Great Yarmouth Third River Crossing

Application for Development Consent Order

Document 6.2: Environmental Statement Volume II: Technical Appendix 8H: Detailed Arboricultural Report

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) ("APFP")

APFP regulation Number: 5(2)(a)

Planning Inspectorate Reference Number: TR010043

Author: Norfolk County Council

Document Reference: 6.2 – Technical Appendix 8H

Version Number: 0 – Revision for Submission

Date: 30 April 2019

CONTENTS PAGE No.

Tables

Plates

Glossary of Abbreviations and Defined Terms

Term	Definition
Ancient Semi-Natural Woodland	An area of ancient woodland where the vegetation is made up of trees and shrubs native to the site and which have predominately arisen from natural regeneration.
Ancient Tree	A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural or aesthetic features of interest.
Ancient Woodland	Any wooded area that has been continuously wooded since 1600 AD.
Arboricultural Method Statement	A methodology for the implementation of any aspect of development which is within the root protection area, or has the capacity to adversely affect, any retained tree.
Arboriculturist	A person who has, through relevant education, training or experience, gained expertise in the field of trees in relation to construction.
Construction Exclusion Zone	An area within which all site clearance and construction activities, access and storage of materials are prohibited.
Crown	The upper part of a tree, measured from the lowest branch, including all branches and foliage.
Notable Tree	A tree that is very large but might not qualify as ancient or veteran.
Plantation on Ancient Woodland Site	An area of ancient woodland where the former native tree cover has been felled and replaced by planted trees, usually of species not native to the site.
Scheme	The Great Yarmouth Third River Crossing project for which the Applicant seeks development consent.
Root Protection Area	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's vitality.
Veteran Tree	A tree that has the biological or aesthetic characteristics of an ancient tree but is not ancient in years compared with others of the same species.

1 Introduction

1.1 Introduction

1.1.1 This arboricultural report is compliant with British Standard BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations (Ref 8H.1)*, and includes a tree survey schedule, arboricultural impact assessment, Arboricultural Method Statement, and a tree protection plan.

1.1.2 The purpose of this report is to identify all trees which may reasonably be affected by the Scheme, to assess the direct and indirect impact of the Scheme upon those trees, and to identify protection measures that would be necessary to ensure the long-term wellbeing of trees which are to be retained.

1.2 Validity Period

1.2.1 Trees are dynamic organisms which are influenced by a variety of environmental variables and whose health and condition can rapidly change. As a result of this any recommendations made within this report are valid for a period of 24 months from the date of issue.

1.3 Limitations

1.3.1 This report in no way constitutes a health and safety survey. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be carried out.

1.4 Description of the Scheme

1.4.1 Chapter 2 of Volume I of the Environmental Statement (ES) (document reference 6.1) provides a full description of the Scheme, and is accompanied by the General Arrangement Plan (document reference 2.2). Both documents should be read alongside this appendix, as a detailed project description is not provided in this document to prevent unnecessary duplication.

1.4.2 The Scheme involves the construction, operation and maintenance of a new crossing of the River Yare in Great Yarmouth. The Scheme consists of a new dual carriageway road, including a road bridge across the river, linking the A47 at Harfrey's Roundabout on the western side of the river to the A1243 South Denes Road on the eastern side. The Scheme would feature an opening span double leaf bascule (lifting) bridge across the river, involving the construction of two new 'knuckles' extending the quay wall into the river to support the bridge. The Scheme would include a bridge span

over the existing Southtown Road on the western side of the river, and a bridge span on the eastern side of the river to provide an underpass for existing businesses, enabling the new dual carriageway road to rise westwards towards the crest of the new crossing.

1.4.3 If constructed, the Scheme would comprise the following principal elements:

- A new dual carriageway road, crossing the River Yare in an east-west orientation, comprising of:
  - A new double-leaf bascule bridge providing an opening span to facilitate vessel movement within the river. This would include structures to support and accommodate the operational requirements of the bridge-opening mechanism, including counterweights below the level of the bridge deck. The bridge would be supported on driven piles;
  - New substructures, supported by driven piles, to support the double leaf bascule bridge within the existing quays either side of the river and within the river itself, requiring new permanent "knuckle" walls, creating cofferdams in the waterway to accommodate their construction;
  - A new five-arm roundabout connecting the new dual carriageway road with Suffolk Road, William Adams Way and the western end of Queen Anne's Road. Sections of the new five arm roundabout would be supported on driven piles where deep soft ground is encountered;
  - A single-span bridge over Southtown Road, with reinforced earth embankments joining that bridge to the new roundabout at William Adams Way. Southtown Road bridge and the reinforced earth embankments would be supported on driven piles;
  - A single-span bridge to provide an underpass on the eastern side of the river, with reinforced earth embankments joining that single span bridge to South Denes Road. The underpass and reinforced earth embankments would be supported on driven piles; and
  - A new signalised junction connecting the new road with A1243 South Denes Road.
- The closure of Queen Anne's Road, at its junction with Suffolk Road, and the opening of a new junction onto Southtown Road providing vehicular and pedestrian access to residential properties and the MIND Centre and Grounds at the eastern end of Queen Anne's Road;
- Revised access arrangements for existing businesses onto the local highway network;

- Dedicated provision for cyclists and pedestrians which ties into existing networks;
- Implementation of part of a flood defence scheme along Bollard Quay that is proposed to be promoted by the Environment Agency, and works to integrate with the remainder of the flood defence scheme;
- A control tower structure located immediately south of the crossing on the western side of the river. The control tower would facilitate the 24/7 operation of the opening span of the new double-leaf bascule bridge;
- A plant room located on the eastern side of the river for the operation of the opening span of the new double-leaf bascule bridge;
- The demolition of an existing footbridge on William Adams Way;
- Associated changes, modifications and/or improvements to the existing local highway network;
- Additional signage, including Variable Message Signs (VMS) at discrete locations, to assist the movement of traffic in response to network conditions and the openings / closings of the double-leaf bascule bridge;
- The relocation of existing allotments to compensate for an area to be lost as a result of the Scheme and other works, including those at the MIND Centre and Grounds; and
- New public realm, landscape, ecology and sustainable drainage measures.

1.4.4 The Scheme also includes works to facilitate the construction, operation and maintenance of the above elements including:

- Creation of temporary construction sites and accesses from the public highway;
- Provision of new utilities and services and the diversion of existing utilities;
- Provision of drainage infrastructure, lighting and landscaping;
- Demolition of a number of existing residential and commercial / business properties; and
- Provision of vessel waiting facilities to the north and south of the new crossing, either as floating pontoons or additional fendering to the existing berths, including any dredging and quay strengthening works that may be required.

2 Site Description

2.1.1 Great Yarmouth is located at the mouth of the River Yare, one of the main waterways providing access to the Norfolk Broads. The river bisects Great Yarmouth, with the town centre, seafront, industrial areas and outer harbour located on the narrow, 4km long, South Denes peninsula between the river and the sea, isolated from the rest of the town. To the south of the River Yare, Gorleston-on-Sea is just a few hundred metres away as the crow flies, but over 7km distance by road. The administrative authority is Great Yarmouth Borough Council (GYBC). Figure 8H.1 shows an aerial photograph of the Principal Application Site. Figure 8H.2 is a plan to show the location of the Principal and Satellite Application Sites.

2.1.2 A detailed description of the geology of the study area is available in Chapter 16: Geology and Soils of the Environmental Statement (document reference 6.1). The associated geological map is presented within the Contaminated Land desk study in Appendix 16C. The main characteristics of the geology of the study area are:

- Blow sand along the shore;
- Quaternary sand and gravel deposits from the North Denes Formation at the East of the Scheme Boundary;
- Quaternary clay and silt deposits from the Breydon Formation at the West and North West of the Scheme Boundary;
- Peat, also from the Breydon Formation, at the West and South West of the Scheme Boundary;
- Quaternary sand and silt deposits from the Lowestoft Till Formation and Happisburgh Glacigenic Formation at the South of the Peat Deposit;
- Underneath the Quaternary deposits, the bedrock consists of sands, gravels, silts and clays from the Crag Group.

3 Legislative Framework and Guidance

3.1 Forestry Act 1967

3.1.1 The Forestry Act 1967 sets out the requirements of a licence for the felling of growing trees and states when trees can and cannot be felled. However, there are exemptions that apply. Section 9 (4)(d) of the Act allowing developers to legally fell trees which:

"…is immediately required for the purpose of carrying out development authorised by planning permission granted or deemed to be granted under the Town and Country Planning Act 1990 or the enactments replaced by that Act".

3.1.2 The draft DCO (document reference 3.1) for this Scheme disapplies the need for a felling licence. Other exemptions are also afforded within the legislation. As such, expert advice from a suitably qualified and experienced Arboriculture or Forestry Consultant should be obtained before felling trees for the purposes of the Scheme.

Tree Preservation Orders

3.1.3 The Town and Country Planning Act 1990 (Ref 8H.2) places a duty upon local planning authorities to make provision for the preservation and planting of trees when granting permission for new development. It also affords local planning authorities with the power to make Tree Preservation Orders (TPO) where it is expedient in the interests of amenity to make provision for the preservation of trees and woodlands.

Purpose of a Tree Preservation Order

3.1.4 The purpose of a TPO is to protect specific trees, groups of trees and woodlands for the purpose of amenity. TPOs are used to protect specific trees, groups of trees and woodlands where removal would result in a significant adverse effect.

3.1.5 A TPO does not prevent the removal of trees in order to implement development. It does, however, prevent their unauthorised removal and ensures that they can be fully considered when determining whether development is appropriate and acceptable.

3.1.6 A TPO makes it a statutory offence to carry out any of the following works to trees without the formal consent of the Local Planning Authority (LPA):

- Cutting down;
- Topping;

- Lopping;
- Uprooting;
- Wilful damage; and
- Wilful destruction.

Amenity Value

3.1.7 Trees which are to be included within a TPO should exhibit a minimum level of current or future amenity value. This should be assessed by the LPA in a structured and consistent manner with Government advice making reference to the following requirements.

Visibility

3.1.8 Trees should be visible, in whole or in part, from a public place such as a road, footpath or publicly accessible land.

Value

3.1.9 Public visibility is in itself not sufficient to warrant inclusion within a TPO. Arboricultural features should also exhibit merit in terms of one or more of the following criteria:

- Size and form;
- Future potential;
- Rarity, cultural or historical value;
- Contribution to, and relationship with, the landscape; and
- Contribution to the character or appearance of a conservation area.

Other Factors

3.1.10 Other factors such as nature conservation may be considered when making a TPO but on their own would not warrant making an Order.

Conservation Areas

3.1.11 A conservation area is an area which has been designated because of its special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance (Ref 8H.3). Trees have the ability to positively contribute towards the character, appearance or general amenity of a conservation area and, if not protected by a tree preservation order, are protected by the provisions in section 211 of the Town and Country Planning Act 1990.

3.1.12 Section 211 of the Town and Country Planning Act 1990 makes it a statutory offence to carry out any of the following works to trees[1] located within a conservation area without first providing the LPA with six weeks' notice of intent:

- Cutting down;
- Topping;
- Lopping;
- Uprooting;
- Wilful damage; and
- Wilful destruction.

3.1.13 Although the LPA must normally be given six weeks' notice of intent to carry out work to trees in a conservation area, certain exemptions do exist. These include, but are not limited to, the following criteria:

- The making safe of dangerous trees where there is an immediate risk of serious harm;
- The removal of dead wood or dead trees;
- Work necessary to abate an actionable legal nuisance; and
- Where work is necessary to implement a grant of full planning consent.

3.1.14 However, under Article 56 of the draft DCO (document reference 3.1), the Applicant will have the ability to undertake the above-mentioned works to trees identified in the Tree Preservation Orders and Conservation Area Tree Plans (document reference 2.8) without an offence being caused.

Natural Environment and Rural Communities Act 2006

3.1.15 Section 40 of the Natural Environment and Rural Communities Act 2006 places a duty on local authorities and government departments to have

[1] Except for trees whose stem diameter at 1.5 metres (m) above ground level:

- does not exceed 75mm; or
- has a stem diameter of 100mm of less and is to be removed for the sole purpose of improving the growth of other trees (e.g. thinning as part of forestry operations).

regard for the conservation of biodiversity when exercising their normal functions.

3.1.16 Biodiversity comprises all living things including animals, plants, fungi and micro-organisms, and includes the communities and habitats that they form. Trees form integral elements of the natural environment either due to rarity (e.g. Common Juniper (Juniperus communis)), as part of an important habitat (e.g. ancient woodland) or because they directly support another species (e.g. a bat roost or nesting bird). Even widespread, common or non-native tree species are important due to their positive contribution towards a sustainable natural environment.

3.1.17 Development activities must be undertaken with due regard for trees and their biodiversity value. Trees should be retained wherever practicable and opportunities taken to maintain and enhance their environmental contribution.

Health and Safety at Work etc. Act 1974

3.1.18 The Health and Safety at Work etc. Act 1974 is the primary piece of legislation covering occupational health and safety in Great Britain. It places duties upon employers to ensure that they conduct their business activities with due regard for the safety of employees and members of the public.

3.1.19 Development activities should be undertaken with due regard to health and safety. This applies not only to those engaged in the pruning, felling or planting of trees but also extends to ensuring that trees are not damaged to the point whereby they become unsafe. Potentially hazardous trees should also be identified and subsequently made safe.

Trees on Third-Party Land

3.1.20 Under Common Law any roots or branches which cross a property boundary and encroach onto neighbouring land are deemed to be a nuisance. They are deemed to be a nuisance as they have the potential to affect the owner/occupier's reasonable enjoyment of their land. This nuisance may be legally abated by the land owner or occupier cutting back encroaching roots or branches to the edge of their property if they so desire.

3.1.21 However, when abating a nuisance in this manner the owner/occupier must ensure that they are aware of and/or adhere to the following requirements:

- There is no duty to give notice to the tree owner although it would be considered courteous to do so;
- Unless otherwise agreed with the tree owner all work must be undertaken without trespass onto the neighbouring property;

- All arisings remain the property of the tree owner and should be both offered back and only disposed of with their permission; and
- A duty of care is owed to the landowner at all times meaning that all work should be undertaken with reasonable skill and in accordance with any relevant best practice guidance.

3.1.22 The potential for future nuisance must be considered when undertaking new tree planting with due regard given to the likely effects of encroaching roots and branches on neighbouring land. The possibility of direct physical damage to boundary walls and fences should be avoided by allowing sufficient room for future growth and movement due to wind.

3.2 Planning Policy

3.2.1 National and local planning policies of specific relevance to this report are outlined below.

National Policy

National Planning Policy Statement for National Networks

3.2.2 The National Policy Statement for National Networks (NPS NN) (Ref 8H.5) also includes relevant guidance in chapter 5: Generic impacts. Paragraph 5.32 of this chapter supports the NPPF by stating:

"*The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss.*"

3.2.3 Paragraph 5.32 of the NPS NN further states that in instances where such trees would be affected by the proposed development then the applicant should either provide proposals for their conservation or give reasons for their loss.

National Planning Policy Framework

3.2.4 The National Planning Policy Framework (NPPF) (Ref 8H.4) includes relevant guidance in Chapter 15: Conserving and Enhancing the Natural Environment. Guidance provided includes:

- Paragraph 170(b) recognises the economic and other benefits that trees and woodlands provide and the fact that they should be considered as part of a planning decision;

- Paragraph 175(c) identifies the principle that *'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'.*

The Town and Country Planning Act

3.2.5 The Town and Country Planning Act 1990 (Ref 8H.2) places a duty upon LPAs to make provision for the preservation and planting of trees when granting permission for new development. It also affords local planning authorities with the power to make TPOs where it is expedient in the interests of amenity to make provision for the preservation of trees and woodlands.

Other Guidance

3.2.6 Other guidance of specific relevance to this report is outlined below.

British Standard BS 5837:2012

3.2.7 British Standard BS 5837:2012 (Ref 8H.1) provides recommendations and guidance on the relationship between trees and design, demolition and construction processes. It sets out principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures, and is applicable whether or not planning consent is required.

Ancient Woodland and Veteran Trees: Protecting them from Development

3.2.8 The Forestry Commission and Natural England published guidance (known as 'standing advice') on 13 October 2014 (Ref 8H.6). Standing advice is a material planning consideration. This means it should be considered when making decisions on relevant planning applications and used to provide information for the protection of veteran trees from development. This guidance was subsequently updated on 05 November 2018 and advises the following:

- A buffer zone of semi-natural habitat should be left of at least 15m between any development and ancient woodland.

- A buffer zone should be left between any veteran, ancient or aged tree and proposed development of at least 15 times the diameter of its stem or 5m from the edge of its canopy, whichever is the greater.

4 Baseline Data Collection

4.1 Study Area

4.1.1 The Study Area for this report has been defined as all land within, and up to 15m beyond, the Application Site, as identified in DCO document reference 2.8.

4.1.2 This has been identified as the maximum area within which trees may be directly influenced by the Scheme and its associated demolition, construction or operational activities and accounts for the root protection areas of trees growing within and immediately outside the boundary of the Scheme.

4.1.3 For the small parcels of land that were not part of the walkover survey in October 2018 a desk-based review of tree features within these parcels was undertaken. The review showed that no additional trees were within the Application Site. However, three poor quality mature conifers are within 15m of the Application Site on Suffolk Road. It is not considered that the roots of these trees pose a significant constraint to the Scheme or be impacted during delivery of the Scheme.

4.2 Method of Baseline Data Collection

4.2.1 Baseline data collection has been undertaken with reference to British Standard BS 5837:2012 (Ref 8H.1).

4.2.2 Baseline data collection has been undertaken using the following data sources:

- An arboricultural desk study; and
- A walkover survey of all arboricultural features within the study area.

Desk Study

4.2.3 A desk study has been undertaken as a means of identifying any statutory and non-statutory constraints which may apply to arboricultural features within the Study Area. The desk-based review has considered the following sources.

TPOs and Conservation Areas

4.2.4 GYBC is responsible for implementing any legal controls imposed through TPOs and conservation areas within the study area. The statutory status of trees within the conservation areas was checked online with GYBC using their interactive map (Ref 8H.7) on 26 February 2019. The statutory status and location of trees within the TPO area was confirmed via email received

from GYBC on 30 October 2018 and shown on document reference 2.8: TPOs and Conservation Areas.

Notable, Ancient and Veteran Trees

4.2.5 The presence of locally notable, ancient and veteran trees within the study area was checked using the Woodland Trust's Ancient Tree Inventory (Ref 8H.8) on 10 September 2018.

Ancient Woodland

4.2.6 The presence of ancient woodlands within the study area was checked using Natural England's Multi Agency Geographical Information for the Countryside (MAGIC) (Ref 8H.9) map on 10 September 2018.

Site Visit / Surveys

4.2.7 A walkover survey of all arboricultural features within the study area was undertaken on 23 and 24 October 2018. The survey was undertaken by a suitably qualified Arboricultural Consultant.

4.2.8 The survey was undertaken in accordance with British Standard BS 5837:2012 (Ref 8H.1) (with Ordinance Survey Master Map forming the base mapping). The tree survey was undertaken in accordance with the following criteria:

- Trees have been recorded as groups or woodlands where this has been deemed appropriate. Groups have been recorded on the basis that they form distinct arboricultural features either aerodynamically, visually or because they contain trees of similar cultural and biodiversity value.
- Hedges have been recorded where these form substantial internal or boundary features or where they contribute meaningfully to the landscape character of the local area.
- The trees have been inspected using the Visual Tree Assessment methodology as purported by Mattheck and Breoler (2006) (Ref 8H.10).
- The tree survey was carried out from ground level only.
- No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
- Tree heights and canopy spreads have been estimated to the nearest 1m.

4.2.9 Stem diameters have been measured in accordance with Annex C of BS 5837:2012 (Ref 8H.1). Diameters of single stem trees on level ground have been measured at 1.5m above ground level. The diameters of other

commonly encountered stems have been measured where most appropriate and this is recorded within the schedule.

4.2.10 The combined stem diameters for multi-stemmed trees have been calculated in accordance with BS 5837:2012 (Ref 8H.1), notably paragraph 4.6.1. Root protection areas are calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

Notes and Limitations

4.2.11 The arboricultural survey data is of a preliminary nature and has been collected during a brief walkover survey. Only defects visible from the ground have been noted and each individual feature may not have been inspected closely due to access difficulties, the presence of dense ivy or vegetation, or safety constraints. Safety related features have been recorded on the basis that the arboricultural features will be subject to a normal programme of tree hazard assessment and only those features which materially affect the quality of the feature or pose a real and immediate safety concern have been recorded.

4.2.12 Arboricultural survey data is typically valid for a period of two years unless otherwise stated. Significant environmental events (such as extreme weather conditions) or changes to the Application Site may render it invalid within a shorter timescale.

4.2.13 Records held on the Ancient Tree Inventory are collected on a voluntary basis, therefore the absence of records does not demonstrate the absence of ancient, veteran or notable trees but may simply indicate a gap in recording coverage.

4.2.14 Whilst arboricultural surveys are not seasonally limited it is the case that certain pests and diseases may be more or less evident at different times of the year. This is especially true of certain wood decaying fungi such as the Giant Polypore (*Meripilus giganteus*) where fruiting bodies are short-lived, and the early stages of root decay may not result in other identifiable symptoms. Walkover survey data is therefore based upon observations made at the time of the site visit and may be subject to change should further or more detailed inspections be undertaken.

4.2.15 The survey has only been undertaken from land within the client's ownership, from public land or from areas where formal access has been arranged.

4.2.16 The position of arboricultural features not recorded on a topographical survey has been estimated using aerial photography. The position and extent of these features should be regarded as approximate only.

5 Baseline Conditions

5.1 Desk Study

5.1.1 The desk study confirmed the presence of arboricultural features within the Application Site to be afforded statutory protection. These include a TPO and three conservation areas.

Tree Preservation Orders

5.1.2 The arboricultural features listed in Table 5.1 have been identified as being afforded statutory protection by virtue of a TPO. A copy of the 'map' included within Schedule 12 of the draft DCO (document reference 3.1) and which identifies the location of the protected features is included within document reference 2.8.

Table 5.1: Arboricultural Features covered by a TPO

Arboricultural Survey Reference Number	TPO Name	TPO Reference Number	TPO Schedule Description
G38	TPO No.7 2005	G3	Consisting of sycamore, whitebeam and poplar.
G39	TPO No.7 2005	G1, G2	Consisting of sycamore and whitebeam

5.1.3 TPO No.7 2005 is located on a plot of land between the east of Gapton Hall Retail Park and Gapton Hall Road. Within this TPO two groups of trees have been identified.

5.1.4 Of the two groups of trees, G38 is situated to the southern end of the surveyed area and consists of a group of mature poplars with maximum height of 12m and a stem diameter ranging from 220 and 430 mm. The other tree group, G39, consists of sycamore and white beam with a stem diameter ranging from 110 to 320 mm and a maximum height of 7 m.

Conservation Areas

5.1.5 GYBC state on their website: "There are no standard criteria by which an area is designated (as a conservation area). They may form groups of buildings, open spaces, trees, historic street patterns, village greens or features of historic or archaeological interest. It is the character of areas rather than individual buildings that these conservation areas seek to enhance."

5.1.6 The arboricultural features listed in Table 5.2 have been identified as being afforded statutory protection by virtue of their location within a designated conservation area.

5.1.7 A plan showing the location and extent of the conservation areas(s) is included within document reference 2.8.

Table 5.2: Arboricultural Features Located within a Conservation Area

Reference Number	Conservation Area Name
G40 (Part)	Conservation Area No.3 – Hall Quay & South Quay
Site: T52, T53, T54, T55, T56, T57, T58, T59, T60, G44 Study: T51, T52, G42	Conservation Area No.5 – Nicholas & Northgate Street (Laughing Image Corner)
T45, T46, T47, T48, T49, T50, G41	Conservation Area No.5 – Nicholas & Northgate Street (Fullers Hill)

5.1.8 Partially within Conservation Area No.3 – Hall Quay & South Quay, is the site known as The Tolhouse. The section within this conservation area is located to the west of Tolhouse Street. The group of trees, G40, consists of sycamore with a maximum height of 14 metres and maximum diameter of 350mm. This group of trees is located within the study area, across the Application Site.

5.1.9 Two Satellite Application Sites are located within Conservation Area No.5 – St. Nicholas and Northgate Street. The first is the Laughing Image Corner site. Of this Site, only the area to the south of Rampart Road falls within the boundary of the conservation area (in which all relevant arboricultural features identified were located). Species include three Whitebeam (T57, T57, T59) with a height range of 6 to 11 m; three Ash (T53, T55, T56) with a maximum height of 9 m; two unidentified ornamental trees (T58, T60) which stand at 5 m; and a Corsican pine (T54). The group of trees, G44, is a group of three Elder trees located on the car park boundary. These show signs of being previously coppiced with a current maximum height of 3.5m. The three remaining arboricultural features are located within the Study Area, either on or outside of the Satellite Application Site boundary.

5.1.10 The second Site, Fullers Hill, is wholly located within Conservation Area No.5. Tree species within the Satellite Application Site consist of sycamore (T46, T49) of similar size with a maximum height of 9 meters and maximum diameter of 340mm; birch (T45, T48) with heights of 12m and 14m and diameter range of 210mm to 300mm; one silver maple (T47) with a height of 12m and diameter of 380mm; and a six meter tall cherry with a diameter of 370mm.

5.2 Site Visit / Survey

5.2.1 A total of 130 arboricultural features were surveyed, details of which are provided within the Arboricultural Survey Schedule included in Annex B of this report. A summary of the surveyed features, including their category[2] and designation, is provided in Table 5.3.

Table 5.3: Summary of Surveyed Arboricultural Features

BS 5837:2012 Category	Quality	Trees	Tree Group	Woodlands	Hedges
A	High	2	-	-	-
B	Moderate	37	7	1	2
C	Low	36	40	4	1
Total		**75**	**47**	**5**	**3**

Sub-categories

5.2.2 The value associated with each arboricultural feature is defined by its sub-category. Sub-categories vary depending upon the overall quality of the arboricultural feature, carry equal weight, do not influence retention priority and are simply included to indicate the primary value(s) associated with each surveyed item. The sub-categories assigned to each arboricultural feature are identified within the Arboricultural Survey Schedule included in Annex B of this report.

5.2.3 Table 5.4 to Table 5.6 below define the sub-categories associated with high, moderate and low quality arboricultural features.

[2] Categories are assigned based upon the criteria described within British Standard BS 5837:2012 Table 1.

Table 5.4: Sub-categories Associated with High Quality 'Category A' Arboricultural Features

Sub-category	Area of Value	Estimated Remaining Life Expectancy (years)	Description
1	Arboricultural	>40	Trees that are of particularly good examples of their species (e.g. notable specimens), especially if rare or unusual; or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle trees within an avenue).
2	Landscape	>40	Trees, groups, or woodlands of particular visual importance as arboricultural and/or landscape features.
3	Cultural	>40	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. ancient trees, veteran trees and ancient woodland).

Table 5.5: Sub-categories Associated with Moderate Quality 'Category B' Arboricultural Features

Sub-category	Area of Value	Estimated Remaining Life Expectancy (years)	Description
1	Arboricultural	>20	Trees that might be included in category A but are downgraded because of impaired condition (e.g. the presence of significant though remediable defects including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention beyond 40 years; or trees lacking the special quality necessary to merit category A designation.
2	Landscape	>20	Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.

Sub-category	Area of Value	Estimated Remaining Life Expectancy (years)	Description
3	Cultural	>20	Trees with material conservation or other cultural value.

Table 5.6: Sub-categories Associated with Low Quality 'Category C' Arboricultural Features

Sub-category	Area of Value	Estimated Remaining Life Expectancy (years)	Description
1	Arboricultural	>10	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2	Landscape	>10	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.
3	Cultural	>10	Trees with no material conservation or other cultural value.

High Quality Arboricultural Features

5.2.4 A total of two high quality arboricultural features were recorded during the walkover survey. Both trees are good examples of mature trees for their species. Tree T5 is located on the Site boundary, on the edge of a car park to the east of the A47, north of Harfrey's roundabout. Tree T12 falls within the study area, located in the north-eastern corner of a site known as Southtown Common.

5.2.5 Tree T5 is a late mature weeping willow with a girth of 670mm and height of 11m, which stands in a prominent position within a well-maintained car park of a private business. Tree T12 is a noteworthy specimen of a late mature weeping willow with a girth of 760mm, a height of 24m, and an average crown spread of 7m.

5.2.6 Both trees have been assessed as warranting category A inclusion due to having a notable sized girth and that they are living beyond that considered typical of the species. For this reason, tree T5 can therefore be deemed a veteran tree and T12 a notable tree. Although these trees are not currently

recorded on the Woodland Trust's Ancient Tree Hunt Interactive Map, both trees should be considered as an ancient tree in regard to this Scheme.

Moderate Quality Arboricultural Features

5.2.7 The moderate quality category B arboricultural features consist of 37 trees, seven tree groups, one woodland and two hedges.

5.2.8 Of the moderate quality category B trees, 25 trees have an estimated life expectancy of more than 20 years. Of these, 16 are in good physiological and structural condition; eight are in good to fair condition physiologically and structurally; and one is in fair structural, but poor physiological condition.

5.2.9 Of the 16 trees in good physiological and structural condition, three beech trees (T8, T9, T10) and one willow T11 are located within the Study Area of the Principal Application Site, all in the north-eastern corner of Southtown Common. Tree T15 is a sweet cherry located within the Site, outside the boundary to Southtown Common close to the north-eastern entrance. Three cherry trees (T32, T34, T36) and one ray wood ash (T38) are located on a plot of land to the south of TPO No.7 2005 Satellite Application Site. Within the Study Area of the Satellite Application Site located to the south of Fullers Hill, this site contains one silver maple (T47) and one cherry (T50). Located at the Laughing Image Corner Satellite Application Site, a Scots pine (T51) is located within the study area, as are two whitebeam (T52, T57) and a Corsican pine (T54). All these trees are located at the southern end of the Site within the vicinity of the eastern side of the roundabout. More centrally, a second whitebeam (T59) is found.

5.2.10 The eight trees of good to fair condition are predominantly sycamore (T35, T37, T39, T42, T43, T49), with one hawthorn (T26) and one ray wood ash (T33). Three of the sycamores (T35, T37, T39) and the ray wood ash (T33) are located to the south of TPO No.7 2005 Satellite Application Site; two sycamores (T42, T43) are within the study area opposite the Salvation Army Hall, outside of the Conservation Area No.3 Satellite Application Site; and the final sycamore (T49) is located within the Study Area south of Fullers Hill Satellite Application Site. Also, within this Study Area is the sycamore (T46) which was found to be in fair structural but poor physiological condition. The Hawthorn (T26) is located within the Principal Application Site boundary on the western side of Southtown Road, north of the intersection with William Adams Way and Beccles Road.

5.2.11 The remaining 12 category B trees all have a life expectancy of more than 10 years. Within the north-eastern corner of Southtown Common, located in the Study Area of the Principal Application Site, a line of Lombardy Poplars (T13, T16, T17, T18) and one Poplar (T14) have a good physiological and structural condition. Three sycamores (T24, T27, T28) are in fair physiological and structural condition, and located on the eastern side of Southtown Road near the intersection with William Adams Way and Beccles

Road. A sycamore (T44) is within the Satellite Application Site study area opposite the Salvation Army Hall, outside of Conservation Area No.3. Two ornamental trees of unknown species (T58, T60) are in good structural and physiological condition, located within the Site at Laughing Image Corner Satellite Application Site. The final tree to consider is a whitebeam (T71) in fair physiological and structural condition. This tree is located within the Satellite Application Site on the north side of the A47 and western side of the entrance to Vauxhall Holiday Park Satellite Application Site.

5.2.12 Of the seven tree groups, three (G21, G22, G27) are located around the north-eastern corner of Southtown Common Principal Application Site. All three groups are in good physiological and structural condition. Group G21 consists of holly, sycamore and oak trees and elder bush. Group G22 is predominantly alder and G27 is a row of holly.

5.2.13 A group of sycamore (G36) is located centrally in a block of land between Queen Ann's Road, William Adams Road and Southtown Road within the Principal Application Site. This group is in good physiological and fair structural condition, consisting of multi-stems which show signs of previous pruning. Due to lack of access, all features are an approximate assessment.

5.2.14 Another group of sycamore (G40) is located within Conservation Area No.3 at the Salvation Army Satellite Application Site. Access to these trees was not possible. Visually, it appears these trees have previously been pollarded and located within a tarmacked area.

5.2.15 At the Vauxhall Holiday Park Satellite Application Site, tree group G49 consists of rowan in fair physiological and good structural condition.

5.2.16 Tree group G26 is located within the Principal Application Site, running along the boundary of a business unit and backing onto a row of residential properties on Queen Anne's Road. In fair physiological and structural condition, the dominant species is cypress, with the occasional Corsican pine and one sycamore.

5.2.17 The woodland W6 demonstrates the characteristics of a native broadleaf woodland, consisting of ash, birch, cherry and poplar. This woodland is located on the eastern edge of Southtown Common within the Study Area of the Principal Application Site.

5.2.18 Two hedgerows (H2, H3) form the boundary to a private business located within the Principal Application Site. These hedges are well maintained cypress in good structural and physiological condition. Technical Appendix 8A (document reference 6.2), titled Preliminary Ecological Appraisal Report categorised hedgerows within the scheme as having a low ecological value. For this reason, these hedgerows are deemed not important under The Hedgerow Regulations (1997) (Ref 8H.13).

Low Quality Arboricultural Features

5.2.19 Located within the Vauxhall Holiday Park Satellite Application Site, the low-quality category C trees consist predominantly of poplar (T61, T62, T63, T64, T65, T66, T67, T70, T74, T76, T77, T78) with a few Lombardy poplars (T68, T69, T72 and one cypress tree (T73). Trees T68, to T78 are located along the boundary of the holiday park on the eastern side of the entrance. Trees T61 to T67 are located on the boundary of the holiday on the western side of the entrance. The poplar tree (T78) has a tag identifying it as a "David Bellamy Conservation Award" tree. Also, within this Satellite Application Site are tree groups G48 of unknown species, G50 consisting of semi-mature rowan, and two groups of poplar (G51, G52).

5.2.20 At the Laughing Image Corner Satellite Application Site, three ash trees (T53, T55, T56), and one group of elder (G44) are located within the Site. The group of elder (G43) is located within the Study Area. Each group are located within the boundary to the car park and consist of three trees in fair physiological and structural condition that show signs of previously being coppiced. Tree group (G42), also a group of rowans, is located just outside of the Study Area. All arboricultural features identified are located within Conservation Area No.5.

5.2.21 The Fuller Hill Satellite Application Site contains two birch trees (T45, T48) in good physiological and structural condition, and one group (G41) consisting of sycamore, hawthorn and elder. Access to this group of trees was not possible.

5.2.22 Gapton Hall Retail Park is the location of the Satellite Application Site that also contains TPO No.7 2005. The two tree groups that fall within the TPO location are G38 and G39. The third tree group found at this location is G37. This group was not accessible, located behind a maintained hawthorn hedge on the south side of Purley Court and consisted of a young group of willow. Also within the site boundary is a cherry (T40) and within the Study Area, a whitebeam (T41).

5.2.23 The north end of the Satellite Application Site located south of Harfrey's Roundabout had limited access due to a deep dike. The southern end of the group of trees (G2) was assessed from a position of safety within a layby on the A47, the northern section was extrapolated from a drive-by. From this, a mix of native species including birch, alder, beech, willow, hazel coppice, cherry, Rowan and hawthorn were identified. The southern section (G1), was assessed from a public footpath that was accessible from Burgh Road. The dominant species in this group of trees was cherry and goat willow, with alder, oak and hawthorn also present.

5.2.24 The remaining category C arboricultural features are located within the Principal Application Site, identified in the Landscaping Plans (document reference 2.9).

5.2.25 A laburnum tree (T29) is located outside the Scheme Boundary, on the boundary of a petrol station travelling north on Southtown Road bordering on the edge of the Principal Application Site.

5.2.26 Two trees (T30, T31) are located on the eastern side of the River Yare behind West Quay/Hewett's Wharf. Despite growing in a confined space behind a fence, this cherry tree (T31) appeared to be in good physiological and structural condition. The species of the second tree could not be identified and was found to be growing into a metal fence and girdling a telegraph pole.

5.2.27 A sweet chestnut (T4) is a multi-stemmed tree located in a road verge in the western side of the A47 within the Principal Application Site and footprint of the footbridge north of Harfrey's roundabout. A Eucalypt tree (T25) in fair physiological and poor structural condition, and group of alder trees (G25) were ran along the edge of a block of council owned land viewed from the service road accessible from Queen Anne's Road for the rear of a row of properties off Southtown Road.

5.2.28 South of Harfrey's roundabout, running along the western edge of the A47 is a group of goat willow, hazel, sycamore, oak, hawthorn, birch. This group was assessed from a distance due to access restrictions. Opposite this group, on the western side of the A47, a group of willow and goat willow (G5) were growing in an apparent floodplain. This group partially falls within the Principal Application Site.

5.2.29 The tree group G8 runs between the road and Harfrey's Industrial Estate around the north-western edge of the roundabout. Due to its location, it was not possible to assess the tree group (G8) from a place of safety from the road side, and visibility from the other side was obscured by stacked storage containers. The main tree species that were visible were birch with some goat willow. The group of trees (G9) continues northwards from G8, and consists of goat willow, birch and poplar. Although visible from a short distance, again access was restricted. Opposite tree group G9, on the eastern side of the A47, the tree group G10 is located. This group consisting mainly of ash with goat willow. Again, access was not possible. Located south of tree group G10, along the edge of the A47 down towards the north-eastern side of the roundabout is tree group G11 consisting of willow and goat willow, with some alder, birch and shrub species.

5.2.30 A group of cypress (G17) is located behind hedge H3. Beside this, and behind hedgerow H2 is a tree group (G18) consisting of willow and goat willow. These groups appear to be located along a ditch.

5.2.31 The tree group G23, runs along the Principal Application Site boundary located behind a row of business units on Suffolk Road. This tree group consist of four cypress trees growing on the edge of a small private car park against a brick wall.

5.2.32 A group of coppiced sycamore (G29) growing on a relatively small patch of waste ground. These trees are young in appearance.

5.2.33 The final group of trees is a group of young cypress trees (G30) in good physiological and structural condition, located opposite business units which are accessed from Southtown Road.

5.2.34 Woodland areas identified as W4 and W7 are located within the Principal Application Site, south of Harfrey's roundabout, on the western edge of the A47. These woodland areas consist of mixture of species including ash and sycamore, horse chestnut, oak and willow. Although outside of the Principal Application Site boundary, Woodland areas W14 and W13 are within the Study Area along the northern edge of Southtown Common. These two woodland areas abut each other and are identified individually due to their differing structures. Woodland area W14 is mainly poplar, whereas woodland W13 is dominated by hawthorn with the occasional ash tree.

5.2.35 The category C low quality arboricultural features located within the Landscape and Urban Design, and the Soft Landscaping areas outlined in Landscaping Plans (document reference 2.9) have been identified for removal and will be discussed in Section 6 below.

6 Arboricultural Impact Assessment

6.1.1 The following Arboricultural Impact Assessment (AIA) evaluates the direct and indirect effects of the Scheme on existing trees and identifies the necessary mitigation measures where these are deemed appropriate.

6.2 Arboricultural Features to be Removed

Arboricultural features selected for retention and removal are identified on the Tree Protection Plans (Figures 8H.3 to 8H.10). Details of the arboricultural features to be removed are summarised in *Table 6.1: Arboricultural Features to be Removed / Sub-Divided by Type and Quality*

6.2.1 1.

Table 6.1: Arboricultural Features to be Removed / Sub-Divided by Type and Quality

BS 5837:2012 Category	Quality	Trees	Tree Group	Woodlands	Hedges
A	High	-	-	-	-
B	Moderate	T15	G22(Part), G26	-	-
C	Low	T6, T7, T19, T20, T21, T22, T23	G15, G16, G19, G20, G24, G25, G28 (Part), G31, G32, G33, G34	-	H1
U	Very Low	-	-	-	-
Total	**-**	**8**	**13**	**-**	**1**

6.2.2 Arboricultural features identified for removal and partial removal are based upon design information available at the time of writing this report. The plan used to inform this section of the report was Landscaping Plans (document reference 2.9). The below assessment may need to be revised as additional design information becomes available.

6.2.3 Removals have been identified on the basis that they are located directly within the Landscape and Urban Design, and the Soft Landscaping areas outlined in Landscaping Plans (document reference 2.9) and are all located within the Principal Application Site.

6.2.4 Implementation of the Scheme will not require the removal of the two high quality category A arboricultural features identified during the walkover

survey as veteran (T5) or notable (T12) trees. Tree T5 is in a prominent position within a well-maintained car park of a private business on the eastern side of A47, north of Harfrey's roundabout. Tree T12 is located in the north-eastern corner of a site known as Southtown Common. Both locations are within areas marked as 'Exiting Trees' on DCO document 2.9.

6.2.5 One moderate quality tree (T15) and two moderate quality tree groups are identified for removal (G22, G26). Tree T15 is located outside the boundary to Southtown Common close to the north-eastern entrance. Of the two tree groups, G22 is a group of alders in good structural and physiological condition and a life expectancy of more than 20 years. This group is located along the northern boundary of Southtown Common. The second tree group, G26, is a group of trees in fair physiological and structural condition that run along the boundary of Suffolk Road Enterprise Park and onto the rear of a row of residential properties on Queen Anne's Road. The dominant species is cypress, with the occasional Corsican pine and one sycamore.

6.2.6 Of the low quality category C arboricultural features identified for removal, seven are trees, and 11 are tree groups and one hedge. Within an area located to the east of Kingsgate Community Centre, situated between Queen Anne's Road, Suffolk Road and William Adams Way the arboricultural features in this location include T6, T7, G16, G19 and G20. South of William Adams Way, the group of trees G15 are also identified for removal. The two trees T6 and T7 are young rowan trees in good structural and physiological condition. These two trees are growing along the boundary to the community centre. Within close proximity, on the edge of a plot of land of apparent scrubland (with no access), a group of semi-mature, multi-stemmed goat willow (G19) in good physiological and fair structural condition can be found. On the opposite edge of this plot of land, alongside William Adams Way, is tree group G20, consisting of ash and willow in fair physiological and structural condition. From this plot of land, running along the northern edge of William Adams Way eastwards towards Harfrey's roundabout is tree group G16 consisting of semi-mature willow, ash and birch of fair structural and physiological condition. Opposite tree group G16, on the south side of William Adams Way, is the location of G15, a semi-mature group of trees consisting of ash, sycamore and hawthorn. The sycamore has multiple stems ranging from 75 to 300mm.

6.2.7 To the west, using Suffolk Road Enterprise Park as a landmark, arboricultural features located in the area between Suffolk Road, Cromwell Road, Southtown Road and Queen Ann's Road include T20, T21, T22, T23, G24, G25, and G28. Tree T20 is a young sycamore in poor structural and physiological condition, located on the pavement edge near the entrance road to Suffolk Road Enterprise Park. Just inside the Suffolk Road Enterprise Park entrance, two poplars (G25) show signs of historical pruning and are in poor structural and physiological condition. On a plot of land to the

south-eastern corner of the Enterprise Park, visible through a fence, is the location of a palm tree (T23) in good structural and physiological condition.

6.2.8 To the north side of the Enterprise Park, within a private residential car park, a group of early mature cypress trees (G24) in fair structural and physiological condition are growing in an area with restricted growth. On exiting this car park, an inaccessible apple tree (T22) in fair structural and physiological condition is located along Cromwell Road.

6.2.9 South of the Enterprise Park, in the area that is located within the vicinity of Suffolk Road, Queen Anne's Road, Southtown Road, and William Adams Way, the arboricultural features identified for removal include T19, T21, G28, G31, G32, G33, G34, and H1. Tree T21 is a palm tree in good structural and physiological condition, located in the frontage of a residential property on Queen Anne's Road. The group G28 is a long strip of trees along the northern edge of William Adams Way, surveyed from a position of safety. Tree group G28 consists of a mixture of semi-mature native broadleaves, namely ash, alder, sycamore, birch and goat willow in fair structural and physiological condition. It was noted that some trees within this group contained dense ivy. The most western section of this tree group is likely to be retained. All other arboricultural features are located on the south side of William Adams Way.

6.2.10 Set back from the road, an early mature hedge (H1) consists of mostly hawthorn with some hazel in good structural and physiological condition. Between this hedge and the road are T19 and G31. Tree T19 is a semi-mature, multi-stemmed (at 0.5m) lime tree in good structural and physiological condition. The group of trees (G31) consists of predominantly early mature ash with an alder and sycamore, all in good structural and physiological condition. Moving east along William Adams Way, the next group of trees (G32) is a group of early mature sycamore in fair structural and good physiological condition. After this is a group of early mature poplar (G33) in good structural and physiological condition, and finally, a group of young sycamore (G34) in fair structural and good physiological condition.

6.3 Tree Pruning Requirements

6.3.1 Due to the nature, extent and design stage of the Scheme it has not been possible to identify whether any individual trees or branches will need to be pruned. Any requirement for such work will generally only become apparent once a contractor has been appointed and spatial working requirements are known during detailed design.

6.3.2 The requirement for a schedule of pruning work is therefore included as part of an Arboricultural Method Statement in Annex A of this report and shall also detail a process to deal with any ad-hoc tree work requirements that may arise during the construction of the Scheme.

6.4 Soft Landscaping Areas to be Protected

6.4.1 This Scheme would include hard and soft landscaping in locations known as requiring mitigation for identified environmental effects, and to enhance the setting of the Scheme so that is fully integrated into the wider townscape. The proposals are shown on Landscaping Plans (document reference 2.9).

6.4.2 It is the case that the use of heavy construction machinery can damage the structure of soils thereby making them an unsuitable medium within which to plant trees and shrubs. Preventing damage to soils is possible by ensuring that areas are fenced off and out of bounds to construction activities or by ensuring that topsoil is stripped, stored and subsequently replaced once construction is completed. In some instances, it may also be possible to use areas for certain activities during construction and then mitigate any damage using a programme of suitable cultivation and soil improvement works.

6.4.3 Areas identified for structural landscape planting are identified in Landscaping Plans (document reference 2.9). Although within the boundary of the Scheme, it is not possible at this stage to identify whether they require protection as the land-use requirements of the contractor are unknown. Only once the land-uses associated with construction of the Scheme have been determined can a decision be made as to whether landscaping areas should be protected or whether other methods such as soil stripping or remediation can be reasonably undertaken. The approach to landscaping should be submitted to the county planning authority by the undertaker for approval in writing, following consultation with GYBC, as secured by the draft DCO (document reference 3.1) under Requirement 6.

6.4.4 To meet the recommended standards outlined in Section 6.1 of BS 5837:2012 (Ref 8H.1), the provisions of information relating to the protection of retained trees within future tree planting areas shall be included in an Arboricultural Method Statement to be submitted for approval prior to commencement of works, as prescribed in the Outline CoCP (document reference 6.16). The soft-landscaping section of Annex A below outlines an approach to be considered within an Arboricultural Method Statement.

6.5 Potential Arboricultural Impacts

Arboricultural Features to be Removed

6.5.1 Arboricultural features identified for removal are of moderate B to low C categories. The B category arboricultural features include T15, G22 and G26. Arboricultural features T15 and G22 are located close to the Application Site boundary and contribute to the screening of Southtown Common. Tree group G26 currently provides screening between residential properties and Suffolk Road Enterprise Park.

6.5.2 These moderate quality trees should be regarded as having sufficient value to have material consideration through the planning process within this Scheme.

6.5.3 All remaining arboricultural features which will be removed in whole, or in part, are low quality features. These lack any special significance either arboriculturally, culturally or as prominent landscape features.

Potentially Damaging Activities

6.5.4 Work carried within the Application Site will need to take into account arboricultural features that are identified for retention and that fall within the 15m buffer. In the process of delivering this Scheme, there may be potentially damaging activities to these arboricultural features. It is possible to avoid adverse impacts to tree roots through the exclusion of construction activities from within root protection areas. Appropriate protection measures to be considered in an Arboricultural Method Statement are outlined in Annex A of this document.

6.5.5 Damaging activities may occur through the following activities:

- Excavation;
- Soil levelling changes; and
- Soil compaction.

Mitigation Planting

6.5.6 The Scheme includes Landscaping Plans (document reference 2.9), to be secured through the provision of a landscaping scheme. This includes partial replacement of arboricultural features to be removed through new tree and shrub planting. These measures will provide longer-term mitigation for these impacts insofar as once established, new planting will have the capacity to effectively replace any low-quality hedging or tree groups which may be lost.

6.5.7 For category B moderate quality arboricultural features, although it is possible to mitigate for the loss of these arboricultural features, it is not possible to secure trees of the same standard within one lifetime. There will be some short-term residual adverse effects associated with the loss of moderate quality trees. However, the introduction of new feature trees into the local area has the potential to mitigate this loss over the medium to long term, i.e. once they become established, start to mature, and attain a reasonable size.

6.5.8 For low quality category C arboricultural features, the proposed landscape mitigation planting has the potential to mitigate this loss in the short term, particularly in cases where the mitigation planting is achieved in advance of

proposed tree removal. The loss of these trees, tree groups and hedgerows will therefore have little impact on the overall quality and extent of the baseline tree population nor will it adversely impact on the overall character of the local landscape.

6.6 Tree Protection Plan

6.6.1 The above and below ground constraints associated with retained arboricultural features are identified in the Tree Protection Plans (Figures 8H.3 to 8H.10). These account for the physical and physiological requirements of each tree, tree group, wooded area and hedge and include their root protection area, crown spread and stem location.

6.6.2 All tree protection measures have been specified by a suitably qualified and experienced arboriculturist, and are fit for the purpose of excluding construction activities from the root protection areas and canopies of retained trees.

6.6.3 Additional specification relating to the proposed tree protection measures for the trees on the Tree Protection Plan is included in Annex A of this report.

6.7 Arboricultural Method Statement

6.7.1 As outlined in Section 6.1 of BS 5837:2012 (Ref 8H.1), an Arboricultural Method Statement should adopt a precautionary approach to tree protection and should address any activities which have the potential to cause damage to retained trees.

6.7.2 Due to the Scheme currently being at design stage, the type, location and extent of the tree protection measures which will be required to safeguard retained trees is based on current available information. This information has been used to inform an outline Arboricultural Method Statement. Once more detailed design information becomes available and the contractor's working requirements are known, the outline Arboricultural Method Statement may need updating.

6.7.3 For the purposes of this report an outline Arboricultural Method Statement has been compiled and is included within **Annex A**. This outline method statement describes in principle the tree protection measures which have been identified as suitable for the Scheme at this stage. A more refined and accurate Arboricultural Method Statement will be required to support the detailed design and construction phases. The detailed Arboricultural Method Statement will be submitted for approval prior to commencement of works, as prescribed in the Outline CoCP (document reference 6.16

7 References

Ref 8H.1: The British Standards Institute (2012). BS5837:2012 Trees in relation to design, demolition and construction – Recommendations, London: BSI Standards Limited.

Ref 8H.2: UK Parliament (1990). Town and Country Planning Act 1990, Norwich: TSO.

Ref 8H.3: Ministry of Housing, Communities & Local Government (2014). Guidance: Conserving and enhancing the historic environment - What is a conservation area? [Online].

Ref 8H.4: Ministry of Housing, Communities & Local Government (2019). National Planning Policy Framework, London: HM Stationary Office.

Ref 8H.5: Department for Transport (2014). National Policy Statement for National Networks. National Policy Statement for National Networks, London: HM Stationary Office.

Ref 8H.6: Forestry Commission and Natural England (2018) Ancient Woodland and Veteran Trees: Protecting them from Development [Online].

Ref 8H.7: Great Yarmouth Borough Council (2019). Great Yarmouth Borough Council: Conservation Areas [Online].

Ref 8H.8: Woodland Trust (2018). Ancient Tree Inventory [Online].

Ref 8H.9: Defra (2018). MAGIC: Interactive mapping at your fingertips [Online].

Ref 8H.10: Mattheck, C. & Breoler, H. (2006). The body language of trees, Norwich: The Stationary Office.

Ref 8H.11: The British Standards Institute (2010). BS 3998:2010 Tree work - Recommendations, London: BSI.

Ref 8H.12: NHBC (2019). National House Building Council Standards [Online].

Ref 8H.13: UK Parliament (1997). The Hedgerow Act 1997, Norwich: TSO.

Annex A – Arboricultural Method Statement

Purpose

A.1.1 The purpose of this Arboricultural Method Statement is to provide a summary of the tree protection measures which must be adopted in order to ensure the sustainable preservation of retained trees. The measures described are deemed to be appropriate given the scale, intensity and proximity of development to nearby trees.

Tree Surgery

A.1.3 Once design for the Scheme has been confirmed all tree pruning work shall adhere to British Standard BS 3998:2010 (Ref 8H.11) paragraphs 7.2.4, 7.2.5, Table 1 and Figure 2.

A.1.4 The statutory protection afforded by the Wildlife and Countryside Act 1981 (Amended) and Countryside and Rights of Way Act 2000 (Amended) will also be adhered to. Where there is evidence that bats or nesting birds are present then specialist advice will be obtained prior to the commencement of work.

A.1.5 All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

A.1.6 Should the requirement for a tree felling or pruning arise then the following process shall be applied:

- Any specification shall be technically approved by an arboriculturist; and
- Written approval shall be obtained from the Local Planning Authority prior to implementation of the work.

Clay Soils

A.1.7 The presence of a clay element within the soil is significant in terms of both tree protection and foundation design. Clay soils can experience substantial volume changes when vegetation extracts moisture from the ground, and they are also prone to compaction when wet. On this basis it is essential that all recommended tree protection measures are implemented in full and are not relaxed at any point throughout the normal course of delivering this scheme. Any foundations should also be designed in accordance with the recommendations contained within Chapter 4.2 of the National House Building Council Standards (2019) (Ref 8H.12) and should account for the possibility of both subsidence and heave.

Tree Protection Fencing

Purpose

A.1.8 To protect retained trees including their stems, crowns, rooting areas and the soil within which they grow.

General Requirements

A.1.9 Tree protection fencing should be specified by an arboriculturist.

A.1.10 Tree protection fencing will be used to prevent access to the root protection areas of retained trees. In all instances the following specification will be strictly adhered to:

- The area to the rear of the tree protection fencing shall be considered to form a Construction Exclusion Zone. No construction activities, storage of materials, or pedestrian or vehicular access shall take place within this area;
- All-weather notices will be attached to the tree protection fencing at suitable intervals and shall include suitably sized informative text containing the following statement ‘Tree Protection Fencing – Construction Exclusion Zone – No Access’; and
- Regular daily checks will be carried out by an appointed person to ensure that all tree protection fencing is still in place and functioning; any damage will be rectified without delay.

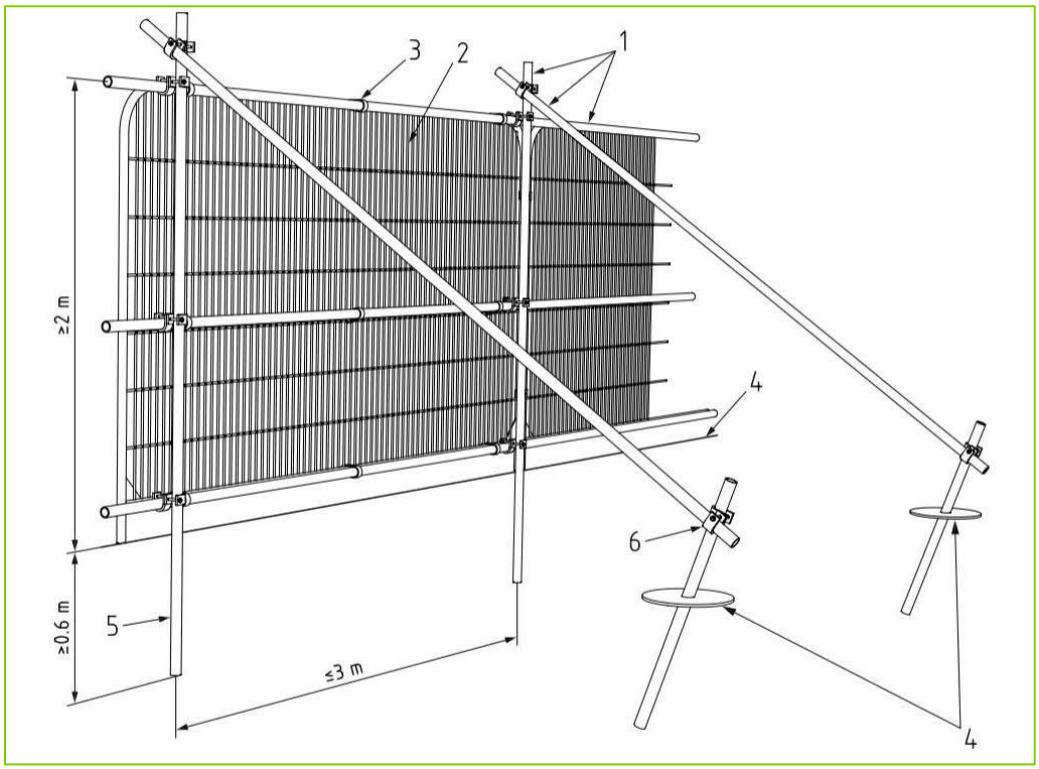
Timing

- Tree protective fencing shall be erected prior to any works onsite including site clearance, ground work, or the importation of plant and materials; and
- Once erected tree protection fencing shall remain in-situ until all construction activities are complete.

Specification for Fencing

- Tree protection fencing shall be fit for the purpose of excluding construction activity and appropriate for the degree and proximity of work taking place. An example of the type of tree protection fencing which may be required is included in Plate 8H.1.

Plate A1.1: Default Specification for Tree Protection Fencing



Key:

1. Standard scaffold poles.
2. Heavy gauge 2m tall galvanised tube and welded mesh infill panels.
3. Panels secured to uprights and cross-members with wire ties.
4. Ground level.
5. Uprights driven into the ground until secure (minimum depth 0.6m).
6. Standard scaffold clamps.

Ground Protection

Purpose

A.1.11 To provide construction access within root protection areas whilst preventing access to underlying soil and roots.

General Requirements

A.1.12 Ground protection shall be employed within the root protection areas shown on the Tree Protection Plan(s) (Figures 8H.3 to 8H.10). In all instances the following specification will be strictly adhered to:

- Unless otherwise stated within this report ground protection shall remain in-situ until all construction activities are complete.

- Regular daily checks will be carried out by an appointed person to ensure that ground protection is still in place and functioning; any damage will be rectified without delay.

Timing

A.1.13 Ground protection shall be in-situ prior to any works onsite including demolition, ground work or the importation of plant and materials.

Specification

A.1.14 Ground protection shall be sufficiently robust to prevent damage or disturbance of the underlying soil. In order to accord with BS 5837:2012 (Ref 8H.1) ground protection shall comply with the following specification.

Areas of Unmade Ground

A.1.15 For pedestrian only access ground protection measures shall include a single thickness of scaffold boards placed on top of 100mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.

A.1.16 For pedestrian activities and plant up to 2 tonnes in weight proprietary interlinked ground protection boards will be used and placed on top of 150mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.

A.1.17 For wheeled or tracked equipment exceeding 2 tonnes in weight a structural engineer will design an alternative system. This may include the use of temporary cellular confinement systems, reinforced concrete slabs or track board systems details of which are to be approved before construction commences.

Areas of Existing Hard Surfacing

A.1.18 Areas of existing hard surfacing identified for use as ground protection shall not be removed during site clearance and shall be retained throughout the construction period.

A.1.19 Areas of existing hard surfacing shall be assessed by an engineer to ensure that they are sufficient to prevent damage or disturbance to the underlying soil. A precautionary approach to any anticipated loadings should be adopted.

A.1.20 In instances where the engineer identifies existing surfacing as inadequate then a specification for additional protection must be provided and any requirements actioned onsite.

Precautions outside Construction Exclusion Zone

A.1.21 In all instances the following tree protection measures will be adopted during any site clearance or construction activities undertaken immediately outside, or in proximity to, the root protection area of any retained tree:

- Oil, bitumen, cement or other material likely to be injurious to a tree will not be stored or mixed within 10m of any stem unless contained within a bunded structure. Concrete mixing will not be carried out within 10m of a tree unless undertaken within a bunded container. Any spillage shall be immediately reported to the project arboriculturist who will determine what mitigation is required.
- Fires will not be lit nearer than five metres from the limit of any crown spread; will be down-wind of any tree and will be prevented from becoming so large as to cause damage to any nearby tree.
- Notice boards, telephone cables or other services will not be attached to any part of any tree. Trees to be retained will not be used as anchors for equipment used to remove stumps, roots, other trees or for any other purposes.
- Care will be exercised when using cranes or similar equipment near the spread of the canopy of a tree.
- It is essential that allowance be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.

Soft-Landscaping Operations

Purpose

A.1.22 To avoid damage to trees during the implementation of soft landscaping activities.

Design

A.1.23 The root protection areas of retained trees are identified on the Tree Protection Plans (Figures 8H.3 to 8H.10). All soft landscaping activities will conform to the following specification where they take place within the root protection area of any retained tree.

Timing

A.1.24 No works will be carried out if the soil moisture is of a level likely to allow compaction to occur.

Specification

General Requirements

A.1.25 Only pedestrian operated machinery up to a gross weight of 50kg shall be used.

A.1.25 All pedestrian operated machinery shall utilise low ground pressure tyres.

A.1.26 Landscaping works shall be undertaken out only when the soil is dry and friable and soil moisture is at a level whereby compaction is unlikely to occur.

Soil Preparation

A.1.27 Herbicide applications shall be restricted to the use of translocated products such as glyphosate. These will be applied according to the manufacturer's instructions and drift onto non-target plants avoided.

A.1.28 Existing vegetation will be removed by hand. Turf may be removed using a mechanical turf stripper where necessary.

A.1.29 Compacted areas of soil will be broken up by using hand tools only.

A.1.30 There shall be no excavation or lowering of soil levels.

A.1.31 Depressions may be levelled through infilling with a maximum depth of 150mm of loosely compressed good quality topsoil or other porous material.

Grass Seeding, Wildflower Seeding and Turfing

A.1.32 Soil shall be cultivated to a depth of no more than 25mm.

Planting

A.1.33 Bare root seedlings, transplants, whips and feathered trees shall be notch planted.

A.1.34 Container grown shrubs, feathered trees, and standard trees shall be planted into individual pits.

A.1.35 In no circumstances shall planting take place into cultivated beds or trenches.

A.1.36 All planting pits shall be excavated with due care for underlying tree roots and using hand tools only.

A.1.37 In instances where tree roots are found within the planting pit then roots less than 25mm in diameter may be severed using a sharp tool such as a saw or secateurs. The cut should be as small as possible and must avoid leaving a ragged end. Roots over 25mm diameter may only be cut on the advice of an

arboriculturist. If roots over 50mm are encountered, or groups of roots over 25mm, then the planting pit will be backfilled and moved to an alternative location.

Annex B – Arboricultural Survey Schedule

Table B1.1: BS 5837: 2012 Arboricultural Survey Schedule Explanatory Notes

Key:					
Reference Number:	Individual reference number				
Type:	T - Tree	G - Group	W - Woodland	H - Hedge	
Species:	Species listed by common name				
Height:	Overall height (m)				
Diameter:	Stem diameter (mm) calculated in accordance with BS 5837:2012 paragraph 4.6.1. An average stem diameter is provided for groups, woodlands and hedges. * Denotes an estimated stem diameter				
No. of Stems:	Number of stems (individual trees only)				
N, E, S, W:	Crown spread taken at each cardinal point (m)				
LCH:	Lowest crown height (m)				
LBH:	Height of lowest significant branch (m)				
Age Class:	Young: < 1/3rd estimated life expectancy	Semi-mature: 1/3rd to 2/3rd estimated life expectancy	Mature: > 2/3rd estimated life expectancy	Veteran: a tree which exists significantly beyond its normal life expectancy	
Physiological Condition:	Good	Fair	Poor	Dead	
Structural Condition:	Good	Fair	Poor		
Estimated Remaining Contribution:	>10 years	10+ years	20+ years	40+ years	
Category:	BS 5837:2012 Category: A, B, C, U	BS 5837:2012 Sub-category: 1, 2, 3			
RPA Radius:	The radius of the circular root protection area associated with the tree as measured from the centre of the stem (m).				

Table B1.2: BS 5837: 2012 Arboricultural Survey Schedule

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
72	T	Lombardy Poplar	15			700			3	2	2	2	5	2	Mature (Late)	Good	Fair	10+	C	2	-	8	221.7			RET
62	T	Poplar	18			610			4	4	6	6	2	4	Mature (Late)	Fair	Fair	10+	C	2	-	7	168.4			RET
33	T	Raywood Ash	6			200			3	4	3	0	1	1	Mature (Early)	Good	Fair	20+	B	2	Competing for light with the cherries, resulting in tree increasingly leaning	2	18.1		TPO	RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
12	T	Weeping Willow	24			760			7	7	7	7	2	4	Mature (Late)	Good	Good	40+	A	1	Between A and B cat. Very nice specimen of weeping willow. Crack going from floor to 1m above ground. Some graffiti.	9	261.3			RET
34	T	Cherry	8			390			5	4	1	4	1	2	Mature (Early)	Good	Good	20+	B	2	-	5	68.8		TPO	RET
39	T	Sycamore	8			230			2	2	2	2	2	2	Mature (Early)	Fair	Good	20+	B	2	Leaves fallen. couldn't properly assess whether sycamore or silver maple.	3	23.9			RET
77	T	Poplar	7			700			2	2	3	3	2	2	Mature (Late)	Fair	Poor	10+	C	2	Appears pollarded	8	221.7			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
71	T	Whitebeam	7			145			2	3	2	2	2	2	Semi-Mature	Fair	Fair	10+	B	2	-	2	9.5			RET
78	T	Poplar	7			700			2	2	3	3	2	2	Mature (Late)	Fair	Poor	10+	C	3	David Bellamy conservation award tree	8	221.7			RET
63	T	Poplar	8			290			4	2	2	4	2	2	Mature (Early)	Fair	Fair	10+	C	2	Lean at about 30 degrees posing danger to adjacent trailer in adverse weather conditions	3	38.1			RET
17	T	Lombardy Poplar	23			760			2	2	2	2	5	3	Mature (Late)	Good	Good	10+	B	2	-	9	261.3			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
53	T	Ash	7			200			3	3	3	3	2	3	Semi-Mature	Good	Good	10+	C	2	-	2	18.1			RET
16	T	Lombardy Poplar	23			760			2	2	2	2	5	3	Mature (Late)	Good	Good	10+	B	2	-	9	261.3			RET
21	T	Other/Unknown	6			260			1	1	1	1	3	3	Mature (Early)	Good	Good	10+	C	1	Palm tree	3	30.6			REM
70	T	Poplar	15			500			3	3	2	3	3	3	Mature (Late)	Good	Fair	10+	C	2	No proper leader	6	113.1			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
5	T	Weeping Willow	11			670			6	7	7	4	2	1	Mature (Late)	Good	Good	20+	A	3	A prominent tree sites within a vet's car park. Signs of previous management. Side of tree overhanging fence line is competing with other vegetation	8	203.1	Notable		RET
4	T	Sweet Chestnut	7			750	750	750	2	2	2	2	0	0	Semi-Mature	Good	Good	10+	C	2	Multi stem tree in road verge.	9	254.5			RET
75	T	Lombardy Poplar	15			700			3	2	2	2	5	2	Mature (Late)	Good	Fair	10+	C	2	-	8	221.7			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
61	T	Poplar	16			560			4	4	6	6	2	4	Mature (Early)	Fair	Fair	10+	C	2	-	7	141.9			RET
8	T	Beech	12			360			4	4	4	4	2	3	Mature (Early)	Good	Good	20+	B	2	-	4	58.6			RET
64	T	Poplar	18			690			6	5	7	6	3	4	Mature (Late)	Fair	Fair	10+	C	2	-	8	215.4			RET
7	T	Rowan	4			105			1	1	1	1	1	1	Young	Good	Good	10+	C	2	-	1	5.0			REM
24	T	Sycamore	7			220			2	2	2	1	0	0	Mature (Early)	Fair	Fair	10+	B	2	On raised walkway, growing out of concrete	3	21.9			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
30	T	Unknown	5			190			3	2	3	1	1	1	Mature (Early)	Good	Poor	10+	C	2	Trunk of tree growing into metal fence and girdling telegraph pole	2	16.3			RET
9	T	Beech	12			360			4	4	4	4	2	3	Mature (Early)	Good	Good	20+	B	2	-	4	58.6			RET
37	T	Sycamore	8			200			2	2	2	2	2	2	Mature (Early)	Fair	Good	20+	B	2	Leaves fallen. Couldn't properly assess whether sycamore or silver maple.	2	18.1			RET
50	T	Cherry	6			370			3	3	3	3	1	2	Mature (Early)	Good	Good	20+	B	2	-	4	61.9		Conservation Area	RET
19	T	Lime	7			630	27	41	4	6	4	5	1	1	Semi-Mature	Good	Good	10+	C	2	Multi stem from 0.5m	8	179.6			REM

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
59	T	Whitebeam	11			400			4	4	4	4	4	2	Mature (Early)	Good	Good	20+	B	2	-	5	72.4		Conservation Area	RET
32	T	Cherry	8			310			1	3	4	4	1	1	Mature (Early)	Good	Good	20+	B	2	Diameter measured at 1m due to low branching	4	43.5		TPO	RET
36	T	Cherry	8			370			4	4	3	4	2	2	Mature (Early)	Good	Good	20+	B	2	-	4	61.9		TPO	RET
47	T	Silver Maple	12			380			6	3	5	4	5	4	Mature (Early)	Good	Good	20+	B	2	-	5	65.3			RET
27	T	Sycamore	6			250			3	3	3	1	0	0	Mature (Early)	Fair	Fair	10+	B	2	Epicormic growths	3	28.3			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
43	T	Sycamore	13			460			3	3	3	3	4	3	Mature (Late)	Good	Fair	20+	B	1	-	6	95.7			RET
52	T	Whitebeam	6			400			2	2	2	2	2	2	Mature (Early)	Good	Good	20+	B	2	-	5	72.4		Conservation Area	RET
29	T	Laburnum	5			260			0	2	1	2	2	1	Semi-Mature	Fair	Poor	10+	C	2	Signs of recent construction of concrete base within root protection area	3	30.6			RET
67	T	Poplar	12			470			6	9	1	4	2	3	Mature (Late)	Fair	Fair	10+	C	2	-	6	99.9			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
31	T	Cherry	7			200			2	2	2	2	3	3	Young	Good	Good	10+	C	0	Growing in confined space behind fence, no access for measurements	2	18.1			RET
28	T	Sycamore	9			350			3	3	3	1	3	3	Mature (Early)	Fair	Fair	10+	B	2	-	4	55.4			RET
76	T	Poplar	15			500			3	3	2	3	3	3	Mature (Late)	Good	Fair	10+	C	2	No proper leader	6	113.1			RET
10	T	Beech	12			360			4	4	4	4	2	3	Mature (Early)	Good	Good	20+	B	2	-	4	58.6			RET
38	T	Raywood Ash	6			200			5	5	5	4	1	2	Mature (Early)	Good	Good	20+	B	2	-	2	18.1		TPO	RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
14	T	Poplar	20			470			4	2	4	4	4	4	Mature (Late)	Good	Good	10+	B	0	-	6	99.9			RET
49	T	Sycamore	9			340			4	4	4	4	5	2	Mature (Early)	Fair	Fair	20+	B	1	-	4	52.3			RET
35	T	Sycamore	8			250			3	3	3	4	2	2	Mature (Early)	Fair	Fair	20+	B	1	Minor dead wood. TPO No.7 2005	3	28.3		TPO	RET
54	T	Corsican Pine	16			500			3	3	3	3	4	5	Mature (Late)	Good	Good	20+	B	2	-	6	113.1		Conservation Area	RET
55	T	Ash	9			310			3	3	3	3	2	3	Semi-Mature	Good	Good	10+	C	2	-	4	43.5			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
58	T	Unknown	5			170			2	2	2	2	2	2	Semi-Mature	Good	Good	10+	B	2	Ornamental minor dead branches	2	13.1		Conservation Area	RET
26	T	Hawthorn	8			300			2	2	2	2	2	1	Mature (Late)	Fair	Fair	20+	B	1	Previously managed. Growing in private property.	4	40.7			RET
23	T	Other/Unknown	6			260			1	1	1	1	3	3	Mature (Early)	Good	Good	10+	C	1	Palm tree	3	30.6			REM
22	T	Apple	6			210			2	2	2	2	0	0	Mature (Early)	Fair	Fair	10+	C	2	Fruiting. Ivy infested no access to measure diameter.	3	20.0			REM
74	T	Poplar	15			500			3	3	2	3	3	3	Mature (Late)	Good	Fair	10+	C	2	No proper leader	6	113.1			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
44	T	Sycamore	17			620			5	5	6	6	4	4	Mature (Late)	Good	Good	10+	B	2	-	7	173.9			RET
41	T	Whitebeam	5			200			1	1	1	1	3	2	Semi-Mature	Fair	Good	10+	C	2	-	2	18.1			RET
42	T	Sycamore	14			510			5	5	5	5	4	2	Mature (Late)	Fair	Fair	20+	B	1	-	6	117.7			RET
45	T	Birch	12			210			2	2	3	2	4	4	Mature (Early)	Good	Good	10+	C	2	Epicormic shoots at 1.5m	3	20.0		Conservation Area	RET
56	T	Ash	7			200			3	3	3	3	2	3	Semi-Mature	Good	Good	10+	C	2	-	2	18.1			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
25	T	Eucalyptus	12			230			1	2	1	1	3	3	Mature (Early)	Fair	Poor	10+	C	2	Notify council about phone line and potential trunk breakage due to horizontal depression in trunk	3	23.9			RET
18	T	Lombardy Poplar	23			760			2	2	2	2	5	3	Mature (Late)	Good	Good	10+	B	2	-	9	261.3			RET
66	T	Poplar	12			470			4	9	6	6	2	3	Mature (Late)	Fair	Fair	10+	C	2	-	6	99.9			RET
69	T	Lombardy Poplar	15			700			3	2	2	2	5	2	Mature (Late)	Good	Fair	10+	C	2	-	8	221.7			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
6	T	Rowan	4			110			1	1	1	1	1	1	Young	Good	Good	10+	C	2	-	1	5.5			REM
46	T	Sycamore	8			300			4	4	4	4	5	2	Mature (Early)	Poor	Fair	20+	B	1	-	4	40.7			RET
11	T	Willow	26			1010			6	6	6	6	2	2	Mature (Late)	Good	Good	20+	B	2	Could be A cat. Very nice willow	12	461.5			RET
20	T	Sycamore	4			100			1	1	1	1	0	0	Young	Poor	Poor	10+	C	2	Growing in metal fence line	1	4.5			REM
60	T	Unknown	5			170			2	2	2	2	2	2	Semi-Mature	Good	Good	10+	B	2	Ornamental minor dead branches	2	13.1		Conservation Area	RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
65	T	Poplar	8			290			4	2	2	4	2	2	Mature (Early)	Fair	Fair	10+	C	2	Lean at about 30 degrees posing danger to adjacent trailer in adverse weather conditions	3	38.1			RET
68	T	Lombardy Poplar	15			700			3	2	2	2	5	2	Mature (Late)	Good	Fair	10+	C	2	-	8	221.7			RET
13	T	Lombardy Poplar	23			810			3	3	3	3	5	3	Mature (Late)	Good	Good	10+	B	2	-	10	296.9			RET
73	T	Cypress	14			250	210	350	3	3	3	3	0	0	Mature (Late)	Good	Fair	10+	C	2	Multi stemmed	3	28.3			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
40	T	Cherry	6			190			2	2	2	2	2	2	Young	Good	Good	10+	C	1	-	2	16.3			RET
48	T	Birch	14			300			2	2	3	2	4	4	Mature (Early)	Good	Good	10+	C	2	Signs of previous management to remove lower branching	4	40.7		Conservation Area	RET
57	T	Whitebeam	6			290			2	2	2	2	2	3	Mature (Early)	Good	Good	20+	B	2	-	3	38.1		Conservation Area	RET
51	T	Scots Pine	9			200			2	2	2	2	3	4	Young	Good	Good	20+	B	2	Two stems	2	18.1		Conservation Area	RET
15	T	Sweet Chestnut	8			410			3	3	3	3	0	0	Mature (Late)	Good	Good	20+	B	2	-	5	76.1			REM

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
25	G	Poplar	16			450			5	5	5	5	0	2	Mature (Late)	Poor	Poor	10+	C	2	2 poorly managed popular with major wounds from historical pruning and cracks	5	91.6			REM
49	G	Rowan	5			200			1	1	1	1	2	2	Semi-Mature	Fair	Good	10+	B	2	-	2	18.1			RET
17	G	Cypress	9			200			2	2	2	2	0	0	Mature (Early)	Good	Good	10+	C	2	-	2	18.1			RET
5	G	Willow	7			75			1	1	1	1	0	0	Young	Good	Good	10+	C	2	In a floodplain, no access to survey safely	1	2.5			RET
50	G	Rowan	5			230			1	1	1	1	0	0	Semi-Mature	Good	Fair	10+	C	2	-	3	23.9			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
42	G	Elder	3			80			1	1	1	1	0	0	Mature (Late)	Fair	Fair	10+	C	1	3 trees on car park boundary, previously coppiced	1	2.9		Conservation Area	RET
40	G	Sycamore	14			350			5	5	6	6	2	3	Mature (Early)	Fair	Fair	20+	B	2	Previously pollarded. Within a conservation area. Poor growing conditions (tarmac). No access (fencing)	4	55.4		Conservation Area	RET
32	G	Sycamore	7			200			3	3	3	3	1	1	Mature (Early)	Good	Fair	10+	C	2	-	2	18.1			REM
11	G	See Notes	5	0	9	200	0	200	1	1	1	1	0	0	Semi-Mature	Fair	Fair	10+	C	2	Mix of native species including willow, goat willow, some alder, birch and shrub species.	2	18.1			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
52	G	Poplar	17			500	45	50	3	3	3	3	3	3	Mature (Late)	Good	Good	10+	C	2	-	6	113.1			RET
6	W	See Notes	16			350			4	4	4	4	0	0	Mature (Late)	Good	Good	20+	B	2	Woodland. Part of parkland. mix of native woodland broadleaf species. (ash, birch, cherry, poplar)	4	55.4			RET
10	G	Ash	12	0	13	250	75	250	2	2	2	2	0	0	Mature (Early)	Fair	Fair	10+	C	2	Mainly ash and goat willow. No access due to high barbed wire fencing. Goes along a ditch containing water.	3	28.3			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
7	W	See Notes	5			200			2	2	2	2	0	0	Semi-Mature	Good	Good	10+	C	2	Mixture of species including ash and sycamore, horse chestnut, oak and willow	2	18.1			RET
41	G	Sycamore	9			310			3	3	3	3	3	2	Mature (Early)	Fair	Fair	10+	C	1	No access. Group also contains hawthorn and elder.	4	43.5			RET
34	G	Sycamore	6			200	15	200	2	2	2	2	2	2	Young	Good	Fair	10+	C	2	No access - barbed wire	2	18.1			REM
29	G	Sycamore	4			75			1	1	1	1	0	0	Young	Fair	Fair	10+	C	2	Sycamore coppice. Appear to be opportunistic on patch of waste ground	1	2.5			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
43	G	Elder	4			90			1	1	1	1	0	0	Mature (Late)	Fair	Fair	10+	C	1	3 trees on car park boundary, previously coppiced	1	3.7		Conservation Area	RET
47	G	See Notes	5			150			1	1	1	1	2	1	Young	Good	Good	10+	C	2	Trees look good. Mix of cherry and copper beech and ornamental shrubs.	2	10.2			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
28	G	See Notes	14	0	16	200	75	300	2	2	2	2	0	0	Semi-Mature	Fair	Fair	10+	C	2	Partial removal of western section. Mixture of native broadleaves, namely ash, alder, sycamore, birch, goat willow. No access due to narrow verge. Surveyed from bridge and other side of road. Heavy ivy infestation on some trees.	2	18.1			RET
4	W	See Notes	5			200			2	2	2	2	0	0	Semi-Mature	Good	Good	10+	C	2	Mixture of species including ash and sycamore, horse chestnut, oak and willow	2	18.1			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
46	G	Maple	4	4	5	150	120	190	2	2	2	2	2	2	Young	Good	Good	10+	C	2	Norway Maple and cherry mix	2	10.2			RET
8	G	See Notes	13	0	14	250	75	300	2	2	2	2	0	0	Semi-Mature	Good	Good	10+	C	2	No access due to storage containers on one side and highway on other. Predominantly birch trees, some goat willow and alder.	3	28.3			RET
37	G	Willow	3	0	3	100	0	100	1	1	1	1	0	0	Young	Good	Fair	10+	C	2	Willow sighted behind a hawthorn hedge. Rowan individual	1	4.5			RET
36	G	Sycamore	16			600	250	650	4	4	4	4	1	1	Mature (Late)	Good	Fair	20+	B	2	Multiple stems, some growing in braces. previously pruned. No access	7	162.9			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
18	G	Willow	7			150			2	2	2	2	0	0	Semi-Mature	Fair	Fair	10+	C	2	Willow and goat willow lining a ditch	2	10.2			RET
39	G	Sycamore	6	3	7	200	110	320	2	2	2	2	3	3	Semi-Mature	Fair	Fair	10+	C	2	Sycamore and white beam. White beam C, sycamore B/C	2	18.1		TPO	RET
1	G	Cherry	8	0	8	200	75	465	2	2	2	2	0	0	Young	Good	Fair	10+	C	2	Dominant species is cherry, second dominant goat willow. Other species include willow, alder, oak, hawthorn	2	18.1			RET
38	G	Poplar	12	6	12	200	220	430	4	4	4	4	2	2	Mature (Early)	Good	Fair	10+	C	2	Slight lean towards highway	2	18.1		TPO	RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
33	G	Lombardy Poplar	16			450			2				0	0	Mature (Early)	Good	Good	10+	C	2	Lombardy, sycamore undergrowth, young ash	5	91.6			REM
27	G	Holly	5			210			2	2	2	2	2	1	Mature (Early)	Good	Good	20+	B	2	Row of holly	3	20.0			RET
23	G	Cypress	9	8	9	500	300	500	5	5	5	5	2	0	Mature (Late)	Fair	Fair	10+	C	2	Group of 4 trees growing against a brick wall on edge of private car park	6	113.1			RET
20	G	Ash	8	0	12	200	75	200	2	2	2	2	0	0	Semi-Mature	Fair	Fair	10+	C	2	No access - verge too narrow and water on other side. Mixture of ash and willow and shrub species.	2	18.1			REM

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
12	G	Other/Unknown	4			170			1	1	1	1	2	2	Young	Good	Good	10+	C	2	No access as in the centre of a busy roundabout	2	13.1			RET
51	G	Poplar	17			500	45	50	3	3	3	3	3	3	Mature (Late)	Good	Good	10+	C	2	-	6	113.1			RET
14	W	Poplar	15			490			4	4	4	4	2	3	Mature (Late)	Good	Good	10+	C	2	-	6	108.6			RET
44	G	Elder	4			90			1	1	1	1	0	0	Mature (Late)	Fair	Fair	10+	C	1	3 trees on car park boundary, previously coppiced	1	3.7		Conservation Area	RET
45	G	Poplar	8			250	180	310	3	2	2	2	2	2	Semi-Mature	Fair	Fair	10+	C	2	Leaning	3	28.3			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
26	G	Cypress	16			550			3	3	3	3	1	0	Mature (Late)	Fair	Fair	10+	B	2	A line of unmanaged trees consisting of cypress as dominant also Corsican pine, sycamore (1)	7	136.9			REM
9	G	See Notes	12	0	12	250	75	250	1	1	1	1	0	0	Semi-Mature	Fair	Fair	10+	C	2	Mixed natives - namely goat willow, birch, poplar. No direct access as barbed fencing on one side and highway on the other.	3	28.3			RET
24	G	Cypress	9			330			3	3	0	3	2	2	Mature (Early)	Fair	Fair	<10	C	2	Growing in a tree coffin against a wall with no space for branches to grow on one side	4	49.3			REM

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
22	G	Alder	10			400			4	2	2	2	1	2	Mature (Early)	Good	Good	20+	B	2	Partial removal likely	5	72.4			RET
21	G	See Notes	16			435			6	6	6	6	0	0	Mature (Early)	Good	Good	20+	B	2	Holly, sycamore, oak trees. elder bush	5	85.6			RET
15	G	See Notes	5			200			2	3	3	3	0	0	Semi-Mature	Fair	Fair	10+	C	2	Mixture of ash sycamore hawthorn. Sycamore has multiple stems ranging from 75 to 300mm	2	18.1			REM
35	G	Alder	7			100			1	1	1	1	2	1	Young	Fair	Fair	10+	C	2	No access to council property.	1	4.5			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
19	G	Goat Willow	3			75	0	75	1	1	1	1	0	0	Semi-Mature	Good	Fair	10+	C	2	No access. Multi stemmed	1	2.5			REM
13	W	Hawthorn	5			100	75	120	2	2	2	2	0	0	Semi-Mature	Good	Good	10+	C	2	Two ash individuals (350 mm)	1	4.5			RET
16	G	Willow	5	0		200	7.5		2	2	2	2	0	0	Semi-Mature	Fair	Fair	10+	C	2	Mixture of willow ash, birch with understory of dog wood and rosehips. Surveyed from opposite side of road - a place of safety	2	18.1			REM
31	G	Ash	6	0	6	300	0	310	2	3	2	2	0	0	Mature (Early)	Good	Good	10+	C	2	Ash and one alder and sycamore	4	40.7			REM

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
30	G	Cypress	7			250			2	2	2	2	0	0	Young	Good	Good	10+	C	1	Surrounded by tarmac	3	28.3			RET
48	G	Unknown	5			110			1	1	1	1	0	0	Semi-Mature	Fair	Fair	10+	C	2	-	1	5.5			RET
3	G	See Notes	9	0	10	75	75	200	1	1	1	1	0	0	Semi-Mature	Good	Good	10+	C	2	Species include goat willow, hazel, sycamore, oak, hawthorn, birch,	1	2.5			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
2	G	See Notes	7	0	8	75	75	350	1	1	1	1	0	0	Mature (Early)	Fair	Fair	10+	C	2	Mix of native species including birch, alder, beech, willow, hazel coppice, cherry, Rowan, hawthorn. Only surveyed from paved area of layby due to safety, remaining section was extrapolated from a drive by.	1	2.5			RET
1	H	Hawthorn	4			120			1	1	1	1	0	0	Mature (Early)	Good	Good	10+	C	2	Hedge mostly hawthorn some hazel	1	6.5			REM
3	H	Cypress	4			75			1	1	1	1	0	0	Mature (Early)	Good	Good	20+	B	2	-	1	2.5			RET

Tree No	Type	Species	Height (m)	Minimum Height (m)	Maximum Height (m)	Stem Diameter (mm)	Minimum Diameter (mm)	Maximum Diameter (mm)	N	E	S	W	LCH	LBH	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contribution	Category	Sub-Category	Notes and Preliminary Management Recommendations	RPA Radius (m)	RPA Area (m^2)	Statutory Status	Environmental Status	Retain/Remove
2	H	Cypress	4			75			1	1	1	1	0	0	Mature (Early)	Good	Good	20+	B	2	-	1	2.5			RET