

South West Milton Keynes

Updated Environmental Statement Volume 2 - Appendices

Carter Jonas LLP

MAY 2020

APPENDIX 9.3:

LANDSCAPE STRATEGY PLAN

1. Native Woodland Planting

- New native woodland planting will be planted throughout the development together with the Site boundaries. This will help to break up views of the Site from the wider landscape.
- Native woodland species will provide opportunities for wildlife and enhance the biodiversity of the Site. It will help to extend the existing wildlife corridors which cross the Site from the Whaddon Chase area in the west, through the Site and into Milton Keynes.
- The new native woodland planting will also respect the visual amenity and setting of the nearby buildings.



Species	Common name
<i>Carpinus betulus</i>	Hornbeam
<i>Acer campestre</i>	Field Maple
<i>Quercus robur</i>	English oak
<i>Prunus avium</i>	Wild cherry
<i>Malus sylvestris</i>	Crab apple
<i>Salix caprea</i>	Goat willow
<i>Viburnum opulus</i>	Gelder rose
<i>Crataegus laevigata</i>	Hawthorn, midland
<i>Rhamnus cathartica</i>	Buckthorn
<i>Corylus avellana</i>	Hazel
<i>Ulmus</i> sp.	Elm (disease resistant)
<i>Prunus spinosa</i>	Blackthorn



Tattenhoe Park
Under construction, application reference 17/00918/OUT

5. Existing Landscape Framework

Across the Site, effort has been made within the scheme design to retain the vast majority of existing hedgerows and woodland belts. Removals will only take place to facilitate access onto Site. The retained vegetation, especially along Weasel Lane, will provide a setting for the new homes and maintain the existing wildlife corridors across the Site.

Site-wide management and enhancement of remnant woodland habitats and the retained hedgerow network will be implemented as part of the Scheme. This will include eradication of invasive non-native species (e.g. variegated yellow archangel and hybrid bluebell), translocation of ground flora/woody features from impacted woodland/hedgerows, the direct ciding of dispersal of certain ground flora (e.g. native bluebell), sensitive coppicing/management of understorey and hedgerows, sowing/planting of native ground flora to species-poor areas and appropriate fencing/protection of sensitive areas from recreational impacts.



4. New Public Parks

A range of attractive, accessible and linked open spaces will be provided across the Site, incorporating formal and informal play and recreation spaces. These will include various linear parks running through the Site, wrapping around the western and northern boundary, and through the centre of the Site. There will also be a new district park located through the centre of the Site and along the southern boundary. This will include NEAPs, LEAPs, MUGAs, outdoor sports facilities, incidental open space within residential development parcels, a community allotment and a community orchard. There is also an opportunity to provide trim trail stations at regular intervals throughout the generous open space on Site. The SuDS features on Site will be incorporated into these spaces to provide visual interest and biodiversity benefits.

Planting within these parks and open spaces will be informed by the ecological surveys to provide high quality wildlife habitat together with an amenity benefit. Species will include predominantly native species with some more ornamental species in the smaller scale spaces within the residential blocks:

Trees and shrubs:
Hornbeam - *Carpinus betulus*
Silver birch - *Betula pendula*
Hazel - *Corylus avellana*
Hawthorn - *Crataegus monogyna*
Dogwood - *Cornus sanguinea*
Field Maple - *Acer campestre*
Wayfaring tree - *Viburnum lantana*
Gelder rose - *Viburnum opulus*

Wildflower grassland:
Emorsgate's "EM4" &/or "EM6" meadow mixtures or similar and approved, to include:
Common Knawweed - *Centaurea nigra*
Lady's Bedstraw - *Galium verum*
Oxeye Daisy - *Leucanthemum vulgare*
Birdfoot Trefoil - *Lotus corniculatus*
Cowslip - *Primula veris*
Yellow Rattle - *Rhinanthus minor*

Hedgerows
Hawthorn midland - *Crataegus laevigata*
Blackthorn - *Prunus spinosa*
Field rose - *Rosa arvensis*
Hazel - *Corylus avellana*
Hornbeam - *Carpinus betulus*



2. Sustainable Drainage and Wildlife Ponds and Black Poplar Planting

Sustainable Drainage Systems are incorporated into the strategy in order to allow run-off water to attenuate on Site before being released slowly into the existing watercourses. These basins will be designed to maximise benefits for biodiversity as well as to create attractive and varied landscaping. These basins which remain dry for much of the year will be sown with a wildflower seed appropriate to chalky and/or clayey soils (Emorsgate's "EM4" & "EM6" meadow mixtures, or similar and approved) to establish species-rich grassland.

The remainder of the basins will be sown with wet grassland seed (Emorsgate's "EM8" &/or "EM11" wet meadow mixtures, or similar and approved) to establish species-rich wet grassland. In all instances, and importantly, nutrient rich topsoil will not be added prior to sowing of wildflower seed to ensure optimum low-nutrient growing conditions for the establishment of species-rich semi-natural grassland. Following initial establishment with more intensive management, long-term management of grassland within basins will comprise a standard nature conservation cut, with all arisings removed to maintain low-nutrient growing conditions.

A proportion of the basins, principally along the north west and along the southern boundary of the Site, will be designed to incorporate "micro-pools" to serve as a network of wildlife ponds integrated into the SuDS design.

These 'micropools' are effectively central areas of the basins which are 'over dug' beyond their required drainage capacity in order to provide permanently wet waterbodies. These areas would be lined, either with naturally occurring clay horizons or with an installed artificial liner, and would provide substantive benefits for amphibian and other local wildlife. Furthermore, the ponds and surrounding grassland would ensure any mitigation measures in respect of great crested newt *Triturus cristatus* would be integrated into the scheme.



Off-line from SuDS features, six dedicated wildlife ponds will be created, to the northwest and southeast of the Site. These ponds are located in low-lying areas of the Site, close to important amphibian populations within informal open spaces. These water bodies will be formed through the use of site-won or imported puddling clay to create permeant natural features in the landscape. Natural colonisation of aquatic plants will be favoured, although some introduction of oxygenating and floating native species may be necessary to improve water quality and prevent drying, respectively.

Three former field ponds which have silted up / scrubbed over will also be restored through excavation of silt and careful removal of vegetation subject to tree protection measures. These small ponds will be allowed to colonise naturally with remnant aquatic seedbank.

Finally, in association with wetland features, locally grown native black poplar *Populus nigra* ssp *betulifolia*, one the UK's rarest trees, will be planted. Plants will be sourced via the National Black Poplar Conservation Group, which is coordinated by AVDC. Other native wetland tree species will also be planted, such as grey willow *Salix cinerea*, goat willow *Salix caprea*, osier *Salix viminalis*, alder *Alnus glutinosa*, downy birch *Betulus pubescens* and guelder rose *Viburnum opulus*.

3. Play Areas

A large area of public space is provide to the south of Weasel Lane, which includes several sports pitches: a cricket pitch, a Neighbourhood Equipped Area for Play (NEAP), a Multi-Use Games Area (MUGA) and a Locally Equipped Area of Play (LEAP). This central area of public open space provides a key focal point to the development and provides new areas for formal and informal recreation for prospective residents of the new development and existing residents of Milton Keynes. There are also several further MUGAs, NEAPs and LEAPs located in key areas of open space within the development.

LEAPs will provide play opportunities mainly aimed at children (up to 8 years old) with a range of equipment for play experiences. NEAPs will be provided at key central locations on the Site. These will have dedicated areas to cater for both older children (8-16 years of age), and younger children (2-8 years of age). They will provide a range of play experiences with an emphasis on adventurous, challenging, and imaginative play elements. These will include elements of natural play such as mounding, boulders, tree trunks and tunnels. New MUGAs will be large enough to accommodate a wide range of outdoor games suitable for use by older children and adults.



LEGEND	
	APPLICATION BOUNDARY
	EXISTING
	EXISTING TREES / VEGETATION
	PROPOSED STREET / POS TREE
	ORCHARD TREE
	WOODLAND MIX
	NATIVE HEDGE PLANTING
	ORNAMENTAL SHRUB / HERBACEOUS / ORNAMENTAL GRASS PLANTING
	WILDFLOWER MEADOW MIX
	AMENITY GRASS
	LONGER GRASS
	PLAY AREAS - LEAP
	PLAY AREAS - NEAP
	PLAY AREAS - MUGA
	PLAY AREAS - SKATEPARK
	RECREATIONAL FOOTPATH / CYCLEWAY
	EXISTING PUBLIC FOOTPATH
	EXISTING BRIDLEWAY
	EXISTING RESTRICTED BYWAY
	EXISTING SUSTRANS ROUTE 51
	EXISTING PONDS
	PROPOSED WILDLIFE PONDS
	PROPOSED SUSTAINABLE DRAINAGE SYSTEMS (SuDS features)
	PROPOSED COMMUNITY ORCHARD
	PROPOSED COMMUNITY ALLOTMENTS

E	04/04/20	PH	Amended to client comment
D	21/05/20	PH	Amended to highways changes
C	05/05/20	PH	Amended to include ecological mitigation measures and match layout
A	14/04/20	PH	Amended to match layout
A	09/04/20	PH	Amended to match layout

Rev	Date	By	Description
CSA environmental			
Dolvis Barns, High Street, Ashwell, Hertfordshire SG7 5NT			
01462 74347 cshwell@csaenvironmental.co.uk w csaenvironmental.co.uk			
Project: South West Milton Keynes 3			
Title: Appendix 9.3 - Landscape Strategy Plan			
Client: Halkam Lane Management, William Davis & Taylor Wimpey			
Scale	1:2000 @ A0	Drawn	PH/AJ
Date	March 2020	Checked	CAJ/JW
Drawing No	CSA/4851/05	Rev	E

APPENDIX 9.4:

ARBORICULTURAL IMPACT ASSESSMENT



ARBORICULTURAL SURVEY AND IMPACT ASSESSMENT

ON BEHALF OF

HALLAM LAND MANAGEMENT, WILLIAM DAVIS & TAYLOR WIMPEY

FOR

PROPOSED MIXED USE DEVELOPMENT

AT

LAND EAST OF WHADDON ROAD

Prepared by: Ian Howell BA Hons, L4 Cert Arb (ABC) & Richard Hyett BSc (Hons), MSc, MArborA, MICFor
Checked by: Paul Barton MSc, TechCert (ArborA), MArborA
Reference: C.2750

Validation statement for LPA application registration

This report is submitted to Aylesbury Vale District Council and Milton Keynes Council to accompany an outline planning application. The report contains arboricultural information relating to the proposed development on land east of Whaddon Road.

For local planning authority (LPA) validation purposes, this report contains the following:

- A full tree survey compliant with the requirements of BS5837:2012 '*Trees in relation to design, demolition and construction – recommendations*' undertaken by a competent and qualified arboriculturist.
- A suitably scaled plan with a north point and the tree survey information.
- An assessment of the impacts of the proposed development on the existing trees. This includes recommendations of which trees should be removed/retained.

CONTENTS:

Page No:

1.	INTRODUCTION	1
2.	REPORT LIMITATIONS	2
3.	DESCRIPTION OF SITE AND TREES	3
4.	STATUTORY PROTECTION	4
5.	ARBORICULTURAL SURVEY	6
6.	TREE SURVEY FINDINGS	7
7.	IDENTIFICATION OF PRELIMINARY TREE CONSTRAINTS	10
8.	GENERAL GUIDANCE NOTES FOR DEVELOPMENT	12
9.	DESCRIPTION OF PROPOSED DEVELOPMENT	14
10.	ARBORICULTURAL IMPACT ASSESSMENT (AIA)	15
11.	RECOMMENDATIONS AND CONCLUSION	17

APPENDICES:

APPENDIX 1 – TREE SURVEY METHODOLOGY AND SCHEDULE

APPENDIX 2 – TREE SURVEY AND CONSTRAINTS PLAN

APPENDIX 3 - INDICATIVE TREE RETENTION AND REMOVAL PLAN

REVISIONS:

Date	Rev	Description of revision	Initials
18.02.2019	-	First issue	RHY
01.05.2020	Rev A	Extension to the site area.	IH
01.06.2020	Rev B	Revised Masterplan provided	IH

1. INTRODUCTION

- 1.1 Barton Hyett Associates have been instructed by CSA Environmental on behalf of Hallam Land Management, William Davis and Taylor Wimpey to inspect the trees that could affect, or be affected by, the development proposal on land east of Whaddon Road; hereafter referred to as 'the site'. This report, in compliance with BS5837:2012 '*Trees in relation to design, demolition and construction - recommendations*' is required to accompany the submission of an outline planning application for mixed use development.
- 1.2 The scope of the instruction was to visit the site and to survey relevant trees, hedges and shrub masses in accordance with BS5837:2012 and to prepare the following information:
- Tree survey summary
 - Schedule of tree survey data
 - Tree survey and constraints plan
- 1.3 With reference to the above information and BS5837:2012, the instruction also extended to an assessment of the impact of the proposed development on the site's arboricultural resource and to produce the following:
- Arboricultural impact assessment
 - Indicative tree retention and removal plan
- 1.4 For the purposes of carrying out the assessment the following information has been provided:
- Topographical Survey - reference: Topo Survey 18 Oct 06
 - Illustrative Masterplan - CSA - reference: 4857_112_E_DAS – May 01- Rev G
 - Highway Access - Mouchel – DO16 Rev B

WSP UK Ltd - D013 Rev C, D014 Rev C

2. REPORT LIMITATIONS

- 2.1 The tree survey was undertaken from ground level and observations have been made solely from visual inspections for the purposes of assessment in terms relevant to planning and development. Only binoculars, mallet and a probe have been used to aid tree assessment. No invasive or non-invasive internal decay detection devices have been used in assessing tree condition.
- 2.2 The recommendations and conclusions in this report relate only to the conditions found on this site at the time of the site visit and inspection. The recommendations contained within this report are valid for a period of 12 months from the date of this report.
- 2.3 Any significant alteration to the site that may affect the trees present, for instance changes in ground level, tree works, extreme weather events, hydrological changes etc,) may invalidate the survey findings and could necessitate a re-assessment of the trees.
- 2.4 This report is prepared for planning purposes only and does not evaluate the degree of risk posed by trees.
- 2.5 Trees are living organisms and self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. It is therefore not possible to categorically state that any tree is 'safe'.
- 2.6 Any management recommendations set out within this report are of an advisory and preliminary nature only and relate to trees within the context of current site use. Any physical alterations to site conditions subsequent to the date of the site survey will have the potential to change/invalidate the findings and recommendations of this report.

3. DESCRIPTION OF SITE AND TREES

3.1 The site is located at the south western edge of Bletchley, a constituent town of Milton Keynes.

- Nearest post code: MK3 5LA
- Central grid reference: SP 83854 32901



Photo 1: aerial photo of the site with approximate boundary shown in blue. (Source: Bing Maps).

Site description

- 3.2 The site is located to the south-west of Milton Keynes at the edge of Bletchley town. The site is rural in character, with residential dwellings beyond to the east. The Windmill Hill Golf Centre and Snelshall West industrial units are located to the north. To the south and east are mixed use agricultural fields.
- 3.3 There are various points of access to the site with some via the various gates off Whaddon Road, and some off the bridleway which bisects the site. The topography of the site slopes gently from north to south.
- 3.4 The arboricultural resource for the site is typical of an agricultural setting with established field edge hedgerows interspersed with semi-mature to mature trees and some larger tree groups (small woodlands) across the site.
- 3.5 The north of the site is bound by Standing Way (A421) and immediately to the east of the site is an agricultural field, beyond which lies the existing settlement edge of Bletchley. To the south is the disused railway track known as the Varsity Line which historically linked Oxford and Cambridge, and to the west is the Whaddon Road.

4. STATUTORY PROTECTION

Statutory tree protection

- 4.1 The Site is not located within a Conservation Area and the vast majority of the trees within the site are not protected by a Tree Preservation Order, save for some of the trees within the parts of the site that fall within Milton Keynes Council.
- 4.2 The reference of the relevant Order is PS/540/15/16 which was served and confirmed in 1970 in response to the Tattenhoe development to the north of the site. On review of this Order the large region indicated within the Order was discovered to be a 'Group' designation and therefore only protects trees that were present at the time the Order was served. The size and estimated age of the trees within the redline boundary, that also fall within the 'Group' designation of the Order, means that they are not believed to be protected by the Order.
- 4.3 The following information is provided for advisory purposes.
- 4.4 Notwithstanding specific exemptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.
- 4.5 Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine if the matter is determined by the Crown Court.
- 4.6 On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.
- 4.7 Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

- 4.8 Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.
- 4.9 Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. In some instances specialist ecological advice may be required. This may result in tree works being carried out

following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or the relevant Statutory Nature Conservation Organisation (SNCO): Natural England, Scottish Natural Heritage or Natural Resources Wales.

- 4.10 It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only provides an indication of likely nesting times and as such diligence is required when undertaking tree works at *all* times.
- 4.11 Irrespective of the time of year, and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.
- 4.12 For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales.
- 4.13 Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

5. ARBORICULTURAL SURVEY

Site visit

- 5.1 The survey was undertaken by Richard Hyett, MArborA, MICFor and Ian Howell, BA (Hons), Cert Arb L4 (ABC), who visited the site between the 13th and 14th of November 2018. With an additional land parcel to the east surveyed on the 14th April 2020. The weather at the time of the visits was slightly overcast; these conditions in no way hindered the ability to view the trees. All observations were made from ground level (aided by the Visual Tree Assessment method – Mattheck and Breloer, 1994¹) and all dimensions were measured unless otherwise stated as estimated in the survey schedules.

Methodology

- 5.2 The survey was undertaken in accordance with BS5837:2012 and the methodology is set out within **APPENDIX 1** of this report.
- 5.3 The tree survey findings are recorded in the tree survey schedule at **APPENDIX 1** of this report.
- 5.4 Within the tree survey schedule, each surveyed tree (T), group (G) or hedgerow (H) on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan which can be found at **APPENDIX 2** of this report.

¹ The Body Language of Trees: A Handbook for Failure Analysis (Research for Amenity Trees)

6. TREE SURVEY FINDINGS

6.1 A summary of the tree survey quality assessment findings that are relevant to the current proposals are shown in table form below:

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.	U - Very poor quality trees that should be removed unless they have high conservation value.
Trees	91	4	55	32	-
Groups	33	1	23	8	1
Hedgerows	25	-	22	3	-
Total	149	5	100	43	1

6.2 The above table demonstrates that the arboricultural resource of the site is comprised of 149 items that were identified and surveyed. The greater majority of this arboricultural resource is made up of individual trees, with a smaller number of tree groups and hedgerows.

6.3 The majority of individual trees (60%) were assessed as being of moderate-quality (Category B), with an estimated life expectancy of at least 20 years. A smaller proportion of the trees (35%) are of low-quality (Category C) with an estimated life expectancy of at least 10 years. Three trees (5%) of the individual trees onsite are of high-quality (Category A) with an estimated life expectancy of at least 40 years. No trees were assigned to Category U (very poor quality, unsuitable for retention in the current site context).

6.4 The majority of tree groups (70%) were also assessed as being of moderate-quality (Category B). A single tree group is of high-quality (Category A) with an estimated life expectancy of at least 40 years. The remainder of the groups are low-quality.

6.5 Twenty-five hedgerows were identified with the vast majority (88%) being of moderate-quality (Category B). Three hedgerows were assigned to Category C.

6.6 The key findings of the survey are as follows:

- No veteran or ancient trees were identified during the survey;
- A number of significant and notable trees and groups (Category A) were noted during the survey;
- Checks undertaken of the relevant records held on the UK Governments MAGIC website have revealed there are no areas of Ancient or Ancient Semi-Natural Woodland (ASNW) present within, or adjacent to the site;

6.7 Select photographs of the site are shown on the following pages:



Photoview 1: looking south at G8, an outgrown hedgerow with some significant trees overhanging the site.



Photoview 2: Looking north at T68, a Category A1 hybrid black poplar tree.



Photoview 3: A general image of the site, illustrating the typical outgrown field hedgerows with common ash interspersed.



Photoview 4: looking east along the bridleway that bisects the site. An off-site Category A, English oak is to the left of the image (T71).

7. IDENTIFICATION OF PRELIMINARY TREE CONSTRAINTS

- 7.1 In accordance with BS5837:2012, below ground constraints, or root protection areas (RPAs), for the surveyed trees have been plotted onto the tree survey plan for the site. These are represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level.
- 7.2 With reference to BS5837:2012, a root protection area (RPA) is defined as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure should be treated as a priority”. “The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained”.
- 7.3 BS5837:2012 states (4.6.2) that, “where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced.” The BS goes on to state that, “modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution,” and that any deviation from the original circular plot should take into account:
- morphology and disposition of roots
 - topography and drainage
 - soil type and structure
 - the likely tolerance of the tree to root damage/disturbance
- 7.4 In this instance, the default circular RPAs have been used throughout and no adjustments made.
- 7.5 Root systems can be damaged in a number of ways as follows:
- Severance of a root will destroy all parts of the root beyond that point. The larger the root severed, the greater the impact on the tree. If roots are damaged close to the trunk, the anchorage and stability of the tree can be affected
 - The root bark protects the root from decay and is also essential for further root growth. If damage to the bark extends around the whole circumference, the root beyond that point will be killed
 - Soil compaction, which may occur from storage of material or passage of heavy equipment over the root area, can restrict and even prevent gaseous diffusion through the soil, and thereby asphyxiate the roots. The roots must have oxygen for survival, growth and effective functioning.

- Lowering the soil level will strip out the mass of roots near the surface
- Raising soil levels will have the same effect as soil compaction
- Incorrect selection and application of herbicide
- Spillage of oils or other harmful materials

7.6 Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

8. GENERAL GUIDANCE NOTES FOR DEVELOPMENT

- 8.1 These notes are provided as a guide to the design team. They represent the professional opinion of the arboriculturist, on which trees should be ideally retained given their quality and condition, and which may be acceptable to remove.
- 8.2 The Tree Survey and Constraints Plan provided at **APPENDIX 2** shows the Root Protection Areas (RPAs) prescribed by the guidance within BS5837 paragraph 4.6.2. The RPA represents the minimum soil volume required to sustain a tree.
- 8.3 For proposed residential developments, consideration must be given to future tree growth and orientation, i.e. adverse shading and blocked views from windows raise concerns for incoming residents, which may lead to pressure to fell or remove trees in the future. Wherever possible it is advisable to arrange fenestration away from tree canopies to lessen the conflict, or increase window size to accommodate ambient light.
- 8.4 A hierarchical approach is adopted in order to achieve optimum use of the Site and location of built structures. This is set out below:

Avoid

- 8.5 The starting point of site layout design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

Mitigate

- 8.6 Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:
- 8.7 Foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.
- 8.8 Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.
- 8.9 Service runs that cannot be routed outside the RPA(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

- 8.10 Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the LPA.

Opportunities

- 8.11 Opportunities exist for the establishment of significant new tree planting as part of a scheme of landscape design for the site. Considered and appropriate new tree planting will assist in delivering an overall enhancement to the arboricultural resource associated to the site. This is particularly relevant on the margins, around existing trees or tree groups, or within areas of open space.

9. DESCRIPTION OF PROPOSED DEVELOPMENT

- 9.1 Outline planning consent is being sought for mixed use development. A summary of the proposed development is provided below.

'Outline planning application for a mixed-use sustainable urban extension to the south-west of Milton Keynes' with all matters reserved with the exception of highways access'.

- 9.2 The indicative layout is shown on the indicative tree retention and removal plan at **APPENDIX 3**.

10. ARBORICULTURAL IMPACT ASSESSMENT (AIA)

10.1 This assessment considers the effect of the proposed site access (i.e. the non-reserved matters). It also considers the potential impacts of the proposed development as indicated on the Illustrative Masterplan. However, a further assessment of the reserved matters details will be required at the detailed planning stages.

10.2 In order to implement the proposed vehicle access to the site only a small number of arboricultural features are expected to be removed. The trees and hedgerows that will require removal are shown on the indicative tree retention and removal plan at **APPENDIX 3** (Insets 1 to 3).

Buckingham road roundabout

10.3 To accommodate the new highway roundabout junction from the Buckingham Road (B4034) in the north-east it will be necessary to remove a single tree, T49 (Horse chestnut, Category B, moderate-quality) and circa 100m of hedgerow from H7 and H11 (Both mixed species, Category B, moderate-quality).

Western access/egress

10.4 To accommodate the new highway access and egress point from Whaddon Road in the west, it will be necessary to remove a single tree, T62 (Grey poplar, Category C, low-quality) and a circa 300m section of hedgerow H9 (Mixed species, Category B, moderate-quality). This removal also accommodates the visibility splay requirements for the new access.

Northern highway access only

10.5 To accommodate the new highway access point from Standing Way in the north it will be necessary to remove an approximately 25m wide section of G14 (Mixed species, Category B, moderate-quality). This is to allow for the carriageway construction and suitable clearance for its safe use.

10.6 Given the limited amount of arboricultural items to be removed and in the context of the anticipated landscape proposals for the wider site (that can be delivered as part of the detailed design and implementation) this impact is considered acceptable from an Arboricultural perspective.

Non-reserved matters

10.7 The Illustrative Masterplan indicates that within the interior of the site it will likely be necessary to remove a number of hedgerows and trees. This removal is required to accommodate the development parcels, the internal highway network, the internal footpath network and to allow suitable landscape areas to be provided. The trees and hedgerows that will potentially require

removal are shown on the indicative tree retention and removal plan at **APPENDIX 3**. The majority of arboricultural features to be removed, or partially removed, are moderate-quality (Category B). However, the proposed internal road network is likely to require the partial removal of a section of G11 (Mixed species, Category A, high-quality).

10.8 In summary the Illustrative Masterplan indicates the following tree and hedgerow removal will likely be required:

- 557m of hedgerow (mainly Category B, moderate-quality)
- 25m section of tree group, G11 (Category A, high-quality)
- 20m of tree groups, (Category B, moderate-quality)
- 1 tree, T7 (Category C, low-quality)
- 2 trees, T50 and T51 (Category B, moderate-quality).

11. RECOMMENDATIONS AND CONCLUSION

- 11.1 Recommendations on the arboricultural constraints and opportunities of the Site are provided below.

Constraints

- 11.2 Confirmed constraints to development at the site have been identified as the presence of:

- Notable, high-quality, individual trees with good future potential
- Notable tree groups of prominence within, and adjacent to, the site

- 11.3 In summary, due to the peripheral, field boundary, location of the identified trees there is minimal arboricultural constraint to development. However, the retention and protection (both from damage during the construction process and also from post development pressure to prune or fell) of trees on the site will serve to provide a level of maturity and provide visual amenity within the proposed development.

Opportunities

- 11.4 Opportunities exist for the establishment of significant new tree planting as part of a scheme of landscape design for the site. New tree planting could assist in delivering an overall enhancement in the arboricultural resource of the site.

Arboricultural impacts

- 11.5 Arboricultural impacts have been identified in the form of hedgerow and tree removal in order to facilitate the construction of the proposed highway accesses. Further tree and hedgerow removals are anticipated as part of the reserved matter elements of the proposed development. The Illustrative Masterplan indicates the site can deliver a significant amount of new tree and hedgerow planting, the details of which can be secured at the reserved matters planning stages. The Illustrative Masterplan also indicates that suitable buffers to retained trees and hedgerows can be provided in order to limit impacts upon them.

Further recommendations

- 11.6 The following is recommended to inform the next stages of the design/planning process of the proposed development, such that suitable arboricultural impact avoidance, mitigation and compensation measures may be adopted:
- Finalised retention and removal plan, along with the preparation of a detailed tree protection plan for non-reserved matters (highway access)
 - Detailed Arboricultural Impact Assessment in line with BS 5837:2012 at the detailed design stage.

Together with:

- A suitable Tree Protection Plan and Arboricultural Method Statement for the wider site once the design is finalised at the advanced planning stage

Conclusion

- 11.7 In conclusion, the site contains a large number of moderate-quality trees along with some high-quality trees and groups. Due to their peripheral location, and subject to the advice provided within this report, it should be possible to retain the majority of trees as part of the proposed development. Given the scale of the site, location of the trees, no overriding arboricultural constraints that would otherwise prevent development have been identified. The Illustrative Masterplan indicates that some arboricultural impacts will occur but also that the proposed development can provide opportunities for significant new tree planting as well as appropriate buffers to retained trees.

APPENDIX 1

TREE SURVEY METHODOLOGY AND SCHEDULE

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

INDIVIDUAL TREES

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T1	Common ash	11.0	1	#	350	4.5-4-4-4	2.0	2	E	SM	None	Tree within field edge boundary, not on topo. Ivy throughout lower canopy	Good	Good	40+	B1	4.32	62	NO
T2	Common ash	13.0	1	#	500	6.5-8-8-7	3.0	2	S	M	None	Tree within field edge boundary, not on topo. Failed limb in situ at base of tree. Some decline in the upper canopy and over extended lateral limb to the east.	Good	Fair	20+	B3	6.0	113	NO
T3	Common ash	7.0	1	#	240	4-4-4-4	3.0	2	S	SM	None	Tree within field edge boundary, not on topo.	Good	Good	40+	B1	2.9	26	NO
T4	Common ash	11.0	2	#	450	5-7-5-7	3.0	2	E	SM	None	Tree within field edge hedgerow	Good	Good	40+	B2	5.4	92	NO
T5	Common ash	16.0	1	#	850	6-6.5-6.5-6.5	3.0	2	W	M	None	Tree within field edge boundary, not on topo. Cavity at base and mid canopy.	Good	Fair	20+	B3	10.2	327	NO
T6	Common ash	14.0	1	-	400	5-4.5-4.5-5	2.5	2	S	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.8	72	NO
T7	Common ash	9.0	1	#	400	3-3-4-7	2.0	2	N	LM	None	Located at the edge of the ditch. Lost the apically dominant stem.	Fair	Poor	10+	C3	4.8	72	NO
T8	Common ash	14.0	1	#	300	3.5-4-4.5-3	4.0	3	E	SM	None	Tree located at the edge of the ditch	Good	Good	40+	B1	3.6	41	NO
T9	Common ash	10.0	2	#	450	5.5-4-5-5.5	2.0	1	E	M	None	Some dysfunction in the southern stem. Prolific regrowth from ground level	Good	Fair	20+	C1	5.4	92	NO
T10	Common ash	12.5	2	#	450	5.5-6.8-3.5-3	2.0	2	N	M	None	Located at the edge of the ditch. Lost the apically dominant stem. Ivy throughout canopy	Fair	Fair	10+	C1	5.4	92	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T11	Common ash	14.0	1	#	600	5-4.5-6.5-4.5	2.0	3	E	LM	None	Located at the edge of the ditch. Lost the apically dominant stem. Hollowing at base with Inonotus Hispidus fungal bracket at 3m.	Fair	Fair	20+	B3	7.2	163	NO
T12	Common ash	8.0	2	#	260	4-4-4-4	2.0	2	R	SM	None	Tree within field hedgerow , not on topo.	Good	Fair	40+	B1	3.1	31	NO
T13	Common ash	8.0	2	#	260	4-4-4-4	2.0	2	S	SM	None	Tree within field hedgerow , not on topo.	Good	Fair	40+	B1	3.1	31	NO
T14	Common ash	8.5	2	#	180	4-4-4-4	2.0	2	S	SM	None	Tree within field hedgerow , not on topo.	Good	Fair	40+	C1	2.2	15	NO
T15	Common ash	10.0	4	#	370	4-4-4.5-4	2.0	2	N	SM	None	Tree within field hedgerow , not on topo. Multi stemmed from ground level	Good	Fair	20+	C1	4.4	62	NO
T16	Common ash	6.5	1	#	230	3-3.5-3-3.5	1.5	1	E	SM	None	Tree within field hedgerow , not on topo. Cankering on main stem	Fair	Fair	20+	C1	2.8	24	NO
T17	Poplar	13.0	1	#	800	3-4-6-5	2.0	3.5	E	M	None	Decline in the upper canopy	Fair	Fair	20+	C1	9.6	290	NO
T18	Poplar	18.0	1	#	800	5-5-5-7	5.0	4	E	LM	None	Decline in the upper canopy with cavities on structural limbs	Fair	Fair	20+	C3	9.6	290	NO
T19	Common ash	10.5	1	#	400	5-3-3.5-5	2.0	2	W	M	None	Suppressed by neighbouring trees	Good	Fair	40+	B1	4.8	72	NO
T20	Common ash	6.0	1	#	290	4-4.5-4-0.5	2.5	2	S	SM	None	Asymmetric canopy due to suppression from neighbouring tree	Good	Fair	20+	C1	3.5	38	NO
T21	Common ash	12.0	1	#	400	3.5-4-5-4.5	2.5	2	S	M	None	Tree within field hedgerow	Good	Good	40+	B1	4.8	72	NO
T22	Common ash	11.0	1	#	400	4-5.5-5-3.5	3.0	2	N	M	None	Tree within field hedgerow , Inonotus Hispidus fungal brackets on main stem	Fair	Fair	20+	C3	4.8	72	NO
T23	Common ash	16.0	1	#	800	3-5-6-5	2.0	2	N	LM	None	Tree within field hedgerow. Decline throughout canopy	Fair	Fair	20+	C3	9.6	290	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T24	Common ash	12.0	1	#	380	4-4-2-3.5	2.5	2	E	M	None	Tree within field hedgerow. Decline throughout canopy. Cavities with good habitat potential.	Fair	Fair	20+	C3	4.5	65	NO
T25	Common ash	17.0	1	#	500	6-6-5-5.5	3.0	3	E	M	None	Tree within field hedgerow. Some Inonotus Hispidus fungal brackets on stems	Good	Fair	40+	B1	6.0	113	NO
T26	Common ash	14.5	1	#	450	6.5-5.5-5-5.5	2.0	2	E	M	None	Tree within field hedgerow, dense ivy throughout lower canopy. Partially failed limb in situ on the hedgerow	Good	Fair	40+	B1	5.4	92	NO
T27	Common ash	16.0	1	#	400	6.5-6-6.5-6	2.0	3	N	M	None	Tree within field hedgerow	Good	Good	40+	B1	4.8	72	NO
T28	Common ash	12.0	1	#	500	5.5-6-6-4	2.0	2	N	M	None	Tree within field hedgerow, dense ivy throughout lower canopy, some decline throughout canopy	Fair	Good	20+	C1	6.0	113	NO
T29	Field maple	7.0	1	#	280	4-4-4-4	2.5	1	N	M	None	Tree within field hedgerow	Good	Good	40+	B1	3.3	35	NO
T30	Common ash	12.0	2	#	440	6-5-4-5.5	3.0	2	S	M	None	Tree within field hedgerow	Good	Good	40+	B1	5.3	88	NO
T31	Common ash	9.0	1	#	250	4-4-4-4	2.0	2	E	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.0	28	NO
T32	Common ash	7.0	1	#	180	3.5-3.5-3.5-3.5	3.0	2	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	2.2	15	NO
T33	Common ash	10.0	1	#	430	2-3.5-4.5-4	3.0	2	S	M	None	Tree within field hedgerow, not on topo. Failed apically dominant stem.	Fair	Fair	20+	C3	5.2	84	NO
T34	Common ash	12.0	1	#	420	4-4-3-2	2.5	2.5	S	M	None	Tree within field hedgerow, not on topo. Decline throughout canopy, cavities on structural limbs.	Fair	Fair	20+	C3	5.0	80	NO
T35	Common ash	13.0	2	#	280	5-4.5-4-4	3.0	3	S	SM	None	Tree within field hedgerow, not on topo. Forks close to ground level	Good	Fair	20+	C1	3.3	35	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	TPO
T36	Common ash	11.0	7	#	400	5.5-5-5-4	3.0	2	E	M	None	Tree within field hedgerow, not on topo. Of lapsed coppice form	Good	Good	40+	B1	4.8	72	NO
T37	Common ash	9.0	1	#	280	4.5-4.5-4.5-4.5	3.0	1.5	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.3	35	NO
T38	Common ash	12.0	2	#	400	5.5-5-5-4.5	3.0	3	N	M	None	Tree within field hedgerow, not on topo.	Good	Good	20+	B1	4.8	72	NO
T39	Common ash	11.0	3	#	290	4-4-4-4	3.0	2	S	SM	None	Tree within field hedgerow, not on topo.	Good	Fair	40+	B1	3.5	38	NO
T40	Common ash	11.0	1	#	350	4-4-4-4	3.0	3	S	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.2	55	NO
T41	Common ash	9.0	1	#	280	3.5-3.5-3.5-3.5	2.0	2	E	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.3	35	NO
T42	Common ash	11.0	1	#	400	5-5-4-4	2.0	2	S	M	None	Tree within field hedgerow.	Good	Fair	40+	B1	4.8	72	NO
T43	Common ash	9.0	3	#	270	4-4-4-4	2.0	2	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.2	33	NO
T44	Common ash	11.0	2	#	310	5-4-5-5	2.0	2	S	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.7	43	NO
T45	Common ash	12.0	3	#	350	5.5-4.5-5-5	3.0	3	S	M	None	Tree within field hedgerow, not on topo. Lapsed coppice form	Good	Fair	10+	C1	4.2	55	NO
T46	Common ash	12.0	1	#	330	5-5-5-5	3.0	3	S	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.9	49	NO
T47	Common ash	12.0	2	#	340	5.5-4-4-4	2.0	3	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.1	52	NO
T48	Common ash	12.0	1	#	400	6-4-4.5-5	3.0	3	N	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.8	72	NO
T49	Horse chestnut	11.0	1	#	360	4-5-5-5.5	2.0	2	E	SM	None	Tree within field hedgerow.	Good	Good	40+	B1	4.3	59	NO
T50	Horse chestnut	11.0	1	#	410	6-6-6-6	2.0	2	S	SM	None	Tree within field hedgerow.	Good	Good	40+	B1	4.9	76	NO
T51	Horse chestnut	10.0	1	#	410	6-6-6-6	2.0	2	N	SM	None	Tree within field hedgerow.	Good	Good	40+	B1	4.9	76	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T52	Horse chestnut	13.0	1	#	520	6-6.5-6-6.5	3.0	2	W	M	None	Tree within field hedgerow.	Good	Good	40+	B1	6.2	122	NO
T53	Common ash	12.0	1	#	310	4-6-6-3	3.0	3	E	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.7	43	NO
T54	Common ash	13.0	1	#	550	6-6-8-8	2.0	2	N	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	6.6	137	NO
T55	Common ash	12.0	1	#	600	6-8-4-2	3.0	2	E	LM	None	Decline throughout canopy, Inonotus Hispidus brackets on structural limbs, requires remedial works as is overhanging the bridle way	Fair	Fair	20+	C1	7.2	163	NO
T56	Common ash	13.0	1	#	250	2-3-4-3	1.5	1	S	SM	None	Sparse canopy to the north	Fair	Fair	20+	C1	3.0	28	NO
T57	Field maple	3.0	1	#	350	4-4-4-4	3.0	2.5	S	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.2	55	NO
T58	Common ash	11.0	1	#	400	7-6-6-6	3.0	3	E	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.8	72	NO
T59	Common ash	11.0	4	#	330	5-2-4-4	3.0	2	S	SM	None	Tree within field hedgerow, not on topo. Many co dominant stems at ground level	Good	Fair	20+	C1	3.9	49	NO
T60	Common ash	10.0	1	#	250	5-5-5-5	2.0	2	S	SM	None	Possibly off site , not on topo.	Good	Good	40+	B1	3.0	28	NO
T61	Crack willow	14.0	9	#	450	7-7-5-7	2.0	1	N	M	None	not on topo. Low pollard with lapsed re growth	Fair	Fair	20+	C1	5.4	92	NO
T62	Grey poplar	12.0	1	#	350	6-5-4-6	2.0	2	N	SM	None	Tree within field hedgerow, not on topo.	Good	Fair	40+	C1	4.2	55	NO
T63	Common ash	19.0	1	#	600	6-6.5-6-7	3.0	3	W	M	None	Tree within field hedgerow, not on topo. Dense ivy throughout lower canopy	Good	Good	40+	B1	7.2	163	NO
T64	Common ash	14.0	1	#	300	5-5-5.5-5.5	2.5	2	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.6	41	NO
T65	Common ash	13.0	1	#	320	4-6-6-5	3.0	2	N	SM	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	3.8	46	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	TPO
T66	English oak	12.0	1	#	680	7-7-7-7	2.0	2	N	M	None	Tree within field hedgerow, not on topo. Good specimen	Good	Good	40+	A1	8.2	209	NO
T67	Common ash	8.0	1	#	350	4-3-3-3	3.0	2	E	M	None	Tree within field hedgerow, not on topo. Has lost its apically dominant stem. Hollowing at the wound provides good habitat potential.	Fair	Fair	20+	C3	4.2	55	NO
T68	Hybrid black poplar	19.0	1	#	700	7-7.5-6.5-6.5	3.0	3	S	M	None	Tree within field hedgerow, not on topo. Good specimen, some historic branch tear outs in upper canopy	Good	Good	40+	A1	8.4	222	NO
T69	Common ash	14.0	1	#	680	6-6.5-5-5.5	2.5	2	N	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	8.2	209	NO
T70	Common ash	19.0	1	#	380	6-5-5.5-5.5	3.0	2	E	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.5	65	NO
T71	English oak	15.0	1	#	900	8-8-8-8	3.0	3	E	M	None	Off site tree, not on topo. Good specimen tree with a large stem diameter	Good	Good	40+	A3	10.8	366	NO
T72	Common ash	12.0	1	#	350	5-5-5.5-5.5	3.0	2	S	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.2	55	NO
T73	Common ash	11.0	1	#	400	6-5-6-5	2.0	2	S	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B1	4.8	72	NO
T74	Common ash	11.0	1	#	320	5.5-5.5-4-3	2.0	2	W	M	None	Tree within field hedgerow, not on topo. Tree has lost its apically dominant stem.	Good	Fair	20+	C1	3.8	46	NO
T75	Common ash	16.0	1	#	600	11.5-9.0-10.0-11.5	3.5	3	W	M	None	Located on the fenceline adjacent to the derelict building. Not on topo	Good	Good	40+	B1	7.2	163	NO
T76	Leyland Cypress	6.0	1	#	200	3.0-3.0-3.0-3.0	0.5	0.5	N/a	SM	None	Establishing evergreen screening tree. Not on topo	Good	Good	40+	C1	2.4	18	NO
T77	Goat willow	6.0	3	#	140	3.0-3.0-3.0-3.0	0.5	0.5	N/a	Y	None	Establishing tree. Not on topo	Good	Fair	40+	C1	1.7	9	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T78	English oak	13.0	1	#	500	6.0-6.0-6.0-6.0	3.0	4	N	EM	None	Tree located within a formalised grassed strip at the field edge. Not on topo	Good	Good	40+	B1	6.0	113	NO
T79	English oak	14.0	1	#	780	8.0-8.0-8.0-8.0	4.0	4	N/a	M	None	Located close to the boundary fence, crown reduced within past 3 years. Not on topo	Good	Good	40+	B1	9.4	275	No
T80	Common ash	14.0	1	-	450	8.0-8.0-8.0-8.0	4.0	5	N/a	EM	None	Located close to the boundary fence, crown reduced within past 3 years. Not on topo	Good	Good	40+	B1	5.4	92	No
T81	Crack willow	8.0	1	#	750	5.0-5.0-5.0-5.0	1.0	0.5	N/a	M	None	Pollarded at 5m in the past 3 years, has 3-4m regrowth present. No access to base of tree. Not on topo	Good	Fair	40+	C1	9.0	255	No
T82	English oak	11.0	1	#	800	6.0-6.0-5.0-5.0	6.0	3	N/a	M	None	Heavily topped/Pollarded at 8m. Located on the fenceline. Not on topo	Fair	Poor	10+	C1	9.6	290	No
T83	Common ash	14.0	2	#	570	8.0-7.0-7.0-8.0	3.0	2	W	M	None	Located within the low level hedgerow. Not on topo	Good	Good	40+	B1	6.8	147	No
T84	Common ash	17.0	1	#	480	6.0-7.0-5.0-6.0	4.0	5	N/a	SM	None	Located within the low level hedgerow. Topped at 9m with 7-8m regrowth. Not on topo	Good	Good	40+	C1	5.8	104	No
T85	Crack willow	17.0	2	#	860	9.0-9.0-9.0-9.0	1.0	1	N/a	M	None	Twin stemmed from ground level with one co dominant stem having collapsed into the field. Not on topo	Good	Fair	20+	C1	10.3	335	No
T86	Common ash	12.0	1	#	650	5.0-5.0-6.0-5.0	4.0	4	W	M	None	Offsite tree located within the neighbouring garden. Heavily topped with 4m regrowth. Not on topo.	Fair	Fair	20+	C1	7.8	191	No

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m ²	TPO
T87	Common ash	18.0	1	#	780	10.0-10.0-9.0-9.0	7.0	7	S	M	None	Located within the hedgerow, some small diameter deadwood throughout canopy and indications of reduced vitality. Not on topo	Fair	Fair	20+	C1	9.4	275	No
T88	Common ash	12.0	1	#	650	6.0-6.0-7.0-8.0	2.0	2	S	M	None	Tree located close to the boundary fence, of good form and condition. Not on topo.	Good	Good	40+	B1	7.8	191	No
T89	English oak	13.0	1	#	700	10.5-11.0-10.0-10.0	3.0	2.5	N/a	EM	None	Prominent tree. Within a neighbouring garden and overhanging the site by up to 10m. Not on topo	Good	Good	40+	A1	8.4	222	No
T90	Contorted willow	8.0	1	#	300	5.0-4.0-4.0-4.0	2.0	1.5	N/a	EM	None	Offsite tree of good form and condition. Not on topo	Good	Good	20+	B1	3.6	41	No
T91	English oak	16.0	1	#	550	5.0-5.0-7.0-7.0	4.0	4	E	EM	None	Overhanging the site by up to 6m. Tree of good form and condition. Not on topo	Good	Good	40+	B1	6.6	137	No

GROUPS OF TREES

Ref	Species	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	TPO
G1	Grey poplar	12-14	3	#	400	4.5	2.0	SM	None	Off site group on bridle way side of the hedgerow	Good	Good	40+	B2	4.8	NO
G2	Common ash, Field maple	6-12	6	#	300	4	2.0	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	3.6	NO
G3	Common ash	11-13	9	#	300	4	3.0	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	3.6	NO
G4	Field maple, common ash	11-12	7	#	300	4	2.5	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	3.6	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	TPO
G5	Common ash, field maple	8-12	9	#	300	4	2.0	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	3.6	NO
G6	Common ash	10-13	8	#	350	4	3.0	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	4.2	NO
G7	Goat willow	13	2	#	380	4.5	3.0	M	None	Tree within field hedgerow, not on topo.	Good	Good	40+	B2	4.5	NO
G8	Blackthorn, hawthorn, common ash	6-12	150+	#	200	5	3.0	SM	None	Off site group of maturing trees above an outgrown hedgerow	Good	Good	40+	B2	2.4	NO
G9	Common ash	11-18	7	#	500	6.5	3.0	M	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	6.0	NO
G10	Common ash, field maple, hawthorn, blackthorn,	6-15	100+	#	400	6	3.0	M	None	Linear group of mature ash with an understorey of hawthorn, maple and blackthorn	Good	Good	40+	B2	4.8	NO
G11	English oak, common ash, hawthorn	6-15	100+	#	600	7	3.0	M	None	Linear group of mature trees with an understorey of hawthorn.	Good	Good	40+	A2	7.2	NO
G12	Common ash, horse chestnut	8-13	12	#	350	5.5	3.0	SM	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	4.2	NO
G13	Poplar	18-20	6	#	400	7	2.0	SM	None	Group of tall and slender stems. Likely lapsed re growth from historic stumps	Fair	Fair	20+	C2	4.8	NO
G14	English oak, common ash, poplar, sycamore	12-20	250+	#	500	7	3.0	M	None	Large group (or small woodland area), many mature trees with a Hawthorn understorey at the field edge	Good	Good	40+	B2	6.0	NO
G15	Common ash	10-15	7	#	300	6	3.0	SM	None	Group adjacent to the derelict buildings	Good	Good	40+	B2	3.6	NO
G16	Leylandii	16-17	2	#	320	4	0.5	M	None	not on topo. Outgrown screening trees. Possibly off site	Good	Fair	20+	C2	3.8	NO

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	TPO
G17	Leylandii	16-17	2	#	350	4.5	0.5	M	None	not on topo. Outgrown screening trees	Good	Good	20+	C2	4.2	NO
G18	Hybrid poplar	18-20	4	#	550	7	3.0	M	None	Off site trees. not on topo. Lapsed pollards. Poor attachment points at historic cut points	Good	Fair	20+	C2	6.6	NO
G19	Cypress, spruce	6-8	20	#	200	3	1.0	SM	None	Off site trees. not on topo. Evergreen screening trees	Good	Good	40+	B2	2.4	NO
G20	Common ash, English oak, common lime	12-18	20	#	800	7	3.0	M	None	Off site trees, not on topo. Mature linear group parallel to the bridle way.	Good	Good	40+	B2	9.6	NO
G21	Common ash, field maple	11-12	3	#	350	5	3.0	M	None	Trees within field hedgerow, not on topo.	Good	Good	40+	B2	4.2	NO
G22	Grey poplar	20-21	3	#	550	10	4.0	M	None	Not on topo, adjacent to the footpath	Good	Good	40+	B2	6.6	NO
G23	Common ash, field maple,	8-17	150+	#	300	5	3.0	SM	None	Not on topo. Densely planted group forming the highway verge and incorporating a small woodland area to the west	Good	Good	40+	B2	3.6	NO
G24	Common ash, oak, poplar, yew	4-15	100+	#	250	4	1.0	SM	None	Densely spaced group with yew at the highway edge	Good	Good	40+	B2	3.0	NO
G25	Common ash, alder, goat willow	13-15	18	-	500	7	1.0	SM	None	Linear group forming a largely cohesive canopy within the adjacent property. Not on topo	Good	Good	40+	B2	6.0	
G26	Lawson cypress, laurel	6-8	12	#	200	3.5	0.5	SM	None	Offsite group of unmaintained evergreen screening trees. Not on topo	Good	Good	40+	C2	2.4	
G27	Hazel, silver birch, common ash, cherry	5-10	15	-	200	3	1.0	SM	None	Establishing group forming valuable screening for the neighbouring properties. Not on topo	Good	Good	40+	C2	2.4	

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	TPO
G28	English elm	3-8	20	-	200	2	1.0	Y	None	Elm group, many of which have succumbed to DED. some shrubs have been planted in the understorey. Not on topo.	Poor	Poor	<10	U	2.4	
G29	English elm, hawthorn	4-8	10	#	200	3	1.0	SM	None	Mixed elm and hawthorn. Elm are likely to succumb to DED but are for the most part healthy at present.	Fair	Fair	<10	C2	2.4	
G30	English elm, hawthorn	4-8	8	#	200	3	1.0	SM	None	Mixed elm and hawthorn. Elm are likely to succumb to DED but are for the most part healthy at present. Not on topo	Fair	Fair	<10	C2	2.4	
G31	Hawthorn	5-6	6	#	250	3	1.5	EM	None	Linear group located close to the boundary fence and forming a cohesive canopy. Not on topo	Good	Good	40+	B2	3.0	
G32	Common ash, hawthorn, wild cherry, field maple	5-16	1000	#	400	5	0.5	EM	None	Hedgerow planting at the field edge (unmaintained) with establishing ash set back from the field edge.. Not on topo	Good	Good	40+	B2	4.8	
G33	Blackthorn, hawthorn, common ash	6-12	150+	#	200	5	3.0	SM	None	Off-site group of maturing trees above an outgrown hedgerow. Not on topo	Good	Good	40+	B2	2.4	

HEDGES

Ref	Species	Av. Height (m)	Av. width (m)	Av. Stem diam (mm)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
H1	Blackthorn, hawthorn, elm	3.8	3.0	80	0.5	SM	Dense hedgerow creating a good shelter belt from the bridle way.	Good	Fair	20+	B2	1.0
H2	Hawthorn, blackthorn, elder	3.0	2.0	90	0.5	SM	Well maintained boundary hedge, elm interspersed along its length	Good	Good	40+	B2	1.1
H3	Hawthorn, blackthorn	2.0	1.5	80	0.2	SM	Very patchy hedgerow dissected by large gaps along its length	Fair	Fair	20+	C2	1.0
H4	Hawthorn, blackthorn	2.5	2.0	80	0.2	M	Dense isolated section of hedgerow.	Good	Good	40+	B2	1.0
H5	Hawthorn, blackthorn	2.0	1.5	80	0.2	SM	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H6	Hawthorn, field maple, elder	2.5	1.5	80	0.2	M	Well maintained boundary hedge with some evidence of hedge laying having been carried out	Good	Good	40+	B2	1.0
H7	Field maple, hawthorn	2.0	1.5	80	0.2	M	Well maintained boundary hedge with evidence of laying being carried out in the past	Good	Good	40+	B2	1.0
H8	Field maple, hawthorn, blackthorn, elm	3.0	2.0	80	0.2	M	Field edge boundary hedgerow, becoming outgrown.	Good	Good	40+	B2	1.0
H9	Hawthorn, field maple, blackthorn	1.5	1.0	80	0.2	SM	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H10	Hawthorn, field maple, blackthorn	5.0	3.0	90	0.5	SM	Outgrown hedgerow	Good	Good	40+	B2	1.1
H11	Hawthorn, elm, blackthorn	3.0	2.0	80	0.2	M	Dense well maintained boundary hedge	Good	Good	40+	B2	1.0
H12	Blackthorn, hawthorn, elm	3.0	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H13	Hawthorn, blackthorn, ash	5.0	3.0	100	0.5	M	Outgrown hedgerow	Good	Good	40+	B2	1.3
H14	Hawthorn, blackthorn	2.0	1.0	80	0.0	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0

BS5837:2012 TREE SURVEY SCHEDULE

LAND EAST OF WHADDON ROAD

PROJECT NO: C.2750

SURVEYOR: IAN HOWELL and RICHARD HYETT

DATE: NOVEMBER 2018 / APRIL 2020

Ref	Species	Av. Height (m)	Av. width (m)	Av. Stem diam (mm)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
H15	Hawthorn, blackthorn	3.0	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H16	Hawthorn, black thorn	3.0	2.0	80	0.5	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H17	Blackthorn, field maple, common ash	3-5	3.0	80	0.2	M	Outgrown hedgerow	Good	Good	40+	B2	1.0
H18	Hawthorn, blackthorn	2.5	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H19	Hawthorn, blackthorn	2.0	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H20	Hawthorn, blackthorn	2.0	1.5	80	0.2	M	Off site well maintained boundary hedge	Good	Good	40+	B2	1.0
H21	Blackthorn, hawthorn	2.0	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H22	Blackthorn, hawthorn	2.0	1.5	80	0.2	M	Well maintained boundary hedge	Good	Good	40+	B2	1.0
H23	Blackthorn, hawthorn, elder	3.0	3.0	150	0.5	EM	Unmaintained hedgerow	Good	Fair	40+	B2	1.8
H24	Hawthorn	3.0	3.0	150	0.5	EM	Hedgerow spanning the boundary. Creates valuable screening	Good	Good	40+	C2	1.8
H25	Hawthorn, elm	2.0	1.0	100	0.5	EM	Maintained boundary hedgerow providing valuable screening	Good	Fair	20+	C2	1.3

METHODOLOGY

TREE SURVEY:

- The tree survey was carried out with reference to the methodology set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (eg avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups/woodlands were also surveyed as individuals
- The full tree survey findings are recorded in the following tree survey schedule.
- Within the tree survey schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W) or SHRUB MASS on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan.
- TREE SPECIES are listed by common name.

The **DIMENSIONS** taken are:

- **STEM-No.** Indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (Used in the calculation of RPA.) "m-s" = Multi-stemmed.
- **DIAMETER** (in millimetres), obtained from the girth measured at approx.1.5m. For trees with 2 to 5 sub-stems, a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees the notional diameter may be estimated on the basis of the average stem size x the number of stems. (A notional diameter may be estimated where measurement is not possible.)
- **HEIGHT**, are measured in metres. They are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- The **CROWN SPREAD** are taken at the four cardinal points to derive an accurate representation of the tree crown. They are recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- **CROWN CLEARANCES** are expressed both as existing height above ground level of first significant branch along with its direction of growth (eg 2.5m-N), and also in terms of the overall canopy. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- **ESTIMATES.** Where any measurement has had to be estimated, due to inaccessibility for example, this is indicated by a "#" suffix to the measurement as shown in the tree survey schedule.

LIFE STAGE is defined as follows:

- Y** Young: normally stake dependent, establishing trees. Should be growing fast, usually primarily increasing in height more than spread, but as yet making limited impact upon the landscape.
 - SM** Semi-mature: Established young trees, normally of good vigour and still increasing in height, but beginning to spread laterally. Beginning to make an impact upon the local landscape & environment. Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature).
 - EM** Early-mature: Not yet having reached 75% of expected mature size. Established young trees, normally of good vigour and still increasing in height, but beginning to spread laterally. Beginning to make an impact upon the local landscape & environment.
 - M** Mature: Well-established trees, still growing with some vigour, but tending to fill out and increase spread. Bark may be beginning to crack & fissure. In the middle half of their safe, useful life expectancies.
 - OM** Over -Mature: In full maturity but possibly beyond mature and in a state of natural decline). Still retaining some vigour but any growth is slowing.
-

PHYSIOLOGICAL CONDITION (HEALTH & VITALITY): Essentially a snapshot of the general health of the tree based upon its general appearance, its apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (Fungal infections may be recorded here but decay giving rise to structural weakness would be recorded under 'Structural Condition' – see next parameter):

Good	no significant health issues.
Fair	indications of slight stress or minor disease (e.g. the presence of minor dieback/deadwood or of epicormic shoot growth)
Poor	Significant stress or disease noted; larger areas of dieback than above
Dead	(or Moribund)

STRUCTURAL CONDITION: Defects affecting the structural stability of the tree, including decay, significant dead wood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. etc. Classified as:

Good	No obvious structural defects: basically sound
Fair	Minor, potential or incipient defects
Poor	Significant defect(s) likely to lead to actual failure in the medium to long-term
Dead	(or Moribund)

REMAINING USEFUL LIFE EXPECTANCY: An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance)

- less than 10 years
- 10+ years
- 20+ years
- 40+ years

QUALITY CATEGORY: Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follow (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value:

(1) arboricultural qualities (2) landscape qualities and (3) cultural, historic or ecological/conservation qualities. Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

- U **UNSUITABLE:** Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development.
Dead or moribund trees; those at risk of collapse or in terminal decline; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low quality trees that are suppressing better specimens
(Category U trees may have conservation values that it might be desirable to preserve. It may also include trees that should be removed irrespective of any development proposals.)
- A **HIGH QUALITY:** Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life expectancy of at least 40 years.

-
1. Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g. dominant trees within an avenue etc.)
 2. Trees, groups or woodlands of particular visual importance as landscape features.
 3. Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture.)
- B MODERATE QUALITY: Trees or groups of some importance with a likely useful life expectancy in excess of 20 years. Their retention would be highly desirable; selective removal of certain individuals may be acceptable, but only after full consideration of all alternative courses of action.
1. Fair quality but not exceptional; good specimens showing some impairment (e.g. remediable defects, minor storm damage or poor past management.)
 2. Acceptable trees situated such as to have little visual impact within the wider locality. Also numbers of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees' overall, collective value).
 3. Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.
- C MINOR VALUE: Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees below 15cm diam. Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.
1. Unremarkable trees of very limited merit or of significantly impaired condition.
 2. Trees offering only low or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.
 3. Trees with extremely limited conservation or other cultural benefit.
-

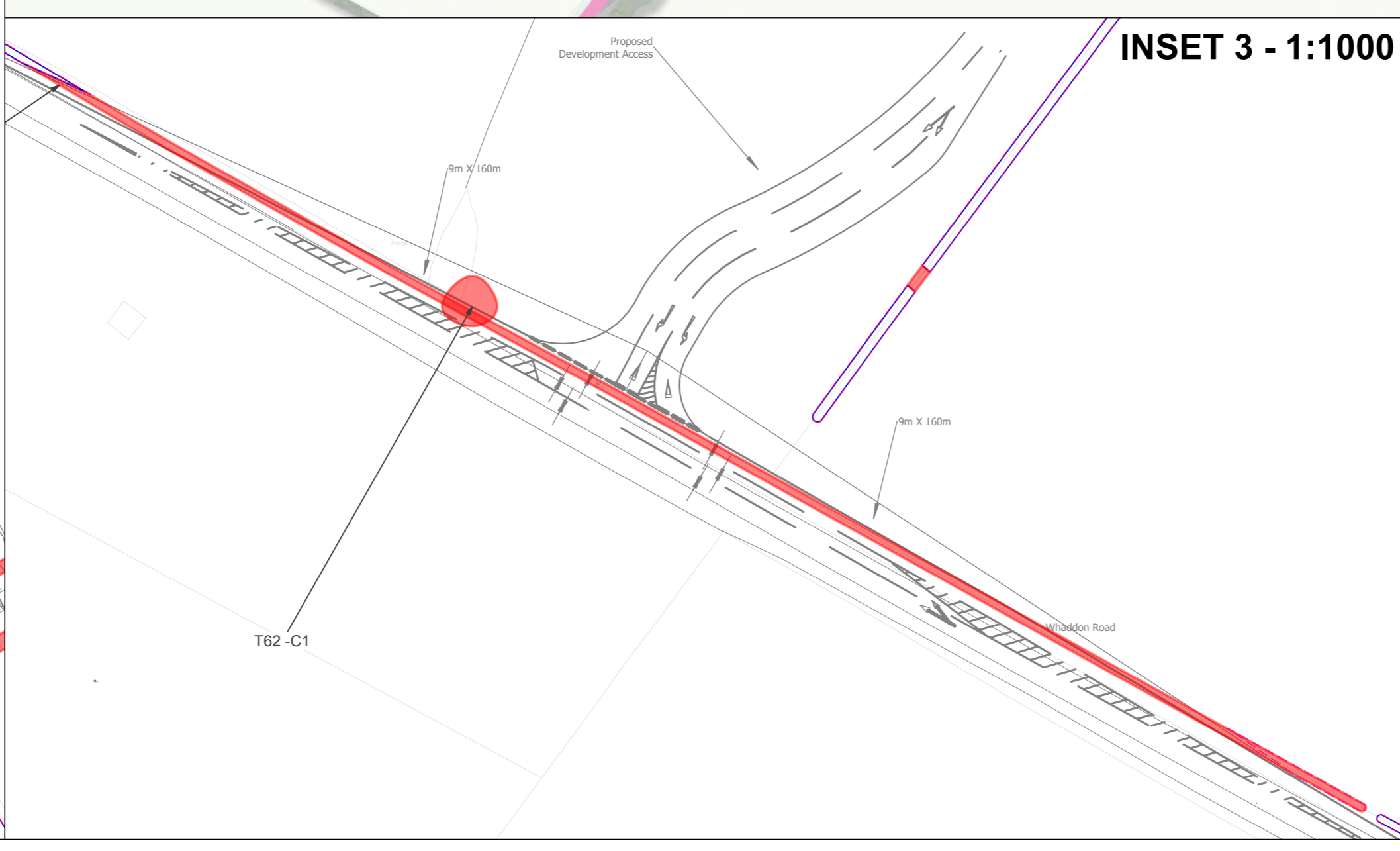
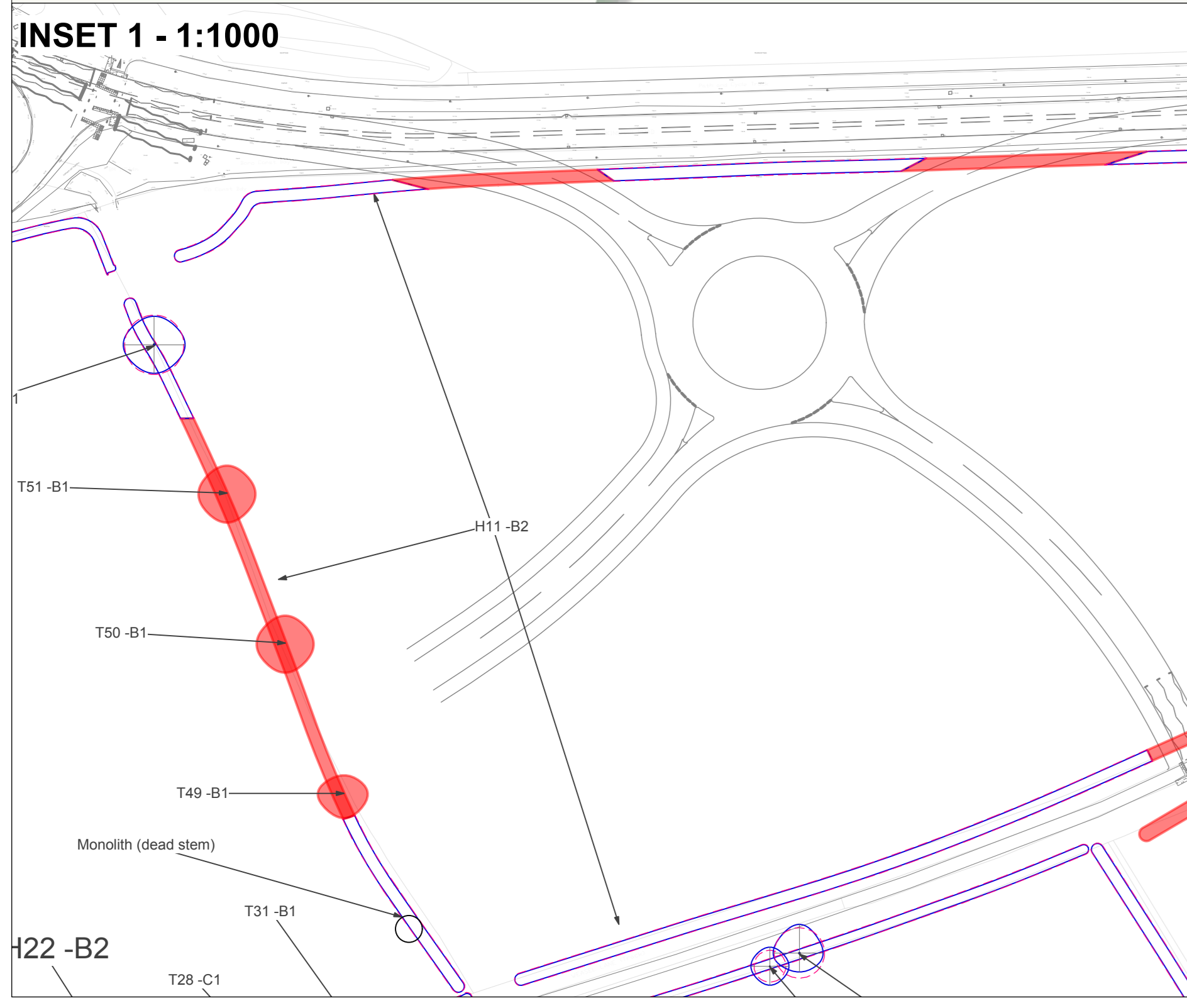
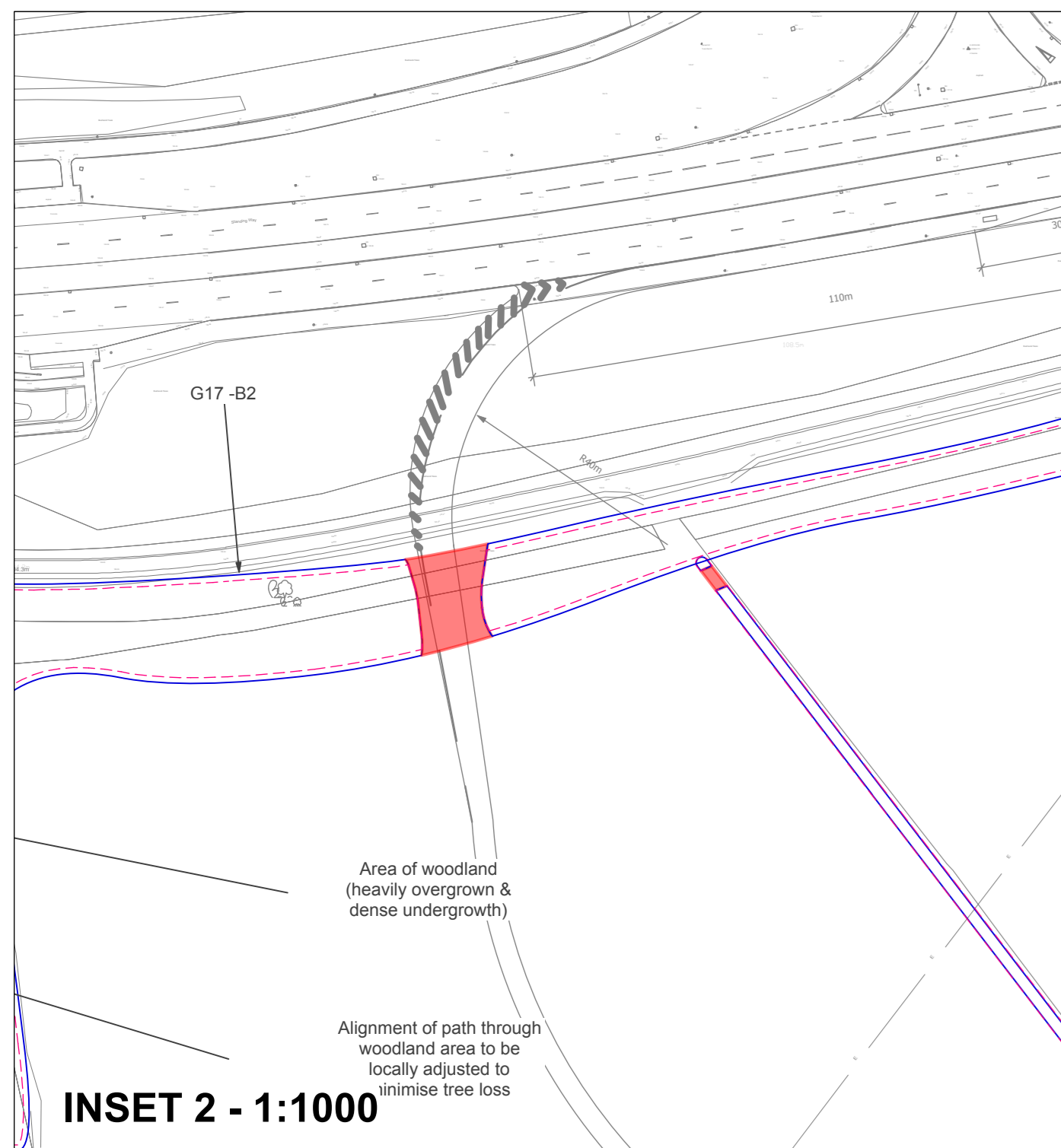
APPENDIX 2

TREE SURVEY AND CONSTRAINTS PLAN



APPENDIX 3

INDICATIVE TREE RETENTION AND REMOVAL PLAN



- KEY** BS 5837: 2012 Categories
- Tree Category A - High Quality
 - A Category - Hedgerow, Group, Woodland
 - Tree Category B - Moderate Quality
 - B Category - Hedgerow, Group, Woodland
 - Tree Category C - Low Quality
 - C Category - Hedgerow, Group, Woodland
 - Tree Category U - Unsuitable for Retention
 - U Category - Hedgerow, Group, Woodland
 - Road Protection Area to BS 6837:2012
 - Shrub Mass / Other Tree / ODS (Out of scope)
 - Tree / Hedgerow to be Removed

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.



PROJECT TITLE				
South West Milton Keynes				
DRAWING TITLE				
Tree Retention & Removal Plan				
SCALE		DRAWING NUMBER		
1:2000		BHA_472_02		
DRAWN BY		REVISION		DATE
SD		IH		31/05/2020
CLIENT				
CSA Environmental				
COORDINATE SYSTEM / DATUM				
British National Grid / Newlyn Datum (ADD)				
CSA copyright. All rights reserved.				
2014 Emeralds License Number: 0100042054				
Ordnance Survey Copyright License number 100049487				

APPENDIX 9.5:

LANDSCAPE AND VISUAL ASSESSMENT TABLES

Table 9.1 Table of Significance – Landscape Effects

'Significant' effects in EIA terms would include any Substantial Adverse or Moderate Adverse effects. Substantial Effects in isolation could have a material influence on decision making. Moderate effects could have a moderate influence on decision making, particularly when combined with other similar effects. Slight adverse effects, although not considered 'significant' in EIA terms should not be wholly disregarded. Negligible or neutral effects would see limited or no change or effects.

Direct/Indirect Effects on Landscape Features	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Hedgerows	The Site contains a large number of moderate-quality hedgerows together with some stretches of low-quality gappy hedgerows on the internal field boundaries and the external boundaries of the Site.	Medium	Protection of retained hedgerows through the erection of tree protection fencing / site hoarding. Permanent loss of 557m of hedgerow (mainly Category B, moderate-quality) in order to facilitate access into the Site from the bordering roads and between the internal development parcels.	Moderate - Slight	Moderate - Slight Adverse Not Significant	Management of existing retained hedgerows and reinforcement of these with new hedgerow planting. Substantial new lengths of hedgerow will be planted in areas of open space and alongside the development parcels.	Slight	Slight Beneficial Not Significant	Slight Beneficial Not Significant
Trees	The Site contains a large number of moderate-quality trees along with some high-quality trees and groups on the Site's internal field boundaries and external boundaries.	Medium	Protection of retained hedgerows through the erection of tree protection fencing / site hoarding. Permanent loss of 25m section of a Category A (high quality) tree group, 20m of Category B (moderate quality) tree groups, 2 trees of Category B quality, and 1 tree of Category C (low quality) in order to facilitate access into the Site and the internal road network.	Moderate – Slight	Moderate – Slight Adverse Not Significant	Management of existing retained trees and substantial new tree planting within POS and development areas.	Slight	Slight Beneficial Not significant	Slight Beneficial Not significant
Arable Farmland	Undulating arable farmland, with some fields set down to grassland.	Medium	Loss of farmland as a result of construction of new housing and infrastructure.	Substantial	Substantial - Moderate Adverse Significant	Creation of new areas of public open space including new meadow grassland and amenity grassland.	Substantial	Substantial - Moderate Adverse Significant	Moderate Adverse Significant
Public Rights of Way ('PROW')	Restricted Byway, forming part of National Cycle Route 51 and the Milton Keynes Boundary Walk running along Weasel Lane, broadly through the centre of the Site in an east to west direction. Footpath running from Weasel Lane in a southerly direction through the southern part of the Site to meet the southern Site boundary at the disused railway which also forms part of the Milton Keynes Boundary Walk (LDWR).	Medium - High	All existing PROW will be retained along their current alignment, with potential temporary diversions taking place along Weasel Lane in order to safely permit the building works and to allow for the necessary surfacing works and proposed access road junctions.	Substantial	Substantial to Moderate Adverse Significant	All existing PROW will remain along their current alignment and incorporated into the proposed layout. Informal recreational footways will improve connectivity to the public rights of way network.	Moderate	Slight Adverse Not Significant	Slight Adverse Not significant
Landform	Undulating landform over the Site with a shallow local ridgeline along Weasel Lane with the northern and southern parts of the Site falling away from it, representative of the Newton Longville – Stoke Hammond Claylands.	Medium	Some ground modelling works will be required to regrade the Site to create level development platforms for the structures and the excavations for foundations. As far as possible these will work closely to the existing levels and elevations so that the fundamental structure and form of the undulating ground is retained.	Slight	Slight Adverse Not Significant	Siting of dwellings and built forms away from the most elevated parts of the Site and ensuring that where ground modelling is undertaken it is done so through cut and fill in localised areas so that the overall ridge and slope landform of the Site will remain.	Slight	Slight Adverse Not significant	Negligible Not significant
Watercourses	One permanent watercourse runs along the boundary between the westernmost three fields of Area A and the remainder of Area A from Whaddon Road to the block of woodland adjacent to the track alongside the A421. There are two other deeper ditches along the field boundaries of the southernmost fields of Area B that periodically hold water and	Medium	Part of the SUDs will be constructed during the infrastructure works to install temporary surface water management measures. The majority of the existing watercourses will be retained along their current alignment with some alterations to integrate them into the drainage scheme for the whole Site. Those in the south eastern and north eastern areas will be retained along	Moderate	Moderate Adverse Significant	The existing watercourses in the south eastern and north eastern areas of the Site will be retained along their current alignment with some minor alterations to ensure they are integrated into the proposed swales. The watercourses in the north western area will be realigned around the proposed residential plots. There will be numerous new swales and attenuation basins located across the	Moderate	Moderate Adverse Significant	Slight Adverse Not Significant

Direct/Indirect Effects on Landscape Features	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
	flow in a southerly direction towards the disused railway.		their current alignment and connect to the proposed conveyance swales. Those in the north western area of the Site will be realigned around the proposed residential plots and integrated into a SuDS system for the whole Site.			Site that will be incorporated into new areas of publicly accessible open space.			
The Site and immediately surrounding area	The Site is immediately adjacent to the south western edge of Milton Keynes and Bletchley. It comprises farmland located on a local ridgeline with two slopes facing north and south away from it. The surrounding townscape is generally of 20 th and 21 st century industrial and commercial warehouses to the north as part of Snelshall West industrial estate and medium – low density 20 th century housing to the east, in Bletchley. The adjacent farmhouses date from various time periods with the oldest dating back to pre-1881, none of those closest to the Site are listed. The Site shares many of the characteristics of the wider Newton Longville – Stoke Hammond Claylands, in that it is rolling farmland, subdivided by hedgerows and small pockets of woodland that is influenced by the neighbouring built edges of development at Milton Keynes and nearby Newton Longville.	Medium -Low It is noted that the AVDCLCA assessed the wider LCA 4.9 as being of 'low' sensitivity. However, based on our own methodology we have assessed the Site and immediately surrounding area as being of medium/low.	Loss of farmland to residential development and extension of townscape outwards to the southwest.	Substantial	Substantial Adverse Significant	Creation of new areas of public open space including new meadow grassland and amenity grassland contributing to the sense of place and character of the new townscape. The new development will reflect the settlement pattern extending outwards to form a new grid square at the edge of Milton Keynes. The proposed Green Infrastructure corridors on Site will help to break up development and supplement the existing landscape features.	Substantial	Substantial - Moderate Adverse Significant	Moderate Adverse Significant
LCA 4.9 Newton Longville – Stoke Hammond Claylands	The Site lies within the Newton Longville – Stoke Hammond Claylands, in the AVDCLCA (2008). This area is part of the Landscape Character Type (LCT) Undulating Clay Plateau (LCT 4). The Site lies in the north west of this character area, with influences from the suburban edges of Bletchley and Newton Longville.	Medium – Low	Small loss of farmland on the north western edge of the LCA as a result of construction of new housing and infrastructure. Protection of majority of Site vegetation and temporary hoarding to Site perimeter	Moderate	Moderate - Slight Adverse Not significant	The development will physically alter the landscape character of a small part of this character area. Agricultural land will be changed to a mixed used development and an extensive new green infrastructure network. The development abuts the existing urban edge of Milton Keynes and Bletchley and would extend the existing settlement further to the south west. Indirect landscape effects would be experienced in the wider context of the LCA due to the changes in the perception of the qualities of the landscape. For a limited area in the north of the character area (where views are possible) the perception of the Site will change from views of an agricultural field to residential use. The proposals include measures of planting at perimeter of Site. The existing key landscape features will be retained and landscape proposals will provide new landscape features which will complement the character of the LCA.	Moderate - Slight Not significant	Moderate - Slight Adverse Not significant	Slight Adverse Not significant
LCA 4.7 Whaddon Chase	This LCA lies to the north west of the Application Site and also lies within LCT	High	The majority of the Site does not lie within this LCA, so only indirect effects	Slight	Slight Adverse	Woodland blocks will be planted along the northern and western boundaries of	Slight	Slight Adverse	Negligible Adverse

Direct/Indirect Effects on Landscape Features	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
	4. A small area along the existing A421 dual carriageway is included within the application boundary, including the Bottledump Roundabout. The remainder of the Site does not lie within this character area. There is extensive woodland cover in this LCA, which provides distinctive character and also helps to screen the Site from the majority of the character area. There is therefore limited intervisibility between the Site and LCA.		on the perceptual qualities of the LCA will be experienced during construction but due to the limited intervisibility, effects will not be significant.			the Site and in wide landscape strips, which will extend the character of Whaddon Chase and help to integrate the edge of the new development.		Not significant	Not significant
LCA 4.8 Horwood Claylands	This LCA lies to the west of the Application Site and also lies within LCT 4. Overall, the area is characterised by rolling landform, shallow valleys, mixed farmland and irregular field pattern around settlements. The Site does not lie within this LCA though there is some intervisibility from some areas.	Medium	The majority of the Site does not lie within this LCA, so only indirect effects on the perceptual qualities of the LCA will be experienced during construction but due to the limited intervisibility, effects will not be significant.	Slight	Slight Adverse Not significant	A small area of works will be necessary in this LCA on the existing Whaddon Road, so direct effects will be limited to this area and only indirect effects on the perceptual qualities of the LCA will be experienced in the remainder of the character area. Small copses and fragments of woodland located to the north eastern boundary of the area relate to the original Whaddon Chase (Hunting Forest). Woodland blocks in the proposed scheme relate to the existing woodland blocks in Whaddon Chase and the northern Horwood Claylands limit intervisibility between this LCA and the Site. These new woodland blocks will help to integrate the new development into the landscape.	Slight	Slight Adverse Not significant	Slight - Negligible Adverse Not significant
LCA 4.11 Mursley – Soulbury Claylands	This LCA lies to the southeast of the Application Site and also lies within LCT 4. Overall, the area is characterised by rolling landform with small dispersed pockets of woodland cover and springs and streams draining off the ridge. The Site does not lie within the LCA though there is some very limited intervisibility from some areas within it.	Medium	The majority of the Site does not lie within this LCA, so only indirect effects on the perceptual qualities of the LCA will be experienced during construction but due to the limited intervisibility, effects will not be significant.	Slight	Slight Adverse Not significant	There will be no direct landscape effects on this LCA as a result of the Proposed Development. There will also be very limited intervisibility between this LCA and the Proposed Development. Therefore, it is considered that the indirect effect on this LCA will be negligible.	Negligible	Negligible Adverse Not Significant	Negligible Adverse – Neutral Not Significant

Table 7.2: Table of Significance – Visual Effects

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
Users of A421 and B4034 (Photographs 01, 07 and 11)	Users of the road approaching Milton Keynes from the west have their first view of the Site adjacent to the Bottledump Roundabout, as Broadway Wood screens all views from further west. Users travelling on these roads from the east have their first view of the Site when the road emerges from the built area of Bletchley. Views from these roads where they are adjacent to the Site are heavily filtered by existing tree and shrub planting along the northern edge of the Site with only a partial area of the Site north of Bletchley Leys Farm visible.	Low	Views of construction activity, mitigated in part by retention of the majority of northern boundary vegetation, erection of Site hoarding and adherence to CEMP. There will be views of the new accesses and roundabouts as these are constructed together with the additional construction traffic.	Substantial	Moderate Adverse Significant	Views of the new housing and employment buildings in the northern parts of the Site set behind the new accesses off Standing Way (A421) and new roundabout junction off Buckingham Road (B4034). The retention of the majority of the densest boundary vegetation on the northern Site boundary together with new structural tree planting and setting back the built form from the boundary will filter these views as it establishes. Due to the location of these roads on the edge of Milton Keynes and the existing large buildings in Snelshall West and nearby residential properties, these new elements will not be alien features given the surrounding context.	Substantial	Moderate Adverse Significant	Moderate - Slight Adverse Not Significant
Users of Whaddon Road, west of Site (Photographs 08, 09 and 15)	The Site is clearly visible from the elevated bridge over the disused railway on Whaddon Road. From elsewhere along the road the dense vegetation along the disused railway and the hedgerow along Weasel Lane are the most obvious features of the Site with glimpsed views of the groundplane of the Site where gaps in the hedgerow along Whaddon Road allow. The barn at The Leys Farm on the western boundary of the Site can be seen from most locations along Whaddon Road due to its elevated position.	Low	Views of construction activity, mitigated in part by retention of the majority of western boundary vegetation, erection of Site hoarding and adherence to CEMP. There will be views of the new accesses and roundabouts as these are constructed together with the additional construction traffic.	Substantial	Moderate Adverse Significant	Near distance views of the Site including the fields, hedgerows, intermittent mature trees, together with residential buildings on the rising land north of Tattenhoe Park and those on the edge of Bletchley. Development will be visible over existing hedgerows which will lead to the urbanisation of this highway. To minimise the effects on these views, the proposed built form will be set back from the road, behind extensive woodland belts and linear parks, which would including planting of new trees and hedges. Once the planting has established, it would help to filter and soften views of the built form and new access road.	Substantial	Moderate Adverse Significant	Slight Adverse Not Significant
Users of Bletchley Road, north of Newton Longville (Photograph 21)	The Site's south facing slopes are visible from some stretches of this road as it emerges northwards out of Newton Longville. The Site is seen in context with the existing built development along Bletchley Road together with the other built from in the western area of Bletchley.	Medium - Low	Views of construction activity, mitigated in part by retention of the majority of western boundary vegetation, erection of Site hoarding and adherence to CEMP.	Moderate	Moderate - Slight Adverse Not Significant	There will be partial views of the Proposed Development on the southern facing slopes of the Site from some stretches of this road as it emerges out of Newton Longville. These would be fleeting in nature and would be seen in context with the built features that are already visible along this route. Once established, the new planting will filter views and soften the built form which will lessen these effects.	Moderate	Moderate - Slight Adverse Not Significant	Slight Adverse Not Significant
Users of Midshire & Swan's Way, west of Site (Photographs 35-37)	Although these paths lie relatively close to the Site, the intervening trees and hedgerows on field boundaries and particularly alongside Whaddon Road and the western Site boundary act as an effective screen to most of the Site from these paths. However, there are some locations adjacent to Broadway Wood where there are views of Bletchley Leys Farm.	High	There will be heavily filtered, glimpsed views of construction activity from a limited number of locations along these paths due to intervening vegetation. These will be mitigated in parts by the retention of the majority of vegetation on the western Site boundary and adherence to CEMP.	Slight	Slight Adverse	There will be heavily filtered, glimpsed views of the Proposed Development from these paths. However, they would be set back from the western Site boundary behind a thick belt of woodland and tree planting. As these elements establish, the overlapping vegetation will filter and soften these views.	Slight	Slight Adverse Not Significant	Slight - Negligible Adverse Not Significant

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
Users of footpath NLO/16/1, west of Newton Longville (Photograph 23)	There are partial views of the southern slopes of the Site visible from this footpath as it emerges from Newton Longville. The lower parts of the slopes near to the disused railway line are screened by the intervening vegetation and landform with the hedgerow and trees along Weasel Lane visible on the skyline. These partial views of the Site are seen in context with the western built edge of Bletchley and built edge of Newton Longville.	High	Visibility of construction activity will vary for users of this route depending on their location on the route. In all instances, there will be partial views of the Proposed Development under construction. In certain locations, construction would be observed in conjunction with the built edge of Bletchley. Construction on the south facing slopes of the Site will be much clearer in these views than construction on the north facing slopes. These views will be mitigated in part by the retention of the majority of existing vegetation on the Site, erection of Site hoarding and adherence to CEMP.	Moderate - Slight	Moderate - Slight Adverse Not Significant	There will be partial views of the Proposed Development from this footpath. Views will appear slightly differently depending on the location of the user along the route. The residential development, primary school and sports pavilion on the south facing slopes of the Site will be most visible in these views, with the taller buildings on the employment land visible behind and above the other development. The Proposed Development will be seen in context with the built edge of Bletchley from certain locations along this route. The effects of the development on these views will be minimised when the proposed tree and woodland planting between the blocks of built form and on the Site boundaries. These will break-up the built elements of the proposals and soften views over time.	Moderate - Slight	Moderate - Slight Adverse Not significant	Slight Adverse Not significant
Users of footpath NLO/18/1, south east of the Site (Photograph 18)	There are partial views of the Site from footpath NLO/18/1, south east of the Site which passes through an overgrown parcel of land adjacent to the Sewage Works. The dense vegetation along the disused railway and along the hedgerow extending northwards along the Milton Keynes Boundary Walk screen the lower parts of the Site with small parts of the most elevated fields of the Site visible. The hedgerow and trees along the eastern part of Weasel Lane are also visible.	High	Visibility of construction activity will vary for users of this route depending on their location on the route due to the varied amounts of intervening vegetation. In all instances, there will be partial or filtered views of the Proposed Development being constructed. In certain locations, the construction activity on the southern slope of the Site will be visible in conjunction with the existing built edge of Bletchley and in all instances with the sewage works adjacent to this footpath. These views will be mitigated in part by the retention of the majority of existing vegetation on the Site, erection of Site hoarding and adherence to CEMP.	Moderate	Moderate Adverse Significant	There will be partial and filtered views of the Proposed Development on the southern slopes of the Site from this footpath. Due to its elevation in relation to the ridgeline in the centre of the Site, the vast majority of the Proposed Development on the northern part of the Site will be screened by the intervening landform, with the exception of some of the employment buildings in the northeastern part, which will be partially visible on the horizon. The residential development, primary and secondary school and sports pavilion will be visible in the middle of the view which will be partly filtered by the intervening vegetation south of the Site. The proposed tree planting within the public open spaces and within the development blocks will break up these views as they mature.	Moderate	Moderate Adverse Significant	Slight Adverse Not Significant
Users of footpaths near Salden House Farm (Photograph 31 and 32)	Views from these footpaths are limited by the intervening landform and dense woodland at Salden Wood and Middle Salden Wood. However, there are some small stretches of the paths where distant, partial views of the south facing slopes of the Site are visible. There are also glimpses of the edge of Milton Keynes in these views as well as glimpses of the distinctive form of the Xscape Milton Keynes building in the centre of the city.	High	Partial, distant views of construction activity on the southern slopes of the Site. These will be mitigated by the retention of the majority of the existing vegetation on Site and adherence to CEMP.	Slight - Negligible	Slight - Negligible Adverse Not Significant	There will be distant, partial views of the proposed built form on the southern slopes of the Site from short stretches of these footpaths. The proposed woodland belts and planting on the Site boundaries as well as between the blocks of built form will help to break up these views. The proposed built form will be seen in context with the other built form on the edge of Milton Keynes. As the proposed planting establishes, these views will be softened.	Slight - Negligible	Slight - Negligible Adverse Not Significant	Negligible Not Significant
Users of bridleway WHA/15/1, near Chase Farm (Photograph 34)	Views from this bridleway are restricted to the stretch that runs alongside Chase Farm. Further north, the path runs through Broadway Wood which screens	High	Heavily filtered, distant views of construction activity, mitigated in part by the retention of the majority of the western Site boundary vegetation,	Slight – Negligible	Slight - Negligible Adverse	There will be heavily filtered views of the proposed built form on the western parts of the Site on account of the intervening vegetation in the form of woodland blocks	Slight - Negligible	Slight - Negligible Adverse	Negligible Not Significant

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
	views out to the neighbouring countryside. Broadway and Salden Woods enclose the view to the north and south, with a long thin horizontal area of the fields within the Site visible behind existing hedgerow planting beyond a single field used for grazing. The industrial development at Snelshall East and West detracts from the view, as do the overhead power cables.		erection of Site hoarding and adherence to CEMP.		Not Significant	and hedgerows on fields boundaries. The proposed woodland belts and planting within the linear parks on the western Site boundary will further filter views of the built form in the longer term.		Not Significant	
Users of bridleway MUR/16/1 and MUR/16/2 from Newton Longville to Cowpasture Farm (Photographs 24, 25 and 33)	The Site forms a long horizontal strip along the horizon of views from this path with the hedgerow along Weasel Lane visible along the top of the ridge. The planting alongside the disused railway screens the lower slopes of the southern part of the Site. The Site is seen in context with the built edges of Newton Longville and Bletchley but forms a large part of the view in the medium distance.	High	Visibility of construction activity will vary for users of this route depending on their location along the route. It will also depend on the varying levels of intervening vegetation in the form of woodland blocks and hedgerows on field boundaries. The effects on views will be mitigated in part by the retention of the majority of vegetation on the southern and western Site boundaries, erection of Site hoarding and adherence to CEMP.	Moderate - Slight	Moderate - Slight Adverse Not Significant	There will be partial and heavily filtered views of the Proposed Development on the south facing slopes of the Site from this route. The amount of visibility will depend on where users are along the route and the levels of intervening vegetation. The proposed woodland belts and planting in between the blocks of built form will help to break up views of the proposed built form and soften views of the development in the longer term.	Moderate - Slight	Moderate - Slight Adverse Not Significant	Slight Adverse Not Significant
Users of Hammond Park Recreational Ground, Newton Longville (Photograph 17)	The more elevated parts of the southern area of the Site near to Weasel Lane are visible from the playing fields on the northern edge of Newton Longville with the lower slopes screened by the dense hedgerow and tree vegetation along the disused railway.	Medium	Views of construction activity on the south facing slopes will be possible above the intervening vegetation. Development on the lower parts of the slopes will be partially screened by existing vegetation on the southern Site boundary. The effects on these views will be mitigated in part by the retention of the existing vegetation along the southern Site boundary, erection of Site hoarding and adherence to CEMP.	Moderate	Moderate - Slight Adverse Not Significant	Users of the playing fields are of less sensitivity than the surrounding public rights of way because they are more likely to be involved in playing sports which do not focus solely on the surrounding landscape. There will be partial and heavily filtered views of the Proposed Development on the southern slopes of the Site from these playing fields. The Proposed Development will be seen in context with the built edge of Bletchley. The proposed woodland belts and tree planting within the public open space along the southern area of the Site together with planting in between the blocks of built form will help to break up these views and soften them in the longer term.	Moderate	Moderate - Slight Adverse Not Significant	Slight Adverse Not Significant
Users of Milton Keynes Boundary Walk within the southern part of the Site (Photographs 06 and 16)	There are filtered views of the southern slopes of the Site from this section of the boundary walk through the hedgerow on the eastern boundary of the Site. Where gaps allow, there are direct views into the Site. The hedgerow and vegetation along Weasel Lane is visible at the top of the ridge and prevents views into the northern part of the Site. The built edge of Bletchley presents a blunt edge to the settlement in views from this footpath. The northern built edge of Newton Longville in visible in the middle distance is views from the northern parts of this footpath.	High	Receptors will have near distance views of construction activity to the west of the retained hedgerow and to the east. To the west, this will include construction of new road and roundabout together with new residential dwellings set behind a wide contiguous proposed grassland corridor adjacent to the proposed road. To the east this will be of the new secondary school and residential dwellings. The effects on these views will be mitigated in part by the retention of the existing hedgerow adjacent to the route, erection of Site hoarding and adherence to CEMP.	Substantial	Substantial Adverse Significant	The route of the path will be retained along its current alignment with the proposed new road and roundabout in the eastern part of the Site, together with the residential development visible behind the retained hedgerow and new wide, contiguous grassland corridor. The potential route of a New Grid Road, if it eventually follows the proposed potential alignment, will also be visible in the foreground of these views. Views to the east from this path will look onto the new secondary school and residential development. There will be near distance views of the proposed attenuation feature when near to the southern end of the path and onto the allotments when at the northern end of the path within the Site. Further south along the route between the	Substantial	Substantial Adverse Significant	Moderate Adverse Significant

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
						disused railway and Newton Longville, views will be partially screened by the retained vegetation along the disused railway line.			
Users of Milton Keynes Boundary Walk and footpaths in Tattenhoe Park (Photograph 12)	In the majority of Tattenhoe Park, views of the Site are screened by the intervening vegetation and the low lying landform of the Park behind Snelshall West. There are some very limited views of the elevated parts of the northern slopes and the vegetation along Weasel Lane from the northern parts of Tattenhoe Park along the route of the Milton Keynes Boundary Walk. The power lines that cross the Site are visible on the skyline of these views.	High	Receptors will have partial, glimpsed views of construction activity on the elevated parts of the north facing slopes of the Site from the paths within Tattenhoe Park. These will be restricted by the existing intervening vegetation. The effects on these views will be mitigated in part by the retention of the majority of vegetation on the northern Site boundary, erection of Site hoarding and adherence to CEMP.	Slight	Slight Adverse Not Significant	There will be partial, glimpsed views of the proposed built form on the north facing slopes of the Site from certain locations within Tattenhoe Park. The intervening vegetation and lower-lying landform screens the majority of views. The retention of the majority of the vegetation along the northern Site boundary together with proposed planting in between the blocks of built form, will help to filter views and soften them in the longer term.	Slight	Slight Adverse Not Significant	Slight Adverse Not Significant
Users of Weasel Lane, crossing the Site, forming part of the Milton Keynes Boundary Walk (Photographs 03 - 06 and 41)	Views from the restricted byway (Weasel Lane) that runs broadly through the centre of the Site vary depending on the density of the vegetation. Along the western extents of the path, views across the Site are filtered by the tall hedgerow and tree vegetation on both sides of the path. Where there are gaps there are extensive, open views across the slopes of the Site towards the A421, Snelshall West Industrial Estate and the new residential development in Tattenhoe Park to the north and across the disused railway to Newton Longville in the south. Further east along the path views become more open due to the lower height of the hedgerow vegetation and the wider farm accesses allow for more expansive views. The church tower in Newton Longville is visible in the views looking south.	High	There will be filtered and direct views of construction activity from the length of this right of way dependent on the height, density and gaps of the retained hedgerow. The route may be temporarily closed or diverted while the construction of the internal road layout takes place. The route of this is not yet known but this will cause a temporary effect on views. Where the hedgerow is retained, this will mitigate the effects to some degree. Erection of site hoarding and adherence to CEMP will also help to limit the visual effects during the construction period.	Substantial	Substantial Adverse Significant	The Proposed Development would result in a significant level of change as receptors would have open views of built development on both sides, with some filtering provided by the retained hedgerow on certain stretches of the route. The effect is assessed as substantial adverse from completion. The route will be set within a broad area of public open space with additional hedgerow, woodland and tree planting on either side, varying in density throughout the Site. As these elements establish, the overlapping planting will soften views such that the effects would reduce in the longer term.	Substantial	Substantial Adverse Significant	Moderate Adverse Significant
Users of Weasel Lane, west of Site (Photograph 14)	There are hedgerows growing along both sides of Weasel Lane that extends west of the Site, along with some tall trees. This serves to channel views along the path and restricts views to the adjacent countryside. The Site is screened from view apart from when users are on Weasel Lane adjacent to Whaddon Road.	High	There will be some channelled views of construction activity in the western part of the Site from along this stretch of the route. This is on account of the intervening hedgerow and vegetation which runs alongside the route and the intervening field boundaries. Retention of the majority of the vegetation on the western Site boundary, together with erection of site hoarding and adherence to CEMP will help to limit the visual effects of the construction period.	Moderate	Moderate Adverse Significant	Views of the Proposed Development will be channelled along a section of the route (approximately 100-200m) west of Whaddon Road due to the hedgerow vegetation which grows along it. The Proposed Development will be seen protruding above the intervening vegetation in the first instance, but once the proposed woodland belts and trees along the western Site boundary establish, these views will be softened.	Moderate	Moderate Adverse Significant	Moderate/Slight Adverse Not Significant
Users of Whaddon Road within Newton Longville Conservation Area (Photograph 22)	Part of the Site south of Weasel Lane can be seen from the road within Newton Longville in between the existing built form within the village. Properties along Whaddon Road can be seen alongside the Site in the middle distance. The barn at The Leys Farm can be seen at the top of the ridge,	Medium	There will be intermittent, framed views of construction activity on the southern parts of the Site from Whaddon Road, within Newton Longville. The construction activity will be visible in context within the other built form within Newton Longville. Retention of vegetation along the southern Site boundary, erection of site hoarding and	Moderate - Slight	Moderate/Slight Adverse Not Significant	There will be intermittent, framed views of the proposed built form on the south facing slopes of the Site. These views will be seen in context with the other built form within Newton Longville. Once the proposed woodland, trees and hedges within the development and in the open spaces establishes, this will help to break	Moderate - Slight	Moderate - Slight Adverse Not Significant	Slight Adverse Not Significant

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
	which marks the western boundary of the Site.		adherence to CEMP will help to limit the visual effects of the construction period.			up these views and soften them in the longer term.			
Users of Bletchley Road, North End (Photograph 28)	There are panoramic views over the over the intervening farmland and village south west of Milton Keynes. The Site is not readily discernible in views due to distance, intervening hedgerow and tree vegetation on field boundaries and the rolling landform. The distinctive form of Xscape Milton Keynes together with other development in Milton Keynes are visible in the far distance. The rising landform of the Greensand Ridge near Great Brickhill and Woburn is also visible in these views.	Low	Construction activity is unlikely to be discernible due to distance and intervening vegetation on field boundaries.	Negligible	Negligible Adverse Not Significant	The Proposed Development is unlikely to be discernible in views due to distance and intervening vegetation on field boundaries.	Negligible	Negligible - Neutral Not Significant	Negligible - Neutral Not Significant
Users of Lower Way, Great Brickhill, in Great Brickhill South Conservation Area (Photograph 26)	Intermittent panoramic views across the farmland and villages south west of Milton Keynes, together with the built form at Milton Keynes are visible from certain locations in Great Brickhill where gaps in built form and vegetation allow. The Site is not readily discernible in these views due to distance.	Medium	Construction activity is unlikely to be discernible due to distance, intervening vegetation and intervening undulating landform.	Negligible	Negligible Adverse Not Significant	The Proposed Development is unlikely to be discernible in views due to distance, intervening vegetation and intervening undulating landform.	Negligible	Negligible Adverse - Neutral Not Significant	Negligible - Neutral Not Significant
Users of bridleway 15, Little Brickhill (Photograph 27)	Users of this bridleway are afforded medium distance views of the southern edge of Milton Keynes with the intervening farmland around Stoke Hammond and Newton Longville in the foreground of views. In the far distance Salden Wood and Broadway Wood can be seen on the horizon with partial views of the most elevated parts of the Site forming a small part of the view. The Site is only discernible in these views in good weather.	High	Construction activity will be visible in views from the most elevated parts of this bridleway. It will form a very small part of the view and be seen in context with the other built form on the southern edge of Milton Keynes. It will only be visible in good weather.	Slight /Negligible	Slight - Negligible Adverse Not Significant	The Proposed Development will form a very small part of views from the most elevated parts of this bridleway. It will be seen in context with other built form on the southern edge of Milton Keynes and will only be visible in good weather. Once the proposed woodland belts, trees and hedgerows through the Site have established, these views will be softened in the longer term.	Slight / - Negligible	Slight - Negligible Adverse Not Significant	Negligible - Neutral Not Significant
Private Views									
Residential properties at Chase Farm hamlet, west of Site (Photograph 34, Photograph 29 taken from access road to farm)	There are views available from upper and lower storeys of these properties. Broadway and Salden Woods enclose the view to the north and south, with a long thin horizontal area of the fields within the Site visible behind existing hedgerow planting beyond a single field used for grazing. The industrial development at Snelshall East and West detracts from the view, as do the overhead power cables.	Medium	There will be glimpsed views of construction activity on the western parts of the Site from these properties. However, visibility will be limited by the intervening vegetation within the landscape.	Slight - Negligible	Slight - Negligible Adverse Not Significant	There will be glimpsed views of the Proposed Development on the western parts of the Site from these properties. However, these views will be limited by the intervening vegetation in the landscape. The setting back of the built form behind the proposed woodland belts, trees and hedgerows on the western boundary will help to filter and soften these views in the longer term.	Slight - Negligible	Slight - Negligible Adverse Not Significant	Negligible - Neutral Not Significant
Residential properties on northern edge of Newton Longville (Photographs 19 and 20 and reverse view Photograph 05)	The elevated parts of the south facing slopes of the Site and the hedgerow along Weasel Lane are visible along the skyline of views from these properties. Depending on the density of rear garden vegetation there are views from some of the lower storeys of the properties. The Site forms a large part of the view on the horizon. The built development on the western edge of Bletchley is also visible in these views.	High	Views of construction activity will be mitigated in part by the retention of the vegetation on the southern site boundary, erection of site hoarding and adherence to CEMP. The built form will be set back from the boundary by the linear park running along the southern Site boundary. However, due to the rising ground of the southern part of the Site, there is the potential for views of	Substantial - Moderate	Substantial - Moderate Adverse Significant	Views of the Proposed Development will be experienced to varying degrees depending on the density and presence of rear garden vegetation within the curtilage of the properties. In some places, the edge of Bletchley will also be visible in these views. The proposed woodland belt, tree and hedgerow planting within the new landscape framework will help to break up these views and soften them as the proposals establish in the longer term.	Substantial - Moderate	Substantial - Moderate Adverse Significant	Moderate Adverse Significant

Receptor	Existing Conditions	Sensitivity	Construction Phase			Operational Phase			
			Potential Effect and Mitigation	Magnitude of Change	Significance of Residual Effect	Proposals and Mitigation Enhancement Measures	Magnitude of change	Level of Effect	
								Year 1	Year 15 (Residual)
Public Views									
			construction activity over a wide part of these views.						
Residential properties on edge of Bletchley, including ‘New Leys Farmhouse’, indented into northern Site boundary	Properties on the western edge of Bletchley closest to the Site have filtered views through the rear garden boundary vegetation and hedgerows on the Site boundaries and field boundaries onto the southern slopes of the Site from upper and lower storeys. New Leys Farmhouse has direct, close proximity views onto the northern parts of the Site and the vegetation along Weasel Lane. Lower storey views are filtered by the boundary vegetation on the curtilage of the property.	High	Views of construction activity will be possible from these properties. Those on the eastern edge of Bletchley will see construction activities set back from existing properties with the existing arable field east of the Site being retained. New Leys Farmhouse will have views of construction activity for the proposed allotments with views of the construction of the remainder of the Proposed Development visible behind. Erection of site hoarding and adherence to the CEMP should help to limit the visual effects of the construction period.	Substantial - Moderate	Substantial - Moderate Adverse Significant	New Leys Farmhouse will have near distance views onto the proposed allotments with the remainder of the proposed built form (residential, secondary school and employment) visible behind the roads and roundabout junction. The properties on the western edge of Bletchley will also have near distance views of the proposed road, roundabout, residential and employment development. However, the lower parts of the Proposed Development will be filtered by the retained existing hedgerow on the eastern Site boundary and the proposed hedgerow alongside the proposed residential area.	Substantial - Moderate	Substantial - Moderate Adverse Significant	Moderate Adverse Significant
Residential properties within Tattenhoe Park (Photograph 13 and reverse view photograph 04)	Properties on the southern edge of the new residential development have middle distance views of the more elevated parts of the Site but this is seen in context with the industrial development within Snelshall East and West with the recently completed new school at Tattenhoe Park in the foreground.	Medium	Construction activity will be visible from these properties in the medium distance. Views will be partial and will look onto the construction on the north facing slopes. Erection of site hoarding and adherence to CEMP will help to limit the visual effects of the construction period.	Slight	Slight Adverse Not Significant	There will be some partial, glimpsed views of the Proposed Development which would depend on the location of each property. Built form within Milton Keynes is already visible within these views and therefore, it is considered that the Proposed Development would not form an incongruous element in views. The proposed tree belts, hedgerow and tree planting in between the proposed built form will help to filter and soften views in the longer term.	Slight	Slight Adverse Not Significant	Slight - Negligible Adverse Not Significant
Residential properties at Bletchley Leys Farm adjacent to western Site boundary and ‘The Leys Farmhouse’, indented into western Site boundary (Photographs 02, 08 and 09)	The Leys Farmhouse is indented into the Site’s western boundary, and those at Bletchley Leys Farm are located directly west of Whaddon Road. These properties have close proximity, direct views of the Site, through and above the vegetation on the property curtilages.	High	Construction activity will be clearly visible from these properties. The retention of the majority of the boundary vegetation on the western Site boundary and the setting back of proposed housing from the Site boundaries will help to minimise effects of the construction period. The erection of Site hoarding together with adherence to the CEMP will also help to reduce the visual effects.	Substantial - Moderate	Substantial - Moderate Adverse Significant	There will be direct, close proximity views of the Proposed Development from these properties. The Proposed Development will be set back from the Site boundaries with public open spaces located closest to these properties. Views will therefore become filtered and softened by the layers of overlapping vegetation that will lie between the properties and the proposed housing in the longer term.	Substantial - Moderate	Substantial - Moderate Adverse Significant	Moderate Adverse Significant
Residential properties adjacent to the eastern Site boundary within Bletchley (Photograph 30 and 38, reciprocal views shown in Photographs 06, 39 and 40)	These properties have near distance filtered views into the Site from upper and some lower storey windows. The extent of views is dependent on the density and quantity of vegetation with the properties curtilages. The majority of Area A is screened due to the ridgeline landform in the centre of the Site.	High	Construction activity will be clearly visible from these properties but through the existing boundary vegetation on the eastern Site boundary. The retention of the boundary vegetation on the eastern Site boundary and the setting back of the proposed housing and secondary school from the boundary will help to minimise the effect of the construction period. The erection of Site hoarding together with adherence to the CEMP will also help to reduce the visual effects.	Substantial	Substantial Adverse Significant	There will be filtered views of the Proposed Development (residential dwellings and secondary school) from these properties. The Proposed Development will be set back from the Site boundaries with public open space located closest to these properties. These public open spaces will have new tree planting which will further filter and soften views of the built form over time.	Substantial	Substantial Adverse Significant	Moderate Adverse Significant

