Ecological Assessment

Tyler Grange

Homebase, Waltham Cross

8th April 2021

TG Report No. 13452_R02a_RB_HM

Report No:	Date	Revision	Author	Checked
13452_R02	08/04/21	a	Rebekah Baker BSc MSc	Duncan Murray CEnv MCIEEM MIEMA

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Summary

S.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Aldi Stores Limited. It sets out the findings of a Phase I habitat survey, desk study and Preliminary Bat Roost Assessment (PBRA) of a parcel of land at Homebase, Sturlas Way, Waltham Cross, EN8 7BF (OS Grid Reference: TL 35899 00721), hereinafter referred to as the "site".

S.2. The proposed development is to enable the existing unit it to trade as part foodstore and part non-food retail unit, alongside modifications to existing external garden centre, car parking layout, and other associated site works.

S.3. The site is allocated in the Broxbourne Local Plan 2018-2033 under Policy WC1: Waltham Cross Town Centre. The site has now been purchased by Aldi for the closure of the Homebase site and refurbishment into an Aldi foodstore as part of the wider Waltham Cross Northern High Street development as a mixed-use quarter.

S.4. The site comprises a car park and Homebase store with a conifer tree line present on the southern site boundary which all have negligible ecological importance. Habitats of local ecological importance include dense scrub which lines the western and eastern site boundaries and a few scattered trees, with one being on the eastern site boundary and three at the south western corner of the site.

S.5. Three European designated sites are found within a 10km search radius from the site, and one nationally and one locally designated site are found within a 2km radius of the site. With regards to the European designated sites, the site is considered to be sufficiently evaluated within the Local Plan HRA (2018) and Local Plan HRA Addendum on Proposed Main Modifications (2019), within which any likely significant effects on the three nearby European designated sites are scoped out.

S.6. No further survey work is required with respect to identified limited potential for protected and/or priority species, however precautionary mitigation measures have been recommended for roosting bats and nesting birds in the form of:

- Any building works or vegetation removal, mainly associated with the dense scrub and tree T1, should be undertaken outside of the core nesting bird season (March-August, inclusive), otherwise, a pre-works check by an Ecological Clerk of Works (ECoW) should be undertaken; and

- Any trees with low suitability for roosting bats that require removal should be soft-felled under the supervision of a suitably qualified ECoW outside of the bat hibernation period.

S.7. In conclusion, with the implementation of the mitigation and enhancement strategy, it is considered that the future development of the site would accord with relevant policy and legislation as set out in Appendix 1. Habitat creation is proposed to ensure the favourable conservation status of protected/priority species is maintained.

Section 1: Introduction, Context and Purpose

Introduction

1.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Aldi Stores Limited. It sets out the findings of a Phase I habitat survey, desk study and Preliminary Bat Roost Assessment (PBRA) of a parcel of land at Homebase, Sturlas Way, Waltham Cross, EN8 7BF (OS Grid Reference: TL 35899 00721), hereinafter referred to as the "site".

Context

1.2. The site currently comprises an active Homebase store with associated car parking, work yard and minimal existing landscaping. The site is accessible from Sturlas Way to the east and sits just south of Winston Churchill Way. The extent of the site is shown in Figure 1.1.

Figure 1.1 Indicative site boundary (Google 2021)

1.3. The proposed development is for the refurbishment, extension and external alterations to existing non-food retail unit to enable it to trade as part foodstore and part non-food retail unit, alongside modifications to existing external garden centre, car parking layout, and other associated site works.

1.4. The application site forms part of Waltham Cross town centre, as identified on the policies map which accompanies the Broxbourne Local Plan (2018-2033), adopted June 2020. The proposed development will enable joint occupation of the existing building by both Aldi and Homebase. This will enable Aldi to make a positive investment within Waltham Cross town centre – a centre in which they have been seeking representation for many years. It will also enable the retention of the home improvement retail offer of Homebase and the existing benefits this brings to the town centre. The reduced size of Homebase's unit will be more commensurate with their future business requirements and will safeguard the viability of their operation in Waltham Cross.

Purpose

1.5. This report:

- Uses available background data and results of field surveys, to describe and evaluate the ecological features present within the likely 'zone of influence' (ZoI)[1] of the proposed development;
- Describes the actual or potential ecological issues and opportunities that might arise as a result of the site's future development;
- Where appropriate, makes recommendations for mitigation of adverse effects and ecological enhancement, to ensure conformity with policy and legislation; and
- Can be used to inform a planning application for the site's redevelopment.

1.6. This assessment and the terminology used are consistent with the 'Guidelines for Ecological Impact Assessment in the UK and Ireland'[2].

[1] Defined as the area over which ecological features may be subject to significant effects as a result of activities associated with a project (CIEEM, 2019). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Winchester. Version 1.1)

[2] https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/

Section 2: Methodology

Data Search

2.1 The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.

2.2 The data search has been undertaken for a 10km radius around the site for European statutory sites, a 2km radius for national statutory sites and a 1km radius for non-statutory sites and protected and priority[3] species records.

2.3 The following organisations and individuals have been contacted and, where relevant, the information provided has been incorporated with acknowledgement within this report:

- Greenspace Information for Greater London (GiGL) was contacted for details of protected and priority species and non-statutory sites within a 1km search radius from the site. The information from GiGL was received in September 2020. Where relevant records were identified, the information provided has been incorporated into the report with due acknowledgement;
- The Multi-Agency Geographic Information for the Countryside (MAGIC) website[4] was accessed for information on the location of European designated sites within 10km of the site and 2km for nationally designated sites;
- The Borough of Broxbourne website[5] was consulted for details of relevant local planning policies and supplementary planning guidance; and
- The Hertfordshire Biodiversity Action Plan (BAP)[6] was consulted for priority habitats and species subject to conservation action, to assist with the evaluation of ecological features and to inform site enhancement strategies.

Extended Phase I Habitat Survey

2.4 An 'extended' Phase I habitat survey was undertaken on 4th September 2020 by Rebekah Baker, an experienced field and qualifying member of CIEEM. The technique was based upon Phase I survey methodology[7]. This 'extended' Phase I technique provides an inventory of the habitat types present and dominant species.

[3] UK priority species and habitats are those subject to conservation action and referred to as Species of Principal Importance (SoPIs) or Habitats of Principal Importance (HoPIs). They are listed at Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act states that local planning authorities must have regard for the conservation of both SoPIs and HoPIs.
[4] http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
[5] https://www.broxbourne.gov.uk/planning
[6] http://www.hef.org.uk/nature/biodiversity_vision/contents.htm
[7] https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf

2.5 The service yard at the south western corner of the site was not accessible on the 4th September and so an update site visit was undertaken on the 19th March 2021 by Zoe Durran, an experienced field and qualifying member of The Chartered Institute of Ecology and Environmental Management (CIEEM), during which all previously un-surveyed areas of the site were assessed.

2.6 As part of this survey work, all habitats were assessed with consideration of the UK Habitat Classification (The UK Habitat Classification Working Group, 2018)[8] in order to determine their condition and ecological importance.

Preliminary Bat Roost Assessment

2.7 A Preliminary Bat Roost Assessment (PBRA) of the on-site building and trees present within the site was undertaken to assess their potential to support roosting bats. This survey was undertaken alongside the 'extended' Phase I habitat survey during the September and March survey. The surveys followed standard methodologies[9,10,11] which are described below.

2.8 The PBRA for the building comprised an external inspection of the buildings present on-site to assess their potential to support roosting bats. In summary, this required the following:

- A visual inspection of the exterior and interior of the buildings on-site was undertaken on the 4th September 2020 and the 19th March 2021, examining features such as brickwork, lead flashing, and tiles for evidence of use by bats, including the presence of bat droppings and staining from fur-oil or urine; and
- A number of factors were considered including the presence of features suitable for use by crevice dwelling bats, proximity to foraging habitats or cover, and potential for disturbance from lighting and other sources.

2.9 The PBRA for trees comprised a ground level inspection of all trees present on the site to determine the potential of each tree to support roosting bats. During this survey, Potential Roost Features (PRFs) that may be used by bats, as identified within the BCT Good Practice Guidelines[11], were sought. These included the following:

- Woodpecker holes, rot holes, knot holes arising from naturally shed branches and man-made holes;
- Hazard beams and other vertical or horizontal cracks and splits (such as frost-cracks) in stems or branches;
- Partially detached platey bark;
- Cankers;
- Other hollows or cavities, including butt-rots; and

[8] https://ecountability.co.uk/ukhabworkinggroup-ukhab/
[9] https://hub.jncc.gov.uk/assets/e5888ae1-3306-4f17-9441-51a5f4dc416a
[10] https://cieem.net/resource/bat-mitigation-guidelines/
[11] https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition

- Partially detached ivy with stem diameters in excess of 50mm.

2.10 Evidence of the presence of bat roosts was also sought. These signs include:

- Bat droppings in, around or below PRF;
- Odour emanating from a PRF;
- Audible squeaking at dusk or in warm weather; and
- Visible staining below a PRF.

2.11 The potential of the buildings and trees to support roosting bats has been categorised against the criteria described in Table 2.1.

Table 2.1 – Roost Assessment Criteria[12]

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on-site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection conditions and surrounding habitat.

Evaluation

2.12 The evaluation of habitats and species is defined in accordance with published guidance (CIEEM, 2019). The level of importance of specific ecological features is assigned using a geographic frame of reference, with international being most important, then national, regional, county, borough, local and lastly, within the site boundary only.

[12]https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition

2.13 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 Sites of Species Scientific Interest (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.

Limitations

2.14 The site visits were undertaken outside of the optimal period for plant identification. However, considering the habitat types present on site, this was not considered to be a limitation.

Quality Control

2.15 All ecologists at Tyler Grange Group Ltd are members of CIEEM and abide by the Institutes Code of Professional Conduct.

Section 3: Ecological Features and Evaluation

Context

3.1. The site measures 1.23ha and is currently an active Homebase retail site. The site mostly comprises the retail unit and associated hardstanding which makes up the car parking area, outdoors garden centre and service yard. A line of coniferous cypress Cupressaceae sp. trees are present along the southern site boundary, and small areas of scrub borders the eastern and western site boundaries.

Protected Sites

3.2. There are three European designated sites within a 10km search radius of the site, three nationally designated sites and one locally designated sites within 2km of the site boundary. These are detailed within Table 3.1.

Statutory Sites

Table 3.1 Internationally and nationally designated sites within a 10km radius and 2km radius from the site boundary, respectively

Site Name and Designation	Geographical Importance	Approximate Distance and Direction from Site	Reason for Designation
International Sites			
Lee Valley Special Protection Area (SPA)	International	0.73km north east	The site is designated for supporting internationally important numbers of Annex II species under the Conservation of Habitats and Species Regulations (COSH) 2017 (as amended), wintering Gadwall Anas strepera strepera, northern shoveler Anas clypeus and Eurasian bittern Botaurus stellaris.
Lee Valley Ramsar	International	0.73km north east	This site is designated under Ramsar Criteria 2 and 6, Ramsar Criterion 2 – the site supports nationally scare plant species es whorled water-milfoil Myriophyllum verticillatum and the rare or vulnerable invertebrate Micronecta minutissi. Ramsar Criterion 6 – the site meets this criterion for its wintering gadwall, and spring/autumn counts of northern shoveler.

Epping Forest Special Protection Area (SPA)	International	5.4km south east	This site is designated for its COSH (2017) as amended Annex I habitat, Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrub layer.
Wormley Hoddesdonpark Woods SAC	International	5.7km north west	This site is designated for its COSH 2017 (as amended) Annex I habitat - Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinus betulus;
National Sites			
Turnford & Cheshunt Pits Site of Special Scientific Interest (SSSI)	National	0.73km north east	This site is designated for its mosaic of wetland habitats regarded as favourable for overwintering waterfowl.
Waltham Abbey SSSI	National	1.4km north east	This site is designated for its grey heron Ardea cinerea breeding population.
Cornmill Stream and Old River Lea SSSI	National	2.0km north east	This site is designated for its dragonfly and damselfly interest

3.3. There are no National Nature Reserves or Local Nature Reserves within a 2km search radius from the site.

Non-statutory Sites

3.4. There is one non-statutory site within a 2km search radius of the site, the Thistly Marsh and Area west of Chestnut Marsh which lies 0.8km to the east of the site and is designated a Local Wildlife Site (LWS). The site is designated as a LWS as it was historically designated a SSSI and sits adjacent to the Lee Valley SPA and Ramsar.

Habitats and Flora

3.5. Habitats on-site are detailed below and should be read in conjunction with Habitat Features plan 13452_P01. The site supports the following habitats:

- Bare Ground;
- Building and Hardstanding;
- Dense Scrub;
- Line of Coniferous Trees; and
- Scattered Trees.

3.6. All habitats are shown on the Habitat Features and Preliminary Bat Roost Assessment Plan (13452/P03).

Bare Ground

3.7. There is a small area of bare ground directly underneath the line of coniferous trees.

3.8. The area of bare ground offers no value to the biodiversity resource at the site and as such is considered to be of negligible ecological importance.

Building and Hardstanding

3.9. The majority of the site comprises building and hardstanding (Photograph 3.1) made up of the Homebase retail unit and associated car parking, outdoors garden centre and the service yard.

3.10. The building and hardstanding offer no value to the biodiversity resource at the site and as such are considered to be of negligible ecological importance.

3.11. The building is discussed below with respect to roosting bats.

Photograph 3.1 View of the eastern aspect of the Homebase store and a section of the hard standing associated with the car park.

Dense Scrub

3.12. There are two areas of scrub on-site at the western and eastern boundaries. The scrub that lines the eastern site boundary is isolated in the landscape and comprised a mixture of native and non-native species containing sycamore Acer pseudoplatanus, elder Sambucus nigra, and beech Fagus sylvatica with some ornamental species such as barberry Berberis sp.

3.13. The scrub lining the western site boundary (Photograph 3.2) is connected to gardens to the west and comprises ivy Hedra helix and hawthorn Crataegus monogyna. The scrub originates off-site beyond the western boundary but does overhang into the site.

3.14. Although the scrub habitat is limited in area on-site and the section which lines the eastern boundary contains ornamental non-native species, the scrub provides some of the only habitat structure and resources to biodiversity on-site. As such, the scrub is considered to be of local ecological importance.

Photograph 3.2 View of the overhanging scrub along the western site boundary which overhangs the site wall and a small section of the metal fence that makes up the boundary to the garden centre.

Line of Coniferous Trees

3.15. A line of mature cypress trees is present along the southern site boundary (Photograph 3.3.). The species within this tree line are non-native and as such the coniferous tree line is considered to be of negligible ecological importance.

Photograph 3.3 View of the coniferous tree line that borders the southern site boundary.

Scattered Trees

3.16. A small number of scattered trees are present on-site, comprising an Italian alder Alnus cordata on the eastern site boundary (Tree T1) and two lime trees Tilia sp. and an ash in the south western corner of the site.

3.17. The scattered trees provide a habitat resource on-site, on an otherwise developed site. Considering this and the fact that the site sits within a well-developed wider landscape, it is considered that the scattered trees are of local ecological importance.

Fauna

3.18. Species which are considered likely absent from the site based on professional judgement, following consideration the of habitats within the site, signs of species presence at the time of survey and data search records, are not discussed.

Amphibians

3.19. The data search returned one record for common toad Bufo bufo located 0.68km north east from the site boundary. The site supports no aquatic habitat and limited areas of habitat suitable for amphibians, such as dense scrub. As such, it is considered that common and widespread amphibians are likely absent from site.

3.20. No records of great crested newt (GCN) Triturus cristatus were returned by the data search and the site offers no suitable terrestrial habitat for GCN. Moreover, only one waterbody is located within a 250m radius from site which is separated via residential development and a train track. As such, it is considered that GCN are likely absent from site.

Bats

3.21. The data search returned thirty-five records for bats within 1km of the site, twenty-nine of which have been returned with no date. The records with no data have been included as part of the assessment on a worst-case scenario that the records were returned within the past 10 years.

3.22. The closest record is of an unidentified bat species Chiroptera, approximately 0.23km north from site at a precision of a 4-figure grid reference. Other recorded bat species included:

- Nathusius' pipistrelle Pipistrellus nathusii;
- Soprano pipistrelle Pipistrellus pygmaeus ;
- Common pipistrelle Pipistrellus pipistrellus;
- Noctule bat Nyctalus noctule;
- Natterer's bat Myotis nattereri; and
- Daubenton's bat Myotis daubentonii.

3.23. The site offers limited resources for both foraging and commuting bats. The tree line on the southern boundary and scrub on the western and eastern boundaries could provide linear commuting features and some source of insect forage.

3.24. The site is likely well-lit at night from the adjacent street lighting associated with Sturlas Way to the east and Winston Churchill Way to the north. Furthermore, several lights are scattered throughout the site in association with the car park and the building itself.

3.25. Considered the lack of habitat on-site and the site context, it is considered unlikely that the site will support notable levels of bat activity or species.

PBRA

3.26. A PBRA was undertaken of the Homebase unit (B1) and all on-site trees.

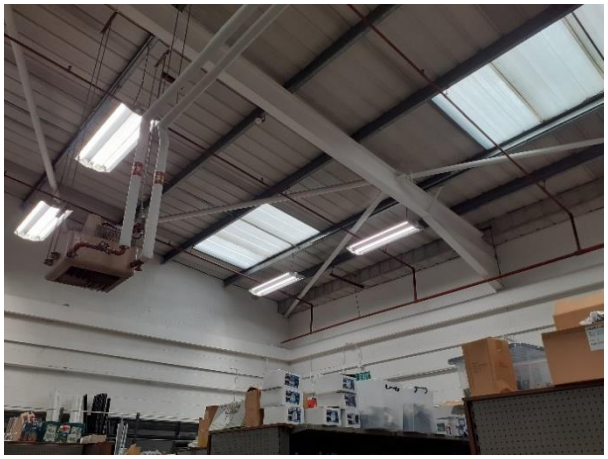
Building B1

3.27. Building B1 is a well maintained and active Homebase store with associated outdoors garden centre. The building is constructed from brick with a flat roof and has two glassed sections comprising the store entrance on the eastern aspect and the garden centre on the western aspect.

3.28. An internal inspection identified that the building is in good condition and that no roof voids are present (Photograph 3.4).

3.29. An external inspection identified no PRFs, and bird netting was identified as covering the outdoors garden centre at the west of the site.

3.30. The building was found to support no PRFs and therefore was considered to have negligible potential for roosting bats.



Photograph 3.4 View of the interior of building B1

Photograph 3.5 View of the exterior of building B1

Trees

3.31. Twelve on-site trees (trees T2-T13) located on the southern site boundary were considered to have low suitability for roosting bats due to the presence of dense ivy cover which could be obscuring a PRF (Photograph 3.5 and 3.6).

Photograph 3.5 Three of the trees with low suitability for roosting bats located along the southern site boundary which have dense ivy cover

Photograph 3.6 Tree with low suitability for roosting bats in the south western corner

3.32. All other on-site trees were considered to have negligible potential for roosting bats.

Birds

3.33. The data search returned 177 records for 69 bird species, of which 21 are red listed Birds of Conservation Concern (BoCC) bird species, including house sparrow Passer domesticus and starling Sturnus vulgaris, and 24 amber listed BoCC species, including swift Apus apus within 1km of the site.

3.34. Building B1 was well sealed, lined with bird netting at the western and eastern site boundaries and includes bird deterrent metal spikes. Although no obvious opportunities for nesting birds were identified during the site visit, as a precaution, it is considered that building B1 could support nesting birds.

3.35. In addition, the on-site scattered trees, coniferous tree line and scrub could offer suitable nesting opportunities for birds.

3.36. The site offers minimal foraging opportunities to birds which will be limited to the small areas of scrub and tree line habitat.

3.37. Due to the lack of habitat and nature of the site, it is considered unlikely that the site would support notable assemblages of either breeding or wintering birds. The site does not offer suitable habitat for any of the qualifying species of the nearby Lee Valley SPA and Ramsar site and as such is not considered likely to support any of these species.

Invertebrates

3.38. The data search returned ten records for invertebrates within 1km of the site including eight for stag beetle Lucanus cervus with the closest record being 0.03km east from the site boundary, within the adjacent site across Sturlas Way in 2016.

3.39. Although there is a record close by, the site supports very limited suitable habitat for stag beetle and no deadwood habitat was noted on-site during the site visit. Considering this and the fact that the record is from six years ago, it is considered highly unlikely stag beetle are present on-site.

3.40. The tree line and scrub could provide some limited suitable habitat for an assemblage of common and widespread invertebrates; however, the potential is isolated to these habitats.

Invasive Species

3.41. Invasive species are those listed under Schedule 9 of the Wildlife and Countryside Act 1981. With regard to invasive plant species (listed under Part II of Schedule 9), it is an offence to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9.

3.42. No invasive species were identified during the Phase I habitat survey.

Section 4: Potential Impacts, Mitigation and Enhancements

Proposed Development

4.1. The proposed development is for the refurbishment, extension and external alterations to existing non-food retail unit to enable it to trade as part foodstore and part non-food retail unit, alongside modifications to existing external garden centre, car parking layout, and other associated site works. See Appendix 2 for the proposed site plan and Appendix 3 for the proposed Landscape Plan.

4.2. The application site forms part of Waltham Cross town centre, as identified on the policies map which accompanies the Broxbourne Local Plan (2018-2033), adopted June 2020. The proposed development will enable joint occupation of the existing building by both Aldi and Homebase. This will enable Aldi to make a positive investment within Waltham Cross town centre – a centre in which they have been seeking representation for many years. It will also enable the retention of the home improvement retail offer of Homebase and the existing benefits this brings to the town centre. The reduced size of Homebase's unit will be more commensurate with their future business requirements and will safeguard the viability of their operation in Waltham Cross.

4.3. The proposals will result in the refurbishment and extension of the existing building which will lead to the loss of some negligible hardstanding habitat. The existing tree line and scattered trees, with the exception of tree T1 will be retained and tree T1 will be replaced. The existing scrub habitat along the eastern and western site boundaries be replaced with a mixture of native scrub and native hedgerow planting.

4.4. The potential consequences with respect to development at the site are set out below, with reference to relevant legislation and planning policy, which is summarised in Appendix 1.

Protected Sites

Statutory Sites

4.5. The site is covered under the Local Plan Habitats Regulations Assessment (HRA) 2018[13] produced by Lepus Consulting under the assessment of Policy WC2. The policy was screened in for a requiring a HRA with the HRA screening report produced by Lepus Consulting in 2016[14] for the possibility of having a likely significant effect on nearby European designated sites alone.

Epping Forest SAC

4.6. The Local Plan HRA (2018) states that Policy WC2 provides mass employment opportunities that will likely attract commuters from throughout and beyond the borough. Although the area has excellent sustainable transport access, it is stated that it is anticipated that the designated employment area in Waltham Cross, for which this site is part of, in combination with the

[13] https://www.broxbourne.gov.uk/downloads/file/913/ev1-habitats-regulations-assessment
[14] https://www.broxbourne.gov.uk/downloads/file/915/ev2-habitats-regulations-assessment-screening-report

designated employment area in Park Plaza (Policy PP1 of the Local Plan 2018-2033) will be responsible for a significant increase in the number of people commuting into Broxbourne via the J26-J27 portion of the M25 which could cause likely significant effects on Epping SAC via a reduction in air quality.

4.7. In response to this, a series of recommendations were put forward to help reduce the reliance on personal car use of workers commuting in and out of the borough and mitigate the potential increase in traffic flow. Figure 4.1 is taken from the Local Plan HRA and sets out the proposed recommendations.

Figure 4.1 Box 5.1 adapted from the Local Plan HRA (2018) which details the mitigation measures to be put in place in response to the anticipated increase in traffic flow at the J26-J27 portion of the M25.[15]

Box 5.1: Protecting the integrity of Epping Forest SAC

1. **Limiting increases in AADF between J26 and J27 on the M25 caused by development proposed in the Local Plan**

- Ensure that designated employment areas and new housing developments have access to affordable, frequent and sustainable modes of transport, including:
  - Extending bus services to create more frequent access to proposed employment sites
  - Affordable, accessible and frequent bus links to railway stations;
  - Pedestrian and cycle links, particularly for Park Plaza employment areas and strategic residential sites, to town centres and railway stations;
  - Requiring provision of a greater number of electric car charging points for all new development.

- Businesses at Park Plaza employment areas and Waltham Cross Business Park should adopt programmes designed to reduce the frequency and duration of commuting trips of their employees. These programmes could potentially include:
  - Carpooling and/or vanpooling schemes;
  - Shuttle bus services;
  - Cycle-to-work schemes;
  - Enabling employees to work from home; and/or
  - Adopting online meetings as a standard practice
  - Subsidized or dedicated bus services to serve the workforce.

- New employment opportunities in the Borough should include knowledge based and/or high skilled and/or well-educated opportunities which appeal to local residents;
- Businesses located at Park Plaza employment sites and/or Waltham Cross Business Park should make every effort to acquire robust and accurate data on the commuting habits of their employees, including the distance, frequency and method of commuting; and
- Bus links between the Borough (particularly Cheshunt, Waltham Cross and Park Plaza employment areas) and Epping should be made more appealing to commuters. Bus number 13 currently runs every 90 minutes between Waltham Cross and Epping, takes 36 minutes and costs £6 one-way (in contrast, driving a car from Waltham Cross to Epping takes approximately 23 minutes and approximately £1.35 in fuel). New bus route 66 could be extended to the Park Plaza site and its frequency increased.

2. **Provide financial contributions towards the management of Epping Forest SAC**

- This could potentially involve supporting the work of the Epping Forest Conservators in managing and monitoring the effects of poor air quality on the forest; and
- Contributing to on-site nitrate alleviation measures for short and medium term mitigation

[15] https://www.broxbourne.gov.uk/downloads/file/913/ev1-habitats-regulations-assessment

4.8. In addition to the measures set out in Figure 4.1, the HRA (2018) states that the Local Plan addresses the issue of sustainable transport in various policies including:

- Policies TM1: Sustainable Transport which requires developments to explore ways to reduce the use of cars;
- Policy INF6: Which proposes the reinstatement of bus services between Waltham Cross and Park Plaza, which is another employment allocation within the local plan; and
- Policy INF7 which states a walking and cycling strategy will be produced by the council during the first five-year period of the plan.

4.9. The HRA report (2018) concludes that, on the basis that the council become a signatory of the Memorandum of Understanding (MoU) which has been set up with the aim of managing the impacts of growth within the West Essex/East Hertfordshire Housing Market Area on Epping Forest SAC, the SAC will be adequately protected from air pollution caused by development proposed in the Broxbourne local plan and that likely significant effects can be ruled out[16].

4.10. Likely significant effects as a result on recreational pressure can be scoped out due to the nature of the development.

Lee Valley SPA and Ramsar

4.11. The HRA report (2018) concluded that the only likely significant effect would be a potential increase in number of visitors and dog walkers visiting the SPA and Ramsar. The council is committed to ensuring that through a mitigation strategy, in cooperation with Natural England, that will ensure the conservation objectives of the SPA will not be undermined. As such, any likely significant effects on Lee Valley SPA and Ramsar sites can be ruled out[17].

4.12. Furthermore, the development in question is not residential and so is highly unlikely to contribute to an increase in visitor numbers.

Wormley Hoddesdonpark Woods SAC

4.13. The HRA report (2018) concluded that any likely significant effects of the local plan on Wormley Hoddesdonpark Woods SAC as a result of air quality or recreational pressure can be ruled out.

4.14. In light of modifications to the Local Plan a HRA addended of proposed main modifications was produced in 2019[18], within which it was concluded that the modifications to Policy WC1 which included "Conserving and where possible enhancing the setting of historic assets", would not give rise to any new likely significant effects.

4.15. The development has been sufficiently covered by the local plan HRA process and as such, no further work is required in relation to European designated sites.

[16] https://www.broxbourne.gov.uk/downloads/file/913/ev1-habitats-regulations-assessment
[17] https://www.broxbourne.gov.uk/downloads/file/913/ev1-habitats-regulations-assessment
[18] https://www.broxbourne.gov.uk/downloads/file/914/exam-32f-main-modifications-hra

4.16. The site sits within an identified SSSI Impact Risk Zone. However, due to the nature of the development, the proposals do not meet any of the listed criteria of development types that require consideration in terms of impacts to nearby SSSI sites.

Non-Statutory Sites

4.17. The one LWS which lies approximately 0.8km to the east of the site, the Thistly Marsh and Area west of Chestnut Marsh, is not considered likely to be impacted by the development due to the distance between the site and the LWS.

4.18. It is not known whether or not this site is accessible to the public but considering the type of development and given there is no land-use change proposed, the development should not impact the LWS through any increase in recreational pressure or through pathways such as rubbish dumping or antisocial behaviour.

Habitats

Dense Scrub

4.19. The scrub is proposed to be lost as part of the proposals. The scrub on the eastern site boundary will be replaced by the establishment of a native hedge comprising beech, hornbeam Carpinus betulus, holly Ilex aquifolium and guelder rose Viburnum opulus.

4.20. The planting of the new native hedgerow will mitigate the loss of the existing scrub which contains a mixture of native and ornamental species and will provide a mix of native species that will provide a range of fruiting and nectar resources to fauna that may use the site, including nesting birds and invertebrates.

4.21. The scrub on the western site boundary is likely to be cut back as part of the proposals. New planting is proposed at the north of the western boundary of the site and will comprise native shrub planting and a silver birch Betula pendula tree. The shrub planting will comprise native species common box Buxus sempervirens, common dogwood Cornus sanguinea and English yew Taxus baccata. The mix of beech hedge planting, scrub and tree planting is considered to mitigate any cutting back of the off-site scrub that will be lost to facilitate the new landscaping.

4.22. The site will be enhanced by introducing native scrub mixes in place of existing ornamental planting on the eastern boundary. There will also be new landscaping in the north-western corner of the site, in the form of native hedge and shrub planting. Finally, the tree proposed for removal on safety grounds at the north-eastern corner of the site (Tree T1), will be replaced by a new tree at the north-western corner of the site (as part of the new pocket of native planting.

Scattered Trees

4.23. The scattered trees are to be retained as part of the proposals with the exception of the Italian alder T1. This will be mitigated for by the planting of a native silver birch at the north-western corner of the site.

4.24. All trees should be protected in line with best practice guidance BS5873 to ensure the protection of the trees and their roots during the construction phase.

Fauna

Bats

Roosting

4.25. As stated within Section 3, building B1 had negligible suitability for roosting bats and as such, no further works are required in relation to roosting bats with respect to the renovation of the building.

4.26. Although none of the low suitability trees are proposed to be removed as part of the proposals, should the proposals change and these trees will be removed, then they should be soft-felled under the supervision of a suitably qualified Ecological Clerk of Works (ECoW). Soft-felling must occur only outside of the core bat hibernation season (November-March, inclusive) and will satisfy policy NEB1 of the Local Plan.

4.27. No further survey work is required in relation to roosting bats, however, should two years elapse from the time of the PBRA and construction has not started, an update PBRA will be required. This ensures that should that in the event that the condition of either the on-site trees or building deteriorates and a suitable PRF is established, the relevant survey works will be undertaken if required.

4.28. The site will be enhanced for roosting bats by including bat boxes within the scheme design, satisfying policy NEB4 of the Local Plan. This will be achieved by using free hanging exterior bat boxes on the renovated building or retained trees, such as the "Schwegler 1F Bat Box" or by using enclosed brick bat boxes such as the "Ibstock Enclosed Bat Box" which can be incorporated into the design of the building if possible.

Foraging

4.29. The tree line at the southern boundary of the site is being retained as part of the proposals. The limited areas suitable for foraging bats that are being lost as a result of the development, namely the scrub habitat on the western and eastern site boundaries, is to be replaced with a mixture of native species. As such, the loss of suitable foraging habitat, is considered to be mitigated for and the native species planting is likely to provide opportunities for invertebrates at the site which will in turn increase foraging opportunities for bats.

Lighting

4.30. Although as discussed in Section 3, the baseline light levels are likely relatively high and therefore no tangible impacts are predicted in terms of lighting. However, any new lighting should be sensitively designed, satisfying policy EQ3 of the Local Plan. In particular, any new lighting proposed along the southern boundary should be directed away from the tree line and should be subject to sensitive design.

4.31. In addition, any new lighting should also be designed to avoid illuminating any newly installed bat boxes, if integrated into the scheme design.

4.32. Sensitive lighting measures may include low bollard lighting, use of hoods and cowls on lamps and use of low-pressure sodium or, where glass glazing is preferred, use of high-pressure sodium instead of metal halide lamps (Collins, 2016; BCT and Institute of Lighting Engineers, 2009).

Nesting Birds

4.33. In England and Wales, birds and their nests are protected under the Wildlife and Countryside Act (1981) (as amended).

4.34. The existing building and vegetation have the potential to support nesting birds. The risk of disturbing nesting birds as a result of vegetation removal or building renovation can be reduced either through the sensitive timing of works, scheduling any vegetation works for outside of the core nesting bird season (March-August, inclusive), although nests can be present at any time of year. If works must take place during the breeding bird season, the vegetation must first be checked for nesting birds by a suitably qualified ECoW. Should any active nests be found during works a suitable buffer must be erected around the nest and no works may take place within that buffer until the nest can be confirmed fledged or failed by an ECoW.

4.35. The site will be enhanced for nesting birds through providing bird boxes within the scheme design and through installing bird boxes on retained trees, satisfying policy NEB4 of the Local Plan. The proposed native planting mix will provide a good supply of fruiting and nectar forage that will provide foraging opportunities for birds both directly and through increasing the amount of insect forage available on-site.

Invertebrates

4.36. Although it is considered highly unlikely stag beetle are present on-site, the site could be enhanced for the species through the establishment of habitat piles within the new native hedgerow and scrub planting. The materials from the felled tree T1 could be retained on-site within the boundary landscaping as to provide a source of deadwood material for stag beetle that may use the site, creating greater habitat opportunities than currently present on-site.

Section 5: Conclusion

5.1 With the implementation of the mitigation and enhancement measures described in Section 3, the proposed development would be in conformity with relevant planning policy and legislation (see Appendix 1).

5.2 The mitigation and enhancement strategy could be controlled through appropriately worded planning controls devised to:

- Avoid impacts to protected and priority fauna, particularly birds;
- Secure mitigation and enhancements measure for bats, bird and stag beetle, including provision of bat and bird boxes, deadwood habitat piles and native species/known wildlife beneficial planting; and
- Secure best practice during construction based on the principles outlined in this report to avoid impacts to retained habitats, namely trees.

5.3 The site is not adjacent to or directly covering any designated sites and the site is considered to be sufficiently evaluated within the Local Plan HRA (2018) and Local Plan HRA Addendum on Proposed Main Modifications (2019), within which any likely significant effects on the three nearby European designated sites are scoped out.

5.4 In conclusion, it is considered that the future development of the site would accord with relevant planning policy and seeks to protect and enhance ecological features and that the mitigation and enhancement strategy can be secured by planning conditions.

Appendix 1: Legislation and Policy

Legislation

A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2018;
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerows Regulations 1997; and The Protection of Badgers Act 1992.

A1.2. 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 of Habitats and Species Regulations 2018 (as amended).

A1.3. In Britain, the WCA 1981 (as amended) is the primary 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.

A1.4. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

National Planning Policy

National Planning Policy Framework (NPPF), February 2019

A1.5. The National Planning Policy Framework (NPPF) was published in February 2019 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.

A1.6. Paragraph 11 states that:

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

A1.7. Section 15 of the NPPF (paragraphs 170 to 177) considers the conservation and enhancement of the natural environment.

A1.8. Paragraph 170 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; and
c) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

A1.9. Paragraph 171 states that plans should distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value; 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.

A1.10. Paragraph 174 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."

A1.11. When determining planning applications, Paragraph 175 states that local planning authorities should aim to conserve and enhance biodiversity by applying 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 reasons58 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."

A1.12. As stated in paragraph 176 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."

A1.13. Paragraph 177 states that the presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

A1.14. Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

A1.15. ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.

A1.16. ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).

A1.17. Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

A1.18. Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

Local Planning Policy

Broxbourne Local Plan 2018-2033

A1.19. Policy NEB1: General Strategy for Biodiversity

"I. Development proposals will be expected to apply the mitigation hierarchy of avoidance, mitigation and compensation.

II. Development proposals should result in net gains to biodiversity wherever possible.

III. The Council will seek the creation of new networks of biodiversity, as well as the extension, enhancement and active management of existing sites.

IV. Opportunities to connect habitat fragments through the creation of stepping stones, using built form, vegetation or green areas will be assessed as part of all relevant applications.

V. When granting permission for any proposals that include measures to improve biodiversity, the Council will impose conditions or seek planning obligations that secure appropriate management regimes to deliver biodiversity gain in perpetuity."

A1.20. Policy NEB2: Wildlife Sites

"Internationally Designated Wildlife Sites

I Development at Cheshunt Lakeside should ensure that adverse impacts on the Lee Valley SPA, either alone or in-combination, are avoided and mitigated through the implementation of the mitigation strategy, in accordance with Policy CH1;

II. Where necessary, financial contributions towards the measures set out in any Epping Forest mitigation strategy for recreational impacts will be sought from residential developments within the Epping Forest ZOI in order to mitigate and avoid in-combination effects on the SAC;

III. Development proposals which may have an adverse impact on any internationally designated wildlife site, either alone or in-combination, must satisfy the requirements of the Conservation of Habitats and Species Regulations, determining site specific impacts and avoiding or mitigating against impacts identified.

Nationally Designated Wildlife sites

IV. Development which would harm the nature conservation or geological interest of a nationally important wildlife site, as shown on the Policies Map, will not be permitted unless:

(a) it is required in connection with the management or conservation of the site; or

(b) the development provides appropriate avoidance or mitigation measures and as a last resort compensation to offset any adverse impacts on the interest features of the site; and

(c) there is no alternative to the development.

Locally designated sites of wildlife value

V. Development on, or which negatively affects, a Local Wildlife Site or Local Nature Reserve, as shown on the Policies Map, will not be permitted unless:

(a) local development needs significantly outweigh the nature conservation value of the site; and

(b) the development provides appropriate avoidance or mitigation, and as a last resort compensation measures to offset any detriment to the nature conservation interest on the site."

A1.21. Policy NEB3: Green Infrastructure

"I. The Local Plan will create a diverse, linked network of multi-functional green infrastructure. The network will be protected and enhanced for its biodiversity, recreational, accessibility, health benefits and landscape value, and for the contribution it makes towards combating climate change.

II. Development proposals should:

(a) Avoid the loss, fragmentation or functionality of any component of the green infrastructure network, including within the built environment, such as access to urban waterways;

(b) Maximise opportunities for extensions, additions and improvements to the green infrastructure network;

(c) Maximise opportunities for urban greening through landscaping, the planting of street trees and restoration of channelised or culverted watercourses where possible;

(d) Consider opportunities to enhance connections and extensions to footpaths, bridleways or rights of way where appropriate opportunities exist.

III. Contributions towards local green infrastructure projects will be sought where appropriate. If providing green infrastructure as part of a development contribution, applicants should detail how it will be maintained in the long term.

See also polices on SuDS, Water and the New River Path."

A1.22. Policy NEB4: Landscaping and Biodiversity in New Developments

"I. Proposals for new development must submit details on how existing landscaping will be protected, enhanced and integrated into the development.

II. New landscaping must be well planned taking into consideration:

(a) the outlook and amenity of existing and future residents,

(b) the safety of inhabitants,

(c) the practicalities of future management and maintenance,

(d) opportunities for biodiversity creation, and

(e) street scene and character.

III. Landscaping schemes should ensure that there is no residual land, which no one takes responsibility for, such as on the edge of development sites or house plots.

IV. New developments must make connections to biodiversity features and habitat networks outside of the site, particularly through the use of a strong landscape framework and green infrastructure to strengthen and widen wildlife corridors.

V. Landscaping schemes should maximise their benefits to biodiversity by using locally appropriate native species wherever possible.

VI. Integrated features for wildlife e.g. Swift, House Martin and bat boxes should be incorporated into all suitable buildings."

A1.23. Policy NEB5: Ancient Woodland, Protected Trees and Hedgerows

"I. Development proposals which would result in the loss or deterioration of ancient woodland; or aged or veteran trees found outside ancient woodland; will not be permitted unless the need for, and benefit of, the development in that location is wholly exceptional.

II. Applicants who wish to fell, top or lop protected trees or remove protected hedgerows should demonstrate that:

(a) the tree or hedgerow is dead, diseased or dangerous and in need of work on public safety and/or environmental grounds; and/or

(b) removal of the tree or hedgerow is essential for the development of a site. III. Replacement planting will be required if permission is granted to fell protected trees or hedgerows. Replacement specimens should, where-ever possible, be of an equivalent size and of similar species, in the same or most suitable location, and in sympathy with local landscape character. The Council will seek replacement with two trees if they are of a lesser species or size than the removed tree."

A1.24. Policy EQ3: Lighting

"I. Proposals for development including new lighting, or new lighting proposals, will be considered against the following criteria:

(a) the need for the lighting;

(b) whether there would be an unacceptable adverse impact upon the amenity of residents, highway users, and biodiversity;

(c) whether the necessary steps have been undertaken to reduce lighting overspill and pollution.

II. Applications for lighting should detail light angles, the design and spread of lights, the strength of luminance, height of light columns and proposed hours of use"

Biodiversity Action Plans

A1.25. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

A1.26. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Local BAP

Hertfordshire Biodiversity Action Plan

A1.27. Habitats:

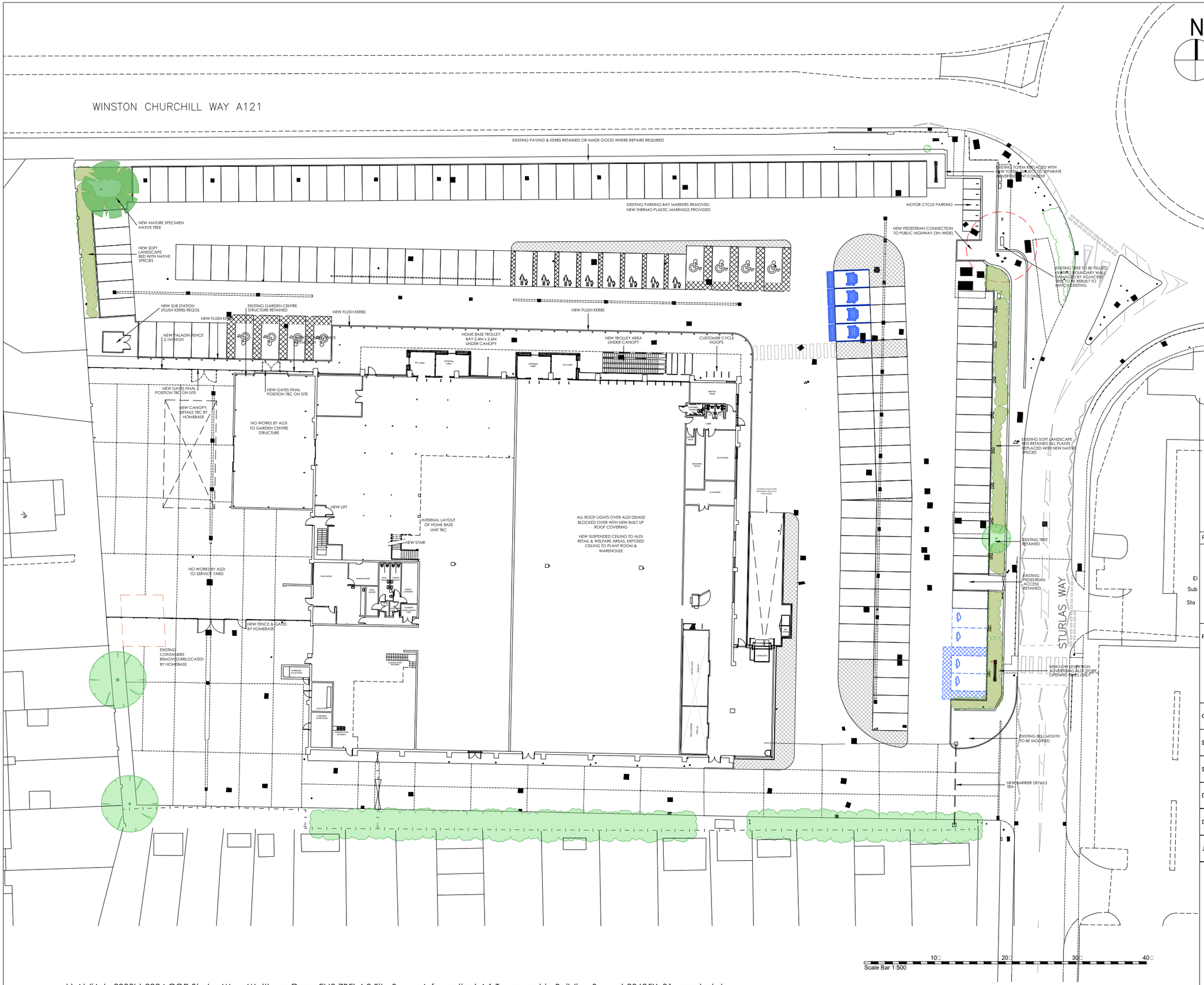
- Chalk rivers
- Lowland Beech woods
- Ancient species-rich hedgerows
- Lowland acidic grassland and lowland heathland (combined in Herts)
- Lowland calcareous grassland
- Lowland hay meadow
- Floodplain grazing marsh
- Fens
- Reedbeds
- Cereal field margins
- Oak-hornbeam woods

A1.28. Species:

- Brown Hare
- Dormouse
- Otter
- Pipistrelle

- Water Vole
- Bittern
- Grey Partridge
- Skylark
- Song Thrush
- Stone Curlew
- Bullfinch
- Corn Bunting
- Linnet
- Reed Bunting
- Spotted Flycatcher
- Tree Sparrow
- Turtle Dove
- Great Crested Newt
- Stag Beetle
- White-clawed Crayfish
- Thatch Moss
- Shepherd's Needle
- Cornflower
- Corn Cleavers

Appendix 2: Proposed Site Plan



N

SUBJECT TO SITE SURVEY, CONFIRMATION OF LEGAL BOUNDARIES, SITE CONSTRAINTS & HIGHWAYS

THE HARRIS GROUP LTD DOES NOT ACCEPT LIABILITY FOR ANY DEVIATION FROM OUR DRAWINGS OR SPECIFICATION

EXTERNALS:
SITE AREA (RED LINE) 12,159 SQ.M; 3.005 ACRES; 1.217 HECTARES

157 SHARED CUSTOMER SPACES INC 8 DDA, 8 PC & 4 C+C; 4 ACTIVE EVCP & 16 PASSIVE EVCP; 5 MOTOR CYCLE SPACES; 8 CYCLE SPACES

EXISTING	3,520 SQ.M (GEA)
PROPOSED	3,596 SQ.M (GEA)
PARKING BAYS	2.5M X 5.0M
PARKING AISLES	VARIES MIN 6M

ALDI FOOD STORE:

PROPOSED	1,756 SQ.M (GIA)
RETAIL AREA	1,262 SQ.M (GIA)
~~WAREHOUSE~~	337 SQ.M (GIA)
~~WELFARE~~	120 SQ.M (GIA)
EXTERNAL LOBBY	29 SQ.M (GIA)
INTERNAL WALLS	8 SQ.M (GIA)
RETAIL AREA	23.9M X 52.7M
WAREHOUSE	7M

HOME BASE:

PROPOSED	2,371 SQ.M (GIA)
GROUND INC GARDEN CENTRE STRUCTURE	1,706 SQ.M (GIA)
EXTERNAL LOBBY	29 SQ.M. (GIA)
MEZZ	636 SQ.M (GIA)

Rev	Date	Description	Rev By	Chk'd By
C	01.04.21	EMPLOYEE SHOWER RMS ADDED	JPG	---
B	19.03.21	EXTENDED TOPO ADDED	JPG	---
A	26.02.21	LAYOUT UPDATED TO AFL DRAWINGS & TO INCLUDE MEASURES IN RESPONSE TO HIGHWAY AUTHORITY COMMENTS	JPG	---

ALDI

Project Title	PROPOSED ALDI FOOD STORE AND HOMEBASE UNIT EXISTING HOME BASE UNIT STURLAS WAY WATHAM CROSS EN8 7BF
Client	ALDI STORES LIMITED - CORPORATE
Status	PLANNING
Scale	1:500
Drawing Size	A3
Date	14.09.20
Drawn By	JPG
Checked	---
Drawing Title	PROPOSED SITE PLAN
Job-Dwg No	2924-COR-111
Rev	C

2 St. Johns North, Wakefield, WF1 3QA t. 01924 291800
Carvers Warehouse, 77 Dale Street, Manchester, M1 2HG t. 0161 2388555
The Old Rectory, 79 High Street, Newport Pagnell, MK16 8AB t. 01908 211577
101 London Road, Reading, RG1 5BY t. 0118 9507700
10 Gees Court, St Christophers Place, London, W1U 1JJ t. 0207 4091215

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CAD file reference J:\AldiJobs2900's\2924 COR Sturlas Way, Waltham Cross, EN8 7BF\6.0 Site Survey Information\6.1 Topographic Building Survey\20695Y_01 rescaled.dwg

Appendix 3: Landscape Plan

NOTE:
SURROUNDING CONTEXTUAL BUILDINGS AND INFORMATION ARE BASED ON RECEIVED ORDNANCE SURVEY DRAWINGS AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ASSUMED SITE BOUNDARY IS SUBJECT TO CONFIRMATION

NORTH

General Notes:

All proposed tree locations are subject to co-ordination with drainage layout and subject to modification depending on the location of underground services and utilities.
Drainage engineer to co-ordinate services layout in conjunction with the landscape plan to avoid conflict as much as possible. Allowance to be made at tender stage for the possible requirement for root barriers once the drainage layout is confirmed. CA to be informed immediately once this is available.

SOFT LANDSCAPE KEY:

Existing trees and vegetation to be retained
Retained and protected during construction and landscaping works in accordance with BS5837:2012 guidance.

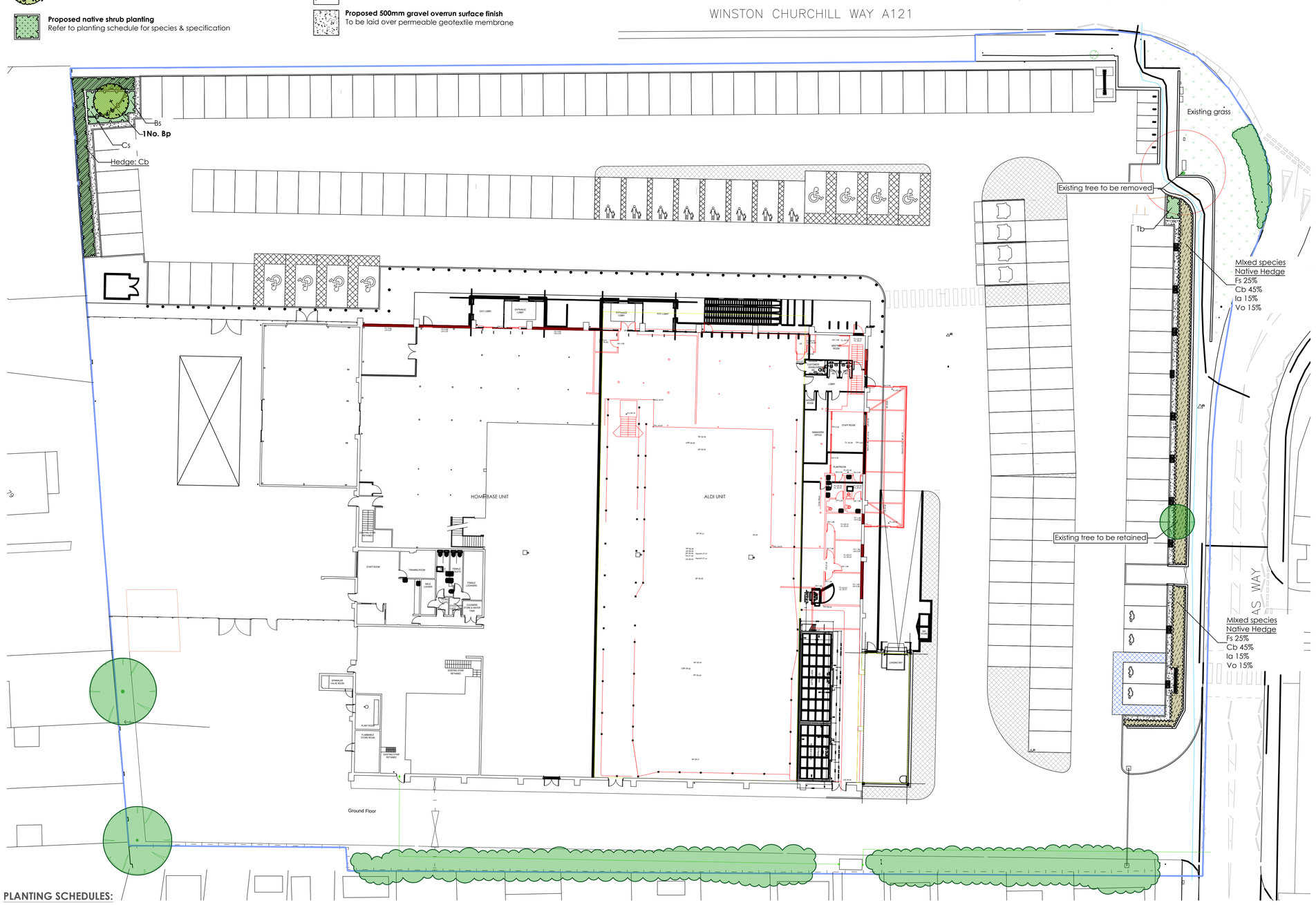
Proposed Tree in soft landscape
Refer to planting schedule for species & specification

Proposed native shrub planting
Refer to planting schedule for species & specification

Proposed single species native hedge planting
Refer to plant schedule for species & specification

Proposed native hedge mix planting
Refer to planting schedule for species & specification

Proposed 500mm gravel overrun surface finish
To be laid over permeable geotextile membrane



PLANTING SCHEDULES:

Trees

Species	Abb.	Form	Girth	Height (cm)	Clear stem (cm)	Root	Quantity
Betula pendula	Bp	Standard (semi mature)	25-30	Min 450	Min 220	RB	1

Ornamental Shrub Planting:

Name	Abb	Height(cm)	Root	Container	Habit	Density
Buxus sempervirens	Bs	40-60	C	3L	Branched	4/m²
Cornus sanguinea	Cs	60-80	C	3L	Branched	3/m²
Taxus baccata	Tb	30-40	C	3L	Bushy	4/m²

Hedge Planting

Name	Abb	Height(cm)	Root	Specification	Centre Spacing
Carpinus betulus	Cb	80-100	B	Bushy, Clipped sides	50cm centres, 40cm between rows
Note:					
* Hedge plants to be planted in doubled staggered rows at centres noted above.					
Maintained at 1.2m high/0.6m high					

Mixed Species Native Hedge Mix Planting

Name	Abb	Height	Root	Container	Habit	% in Mix
Fagus sylvatica	Fs	40-60	C (UK grown)	2L	Branched	25%
Carbinus betulus	Cb	40-60	UK Cell grown	/	Branched	45%
Ilex aquifolium	Ia	40-60	C (UK grown)	2L	Leader & Laterals	15%
Viburnum opulus	Vo	40-60	UK Cell grown	/	Branched	15%
*Hedge species to be planted in double staggered rows @ 450mm centres in groups of 5, 7, 9, 11, 13, 15 or 17 of a single species.						
**All whips and transplants to have rabbit guards / shrub shelter appropriate to the species.						
*Shrubs to be sourced as local to the site as possible and "UK-Grown" in accordance with current bio-security best practice.						

0 2 4 6 8 10 20 50m
Scale: 1:250 @ A1

GENERAL WATERING

All soft landscaping to be subject to a watering regime which is absolutely essential to ensure the continued success of the scheme, particularly during the initial 12 month establishment period. The watering frequency should be as necessary to ensure the continued thriving of all grass, hedges, trees and ornamental planting. During dry periods minimum weekly visits should be made to the site to ensure the soil has not dried out and to action watering if necessary. The soil should be checked for dryness using either a soil moisture sensor or by inserting a spade into the ground to a depth of 300mm to observe the appearance of the soil. If the soil is moist there is no need to water but if it is bone dry then watering procedure should be carried out immediately. Water supply should be from potable mains water or an approved alternative. The full depth of topsoil should be wet without loosening or damaging plants. Any compacted soil should be broken up sufficiently to allow water to reach the rootzone.

WATERING TREES

Trees to be watered in accordance with BS 8545-2014 Tree - From Nursery to Independence.
Trees should be watered via the installed irrigation / aeration pipes around the base of the trees stem in accordance with the manufacturer's instructions to ensure the water reaches the roots of the tree. Below is a suggested watering regime but this should be used as a guide only and may require modification in times of drought or flood, dependant on the ground conditions at the time, which should be monitored as above:

- March - October: 20 litres to be poured into irrigation pipe twice a week (40 litres in total)

SOFT LANDSCAPE SPECIFICATION NOTES

NOTE: All soft landscape works to be carried out in accordance with BS4428:1989.

SUBSOIL
Subsoil should be broken up to relieve compaction and aid drainage prior to topsoiling to the following depths:
- For light and non cohesive subsoils: 300mm
- For stiff clay and cohesive subsoils: 450mm
Immediately before spreading topsoil, remove stones larger than 50mm.

TOPSOIL
Existing site won topsoil to be reused for soft landscape areas if sufficient quantities are available and the topsoil meets the criteria for multipurpose topsoil as defined in table 1 of BS3882:2015 specification for Topsoil.

If imported topsoil is required it is to be supplied and spread by the main contractor to the approval of the Landscape contractor, in accordance with BS 3882 :2015. To be a natural sandy loam, of medium texture, with a pH between 5.5 and 7.8, not more than slightly stony and free of pernicious weeds. Subsoil to be well broken up prior to top-soiling to relieve compaction. Topsoil depths should be:
Areas for Ornamental Shrub Planting: minimum 400mm
Areas for cultivated turf: minimum 150mm

CULTIVATION
Weeds to be prevented from seeding or becoming established by applying a suitable herbicide and allowing the correct time to elapse, as directed by the manufacturer. Compacted soil to be broken up to a depth of 100mm, with any stones, grass tufts or rubbish larger than 50mm in any direction to be removed, leaving a regular and even surface. Suitable slow release fertiliser to be supplied and spread @ 50g/m2 to all planted areas.

CLIMATIC CONDITIONS
Topsoiling should be carried out in the driest conditions possible – cultivation to be carried out when the soil is moist, friable and not waterlogged or frozen. Topsoil should not be handled during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882. Planting should not take place in waterlogged conditions or when the ground is frozen.

SOIL AMELIORANT
Peat-free compost to be spread over ornamental shrub beds @ minimum 50mm depth prior to cultivation.

TREES
All trees within shrub beds to be planted in separate pits in accordance with tree planting detail.
All plant material to comply with BS 3936 Part 1 :1992, be obtained from a nursery certified by the HTA and transported to site in accordance with the HTA Plant Handling Guide: 1996. All trees to be planted to the original root collar and secured in place with underground guying system in accordance with tree planting detail. All trees to be fitted with aeration and irrigation system in accordance with tree planting detail.

If the trees are to be planted outside of the planting season (late October - Late March) then containerised stock to be used in lieu of root ball to the same specification- allowance to be made for this at tender stage if required once construction timetable is known and CA informed immediately.

NATIVE HEDGE PLANTING
Areas to receive whip planting be cleared of all vegetation and cultivated as described above. Rotavate areas to a minimum depth of 300mm to form an open textured free draining growing medium. Remove all stones and other debris larger than 50mm in any one direction and remove all litter and vegetation matter prior to planting.
Each transplant to be fitted with an appropriate rabbit guard for the size and species and 500 x 500mm biodegradable GT Ecomat by Green-tech or similar approved. To be pruned / maintained as a hedge at a maximum height of 1.4 metres.

SUBSTITUTIONS:
Upon submission of evidence that certain materials, including plant materials, are not available at the time of the landscape contract, the Landscape Contractor may be permitted to substitute other materials and plants in exceptional circumstances during the contract with an agreed adjustment of prices.
All substitutions shall be of nearest equivalent species and variety to the original specified but shall be subject to approval by the Landscape Architect before any change is made.

TIMES OF YEAR FOR PLANTING:
Landscape works to be carried out during the final possible planting periods prior to practical completion of the building and associated engineering works / car park areas in accordance with the following:
- Native and ornamental trees: During dormant winter period - Late October to late March (only if planted in the planting season otherwise containerised stock to be used).
- Bare root native transplants: During dormant winter period - Late October to April.
- Container grown ornamental and specimen shrubs: At any time if ground and weather conditions are favourable.

MULCH
75mm depth of 8-35mm ornamental bark mulch (peat-free) to be supplied and spread to all planting areas. Finished mulch level to be installed and maintained at 25mm below any adjacent kerbs or paving surfaces.

MAINTENANCE
All planting areas to be maintained to a high standard by the contractor for 12 months after practical completion, to ensure the landscape scheme is successful, and discourage decline of the area.
Minimum frequency of maintenance visits:
December / January / February & March - 1no. visit each month
April to November - 2No. visits each month.

Generally, during the first 12months:
- All planting beds to be re-firmed and kept weed free through hand weeding and application of an approved herbicide where appropriate.
- All litter to be picked and removed from landscape areas.
- Mulch to be topped up as required to maintain the specified thickness.
- The condition of all trees is to be regularly checked, with ties and stakes adjusted or replaced as necessary.
- Shrubs to be pruned at appropriate times of year for each species to promote healthy growth and desirable ornamental features.
- All arisings to be removed from site.
- Any defects or plant losses occurring during the first 12 months defects period to be replaced at the contractors expense.

Following the initial 12 month establishment period the ongoing landscape management will be the responsibility of an commercial landscape maintenance contractor under a landscape maintenance contract.

Revisions	Description	Drawn	Check
25.03.2021 - A	Updated to coordinate with Architects site plan	FW	AS

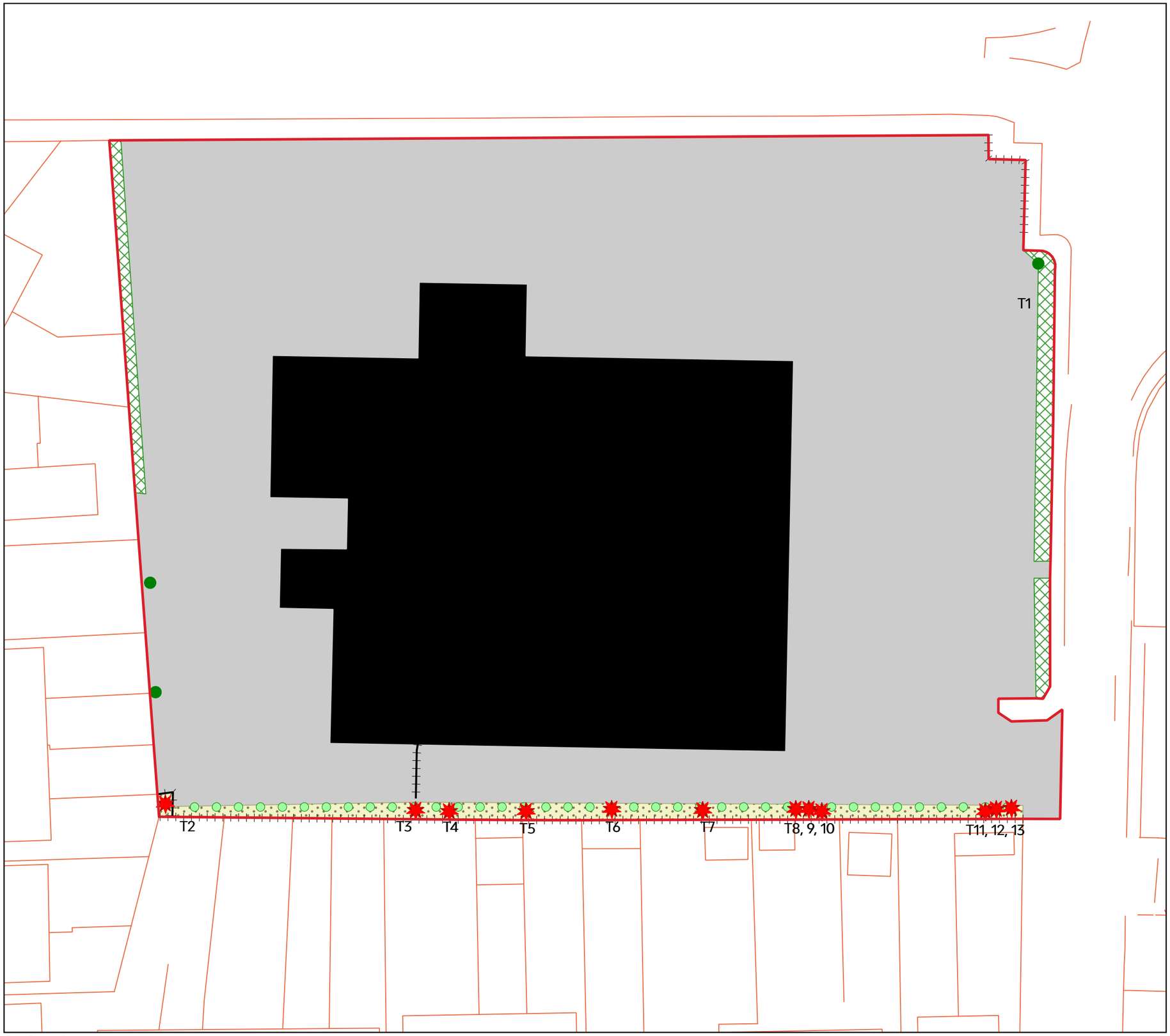
Project Title	PROPOSED ALDI FOOD STORE AND HOMEBASE UNIT STURLAS WAY WATHAM CROSS EN8 7BF
Client	ALDI STORES LIMITED - CORPORATE
Status	PLANNING
Scale	1:250
Drawing Size	A1
Drawn By	FW
Checked By	AS
Date	09/2020
Drawing Title	LANDSCAPE PLAN
Job-Dwg No	2924-VL_L01 Rev A

vector design concepts
LANDSCAPE DESIGNERS
4 ST JOHNS NORTH, WAKEFIELD, WF1 3QA. TEL 01924 332056
web:www.vectordc.com

CAD file reference V:\Aldi Projects\ALDI CORPORATE\2924 COR Waltham Cross\04 Landscaping\17.0 Drawings and Issue Sheets

Plans:

Plan 1: 13542/P03 Habitat Features and Preliminary Bat Roost Assessment Plan



Red line boundary

Habitat Features

Building

Hardstanding

Bare ground

Dense scrub

Fence

Line of coniferous trees

Scattered broadleaved tree

Preliminary Bat Roost Assessment

Tree with low suitability

N

0 10 20 30 m

Project	Homebase, Waltham Cross
Drawing Title	Habitat Features and Preliminary Bat Roost Assessment Plan
Scale	As Shown (Approximate)
Drawing No.	13452/P03
Date	April 2021
Checked	ZD/SC/DM

Tyler Grange

WeWork Offices, 30 Stamford Street, Southbank, London, SE1 9LQ
T: 020 393 494 70 E: info@tylergrange.co.uk W: www.tylergrange.co.uk

Step into our world

www.tylergrange.co.uk

Tyler Grange

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