

Tree health and safety report for Hedge End Retail Park 2026

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Site	Hedge End Retail Park, Charles Watts Way, Hedge End, SO30 4RT
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Disclaimer	This report has been prepared to provide data and recommendations for the client based on the ground-based visual inspection of tree health and safety. This will be derived from observable factors of the tree's physiology at the time that the survey is conducted. It is the client's duty of care to undertake the necessary mitigating actions from the findings of this report within the proposed time limits. This might entail further aerial or advanced survey techniques or the recommended remedial tree management actions. However, in some cases access, vegetation, topography and time of year may limit the surveyor's ability to visually inspect a trees condition or detect pests, pathogens and diseases and should be noted within this report. Further work might be necessary to assess a tree, or group of trees health in these cases. Although the surveyor will endeavour to identify visual tree defects and propose mitigating management recommendations, trees can fail from undetected physiological conditions, weather events and acts of god. Therefore, the surveyor cannot guarantee the safety of any tree, or group of trees detailed within this survey. No tree can be deemed risk free and therefore we do not accept any liability for tree or branch failure under any circumstances.

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1. Introduction

At the instruction of the client, Nurture Landscapes Ltd, a ground-based visual tree inspection (VTA) was carried out for all trees and major vegetation present within the boundaries of, and neighbouring lands with trees affecting buildings and property of Hedge End Retail Park, Charles Watts Way, Hedge End, SO30 4RT (hereby referred to as Hedge End Retail, Map 1).

The landowner has a duty of care under a number of legislative acts including but not limited to:

- Occupiers' liability act 1957 and 1984
- Health and Safety at Work Act 1974
- The Town and Country Planning Act 1990 and 2008
- The Town and Country Planning Regulations 2012

Under current legislation, the occupier, within reason, should take all reasonably practicable steps to prevent harm to visitors on their land by tree related hazards. This includes regular tree inspections and the implementation of remedial management recommendations.

At the time of this report, there are two TPO's affecting the site; TPO (273-E) on a very large mature oak to the rear and side of Starbucks (T064, map 1) and a group Tree Preservation Order (93-E) that covers all tree species along the southern boundary of the site (Map 2) but the site is not within a Conservation Area according to Eastleigh Borough Council's online interactive TPO / CA mapping data available at <https://emaps.eastleigh.gov.uk/WebMaps/Map.aspx?MapName=Trees&initialDialog=layersDialog> (Map 2, accessed on 07/04/2026).

2. Scope

This report covers all trees within or affecting people, property and infrastructure at Hedge End Retail. Through a ground-based visual inspection using binoculars, a sounding hammer, probe and external features, we provide an assessment of the trees health and potential risk factor taking into account potential targets and land-use. Tree locations and findings were recorded using GPS enabled OTISS Tree Survey Software ([OTISS - Website - https://www.otiss.co.uk/treesurvey/index.html](https://www.otiss.co.uk/treesurvey/index.html)).

At the time of year that this survey was conducted (01/04/26 – 07/04/26), potential tree pests, pathogens and diseases, including fungal fruiting bodies, might not be visible.

3. Summary

We inspected around 319 trees at Hedge End retail: 77 individually, and 241 in 6 groups. Most grouped trees couldn't be checked one by one due to limited access, so their health was assessed based on crown condition and any impact on property and infrastructure (see Map 1 & Table 3). However, if a tree's vitality or defects were noted, then the tree within the group was individually recorded.

The species composition (Table 1) and age distribution (Figure 1) at Hedge End Retail are primarily characterised by young – Semi-mature trees within the carpark areas, with older trees around the perimeter. Most trees are in good health (Figure 2); however, some show signs of poor condition or structural issues, notably 3 dead roadside alders (T043 – T045 interspersed within G001, (Map 1, Table 3) that are in a state of collapse and could fall on to the main carriageway – Charles Watts Way.

Additionally, T006 (Map 1, Table 3) —a -mature false acacia that is located at the front of Starbucks and overhangs both the entrance road and disabled parking bays has a fungal fruiting body, most likely Chicken of the Woods (*Laetiporus sulphureus*) within the main union where the stem forks. Chicken of the Woods is associated with cubicle brown rot of the heartwood, which leaves the sapwood untouched and so the vitality of the crown can remain vigorous although the tree is structurally weakened. Therefore, we advise a crown reduction to remove weight and reduce the likelihood of a sudden fracture.

Many of the ash trees within the carpark are in a poor condition, most likely due to ash dieback, although positive diagnosis is difficult as the trees are not in leaf. We have advised remedial management actions on individual trees based on Health and Safety reasons, but if the FM wishes that all trees are managed to a more uniform appearance for aesthetic purposes, then a crown reduction and major deadwood removal would be advised for all affected trees (T024-T025 & T028 – T033, Map 1, Table 3).

If all recommendations within this report are commissioned, then we advise that the trees at Hedge End Retail are inspected every 2 years.

Table 1 Tree species composition at Hedge End Retail

Common Name	No. trees
Alder	3
Blackthorn	1
Broad-leaved cockspur hawthorn	1
Callery pear	3
Cherry	1
Common ash	9
Common hawthorn	6
Common holly	2
Common whitebeam	2
Crack willow	5
Elaeagnus	1
False acacia	33
Field maple	7
Goat willow	6
Hazel	27
Himalayan birch	3
Hornbeam 'Fastigiata'	11
Italian alder	1
Laurel cherry	150
Pedunculate oak	17
Rowan	4
Silver birch	15
Sorbus	6
Swedish whitebeam	1
Whitebeam	2
Wild cherry	5
Total	322

Figure 1 Age composition of trees at Hedge End Retail

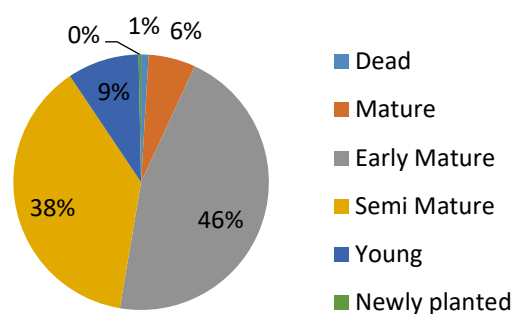


Figure 2 Tree condition at Hedge End Retail

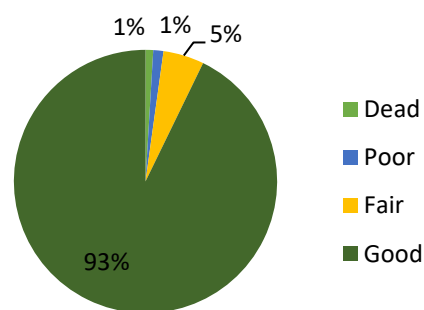


Table 2 Summary of advised remedial management activities

Timescale	No. recommendations
Urgent	3
1 Month	21
3 Months	13
6 Months	8
1 Year	8
No Action	31
Total	84

Table 3 VTA survey data and remedial management actions for Hedge End Retail

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
G001		Field maple x7 (<i>Acer campestre</i>) Common hawthorn x5 (<i>Crataegus monogyna</i>) Hazel (<i>Corylus avellana</i>) Pedunculate oak x8 (<i>Quercus robur</i>) Common holly x2 (<i>Ilex aquifolium</i>)	Height (m): 13 Crown Radius (m): 5 DBH (cm): 26-30 Trees: 23 Life Stage: Early Mature	Roadside tree. Target # - road. Target # - street lights. Target # - signage	Small, wooded area located next to Charles Watts Way Larger trees reduced in height due to high voltage overhead powerlines Encroaching on streetlight, signage and road	Good	Prune back roadside in line with barrier, 1.5m away from light and 1m from signage (TM required)	1 Year
G002		False acacia x12 (<i>Robinia pseudoacacia</i>)	Height (m): 6-10 Crown Radius (m): 3 DBH (cm): 11-15 Trees: 12 Life Stage: Young	Target # - car park.	Self-set trees along carpark boundary No obvious defects	Good	No action required.	No Action
G003		Silver birch x2 (<i>Betula pendula</i>) Laurel cherry x100 (<i>Prunus laurocerasus</i>) Sorbus (<i>Sorbus sp.</i>) Pedunculate oak x5 (<i>Quercus robur</i>)	Height (m): 12 Crown Radius (m): 5 DBH (cm): 21-25 Trees: 108 Life Stage: Early Mature	Dense group of understorey vegetation with larger semi-mature trees on edge of carpark and steep banking	Cannot inspect tree bases or stems Encroaching on building No obvious defects	Good	Prune to clear building or structure by 2m	6 Months

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
G004		False acacia x10 (<i>Robinia pseudoacacia</i>) Hazel x25 (<i>Corylus avellana</i>) Laurel cherry x50 (<i>Prunus laurocerasus</i>) Sorbus x5 (<i>Sorbus sp.</i>) Goat willow x4 (<i>Salix caprea</i>)	Height (m): 12 Crown Radius (m): 5 DBH (cm): 21-25 Trees: 94 Life Stage: Semi Mature	Steep banking in-between retail park, carpark and residential housing Target # - building Target # - car park.	Cannot inspect all tree bases due to location and vegetation, trees of note recorded individually Ivy heavily clads some trees in group Several dead or dying trees within group Encroaching on building	Good	Sever ivy at base to 1.5m and report defects Fell dead trees within group Prune to clear building by 2m Remove stems in contact with fencing	1 Year
G005		Common hawthorn (<i>Crataegus monogyna</i>) Blackthorn (<i>Prunus spinosa</i>) Hazel (<i>Corylus avellana</i>) Crack willow (<i>Salix fragilis</i>)	Height (m): 6-10 Crown Radius (m): 3 DBH (cm): 11-15 Life Stage: Semi Mature	Tree in fence line. Target # - car park. Target # - street lights.	Mixed hedgerow encroaching on delivery yard and streetlights	Good	Crown lift to 5m over delivery yard back to kerb edge Prune to clear street light by 1.5m	3 Months
G006	0897 - 0898	Silver birch x3 (<i>Betula pendula</i>)	Height (m): 12 Crown Radius (m): 4 DBH (cm): 21-25 Trees: 3 Life Stage: Early Mature	Tree in fence line on steep bank with scrub vegetation Target # - car park.	1 single stem and 1 twin stem tree Cannot inspect base or stem due to ivy No obvious defects	Good	Sever and remove ivy to 1.5m and report defects	1 Month
H001		Elaeagnus (<i>Elaeagnus sp.</i>)	Height (m): 0-5 Crown Radius (m): 2 DBH (cm): 11-15 Life Stage: Mature	Boundary hedge Target # - car park. Target # - road. Target # - street lights.	Untidy boundary hedge encroaching on street light and exit road from Sainsbury's	Good	Reduce in height to previous at approximately 3m and cut back roadside to boundary TM needed as vehicle speed on exit road can be fast	1 Year

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T001		Broad-leaved cockspur hawthorn (<i>Crataegus persimilis</i>)	Height (m): 2.5 Crown Radius (m): 1 DBH (cm): 0-5 Life Stage: Newly planted	Landscaped area outside of Starbucks	No obvious defects	Good	No action required.	No Action
T002		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 2 Crown Radius (m): 2.5 DBH (cm): 0-5 Life Stage: Mature	Landscaped area outside of Starbucks	Regrowth from historically felled tree Looks untidy for location	Good	Prune regrowth into shape or remove and eco-plug	1 Year
T003		Swedish whitebeam (<i>Sorbus intermedia</i>)	Height (m): 0-5 Crown Radius (m): 1.5 DBH (cm): 13 Life Stage: Young	Landscaped area outside of Starbucks	No obvious defects	Good	No action required.	No Action
T004	0905	False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 16 Crown Radius (m): 7 DBH (cm): 41 Life Stage: Mature	Landscaped area outside of Starbucks	Acute lean and unbalanced crown bias towards NEXT carpark service Road Encroaching on street light Deadwood throughout crown Weak union at 3m Cambium damage from vehicle at 3.5m	Fair	Crown reduce by 2.5m to reduce weight and remove deadwood >25mm	3 Months
T005		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 16 Crown Radius (m): 6 DBH (cm): 61 Life Stage: Mature	Landscaped area outside of Starbucks Target # - car park. Target # - road.	Major deadwood throughout crown Cannot inspect base due to ivy	Good	Remove major deadwood - greater than 25mm.	1 Month

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T006		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 16 Crown Radius (m): 8 DBH (cm): 56 Life Stage: Mature	Carpark island tree Target # - building Target # - car park. Target # - footpath. Target # - road.	Fungal fruiting body in main union at 2.5m associated with cubicle brown rot of the heartwood Fungus: Laetiporus sulphureus (Chicken of the Woods)	Fair	Crown reduce by up to 3m to reduce weight	1 Month
T007		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 4 Crown Radius (m): 1 DBH (cm): 6-10 Stems: 5 Life Stage: Young	Carpark island tree Target # - car park.	Regrowing shoots from historically felled tree	Good	No action required.	No Action
T008	0927	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 6 Crown Radius (m): 1.5 DBH (cm): 11 Life Stage: Young	Carpark island tree	No obvious defects	Good	No action required.	No Action
T009	0022	Rowan (<i>Sorbus aucuparia</i>)	Height (m): 0-5 Crown Radius (m): 2.5 DBH (cm): 13 Life Stage: Young	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action
T010	0923	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 7 Crown Radius (m): 1.5 DBH (cm): 6-10 Life Stage: Young	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action
T011	0924	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 8 Crown Radius (m): 1.5 DBH (cm): 12 Life Stage: Young	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T012	0925	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 8 Crown Radius (m): 2 DBH (cm): 13 Life Stage: Young	Carpark island tree Target # - car park. Target # - street lights.	Encroaching on street light No obvious defects	Good	Prune to clear street light by 1.5m	6 Months
T013	0928	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 8 Crown Radius (m): 2 DBH (cm): 11-15 Life Stage: Young	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action
T014	0929	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 7 Crown Radius (m): 2.5 DBH (cm): 14 Life Stage: Young	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action
T015	0930	False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 6-10 Crown Radius (m): 5 DBH (cm): 42 Life Stage: Mature	Carpark island tree Target # - car park. Target # - overhead wires.	Historically crown reduced due to high voltage power lines with up to 3m regrowth Major deadwood throughout crown	Good	No action required.	No Action
T016	0931	Rowan (<i>Sorbus aucuparia</i>)	Height (m): 3 Crown Radius (m): 2 DBH (cm): 11 Life Stage: Young	Carpark island tree Target # - footpath.	No obvious defects	Good	No action required.	No Action
T017	0932	Silver birch (<i>Betula pendula</i>)	Height (m): 11 Crown Radius (m): 5 DBH (cm): 49 Life Stage: Mature	Carpark island tree Target # - car park. Target # - overhead wires.	Historically crown reduced due to high voltage powerlines Cannot inspect base due to vegetation and ivy No obvious defects	Good	No action required.	No Action

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T018	0953	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 6 Crown Radius (m): 1 DBH (cm): 9 Life Stage: Young	Carpark island tree Target # - car park.	Cannot inspect base due to vegetation No obvious defects	Good	No action required.	No Action
T019	0952	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 8 Crown Radius (m): 1.5 DBH (cm): 6-10 Life Stage: Young	Carpark island tree Target # - car park.	Cannot inspect base due to vegetation No obvious defects	Good	No action required.	No Action
T020	0951	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 7 Crown Radius (m): 2.5 DBH (cm): 17 Life Stage: Young	Carpark island tree Target # - car park. Target # - street lights.	Cannot inspect base due to vegetation No obvious defects	Good	No action required.	No Action
T021		Whitebeam (<i>Aria edulis</i>)	Height (m): 0-5 Crown Radius (m): 2.5 DBH (cm): 13 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Cannot inspect base due to vegetation Low hanging crown over carpark No obvious defects	Good	Crown lift to 2.5m over carpark	6 Months
T022		Callery pear (<i>Pyrus calleryana</i>)	Height (m): 8 Crown Radius (m): 2.5 DBH (cm): 23 Life Stage: Semi Mature	Carpark island tree Target # - car park. Target # - street lights.	Encroaching on street light Low hanging crown over carpark Cannot inspect base or stem due to ivy Small dead hanging branch over carpark	Good	Sever and remove Ivy to 1.5m and report defects Crown lift to 2.5m over carpark Prune to clear street light by 1.5m Remove dead hanging branch at 5m	3 Months
T023	0945	Himalayan birch (<i>Betula utilis</i>)	Height (m): 4 Crown Radius (m): 2 DBH (cm): 9 Life Stage: Young	Carpark island tree Target # - car park.	Cannot inspect base due to vegetation Low hanging crown over carpark No obvious defects	Good	Crown lift to 2.5m over carpark	6 Months

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T024	0947	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 7 Crown Radius (m): 3 DBH (cm): 19 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Minor dieback of upper crown Minor deadwood throughout crown Dead hanging branch at 3m	Good	Remove deadwood - greater than 25mm. And specified hanging branch	1 Month
T025	0948	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 7 Crown Radius (m): 3 DBH (cm): 21 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Tree visually showing signs of stress Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 2 - 75%-50% remaining canopy	Fair	Crown reduce by 1.5m. To healthy growth points and 25% canopy thin Remove major deadwood - greater than 25mm.	1 Month
T026	0949	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 9 Crown Radius (m): 2 DBH (cm): 24 Life Stage: Semi Mature	Carpark island tree Target # - car park.	No obvious defects	Good	No action required.	No Action
T027	0936	Hornbeam 'Fastigiata' (<i>Carpinus betulus</i> 'Fastigiata')	Height (m): 8 Crown Radius (m): 2 DBH (cm): 26 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Several dead leaders	Good	Remove dead leaders back to suitable growth points	3 Months
T028	0948	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 4 Crown Radius (m): 1 DBH (cm): 14 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Advanced dieback Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 3 - 50%-25% remaining canopy	Poor	Fell, remove stump and replant	1 Month

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T029	0939	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 6 Crown Radius (m): 1.5 DBH (cm): 12 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Tree visually showing signs of stress Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 2 - 75%-50% remaining canopy	Fair	Crown reduce in height by 2.5m to healthy growth points and 25% canopy thin Remove major deadwood - greater than 25mm.	1 Month
T030	0939	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 4 Crown Radius (m): 1 DBH (cm): 13 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Advanced dieback Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 2 - 75%-50% remaining canopy	Poor	Section fell, remove stump and replant	1 Month
T031	0940	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 4 Crown Radius (m): 1 DBH (cm): 13 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Advanced dieback Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 2 - 75%-50% remaining canopy	Fair	Remove deadwood and reduce canopy by up to 1.5m and shape Thin by 25%	1 Month
T032	0941	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 0-5 Crown Radius (m): 1 DBH (cm): 16 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Advanced dieback Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 3 - 50%-25% remaining canopy	Fair	Remove deadwood and reduce canopy back to healthy leaders at approximately 2-2.5m and shape Thin by 25%	1 Month

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T033	0942	Common ash (<i>Fraxinus excelsior</i>)	Height (m): 7 Crown Radius (m): 1 DBH (cm): 17 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Suspected ash dieback but tree not in leaf for confirmation Pests and Diseases: Ash Health Class 1 - 100%-75% remaining canopy	Fair	Remove deadwood greater than 25mm and shape	3 Months
T034		Himalayan birch (<i>Betula utilis</i>)	Height (m): 8 Crown Radius (m): 3 DBH (cm): 18 Life Stage: Semi Mature	Carpark island tree Target # - car park.	Cannot inspect base due to vegetation Low hanging crown over carpark No obvious defects	Good	Crown lift to 2.5m over carpark	6 Months
T035		Callery pear (<i>Pyrus calleryana</i>)	Height (m): 6-10 Crown Radius (m): 2.5 DBH (cm): 18 Life Stage: Semi Mature	Carpark island tree Target # - car park. Target # - street lights.	Encroaching on street light Low hanging crown over carpark Cannot inspect base due to vegetation	Good	Crown lift to 2.5m over carpark Prune to clear street light by 1.5m	3 Months
T036		Callery pear (<i>Pyrus calleryana</i>)	Height (m): 8 Crown Radius (m): 2.5 DBH (cm): 23 Life Stage: Semi Mature	Carpark island tree Target # - car park. Target # - street lights.	Encroaching on street light Low hanging crown over carpark Cannot inspect base or stem due to ivy Small dead hanging branch over carpark	Good	Sever and remove Ivy to 1.5m and report defects Crown lift to 2.5m over carpark Prune to clear street light by 1.5m Remove dead hanging branch at 5m	3 Months
T037		Common whitebeam (<i>Sorbus aria</i>)	Height (m): 9 Crown Radius (m): 3 DBH (cm): 14 Life Stage: Semi Mature	Parkland tree.	No obvious defects	Good	No action required.	No Action

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T038		Himalayan birch (<i>Betula utilis</i>)	Height (m): 12 Crown Radius (m): 4 DBH (cm): 24 Life Stage: Early Mature	Parkland tree.	No obvious defects	Good	No action required.	No Action
T039		Common whitebeam (<i>Sorbus aria</i>)	Height (m): 7 Crown Radius (m): 3 DBH (cm): 6-10 Life Stage: Young	Parkland tree.	No obvious defects	Good	No action required.	No Action
T040		Pedunculate oak (<i>Quercus robur</i>)	Height (m): 6-10 Crown Radius (m): 6 DBH (cm): 37 Life Stage: Early Mature	Carpark island tree Roadside tree. Target # - car park. Target # - road. Target # - street lights.	Tree in raised area over exit road from Sainsbury's Encroaching on street light No obvious defects	Good	Prune secondary and tertiary branches to clear light by 1.5m so that light penetrates to ground level	1 Month
T041	0934	Silver birch (<i>Betula pendula</i>)	Height (m): 13 Crown Radius (m): 2.5 DBH (cm): 21-25 Life Stage: Early Mature	Carpark island tree Roadside tree. Target # - car park.	Cannot inspect base or stem due to vegetation No obvious defects	Good	No action required.	No Action
T042	0933	Silver birch (<i>Betula pendula</i>)	Height (m): 14 Crown Radius (m): 6 DBH (cm): 37 Life Stage: Mature	Target # - car park.	Tree on boundary between carpark and Charles Watts Way No obvious defects	Good	No action required.	No Action
T043		Alder (<i>Alnus sp.</i>)	Height (m): 8 Crown Radius (m): 1.5 DBH (cm): 11-15 Life Stage: Dead	Roadside tree. Target # - road.	Twin stemmed dead tree, one stem has collapsed into neighbouring oak tree, the other stem leans towards main road	Dead	Fell 'TM might be necessary'	Urgent

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T044		Alder (<i>Alnus sp.</i>)	Height (m): 9 Crown Radius (m): 0.5 DBH (cm): 11-15 Life Stage: Dead	Woodland tree. Target # - road.	Dead tree within falling distance of main road and Sainsbury's exit road	Dead	Fell	Urgent
T045		Alder (<i>Alnus sp.</i>)	Height (m): 8 Crown Radius (m): 1 DBH (cm): 16-20 Life Stage: Dead	Roadside tree.	Dead tree within falling distance of Charles Watts Way	Dead	Fell	Urgent
T046		Wild cherry (<i>Prunus avium</i>)	Height (m): 9 Crown Radius (m): 7 DBH (cm): 26-30 Life Stage: Mature	Target # - car park. Target # - overhead wires.	Height reduced and side nearest Pylon removed leaving an asymmetric crown bias towards carpark Cannot inspect base or stem due to vegetation Low hanging crown over access road No obvious defects	Good	Cut vegetation to provide access to base and clear 1m around stem, report any defects to FM or tree inspector Crown lift to 3m over access road	3 Months
T047		Silver birch (<i>Betula pendula</i>)	Height (m): 6-10 Crown Radius (m): 5 DBH (cm): 31-40 Life Stage: Mature	Target # - car park. Target # - overhead wires.	Height reduced and side closest to Pylon removed leaving an asymmetric crown bias towards carpark Birch polypore on secondary stem associated with localised deadwood Small snapped branches over low use area Cannot inspect base due to vegetation	Good	Cut access to base and 0.5m around stem and report defects to FM or tree inspector Crown lift to 3m over access road	3 Months

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T048		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 11 Crown Radius (m): 4 DBH (cm): 17 Life Stage: Semi Mature	Target # - car park.	Twin stem from included union at base 3 x snapped hanging branches within canopy at 4-5m Cambium damage to stem furthest from carpark boundary at 1m and 4m possibly from relatively recent ground works	Fair	Remove snapped and dead hanging branches	1 Month
T049	0918	Silver birch (<i>Betula pendula</i>)	Height (m): 12 Crown Radius (m): 4 DBH (cm): 32 Life Stage: Early Mature	Target # - carpark	Dieback of lowest carpark side laterals	Good	Remove 3 x lowest dead laterals on carpark side of tree back to main stem	6 Months
T050	0920	False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 14 Crown Radius (m): 6 DBH (cm): 78 Life Stage: Mature	Parkland tree. Roadside tree. Target # - road.	Major deadwood over low use areas	Good	No action required.	No Action
T051		Rowan (<i>Sorbus aucuparia</i>)	Height (m): 0-5 Crown Radius (m): 3 DBH (cm): 16 Life Stage: Semi Mature	Parkland tree.	Dieback of various leaders and laterals throughout crown Asymmetric crown due to shading by neighbouring tree	Fair	No action required.	No Action

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T052	0917	Wild cherry(<i>Prunus avium</i>)	Height (m): 11-15 Crown Radius (m): 10 DBH (cm): 71 Life Stage: Mature	Parkland tree. Target # - footpath.	Bark peeling above union where trunk bifurcates on roadside stem Fibre buckling on compression side of lowest lateral extending over footpath (low footfall walkway) Low hanging crown over footpath Dense crown with deadwood throughout	Good	Crown lift to 3m for pedestrian clearance.	1 Month
T053	0916.	Wild cherry (<i>Prunus avium</i>)	Height (m): 13 Crown Radius (m): 10 DBH (cm): 51 Life Stage: Mature	Parkland tree. Target # - footpath. Target # - signage	Asymmetric crown bias towards footpath Low hanging crown over footpath Dense crown with deadwood throughout Major deadwood over low use areas	Good	Crown lift to 3m for pedestrian clearance.	1 Month
T054	0915	Cherry (<i>Prunus sp. 'Cherry'</i>)	Height (m): 7 Crown Radius (m): 5 DBH (cm): 11 Life Stage: Semi Mature	Parkland tree. Target # - signage	Twin stem grafted on to older trunk Encroaching on signage	Good	Crown reduce laterals by up to 2m to improve sign visibility from road	1 Year
T055	0914	Rowan (<i>Sorbus aucuparia</i>)	Height (m): 0-5 Crown Radius (m): 1.5 DBH (cm): 14 Life Stage: Semi Mature	Parkland tree.	Advanced dieback	Poor	Fell tree.	1 Month

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T056	0913	Wild cherry (<i>Prunus avium</i>)	Height (m): 13 Crown Radius (m): 8 DBH (cm): 35 Life Stage: Early Mature	Parkland tree.	Dense crown with deadwood throughout No obvious defects	Good	No action required.	No Action
T057	09121c	Wild cherry (<i>Prunus avium</i>)	Height (m): 13 Crown Radius (m): 8 DBH (cm): 35 Life Stage: Early Mature	7Parkland tree.	Dense crown with deadwood throughout No obvious defects	Good	No action required.	No Action
T058	0911	Silver birch (<i>Betula pendula</i>)	Height (m): 12 Crown Radius (m): 2.5 DBH (cm): 13 Life Stage: Semi Mature	Parkland tree. Target # - road.	No obvious defects	Good	No action required.	No Action
T059	0908	Silver birch (<i>Betula pendula</i>)	Height (m): 16 Crown Radius (m): 5 DBH (cm): 41 Life Stage: Mature	Roadside tree.	No obvious defects	Good	No action required.	No Action
T060		Silver birch (<i>Betula pendula</i>)	Height (m): 14 Crown Radius (m): 8 DBH (cm): 31-40 Stems: 4 Life Stage: Mature	Located on banked ground within fenced area and surrounded by dense vegetation	Estimated dimensions Cannot inspect base or trunk due to vegetation and ivy No obvious defects	Good	Clear access to base and 1m around stems, sever ivy at base to 1.5m and report defects	1 Month
T061		Pedunculate oak (<i>Quercus robur</i>)	Height (m): 14 Crown Radius (m): 5 DBH (cm): 26-30 Life Stage: Early Mature	Within fenced off area and steep bank Target # - building	Cannot inspect base or trunk due to location No obvious defects	Good	No action required.	No Action

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T062		Goat willow (<i>Salix caprea</i>)	Height (m): 7 Crown Radius (m): 4 DBH (cm): 6-10 Stems: 8 Life Stage: Young	Self-set trees in fenced off area Target # - building	Historically pruned to clear building	Good	No action required.	No Action
T063		Silver birch (<i>Betula pendula</i>)	Height (m): 6-10 Crown Radius (m): 4 DBH (cm): 21-25 Life Stage: Early Mature	In fenced area and steep bank Target # - building	Grows on acute angle parallel with the back of Starbucks with dogleg accentuating lean at 2m Historically pruned to clear building Cannot inspect base or stem due to location and ivy	Fair	Sever ivy at base to 1.5m and report defects	1 Month
T064	0895	Pedunculate oak (<i>Quercus robur</i>)	Height (m): 16 Crown Radius (m): 12 DBH (cm): 126-150 Life Stage: Mature	Target # - building Target # - car park.	Cannot inspect base or stem due to location and vegetation Major deadwood over low use areas No obvious defects	Good	Clear access and 1m around stem and base to facilitate future inspections	1 Year
T065		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 12 Crown Radius (m): 3.5 DBH (cm): 21 Life Stage: Semi Mature	Located on edge of steep bank Target # - building Target # - structure	Hazard beam on main stem at 3m Basal cavities Historically pruned to clear building	Fair	Section fell to ground level and eco-plug stump	1 Month
T066		False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 11-15 Crown Radius (m): 5 DBH (cm): 41-50 Stems: 2 Life Stage: Mature	On steep bank between building and NEXT carpark Target # - building Target # - car park.	Cannot inspect base or stem due to ivy and location Heavily clad in ivy for nearly full crown height Twin stem from base	Good	Sever ivy at base to 1.5m and report defects	1 Month

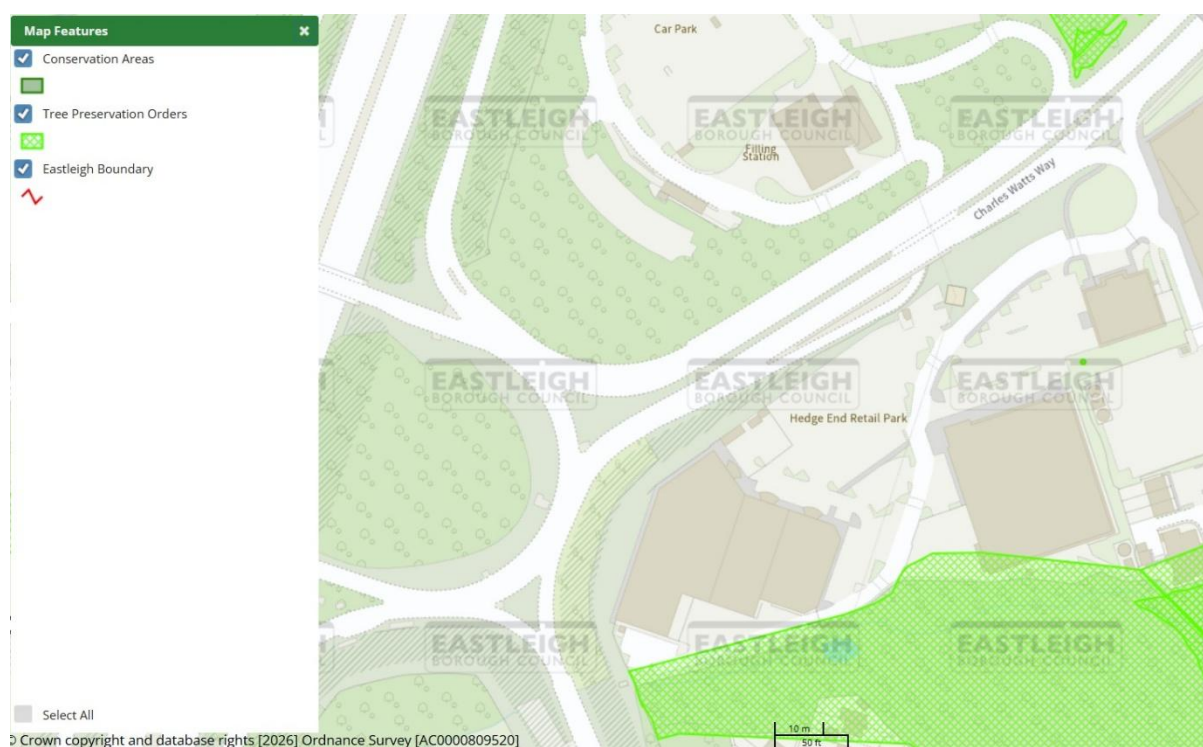
Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T067	0994	False acacia (<i>Robinia pseudoacacia</i>)	Height (m): 18 Crown Radius (m): 8 DBH (cm): 53 Life Stage: Mature	On steep bank overhanging building and water tank	Bifurcated at 1m and 1.5m into 3 main stems Major deadwood over low use areas Cambium damage or reactive growth on several stems at 4-5m but cannot determine severity or risk due to old ivy growth	Good	Crown reduce by 2m, remove major deadwood and aerial inspect stems at 4-7m and report defects to FM or tree inspector	1 Year
T068		Italian alder (<i>Alnus cordata</i>)	Height (m): 14 Crown Radius (m): 5 DBH (cm): 31-40 Life Stage: Mature	Located beside sprinkler tank overhanging residential gardens	Cannot inspect base or stem due to ivy Asymmetric crown bias towards houses	Good	Sever and remove ivy to 1.5m and report defects	1 Month
T069		Pedunculate oak (<i>Quercus robur</i>)	Height (m): 16 Crown Radius (m): 7 DBH (cm): 41-50 Life Stage: Early Mature	Owned by neighbour. Target # - building	3rd party tree encroaching on building Cannot inspect stem or base due to fence and ivy	Good	Prune to clear building by 2m and remove overhang back in line with roof edge	6 Months
T070		Silver birch (<i>Betula pendula</i>)	Height (m): 13 Crown Radius (m): 7 DBH (cm): 21-25 Life Stage: Early Mature	Owned by neighbour. Target # - car park. Target # - street lights.	3rd party tree encroaching on street light with low hanging crown over delivery yard Cannot inspect base or stem due to fence and ivy	Good	Crown lift to 4m over delivery yard Prune to clear street light by 1.5m	3 Months
T071		Crack willow (<i>Salix fragilis</i>)	Height (m): 7 Crown Radius (m): 7 DBH (cm): 21-25 Life Stage: Semi Mature	Tree in fence line. Target # - car park.	Historically pruned back from carpark back to an elongated lateral extending over delivery yard with hazard beam located 1m from main stem	Fair	Remove lateral with hazard beam and reduce main stem by 1.5m to healthy lateral protruding toward woodland to the rear	1 Month

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T072		Crack willow (<i>Salix fragilis</i>)	Height (m): 0-5 Crown Radius (m): 4 DBH (cm): 11-15 Life Stage: Young	Tree in fence line. Target # - car park.	Large cavity at base with weight supported by hedgerow vegetation	Fair	Fell tree.	3 Months
T073		Crack willow (<i>Salix fragilis</i>)	Height (m): 13 Crown Radius (m): 7 DBH (cm): 26-30 Life Stage: Early Mature	Tree in fence line. Target # - car park.	Large basal cavities with advanced decay associated with historically felled stems Acute lean with asymmetric crown bias towards carpark	Poor	Fell all stems leaving stumps at 1m	3 Months
T074		Crack willow (<i>Salix fragilis</i>)	Height (m): 9 Crown Radius (m): 4 DBH (cm): 21-25 Life Stage: Semi Mature	Tree in fence line. Target # - car park.	Acute lean and asymmetric crown bias towards carpark Low hanging crown over delivery yard Snapped hanging branches at 3m Dead subdominant stem with fungal fruiting bodies leaning toward carpark	Fair	Crown lift secondary and tertiary branches to 4m over carpark Reduce laterals extending over carpark by 3m to reduce weight Fell dead stem with fungal fruiting bodies	1 Year
T075		Whitebeam (<i>Aria edulis</i>)	Height (m): 6-10 Crown Radius (m): 4 DBH (cm): 21-25 Life Stage: Semi Mature	Tree in fence line.	No obvious defects	Good	No action required.	No Action
T076		Common ash (<i>Fraxinus excelsior</i>)	Height (m): 27.5 Crown Radius (m): 3.5 DBH (cm): 11-15 Life Stage: Semi Mature	Target # - car park.	No signs of buds swelling or life at branch tips, suspected ash dieback but tree not in leaf Healthy buds on epicormic growth in inner canopy	Fair	Inspect when in leaf, fell or reduce canopy by 2.5m in line with prognosis	3 Months

Ref.	Other Reference	Species	Measurements	Description	Survey Notes	Overall Condition	Recommendations	Timescale
T077	0901	Goat willow (<i>Salix caprea</i>)	Height (m): 0-5 Crown Radius (m): 7 DBH (cm): 21-25 Stems: 2 Life Stage: Early Mature	Tree in fence line. Target # - building Target # - car park.	Cannot inspect base or stem due to vegetation and ivy Dead leader hanging over low use area Over extended laterals overhanging carpark and structure	Fair	Clear access to base and 1m around Crown reduce by up to 3m. Sever ivy at base up to 1.5m and report defects Remove dead hanging leader	6 Months



Map 1 VTA mapping data and site boundary (red line) for Hedge End Retail



Map 2 TPO and Conservation Area affecting Hedge End Retail according to Eastleigh Borough Council's online interactive mapping data

Appendix 1. Key of main headings for VTA survey data (Table 3)

Ref.	Individual tree or group identification
Species	Common and Latin names for individual trees and the number counted / estimated if in a group in parenthesis
Measurements	Tree morphometrics including: Height – from ground level in metres crown spread - approximate greatest spread of crown in metres DBH – Diameter at breast height (1.5m from ground level) in CMs Trees – number of trees in group Life stage defined as: Newly planted – typically staked and tied Young – trees that are pre-sexual for any given species Semi-mature – juvenile trees up to 1/3 of mature crown spread and life expectancy for any given species Early-mature - trees within 1/3 – 2/3 of mature crown spread and life expectancy for any given species Mature – trees at full height and within average crown spread and life expectancy for any given species Over-mature – trees showing signs of retrenchment Ancient / Veteran – trees that typically have typical feature of an ancient tree and a high biodiversity value including advanced retrenchment of canopy, hollowing out of trunk caused by heartwood decay and high volumes of deadwood etc.
Description	Tree location and possible targets
Survey Notes	Notable features of the tree including signs of stress, fungal fruiting bodies, pests or pathogens, disease, decay, defects, instability and close proximity to infrastructure or breaching highways regulations
Overall condition	Recorded as: Good =High vigour and health for its species, age and site conditions Fair = Average vigour and health for its species, age and site conditions Poor = Low vigour and health for its species, age and site conditions Dead = tree shows no signs of healthy living aerial parts
Recommendations	Remedial management actions appropriate at the time of survey
Time-scale	Colour-coded hazard priority with associated time-scale to enact management actions

Appendix 2. Hazard class ratings, priority and associated time limits

Hazard Class	Definition	Time-Scale
Urgent	Tree proposes an immediate risk to people, property and infrastructure that could result in death, serious injury or substantial damage.	Remedial tree management actions should be undertaken as rapidly as possible to avoid potential harm.
High	Trees within target of a high risk area with the potential to cause serious harm to people, property and infrastructure	Remedial tree management actions should be undertaken within 3 months of VTA
Medium	Trees within a high risk area with the potential to cause minor damage or inconvenience as well as trees within a medium risk zone that are likely to cause harm.	Remedial tree management actions should be undertaken within recommended timescale of VTA
Low	Trees that require routine management for tree health or amenity value	Remedial tree management actions should be undertaken within recommended timescale of VTA
Advisory	Trees with no obvious defects. However, due to species and / or location we would recommend the following remedial management actions.	Remedial management actions are advised to be undertaken within recommended timeframe of VTA

Appendix 3. Glossary of Arboricultural Terms (Lonsdale, D. (2017) - The Principles of Tree Hazard Assessment and Management, Arboricultural Association):

Bracing: the use of rods or cables to restrain the movement between parts of a tree

Brown-rot: a type of wood decay in which cellulose is degraded while lignin is only modified

Canker: a lesion formed by the death of bark and cambium usually caused by a pathogen, fungi or bacteria

Coppice: To cut a tree near to the base of the ground to enable new shoots to be produced from the stool

Crown: Where the main body of foliage bearing branches extend from the main trunk or stem

Crown reduction: A specified reduction in size, specified either in meters or as a percentage, of the canopy of a tree whilst maintaining a natural shape

Crown lift: The removal of branches from the tree canopy to a specified height whilst retaining the foliage above this height

Co-dominant: Two or more stems that are of a similar size and from the same origin

DBH: Diameter at breast height (1.5m from ground)

Defect: A feature of the tree that may lead to an increase in mechanical or structural failure

Dieback: Where the canopy, or parts thereof, lose vitality and die from the distal tips of the branches

Eco-pile: The stacking of branches and wood to form a diversity in habitat to benefit the flora and fauna that inhabit, forage and / or nest within it.

Epicormic growth: These are shoots growing from adventitious or dormant buds that lie beneath the bark. Epicormic growth is often associated with physiological stress but can be

important in the management of veteran trees. They often grow into active shoots when damage occurs in the upper canopy, including after crown reductions.

Failure: In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.

Fissure: A radial or vertical (longitudinal) crack in the bark which can extend into the woody tissue and result in the tree or branch splitting. Bark fissures can indicate internal weakness.

Girdling: in woody plants, any form of damage which destroys or kills the bark and cambium all the way around a stem, branch or root, usually leading to the death of the distal portion

Girdling root: a root that grows across the buttress zone or across the bases of other roots, eventually causing constriction of radial growth

Hazard: A tree or branch failure with the potential to cause harm

Hazard Beam: An upwardly curved branch or part of the tree in which strong internal stresses or loading may occur without the compensatory formation of extra wood which can result in a longitudinal fracture

Included union: An acute union of forked stems or branches where ingrowing bark of the adjacent parts of the tree prevent a strong woody union. Included unions can be more prone to failure

Major deadwood: Deadwood >50mm in diameter or >1m in length that has the potential to cause harm or damage

Minor deadwood: Deadwood > 50mm in diameter that is unlikely to cause harm

Occlusion: The process whereby a wound is progressively closed by the formation of new wood and bark around it

Pathogen: A micro-organism which causes disease in another organism

Pollarding: The complete or partial removal of the tree crown to encourage the development of numerous branches

Reactive growth/reaction wood: Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss

Remedial action: in tree hazard management, action to remove or mitigate the risk of injury to persons or damage to property

Retrenchment: Die-back of the outer crown, giving rise to deadwood and stag-heads

Ring barking: a form of girdling, involving physical damage to the bark and cambium

Risk: risk is the combination of the probability of an event occurring and its consequence

Simultaneous white-rot: a kind of wood decay in which lignin and cellulose are degraded at about the same rate

Soft-rot: a kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole

Stringy white-rot: the kind of wood decay produced by selective delignification

Tree Preservation Order (TPO): in Great Britain, an order made by a local authority whereby the authority's consent is generally required for the cutting down topping or pruning of specified trees.

Vitality: in tree assessment, an overall appraisal of physiological and biochemical processes, in which high vitality equates with healthy function

White-rot: various kinds of wood decay in which lignin, usually together with cellulose and other wood constituents is degraded