoration of a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact positively affects the integrity or key characteristics of the resource.
Minor	Adverse	Permanent/irreversible damage to a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact does affect the integrity or key characteristics of the resource.
	Beneficial	Permanent addition of, improvement to, or restoration of a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact does not affect the integrity or key characteristics of the resource.
Negligible	Adverse	Temporary/reversible damage to a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact does affect the integrity or key characteristics of the resource.
	Beneficial	Temporary addition of, improvement to, or restoration of a biodiversity resource; and the extent, magnitude, frequency, and/or timing of an impact does not affect the integrity or key characteristics of the resource.
No Change		No observable impact, either positive or negative.

Residual Assessment

- 6.52 Consideration is given to the potential remaining residual effects of the Development once proposed mitigation measures are assumed to be in place. This will be for both the construction and operational phases of the Development.

Cumulative Assessment

- 6.53 Consideration is given to any other developments within the Zol that, together with the Development, that may result in significant effects.
- 6.54 Effects are unlikely to be significant where features of local importance or sensitivity are subject to small scale or short-term effects. However, where there are several small-scale effects that are not significant alone, it may be that, cumulatively, these may result in an overall significant effect.

Baseline Conditions**Habitat Baseline Conditions**

- 6.55 The Site comprises mainly building, hardstanding, introduced shrub, dense scrub and scattered trees.

Designated Sites

- 6.56 There are no internationally designated sites within 10 km, and no nationally designated sites within 2 km of the Site. The Site does not fall within any Impact Risk Zones (IRZs) and therefore Natural England would not need to be consulted.

Non-statutory designated sites

- 6.57 Eight Local Wildlife Sites (LWSs) and two proposed LWSs within 2 km of the Site. For full details of these LWS sites including distance from Site and description of why they are designated as LWS can be seen in Appendix 6.1 and Appendix 6.2.

Habitats and Flora

- 6.58 The Development supports the following habitats:

- Bare ground
- Buildings
- Dense Scrub
- Hardstanding
- Ornamental Planting; and
- Scattered Trees

- 6.59 The habitats present on Site are described in detail in Appendix 6.1 and Appendix 6.2.

- 6.60 The River Kennet flows between the two areas of the Site. Further upstream the River Kennet has sections considered to be LWSs. The section of the river that flows past the Site has walled sides, little to no natural habitats, and flows through the heavily urbanised Reading city centre. This section of the river is not classed as a designated site or a non-designated site.

*Fauna**Badger*

- 6.61 40 records of badgers were returned from the desk study conducted by HDA within 2 km of the Site. The closest record was located 810 metres (m) to the northeast of the Site, and was recorded in 2020.
- 6.62 During the Site walkover, no badger setts or any other evidence of badger activity were recorded within or adjacent to the Site, with no suitable sett building habitat being recorded on Site. The ornamental planting and dense scrub on Site provide foraging habitat for badger albeit of low quality. No evidence of foraging activity by badger was recorded on the Site. Due to the lack of suitable habitat and no sign of badgers, badgers will therefore not be discussed further in this report.

Bats

- 6.63 Records of eight bat species were returned from the desk study carried out by HDA. Species recorded include Common Pipistrelle *Pipistrellus pipistrellus*, Brown Long-eared bat *Plecotus auritus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctula*, Barbastelle *Barbastella barbastellus*, Serotine *Eptesicus serotinus*, Daubenton's bat *Myotis daubentonii* and Nathusius' Pipistrelle *Pipistrellus nathusii* as well as unidentified bat species. The closest record to the Site pertains to a Common Pipistrelle approximately 250m north-west of the Site, dating from 2009.
- 6.64 A total of 10 European Protected Species Licences (EPSL) were returned within 2 km of the Site boundary. The closest EPSL (Licence No. 2019-44194-EPS-MIT) was located 285m east of the Site and

allows for the destruction of a resting place for common pipistrelle and soprano pipistrelle. The EPSL licences were returned during the high level desk study undertaken by Tyler Grange.

- 6.65 During the original internal/external PBRA of the buildings at the Development, there were no identifiable roost features, and therefore the buildings were considered to be unsuitable for roosting bats. The update external PBRA assessment (carried out by Tyler Grange in February 2024) carried out on the trees found all trees within the Site to be of 'negligible' suitability for roosting bats. The two previously of 'low' suitability trees were determined to have no suitable features present, and therefore re-assessed as being of 'negligible' suitability. The buildings present on Site were determined to still be of 'negligible' suitability for roosting bats.
- 6.66 The habitats present at the Site were considered to provide little to no foraging or commuting opportunities for bats. The adjacent river provides more opportunities for foraging and commuting bats, however, the River Kennet is well lit for pedestrian use, and this section of the river is within Reading city centre which is heavily urbanised.

Birds

- 6.67 Records of 98 notable bird species were recorded within 2 km of the Site. For details on the species of bird returned see Appendix 6.1 and Appendix 6.2.
- 6.68 During the original Site visit conducted by HDA, pigeons *Columba livia domestica* were identified as nesting on the roof of the building. The trees and scrub present at the Site provide some nesting and foraging opportunities for common bird species. The Site was considered to be of negligible ecological value for birds.

Fish

- 6.69 The desk study provided records of Atlantic salmon, brown trout and European eel. The closest record was of Atlantic salmon *Salmo salar*, and was from 2003, with the record being 2 km south of the Site. Overall, the Site was unsuitable for fish species, and therefore fishes will not be discussed further.

Great Crested Newt and other amphibians

- 6.70 One record of Great Crested Newt (GCN) *Triturus cristatus* was returned from the desk study, and was recorded 990m northeast of the Site, with the record being from 2017.
- 6.71 There are no suitable waterbodies within the Site, or within a distance which GCN could disperse to the Site, and there are no habitats suitable for GCN or other amphibians within their terrestrial phase. Therefore, GCN and other amphibians will not be discussed further in this report.
- 6.72 There are no suitable watercourses and very limited suitable habitats within the Site for common toad *Bufo bufo* of which records were returned during the desk study carried out by HDA.

Invertebrates

- 6.73 A total of 682 records of invertebrates were returned from the desk study. A full description of the invertebrate species returned from the desk study can be found in Appendix 6.1 and Appendix 6.2.
- 6.74 The ornamental planting, scattered trees and dense scrub provide some opportunities in the Site, however, it is unlikely that a notable invertebrate assemblage is present with higher quality habitats present in the surrounding areas.

Otter

- 6.75 11 records of otter *Lutra lutra* were returned from the desk study. The closest recorded was 70m east of the Site, and was recorded in 2019.
- 6.76 The habitats in the Site are unsuitable for otters due to the lack of natural habitat and high human activity. The River Kennet adjacent to the Site allows otters to commute to suitable habitat located upstream and

downstream of the Site. It is unlikely that habitats within the Site are used by otters due to it being poor quality habitat, urbanised surrounding, high human activity, of small size and lacking connectivity to more suitable habitat further up/downstream. It has been considered that otters use this section of the River Kennet on an occasional basis to commute further up/down stream.

Plants

- 6.77 47 records of protected and notable plant species were returned from the desk study. The species returned include bluebell *Hyacinthoides* sp., English sticky eyebright *Euphrasia anglica*, chicory *Cichorium intybus*, corn mint *Mentha arvensis*, field scabious *Knautia arvensis*, heath speedwell *Veronica officinalis*, hoary plantain *Plantago media*, quaking grass *Briza* sp., ragged robbin *Lychnis flos-cuculi* and wild strawberry *Fragaria vesca*.
- 6.78 The desk study also returned records of invasive plant species. These include records of Japanese Knotweed *Fallopia japonica*, Himalayan Balsam *Impatiens glandulifera* and New Zealand Pygmyweed *Crassula helmsii* all of which are listed on Schedule 9 of the 1981 Wildlife and Countryside Act (as amended)^v. No invasive plant species were noted as being on Site or adjacent to it.

Reptiles

- 6.79 A total of 61 records of reptiles were returned from the desk study with the species recorded being common lizard *Zootoca vivipara*, grass snake *Natrix natrix* and slow worm *Anuis fragilis*. The closest record to Site was 1 km northeast of the Site, and was recorded in 2016.
- 6.80 It is considered that the Site is unsuitable for reptile species due to the hardstanding, building and ornamental planting present. The scrub located along the boundary near to the canal was considered to provide some suitable habitat for reptiles, but it is very limited in its suitability due to the surrounding habitats. Overall it was considered that a population of reptiles is unlikely to be supported within the Site, and will not be discussed further in this report.

Water Vole

- 6.81 Nine records of water vole were returned from the desk study. The closest record was 1.4 km southwest of the Site, and was recorded in 2020.
- 6.82 The Site is unsuitable for water vole due to lack of suitable habitat and heavy urbanisation within the surrounding area. The River Kennet adjacent to the Development has the potential to allow water vole to commute to suitable habitat located upstream and downstream of the Site, but is considered unsuitable habitat for water vole anything else due to the reason stated above. It is therefore considered that water voles are absent from Site and will not be written further in this report.

Other Species

- 6.83 West European hedgehog *Erinaceus europaeus* were also returned from the desk study. The majority of the habitats present on the Site are considered to be unsuitable for hedgehog. The section of scrub would be considered to be suitable habitat for hedgehog, however, it is small in size, poor quality, and the surrounding areas of the Site are heavily urbanised which is unsuitable for hedgehog. West European hedgehog will therefore not be discussed further in this report.

Future Baseline

- 6.84 Without the Development, it would be expected that the Site will remain as a commercial/retail area (which is currently vacant with the exception of the operational Vue Cinema), and that the habitats present on Site would remain in the same or similar condition.

Likely Significant Effects

Purpose

- 6.85 The aim of this section of the biodiversity chapter is to assess the likely significant environmental effects, both beneficial and adverse, resulting from the Development. The construction and operational effects are considered separately in this chapter through determining the magnitude, sensitivity and significance for each ecological receptor.
- 6.86 The ecological importance and sensitivity of resources within the Zone of Influence (Zol) of the Development are summarised in Table 6.3.

Table 6.3. Summary of sensitivity of ecological receptors.

Ecological Receptor	Evaluation	Ecological Importance	Sensitivity
Statutory/non-statutory nature conservation designations			
Holy Brook LWS	All LWS are designated on the basis that they meet selection criteria for sites of nature conservation importance at a county level and are therefore of county ecological importance.	County Importance	All LWS cover a broad range of ecological receptors and habitats and cannot be readily replaced in the short term but most are achievable long-term.
River Kennet/Kennet and Avon Canal LWS			
Cow Lane Depot LWS			
The Coal, Kennetmouth and Kings Meadow East LWS			
Fobney and Kennet Valley Meadows LWS			
Whiteley Park Farm/ St Patrick's Hill LWS			
Henley Road Gravel Pit LWS			
The Warren Woodlands Complex LWS			
Dingley Dell Proposed LWS			
Habitats and Flora			
Bare ground	Inherently of negligible ecological importance.	Negligible Importance	Not sensitive and can be easily replaced.
Buildings	Inherently of negligible ecological importance.	Negligible Importance	Not sensitive and can be easily replaced
Dense Scrub	A small area of dense scrub located near to the river kennet. The dense scrub is of some ecological value to bats, birds and invertebrates.	Local Importance	Not sensitive and can be easily replaced.
Hardstanding	Inherently of negligible ecological importance.	Negligible Importance	Not sensitive and can be easily replaced
Ornamental planting	Inherently of negligible ecological importance.	Negligible Importance	Not sensitive and can be easily replaced
Scattered trees	20 scattered trees are located within the Development boundary. Given that scattered trees are present in the surrounding area, they are considered to be of local importance.	Local Importance	Not sensitive but not readily replaced in the short term.
River Kennet (adjacent to Site)	Between the two areas of the Site lies the River Kennet. This habitat does not provide any ecological value to the Site but is itself of ecological value since it provides suitable habitat for a wide variety of flora and fauna species. The river is also considered a habitat of principle importance under the NERC Act 2006 ^{vi} . The River Kennet is therefore considered to be of local ecological importance	Local Importance	The ecological receptors and habitats present within the River Kennet cannot be readily replaced in the short term but can be achievable long-term.
Protected/Priority species			
Bats	The follow up survey in 2024 confirmed that the trees and buildings within the Site to have negligible potential for	Negligible Importance	Highly sensitive to changes in lighting in particular, and faithful to known roost sites.

Ecological Receptor	Evaluation	Ecological Importance	Sensitivity
	roosting bats. The Site is therefore to be of negligible importance in maintaining bat populations.		
Birds	The surveys carried out in 2022 and 2024 found that the Site provides very limited nesting opportunities for common bird species, with some foraging potential in the form of the dense scrub. The Site is therefore considered to be of negligible importance for birds.	Negligible Importance	Most species highly sensitive to disturbance from human activity but are accustomed to vehicle movement. Birds will readily occupy suitable habitat if free from disturbance by humans, however, the assemblage of birds using the Site are mostly likely accustomed to human activity.
Invertebrates	The Site supports small areas of scrub and 20 scattered trees. These habitats provide limited opportunities for invertebrates.	Negligible Importance	Some species are highly sensitive to changes in habitat.
Otters	The Site is unlikely to be important in maintaining populations locally due to the absence of suitable habitat, lack of foraging opportunities and high human activity. Because of this, otters are considered likely absent from the Site.	Negligible Importance	Highly sensitive to human disturbance and will disperse from areas subject to regular disturbance.

Construction and Operational Phases Effects

- 6.87 The potential impacts of the Development on each of the ecological features identified are described in Table 6.4 (construction) and Table 6.5 (operation), below.

Table 6.4. Likely significant effects during the Construction phase.

Ecological Receptor (Ecological Importance)	Description of potential impact	Nature of effect	Potential level of significance in the absence of mitigation
Statutory/non-statutory nature conservation designations			
Holy Brook LWS (County)	The LWS is located 570m south west of the Development, and is upstream of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.	Negligible	Negligible impact at the county level = Negligible
River Kennet/Kennet and Avon Canal LWS (County)	The LWS is located 600m south of the Development. It is located upstream of the Development, and therefore would not be affected by any pollution incidents. Potential impacts to the river adjacent to the Site are discussed in the habitats section.	Negligible	Negligible impact at the county level = Negligible
Cow Lane Depot LWS (County)	The LWS is located 1 km north west of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.	None	None
The Coal, Kennetmouth and Kings Meadow East LWS (County)	The LWS is located 1.1 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.		
Fobney and Kennet Valley Meadows LWS (County)	The LWS is located 1.2 km southwest of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.		
Whiteley Park Farm/ St Patrick's Hill LWS (County)	The LWS is located 6 km south of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.		
Henley Road Gravel Pit LWS (County)	The LWS is located 1.6 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.		
The Warren Woodlands Complex LWS (County)	The LWS is located 1.8 km north west of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.		
Dingley Dell Proposed LWS (County)	The LWS is located 1.8 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by noise or air pollution during construction.	None	None
Habitats and Flora			
Bare ground (Negligible)	Permanent loss of current bare ground on Site	Permanent, minor magnitude, irreversible, low sensitivity	Negligible

Ecological Receptor (Ecological Importance)	Description of potential impact	Nature of effect	Potential level of significance in the absence of mitigation
Buildings (Negligible)	Permanent loss of current buildings on Site.	Permanent, minor magnitude, irreversible, low sensitivity	Negligible
Dense Scrub (Local)	The dense scrub is to be retained on Site. Potential for dust pollution and trampling during construction phase.	Permanent, minor magnitude, reversible, low sensitivity	Permanent adverse at local level = Minor Adverse
Hardstanding (Negligible)	Permanent loss of current hardstanding on Site.	Permanent, minor magnitude, irreversible, low sensitivity	Negligible
Ornamental planting (Negligible)	Permanent loss of current ornamental planting.	Permanent, minor magnitude, irreversible, low sensitivity	Negligible
Scattered trees (Local)	Permanent loss of current scattered trees.	Permanent, minor magnitude, irreversible, low sensitivity	Permanent adverse at local level = Minor Adverse
River Kennet (adjacent to Site)	The River Kennet may be adversely affected during the construction phase of the Development through dust, air and potentially run off. This may bring the Development out of line with local planning policies EN11 and EN12.	Permanent, moderate magnitude, irreversible, moderate sensitivity	Permanent adverse at local level = moderate adverse
Protected/Priority species			
Bats (Local)	All trees and buildings were identified to be 'negligible' suitability for roosting bats within the Development, with the habitats being lost being of low quality for bats. Increased lighting could occur during the construction phase.	Permanent, minor magnitude, irreversible, low sensitivity	Permanent adverse within the context of the local area = Minor adverse
Birds (Negligible)	The loss of habitats present within the Development would lead to the loss of habitats suitable for common bird species i.e scattered trees.	Negligible (but legislative concern regarding protection of nests)	Negligible (but legislative concern regarding protection of nests).
Invertebrates (Negligible)	The dense scrub is to be retained, with the scattered trees to be removed.	Negligible	Negligible
Otters (Negligible)	No suitable habitat for otter was recorded on Site so there would be no adverse impact on this species group.	None	None

Operational Phase**Table 6.5. Likely significant effects during the Operational phase.**

Ecological Receptor (Ecological Importance)	Description of potential impact	Nature of effect	Potential level of significance in the absence of mitigation
Statutory/non-statutory nature conservation designations			
Holy Brook LWS (County)	The LWS is located 570 m south west of the Development, and is upstream of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.	Negligible	Negligible impact at the county level = Negligible
River Kennet/Kennet Avon Canal LWS (County)	The LWS is located 600 m south of the Development, and is located upstream of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.	Negligible	Negligible impact at the county level = Negligible
Cow Lane Depot LWS (County)	The LWS is located 1 km north west of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.	None	Negligible impact at the county level = Negligible
The Coal, Kennetmouth and Kings Meadow East LWS (County)	The LWS located 1.1 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.		
Fobney and Kennet Valley Meadows LWS (County)	The LWS is located 1.2 km south west of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.		
Whiteley Park Farm/ St Patrick's Hill LWS (County)	The LWS is located 1.6 km south of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.		
Henley Road Gravel Pit LWS (County)	The LWS is located 1.6 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.		
The Warren Woodlands Complex LWS (County)	The LWS is located 1.8 km north west of the Development. It is considered sufficiently distant from the Development to not be adversely impacted the day-to-day running of the Development.		
Dingley Dell Proposed LWS (County)	The LWS is located 1.8 km north east of the Development. It is considered sufficiently distant from the Development to not be adversely impacted by the day-to-day running of the Development.		
Habitats and Flora			
Bare ground (Negligible)	None expected, as all current bare ground will be removed during construction	None	None

Ecological Receptor (Ecological Importance)	Description of potential impact	Nature of effect	Potential level of significance in the absence of mitigation
Buildings (Negligible)	None expected, as all current buildings will be removed during construction	None	None
Dense Scrub (Local)	Degradation of retained habitats resulting from inappropriate management	Permanent, minor magnitude, irreversible, low sensitivity	Permanent adverse at local level = Minor adverse
Hardstanding (Negligible)	None expected, as all current hardstanding will be removed during construction	None	None
Ornamental planting (Negligible)	None expected, as all current ornamental planting will be removed during construction	None	None
Scattered trees (Local)	None expected, as all current scattered trees will be removed during construction.	None	None
River Kennet (Adjacent to Site)	A BRE test (see Appendix 6.3) found no significant change in overshadowing on the river Kennet in relation to before and during the operational phase, with the BRE test showing 2+ hours of sunlight for at least 92% of the open space. The minimum requirement for the BRE test is 2+ hours of sunlight for at least 50% of the open space.	Negligible	Negligible impact at the local level= Negligible
General (created habitats)	Created habitats unable to reach target conditions anticipated through Landscape and Ecological Management Plan (LEMP).	Permanent, minor magnitude, irreversible, low sensitivity	Adverse impact significant at a local level for created habitats (which will be a maximum of local importance) = Minor adverse
Protected/Priority species			
Bats (Local)	Disturbance to foraging and commuting bats resulting from lighting associated with the Development.	Permanent, minor magnitude, irreversible, low sensitivity	Permanent adverse within the context of the local area = Minor adverse
Birds (Local)	The loss of habitats present within the Site would lead to the loss of habitats suitable for common bird species.	Permanent, minor magnitude, irreversible, low sensitivity	Permanent adverse at the local level = Minor adverse
Invertebrates (Local)	The dense scrub is to be retained, with the scattered trees to be planted. Potential for suitable habitat for invertebrates to be mismanaged.	Negligible	Negligible
Otters (Negligible)	None expected as poor habitat suitability for this species on Site.	None	None

Mitigation Measures

Construction Phase

- 6.88 Mitigation measures that are to be implemented for the process of impact management include a daylight and sunlight overshadowing assessment (see Appendix 6.3), and during the construction phase of the Development, pollution prevention guidelines^{vii} to be followed to prevent adverse effects to habitats and protected species.

Non-statutory Designated Sites

- 6.89 Due to the distances between the Development and the LWS identified during the desk study no mitigation will be required. Although there is a hydrological link to two of the LWS identified, they are both located upstream of the Development and therefore no further mitigation will be required. Appropriate mitigation for the River Kennet is discussed below in paragraph 6.83 since it is river habitat which is of local ecological importance.

Mixed Scrub

- 6.90 The dense scrub located in the Site may be impacted during the construction phase through dust pollution and trampling. The provision of a Construction Ecological Management Plan (CEMP) will include pollution prevention measures which will reduce the potential impact to the dense scrub. The CEMP will also provide measures to prevent the dense scrub from potentially being adversely affected by trampling/excess human activity.

River Kennet

- 6.91 Adverse impacts arising from pollution (i.e noise/light/dust pollution) may occur along the section of the River Kennet where the Development is located and further downstream. Mitigation measures should include pollution prevent recommendations which should cover dust, air and run off prevention measures, and could include recommendations such as^{vi}:

- The use of silt fences at the boundary of the Development;
- Concrete and cement mixing areas be placed 10 metres away from the River Kennet to minimise the risk of run off;
- The use of spill kits on Site; and
- Implementation of dust suppression measures on Site.

- 6.92 These pollution prevention measures can be included within the recommended CEMP to be secured by planning condition. The mitigation mentioned in this report would bring the Development within compliance to local planning policies EN11 and EN12 in relation to the River Kennet adjacent to the Site.

Bats

- 6.93 The Site is considered to provide little to no habitat for bats due to lighting levels, and the poor quality of suitable foraging/roosting habitat. The loss of the scattered trees at the Development is to be mitigated for through the proposed tree planting of 14 scattered trees on Site, and creation of areas of broadleaved woodland, see Appendix 6.4 and 6.5. It is also believed that the proposed tree planting and broadleaved woodland creation would bring the Development into alignment with planning policy EN14. Due to the loss of trees which were considered to be 'negligible' for roosting bats, the proposed tree planting and habitat creation is considered suitable for maintaining the limited functionality of the Development for bats.
- 6.94 A sensitive lighting scheme, secured through planning conditions, is recommended for the Development during the construction phase which will detail how the River Kennet (the only suitable habitat for bats in the immediate environment) will not be subject to inappropriate levels of light spill.

Birds

- 6.95 Minor adverse impacts could occur during site clearance of habitat which could contain nesting birds. This clearance would be timed to avoid the bird breeding season wherever possible (i.e. conducted between September and February). Where this cannot be achieved, habitat clearance would need to be preceded by a check for active nests by a Suitably Qualified Ecologist (SQE). Where an active nest is found, a suitable exclusion zone (commensurate with species concerned, tolerance of disturbance and stage of nesting) would be set up and left undisturbed until dependent young have fledged and the SQE confirms the nests are no longer active. It should be noted that some species of bird (i.e. pigeons / doves) can nest year-round and the legislation afforded to wild bird nests is applicable year-round as well. Whilst there isn't a requirement for ecological supervision for vegetation clearance outside of the 'core' nesting season, due diligence should be shown by contractors for all vegetation clearance and if an active nest is suspected, work in the area should stop and advice sought from the SQE.
- 6.96 Although the loss of suitable habitat for birds will be minor the proposed tree planting, proposed buildings and retention of dense scrub will support the same bird assemblage as before the construction phase of the Development.

Invertebrates

- 6.97 Minor adverse impacts could occur during tree removal which would remove suitable habitat for invertebrates. The proposed tree planting within the Development will mitigate for this adverse effect once the Site transitions into its operational phase. The dense scrub is to be retained, and should be protected through the proposed CEMP.

Operational Phase

- 6.98 The provision of a Landscape and Ecological Management Plan (LEMP) to be secured through planning conditions, will contain the details of the management of existing habitats within the Development (and those to be created).

Non-statutory Designated Sites

- 6.99 Due to the distances between the Development and the LWSs identified during the desk study no mitigation will be required. Although there is a hydrological link to two of the LWSs identified, they are both located up stream of the Development and therefore no further mitigation will be required. Appropriate mitigation for the River Kennet is discussed below in paragraph 6.81 since it is river habitat which is of ecological importance.

Habitats and Flora

- 6.100 Minor adverse impacts may occur on retained and created habitats if not managed effectively. Habitats created as part of the green infrastructure of the Development would be subject to a LEMP. The LEMP should also contain measures to prevent the degradation of retained scrub during site management and to further enhance its value with the adoption of a LEMP.
- Management of these habitats would take account of ecological constraints regarding species such as: Breeding birds - vegetation clearance would be timed to avoid the bird breeding season unless inspected and declared clear by a qualified ecologist (March - August inclusive).
- 6.101 Based on the BRE test (Appendix 6.3), the change in overshadowing is not significant and therefore does not require mitigation. This ensures that the Development will be compliant with local planning policies EN11 and EN12.

*Fauna**Bats*

- 6.102 To mitigate potential minor adverse impacts through increased and insensitive lighting on the local bat population, a sensitive lighting scheme should be designed to ensure that favourable habitat (the River Kennet) is not subject to lighting levels above 1 lux.
- 6.103 The erection of bat boxes within the Development either on the proposed buildings or scattered trees could also be implemented. The location and number of these bat boxes could be controlled through the proposed LEMP for the Development.

Birds

- 6.104 Minor adverse impacts could occur as a result of inappropriate management of retained and created habitats. The proposed green infrastructure layout for the Development would include tree planting and broadleaved woodland habitat creation which would provide suitable breeding habitat for birds.
- 6.105 It will also be necessary for the LEMP to provide timescales to ensure breeding birds are not adversely impacted. This should be done by restricting tree pruning to January / February each year. This will avoid both the breeding season (March – August) and then the autumn period when berry-producing species will be producing the berry food source for thrushes and other species.

Invertebrates

- 6.106 Minor adverse impacts could occur as a result of inappropriate management of retained and created habitats. The proposed green infrastructure layout (see Appendices 6.6-6.9 for the Development) would include tree planting and ornamental shrub planting which would provide suitable habitat for invertebrates.

Otters

- 6.107 No adverse impacts are expected.

Residual Effects

- 6.108 Residual effects are those effects of the Development which still persist after mitigation measures have been implemented.

Construction Phase

- 6.109 The adoption of a CEMP and adherence to measures proposed would result in no residual effects during construction.

Operational Phase

- 6.110 The adoption of a sensitive lighting scheme, LEMP and adherence to measures proposed would result in no residual effects during the operational phase of the Development.

Cumulative Effects**Construction Phase***Yield Hall Place 1 and Yield Hall Place 2*

- 6.111 It is considered that through the adoption of the lighting scheme, CEMP and adherence to measures proposed would result in no cumulative effects of the Yield Hall Place 1 and Yield Hall Place 2 Developments during construction.

The Developments and Other Cumulative Developments

- 6.112 It is considered that through the adoption of the lighting scheme, CEMP and adherence to measures proposed would result in no cumulative effects between the Developments and the cumulative schemes described in Chapter 2 of the ES during the construction phase of the Development.

Operational Phase*Yield Hall Place 1 and Yield Hall Place 2*

- 6.113 It is considered that there will be no cumulative effects should Yield Hall Place 1 and Yield Hall Place 2 on the other. This is due to the mitigation recommended in the form of a LEMP, CEMP, and lighting scheme.

The Developments and Other Cumulative Schemes

- 6.114 It is considered that there will be no cumulative effects from the cumulative schemes described in Chapter 2 of this ES and the Development. After reviewing the Updated Cumulative Schemes List in Appendix 2.1 the closest scheme to the Development is 100 m west of the Development and does not call for the demolition and construction of a new purpose built residential building. The distances of the remaining cumulative schemes do not offer any effect to the Development. The mitigation measures prescribed for the operational phase of the Development will also ensure that there are no cumulative effects in combination with the other schemes identified.

Summary

- 6.115 Table 6.7 contains a summary of the likely significant effects of the Yield Hall Place 1 Development and Table 6.8 contains a summary of the likely significant effects of the Yield Hall Place 2 Development.
- 6.116 Table 6.9 contains a summary of the cumulative effects of the Yield Hall Place 1 Development in combination with the Yield Hall Place 2 Development. Table 6.10 contains a summary of the Developments in combination with the cumulative schemes identified in Chapter 2 of this ES.

Table 6.7: Yield Hall Place 1 Development Table of Significance – Biodiversity

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Construction										
Holy Brook LWS (County)	Negligible	Negligible impact at the county level = Negligible	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
River Kennet/Kennet and Avon Canal LWS (County)	Negligible	Negligible impact at the county level = Negligible	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
Cow Lane Depot LWS (County)	None	None	None required					Y		None
The Coal, Kennetmouth and Kings Meadow East LWS (County)	None	None	None required					Y		None
Fobney and Kennet Valley Meadows LWS (County)	None	None	None required					Y		None
Whiteley Park Farm/ St Patrick's Hill LWS (County)	None	None	None required					Y		None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Henley Road Gravel Pit LWS (County)	None	None	None required					Y		None
The Warren Woodlands Complex LWS (County)	None	None	None required					Y		None
Dingley Dell Proposed LWS (County)	None	None	None required					Y		None
Bare ground (Negligible)	Permanent	Negligible	None						N/A	None
Buildings (Negligible)	Permanent	Negligible	None						N/A	None
Dense Scrub (Local)	Temporary	Minor/Adverse	Production of a CEMP/ LEMP which will include pollution prevention measures during construction and details how the habitat will be managed during the operational phase of the Development.						Y	None should mitigation measures recommended be enacted.
Hardstanding (Negligible)	Permanent	Negligible	None.						N/A	None.
Ornamental planting (Negligible)	Permanent	Negligible	None required						N/A	None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Scattered trees (Local)	Permanent	Minor/Adverse	Mitigation will be in the form of scattered tree planting. The production of a LEMP will provide guidelines which will ensure that these planted trees are maintained during the operational phase of Yield Hall Place 1.					Y		None should mitigation measures recommended be enacted.
River Kennet (adjacent to Site) (Local)	Temporary	Moderate adverse	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
Bats (Local)	Permanent	Minor Adverse	Mitigation will be the creation of a CEMP/LEMP and lighting strategy.					Y		None should mitigation measures recommended be enforced.
Birds (Negligible)	Permanent	Negligible (but legislative concern over active nests)	Sensitive timing of works.					Y		None should mitigation measures recommended be enforced.
Invertebrates (Local)	Temporary	Minor Adverse	Mitigation will be the creation of a CEMP/LEMP.					Y		None should mitigation measures recommended be enforced.
Otters (Negligible)	None	None	None required						Y	None
Completed Development										
Holy Brook LWS (National)	Negligible	Negligible impact at the county level = Negligible	None required					Y		Negligible
River Kennet/Kennet and Avon Canal LWS (National)	Negligible	Negligible impact at the county level = Negligible	None required					Y		Negligible

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Cow Lane Depot LWS (County)	None	None	None required					Y		None
The Coal, Kennetmouth and Kings Meadow East LWS (County)	None	None	None required					Y		None
Fobney and Kennet Valley Meadows LWS (County)	None	None	None required					Y		None
Whiteley Park Farm/ St Patrick's Hill LWS (County)	None	None	None required					Y		None
Henley Road Gravel Pit LWS (County)	None	None	None required					Y		None
The Warren Woodlands Complex LWS (County)	None	None	None required					Y		None
Dingley Dell Proposed LWS (County)	None	None	None required					Y		None
Bare ground (Negligible)	None	None	None required					Y		None
Buildings (Negligible)	None	None	None required					Y		None
Dense Scrub (Local)	Permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Hardstanding (Negligible)	None	None	None required						Y	None
Ornamental planting (Negligible)	None	None	None required						Y	None
Scattered trees (Local)	None	None	None required					Y		None
River Kennet (adjacent to Site)	Permanent	Moderate adverse	None required					Y		None should mitigation measures recommended be enacted.
General (created habitats)	Permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP						Y	Negligible
Bats (Local)	Light pollution, permanent	Minor adverse	Adoption of sensitive lighting scheme and adherence to measures agreed					Y		Negligible
Birds (Negligible)	Disturbance to created and retained habitats, permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		Negligible
Invertebrates (Negligible)	Disturbance to created and retained habitats, permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		Negligible
Otters (Negligible)	None	None	None required						Y	None

*** Geographical Level of Importance**

I = International; UK = United Kingdom; S = Scotland; R = Regional; C = Council; L = Local

Table 6.8: Yield Hall Place 2 Table of Significance – Biodiversity

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Construction										
Holy Brook LWS (County)	Negligible	Negligible impact at the county level = Negligible	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
River Kennet/Kennet and Avon Canal LWS (County)	Negligible	Negligible impact at the county level = Negligible	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
Cow Lane Depot LWS (County)	None	None	None required					Y		None
The Coal, Kennetmouth and Kings Meadow East LWS (County)	None	None	None required					Y		None
Fobney and Kennet Valley Meadows LWS (County)	None	None	None required					Y		None
Whiteley Park Farm/ St Patrick's Hill LWS (County)	None	None	None required					Y		None
Henley Road Gravel Pit LWS (County)	None	None	None required					Y		None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
The Warren Woodlands Complex LWS (County)	None	None	None required					Y		None
Dingley Dell Proposed LWS (County)	None	None	None required					Y		None
Bare ground (Negligible)	Permanent	Negligible	None						N/A	None
Buildings (Negligible)	Permanent	Negligible	None						N/A	None
Dense Scrub (Local)	Temporary	Minor/Adverse	Production of a CEMP/ LEMP which will include pollution prevention measures during construction and details how the habitat will be managed during the operational phase of the Development.						Y	None should mitigation measures recommended be enacted.
Hardstanding (Negligible)	Permanent	Negligible	None.						N/A	None.
Ornamental planting (Negligible)	Permanent	Negligible	None required						N/A	None
Scattered trees (Local)	Permanent	Minor/Adverse	Mitigation will be in the form of scattered tree planting. The production of a LEMP will provide guidelines which will ensure that these planted trees are maintained during the operational phase of Yield Hall Place 1.					Y		None should mitigation measures recommended be enacted.

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
River Kennet (adjacent to Site) (Local)	Temporary	Moderate adverse	Mitigation will be in the form of a CEMP/ LEMP which will include pollution prevention measures. These pollution measures will provide guidelines on how air, dust and run off will be prevented.					Y		None should mitigation measures recommended be enacted.
Bats (Local)	Permanent	Minor Adverse	Mitigation will be the creation of a CEMP/LEMP and lighting strategy.					Y		None should mitigation measures recommended be enforced.
Birds (Negligible)	Permanent	Negligible (but legislative concern over active nests)	Sensitive timing of works.					Y		None should mitigation measures recommended be enforced.
Invertebrates (Local)	Temporary	Minor Adverse	Mitigation will be the creation of a CEMP/LEMP.					Y		None should mitigation measures recommended be enforced.
Otters (Negligible)	None	None	None required						Y	None
Completed Development										
Holy Brook LWS (National)	Negligible	Negligible impact at the county level = Negligible	None required					Y		Negligible
River Kennet/Kennet and Avon Canal LWS (National)	Negligible	Negligible impact at the county level = Negligible	None required					Y		Negligible
Cow Lane Depot LWS (County)	None	None	None required					Y		None
The Coal, Kennetmouth and Kings Meadow East LWS (County)	None	None	None required					Y		None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
Fobney and Kennet Valley Meadows LWS (County)	None	None	None required					Y		None
Whiteley Park Farm/ St Patrick's Hill LWS (County)	None	None	None required					Y		None
Henley Road Gravel Pit LWS (County)	None	None	None required					Y		None
The Warren Woodlands Complex LWS (County)	None	None	None required					Y		None
Dingley Dell Proposed LWS (County)	None	None	None required					Y		None
Bare ground (Negligible)	None	None	None required					Y		None
Buildings (Negligible)	None	None	None required					Y		None
Dense Scrub (Local)	Permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		None
Hardstanding (Negligible)	None	None	None required						Y	None
Ornamental planting (Negligible)	None	None	None required						Y	None
Scattered trees (Local)	None	None	None required					Y		None

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
				I	UK	E	R	C	L	
River Kennet (adjacent to Site)	Permanent	Moderate adverse	None required					Y		None should mitigation measures recommended be enacted.
General (created habitats)	Permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP						Y	Negligible
Bats (Local)	Light pollution, permanent	Minor adverse	Adoption of sensitive lighting scheme and adherence to measures agreed					Y		Negligible
Birds (Negligible)	Disturbance to created and retained habitats, permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		Negligible
Invertebrates (Negligible)	Disturbance to created and retained habitats, permanent	Minor adverse	Adoption of sensitive vegetation management techniques in LEMP					Y		Negligible
Otters (Negligible)	None	None	None required						Y	None

*** Geographical Level of Importance**

I = International; UK = United Kingdom; S = Scotland; R = Regional; C = Council; L = Local

Table 6.9: Residual Effects of the Yield Hall Place 1 Development in combination with the Yield Hall Place 2 Development

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	
				I	UK	E	R	C	L		
Construction											
No potential effects have been identified	None	None	None							N/A	None
Completed Development											
No potential effects have been identified	None	None	None							N/A	None

Table 6.10: Cumulative Effects of the Development in Combination with the Cumulative Schemes Identified in Chapter 2 of this ES – Biodiversity

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*						Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	
				I	UK	E	R	C	L		
Construction											
No potential effects have been identified	None	None	None							N/A	None
Completed Development											
No potential effects have been identified	None	None	None							N/A	None

REFERENCES

ⁱ JNCC. (2010) Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.

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ⁱⁱⁱ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th edition). Bat Conservation Trust, London.

^{iv} CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester."

^v Gov UK (1981) Wildlife and Countryside Act 1981.
<https://www.legislation.gov.uk/ukpga/1981/69/contents>

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<https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england>

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