July 2010
CBA7245

WSP Environmental
and Energy

CBA Trees

The Complete Professional Arboricultural Consultancy

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
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CBA7245

ARBORICULTURAL DEVELOPMENT STATEMENT (incorporating Arboricultural Implications Assessment and Method Statement in accordance with BS5837:2005)

Client:	WSP Environmental and Energy
Site:	Worthing Hospital, Lyndhurst Road, Worthing, West Sussex
Arboricultural Consultant:	Stefan Rose *BSc (Hons), Tech Cert (Arbor.A)*
Date:	July 2010

SUMMARY

The proposal is in two sections, a new Breast Clinic with a permanent car park, and the provision of a temporary car park for the period of hospital reconfiguration works. The second section is for the proposed construction of a new hospital ward block at Worthing Hospital, Lyndhurst Road, Worthing, West Sussex. This Arboricultural Development Statement (ADS) will demonstrate the protection measures for the retained trees.

This Arboricultural Development Statement should be read in association with the Tree Protection Plans (CBA7245.02 and .03). These plans identify the individual trees and groups of trees to be removed, and those to be retained. It follows the initial tree survey, implications assessment and on-going discussions to minimise the impact upon the existing tree stock.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for trees, to ensure their healthy and safe retention during and post development, as guided by BS5837:2005 and current best practice. Of the trees protected by TPO 1992 No.12 the proposed Breast Clinic only affects T22 (CBA 136) of the trees listed in schedule 1, this tree is however recommended for removal on grounds of sound arboricultural management. The New Ward Block proposal will involve the loss of T26 (CBA 56) from the above schedule, it is believed this tree is a replacement planting due to its size, age and species. Two trees from TPO 1992 No.12 G5 (CBA 29 and 30) will require light pruning on the Western side of the canopy which will not detrimentally affect the trees and CBA 31 is listed as lost to the development but it is hoped that this tree can been retained subject to further investigations.

The Breast Clinic and car parking areas will involve the loss of 11 (eleven) individual trees, one group of trees and the partial loss of Hedge 3. The new Ward Block will involve the loss of 3 (three) trees, albeit that one of these, T31, will be lost subject to site investigations which may prove the tree can be retained. Ten individual trees will be removed for sound arboricultural management regardless of any development proposals. A comprehensive landscaping scheme will be submitted as part of the planning proposals which will detail replacement tree planting. CBA Trees believes that the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

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Supporting Information/Appendices

CB1 Tree Survey Schedule and Tree Survey Plan (CBA7245.01 sheets 1 to 4)
CB2 Root Protection Area Schedule
CB3 Tree Protection Plans (CBA7245.02 and 03)
CB4 Tree Works Schedule

Guiding Principles/Appendices

CB5 Tree Preservation Order 1992, No.12
CB6 Tree Protection Guidance Leaflet
Construction Exclusion Zone Site Notice
Common Causes of Damage During Construction Works
CB7 Flow Diagram Summarising the Planning Process for Trees on Development Sites
CB8 Utilities Service Connection General Method Statement
CB9 Qualifications and Experience

PART 1
ARBORICULTURAL IMPLICATIONS ASSESSMENT

1.0 INTRODUCTION

1.1 There are two proposals for the site of Worthing Hospital, Lyndhurst Road, Worthing, West Sussex. This is an operational hospital and the proposed works are to improve the facilities available at the hospital.

1.2 The proposal is comprised of two planning applications, one is for the construction of a new Breast Screening unit with a permanent car park, and the provision of a temporary car park for the period of hospital reconfiguration works. The second section is for the proposed construction of a new hospital ward block.

1.3 Document disclosure provided:

- Topographical Site Survey by Survey Solutions drawing number 4363se-(01-04)
- Copy of Tree Preservation Order 1992 No.12 by Worthing Borough Council
- Breast Clinic and Temporary Car parking drawing provided by HLM Architects
- Breast Clinic Typical elevations Opt, drawing number E(sk)001
- Site Plan – Temporary car park and Breast Clinic, drawing number L(PA)001
- Ground floor plan, drawing number L(PA)002
- First floor plan, drawing number L(PA)002

New Ward Block

- Ground floor plan L (05) 001-P
- First floor plan L (05) 101-P
- Second floor plan L (05) 201-P
- Roof floor plan L (05) 301-P
- Elevation drawings E (05) 001 East
- Elevation drawings E (05) 002 West
- Elevation drawings E (05) 003 South
- Elevation drawings E (05) 004 North
- Section drawings S001
- Section drawings S002
- Section drawings S003

1.4 The client provided the original site plans and locations of the trees, and these have been the basis for the production of subsequent plans. Whilst CBA Trees has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of section 4.1.5 of BS5837:2005.

1.5 Our advice has been sought on the principles of the development in relation to the potential impact on the existing tree stock, to inform and to facilitate the development layout that is acceptable in arboricultural terms.

2.0 CLIENT'S BRIEF

2.1 In line with our written quotation and verbal instructions, information has been compiled in accordance with British Standard 5837:2005 – "*Guide to Trees in Relation to Construction – Recommendations"* and current best practice advice.

- To undertake a Tree Survey, appended at CB1.

- To produce an AutoCAD Tree Survey Plan that relies on the accuracy of the (topographical) survey provided by the client. (Plan CB7245.01 sheets 1-4) appended with the Tree Survey Schedule at CB1).

- To produce a schedule of Root Protection Areas in accordance with BS5837:2005 Table 2, appended at CB2.

- To undertake an arboricultural implications assessment (AIA) of the development provided by the client to identify which trees will be lost, which can be retained and suggest mitigating build techniques in order to retain trees.

- Based on the above and further on-going discussions, to provide an Arboricultural Development Statement detailing the methodologies for the retention of the tree stock where feasible in relation to the approved development layout including Tree Protection Plans CB7245.02 and 03 (appended at CB3).

3.0 DESCRIPTION OF THE SITE

3.1 The site is an operational hospital which contains typical masses of hard standing areas and large dominant buildings. Along the North boundary is a row of houses which will be demolished for the new Breast Clinic and temporary car parking areas.

3.2 The southern half of the site is dominated by car parking, the new Ward Block is proposed on a section of this car parking on the East side of the site.

3.3 Trees are located throughout the site, planted in verges, tree pits in pavements or in the adjacent park.

4.0 THE TREE STOCK

4.1 A tree survey was undertaken by CBA Trees on 12th and 13th January 2009. The tree survey exercise identified 144 individual trees, 9 groups of trees and 4 hedges; a Tree Survey Schedule and plan (CBA7245.01 sheets 1-4) are appended at CB1. The two proposed developments will not affect all trees on site, and therefore whilst the analysed data within this section focuses on all the trees surveyed, the implications of the proposed developments on the tree stock details only those trees that are likely to be affected by the proposals.

4.2 CBA Trees is aware that some of the trees on and adjacent to the hospital grounds as a whole, are protected by a Tree Preservation Order by Worthing Borough Council (1992, no.12) appended at CB5. This Order consists of 32 individual trees and 5 groups of trees. This Order was amended on the 5th October 1992 deleting T21 and changing the species of T14, 15, 16, 17, 18 and 19 from Limes to Planes (although the species for T19 has been crossed out, the new species has not been written in). It is under stood that the site, subject to this report is not in a Conservation Area.

4.3 The client is advised to obtain written confirmation from Worthing Borough Council to establish the legal status of any trees under the hospital's ownership prior to any works being undertaken, outside the remit of a fully approved planning application.

4.4 Tree Categorisation Method

Category R = Trees in such a condition that any value would be lost within 10 years, or should be removed for reasons of sound arboricultural management. There were 10 (ten) 'R' grade trees on or adjacent to the site at the time of surveying. Trees within this category are 36, 70, 115, 118, 130, 131, 134, 136, 138 and 142.

Note:
"Category R trees are those which would be lost in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be a consideration in the planning process."

Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There is 1 (one) individual 'A' grade tree on the site at the time of surveying. This is T38, a Holm Oak.

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 53 (fifty-three) individual 'B' grade trees on or adjacent to the site at the time of surveying. Trees in this category are 2, 3, 5, 7, 8, 9, 11, 16, 17, 18, 19, 26, 28, 31, 37, 39, 41, 44, 47, 48, 49, 50, 51, 52, 54, 60, 61, 62, 63, 66, 72, 75, 76, 77, 92, 93, 94, 95, 96, 97, 98, 99, 105, 109, 110, 111, 112, 129, 133, 139, 141, 143 and 144.

Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 80 (eighty) individual 'C' grade trees in total on or adjacent to the site at the time of surveying. Trees in this category are 1, 4, 6, 10, 12, 13, 14, 15, 20, 21, 22, 23, 24, 25, 27, 29, 30, 32, 33, 34, 35, 40, 42, 43, 45, 46, 53, 55, 56, 57, 58, 59, 64, 65, 67, 68, 69, 71, 73, 74, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 100, 101, 102, 103, 104, 106, 107, 108, 113, 114, 116, 117, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 132, 135, 137 and 140.

Note:
"Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively."

4.5 The following tables summarise the individual tree survey data:

4.5.1 Table 1 showing species distribution

Species	Number of Trees
Apple	7
Bay Laurel	4
Common Ash	8
Blue Atlas Cedar	1

Species	Number of Trees
Common Beech	5
Common Elder	4
Common Hawthorn	6
Common Holly	4
Common Lime	16
Common Sycamore	23
Common Walnut	1
Common Whitebeam	1
Common Yew	3
Fastigiate Hawthorn	3
Fastigiate Hornbeam	2
Field Maple	1
Flowering Cherry	10
Himalayan Cotoneaster	1
Holm Oak	2
Horse Chestnut	3
Irish Yew	1
Lawson Cypress	3
Leyland Cypress	2
London Plane	17
Monterey Cypress	2
Pine	1
Rowan	4
Scots Pine	3
Silver Birch	4
Silver Maple	1
Spindle Tree	1
Wild Cherry	1
Total:	**144**

4.5.2 Table 2 showing age class distribution

Age	Number of Trees
Young	73
Middle Aged	49
Mature	22
Over Mature	0
Dead	0
Total:	**144**

4.5.3 Table 3 showing BS5837:2005 physiological condition

Physiological Condition	Number of Trees
Good	115
Fair	22
Poor	7
Dead	0
Total:	**144**

4.5.4 Table 4 showing grade distribution

Grade	Number of Trees
R	10
A	1
B	53
C	80
Total:	**144**

4.6 The groups and hedges consist of Himalayan Birch, Strawberry Tree, Monterey Cypress, Blackthorn, Common Hawthorn, Norway Maple, Common Holly, Laurel, Privet, Bay Laurel, Portuguese Laurel, Leyland Cypress, Griselinia, Lawson Cypress and Euonymus. The groups of trees have been categorised as low 'C' grade. The hedges have been categorised as either moderate 'B' grade (H1) or low 'C' grade (H2, H3 and H4).

4.7 For more details of the existing tree stock, refer to the Tree Survey Schedule (appended at CB1).

5.0 PROPOSED TREE RETENTION AND TREE LOSS

5.1 In accordance with the recommendations contained within BS5837:2005 *"Trees in Relation to Construction"*, an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA) (appended at CB2). The implications of the two proposed developments are detailed below, along with any mitigating measures to ensure the retention of these trees.

5.2 Details of service location proposals have not been forwarded to CBA Trees at the time of compiling this assessment. It is however assumed, given the location of the trees, that services will be installed outside the root protection areas of retained trees, and connected to the existing where practicable.

5.3 As part of the assessment, dimensions have been scaled from the proposed development drawings P1-L00(PA) Breast Clinic and P2-L00_Building footprint prepared and modified, to include the relevant Tree Survey data and the information as shown on plan number CBA7245.03, appended at CB3.

5.4 Trees numbered 36, 70, 115, 118, 130, 131, 134, 136, 138 and 142 (Table 4) are all advised for removal for reasons of sound arboricultural management, regardless of any approved development and therefore these trees should not be considered as 'tree loss' relating to the proposed development of the Breast Clinic and temporary car parking section.

5.5 Summary of the implications for the trees, groups and hedges potentially affected by the proposed Breast Clinic and temporary car parking section:

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
113	Common Ash	C1+2	• Unaffected by development proposal	• Retained	-

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
114	Common Sycamore	C1+2	• Asphyxiation from car park through soil compaction • Loss of roots	• Lost	• Secure replacement tree planting
115	Common Sycamore	R	-	• Removed	• Removed for sound arboricultural management
116 (TPO G4)	Common Sycamore	C1+2	• Unaffected by development proposal	• Retained	-
117	Common Sycamore	C1+2	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
118	Common Sycamore	R	-	• Removed	• Removed for sound arboricultural management
119	Common Sycamore	C1+2	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
120 (TPO G4)	Common Sycamore	C1	• Unaffected by development proposal	• Retained	-
121	Common Sycamore	C1+2	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
122	Lawson Cypress	C1	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
123	Common Holly	C1	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
124	Common Ash	C1	• Asphyxiation from car park through soil compaction • Loss of roots	• Lost	• Secure replacement tree planting
125	Common Elder	C1	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
126	Common Holly	C1	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting
127	Common Elder	C1	• Unaffected by development proposal	• Retained	-
128	Common Whitebeam	C1	• Remove to facilitate development	• Lost	• Secure replacement tree planting
129	Common Ash	B1	• Minor root damage and/or root loss on perimeter of Root Protection Area	• Retained	• Minor root loss will not affect health or stability of tree
130	Lawson Cypress	R	-	• Removed	• Removed for sound arboricultural management

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
131	Himalayan Cotoneaster	R	-	• Removed	• Removed for sound arboricultural management
132	Common Holly	C1	• Unaffected by development proposal	• Retained	-
133	Lawson Cypress	B1	• Unaffected by development proposal	• Retained	-
134	Apple	R	-	• Removed	• Removed for sound arboricultural management
135	Flowering Cherry	C1	• Remove to facilitate development	• Lost	• Secure replacement tree planting
136 (TPO T22)	Common Hawthorn	R	-	• Removed	• Removed for sound arboricultural management
137	Common Sycamore	C1	• Unaffected by development proposal	• Retained	-
138	Common Elder	R	-	• Removed	• Removed for sound arboricultural management
139	Horse Chestnut	B1	• Loss and damage to minor roots	• Retained	• Install and maintain fit for purpose ground protection during demolition and construction
140	Common Lime	C1	• Unaffected by development proposal	• Retained	-
141	Common Ash	B1	• Unaffected by development proposal	• Retained	-
142	Common Walnut	R	-	• Removed	• Removed for sound arboricultural management
143	Common Lime	B1	• Unaffected by development proposal	• Retained	-
144	Common Sycamore	B1	• Unaffected by development proposal	• Retained	-
Grp 8 (TPO G4)	Leyland Cypress	C1+2	• Asphyxiation from car park through soil compaction • Loss of roots • Crown damage	• Retained	• Crown lift to 3m over car park area
Grp 9	Griselinia	C1+2	• Under footprint of temporary car park	• Lost	• Secure replacement tree planting

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
H 3	Laurel Leyland Cypress Euonymus	C1+2	• Partly under footprint of temporary car park	• Lost in part	• Garden boundary hedge with the site perimeter section retained
H 4	Leyland Cypress	C1+2	• Unaffected by development proposal	• Retained	-

5.6 Summary of the implications for the trees, groups and hedges potentially affected by the proposed new Ward Block:

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
28	Common Lime	B1+2	• Unaffected by development proposal	• Retained	-
29 (TPO G5)	Common Sycamore	C1	• Minor root loss due to building footprint • Crown damage during construction	• Retained with facilitation crown pruning	• Reduce the lateral spread on the West side of the canopy by a maximum of 1.5m
30 (TPO G5)	Bay	C1	• Minor root loss due to building footprint • Crown damage during construction	• Retained with facilitation crown pruning	• Reduce the lateral spread on the West side of the canopy by a maximum of 1.5m
31 (TPO G5)	Common Yew	B1+2	• Significant root loss due to building footprint	• Lost subject to careful excavation	• Carefully excavate with arboricultural supervision along proposed building footprint to assess amount of root loss • Dependant on findings retain or lose the tree • Secure significant replacement tree if tree lost
32 (TPO G5)	Common Sycamore	C1	• Unaffected by development proposal	• Retained	-
33	Spindle Tree	C1	• Unaffected by development proposal	• Retained	-
34	Common Sycamore	C1	• Unaffected by development proposal	• Retained	-
35 (TPO G5)	Monterey Cypress	C1	• Unaffected by development proposal	• Retained	-
56 (TPO T26)	London Plane	C1	• Significant crown damage and/or pruning to facilitate development	• Lost	• Secure replacement tree planting

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
57	Flowering Cherry	C1	• Under footprint of remodelled hard standing areas	• Lost	• Secure replacement tree planting
58	Flowering Cherry	C1	• Unaffected by development proposal	• Retained	-

PART 2
ARBORICULTURAL/CONSTRUCTION METHOD STATEMENTS

6.0 PRE-COMMENCEMENT SITE MEETING

6.1 Pre-commencement site meeting

A pre-commencement site meeting shall be held prior to any works commencing on site, to agree all approved processes with the Arboricultural Consultant, the construction personnel and Worthing Borough Council. This meeting could be used to formally agree the tree protection measures prior to commencement of the development and the associated clearance work.

7.0 PRE-DEVELOPMENT TREE WORKS

7.1 All tree works will be undertaken prior to the commencement of site preparation and construction works.

7.2 **All permitted or approved tree work** should be carried out in accordance with the British Standard *"Recommendations for Tree Work"* BS3998:1989, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the development of the site, and erection of protective fencing.

7.3 With regard to the trees to be retained, if protected by a Tree Preservation Order or within a Conservation Area, prior approval from Worthing Borough Council will be required if any works to these trees are proposed prior to full planning permission being granted detailing the approved tree works.

7.4 Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out during the dormant period from November through to February and then again from June to August. Consideration should also be given to nesting birds, and tree works should not normally be undertaken between March and May; however, care should be taken to inspect trees during the summer months for evidence of nesting birds. Although not apparent at the time of the site visit, consideration should also be given to the possible presence of bats, it may therefore be appropriate to carry out a full visual assessment before any works are carried out on the trees. Where bats are identified as a serious concern, a bat survey should be undertaken by qualified and trained personnel to identify the needs of the bats (roosts, resting place etc) and no tree works can be carried out until the 'all clear' is given, or a programme of recommendations is received in writing.

7.5 Should additional tree works become apparent during the construction process; written consent will be required from Worthing Borough Council prior to these additional works being undertaken.

7.6 All tree works that are required to facilitate the development are detailed within the Tree Works Schedule appended at CB4.

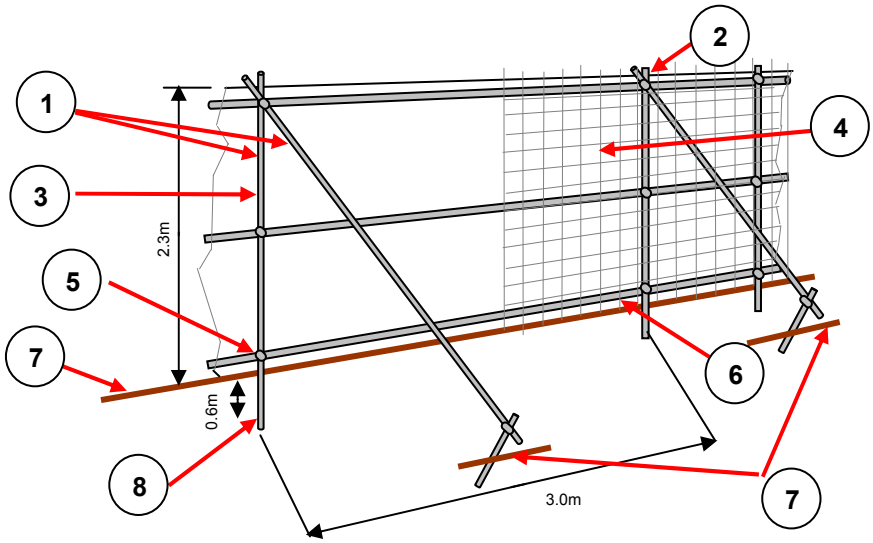
8.0 TREE PROTECTION MEASURES

8.1 Tree Protective Fencing and Tree Protection Plans

8.1.1 The protective fencing shall be erected in accordance with the location set out on the Tree Protection Plans CBA7245.02 and 03, which are appended at CB3, and will be erected prior to any site works. A copy of the Tree Protection Plans shall be made available for all site staff to see.

8.1.2 The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels will be fixed securely with wire or scaffold clamps (Figure 1 below and figure 2 of BS5837:2005). Weldmesh panels on rubber or concrete feet are not resistant to impact, and should not be used in close proximity to the development

Figure 1: Tree Protective Fencing Specification



1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of fencing to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground

8.1.3 Once the fencing is in place it must remain *in-situ* throughout the following phases of the development/construction:

- Contractor occupancy
- Plant and Materials delivery
- Construction works
- Installation of porus surfacing
- Utility installation
- Completion of development
- Landscaping

8.1.4 The area within the Construction Exclusion Zone (CEZ) will be regarded as **sacrosanct**, and the tree protective fencing shall not be taken down or relocated at any time without the written approval of Worthing Borough Council.

8.2 Additional Arboricultural Advice for Site Personnel

8.2.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet, appended at CB6 shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.

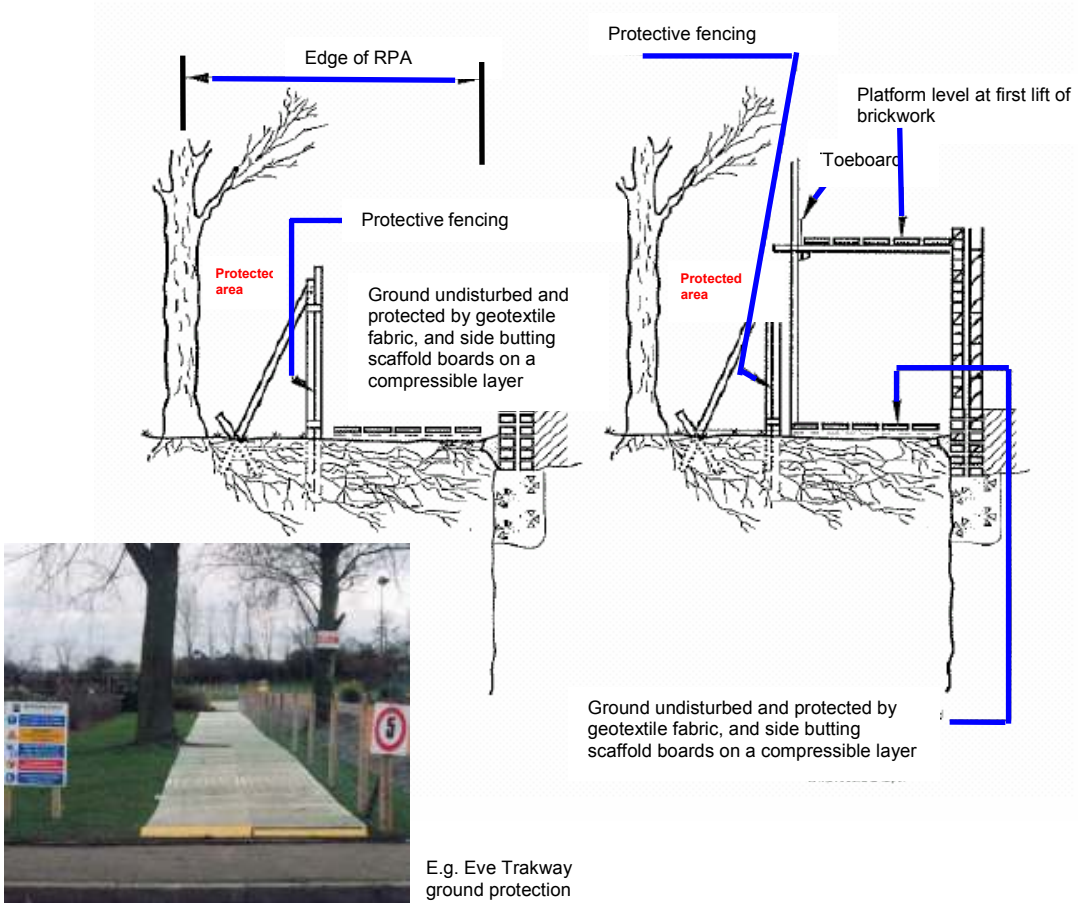
8.2.2 In order to inform site personnel of the purpose of the fencing, information notices shall be fixed to the fencing at 5m intervals. These notices shall be of all-weather construction and shall be substantially in the form of the specimen provided at appendix CB6, and shall be replaced as and when necessary.

8.3 Ground Protection and Scaffolding Specification

8.3.1 In addition, ground protection will be implemented, similar to that shown in Figure 3 of BS5837:2005, and illustrated as figure 2 below, for the area within the Root Protection Areas, to allow for construction and working space. This is necessary to provide working space for construction activities, which may include implementation of foundations, and for the erection of scaffolding to aid in building. This will only be required if the existing hard surface of the car park is to be removed prior to the completion of the project.

8.3.2 Additional heavy-duty ground protection may, in some circumstances, be required. This is feasible through the use of concrete slabs or heavy duty boarding (e.g. Eve Trakway) to enable a higher level of ground protection of the tree's rooting area, and to reduce the potential for damage and compaction.

Figure 2: BS5837:2005 Ground Protection and Scaffolding



Pedestrian Movements

Section 9.3.2 *"For pedestrian movements within the RPA, the installation of ground protection in the form of a single thickness of scaffold boards, on top of a compressible layer laid onto a geotextile, or supported by scaffold may be acceptable".*

9.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE

9.1 Construction Exclusion Zone (CEZ)

9.1.1 Inside the Construction Exclusion Zone (CEZ) formed by the protective fencing and ground protection measures, the following prohibitions shall apply:

- **No construction activity will occur within the CEZ unless otherwise stated in this report or agreed in writing with Worthing Borough Council prior to the specific activity taking place.**

9.1.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

- Materials, which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.

- Fires shall not be lit in a position where their flames can extend to within 5 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.

- Notice boards, telephone cables or other services shall not be attached to any part of the tree. (See appendix CB6 Common Causes of Damage During Construction Works)

10.0 REMOVAL OF HARD SURFACES/BUILT FORM IN CLOSE PROXIMITY TO RETAINED TREES

10.1 Removal of existing surfacing, built forms or other excavations within the Construction Exclusion Zone of retained trees, must be undertaken by hand (where feasible and in line with Health and Safety polices) to avoid any surface root damage, and shall be supervised on-site by the Retained Arboricultural Consultant.

10.2 Any removal of hard surfacing, built form or other excavations in close proximity to trees will be undertaken by working only from the existing hard surface or protected ground area. The required work should then be completed with hand operated tools or appropriate machinery, but under the supervision of an arboriculturist. Any machinery or equipment to be used will need to be lightweight and run on additional ground protection, or working from the existing hard standing only.

10.3 If the area of the zone of protection around the retained trees is to be left following the removal of the existing hard surface, and before a new hard surface

is laid, or the area receives soft landscaping treatment, then ground/tree protection MUST be correctly re-established immediately the hard surface removal work has been completed.

10.4 If there is a delay, for whatever reason, and the area that was previously protected by hard surfacing is left exposed awaiting a new surface, a temporary surface must be implemented, and/or Hessian sacking must be placed over any exposed roots.

10.5 Demolition of Existing Buildings

10.5.1 Demolition of existing surface structures will be carried out so as to prevent damage to existing retained trees.

10.5.2 Demolition of the structures in close proximity to the retained trees must be undertaken with due care and attention, in order to adequately respect overhanging canopies of all retained trees. To this end, the following rules will apply:-

- Site personnel are to undergo an induction session prior to being allowed to work on site. The induction will introduce the contractors to the requirements of the Protection Method Statement. A copy of the Method Statement will be made available as a point of reference in respect of tree protection requirements. In addition, a copy of the Tree Protection Plans will be provided or pinned up in the site hut. During the induction, trees which are to be retained and protected will be highlighted to the demolition personnel and be physically shown which trees are to be protected on site. In this way, it is hoped that unnecessary damage by root disturbance and collision of machinery booms and operating arms with tree crowns can be avoided.

- All walls are to be pulled in on themselves towards the centre of the site, and away from retained trees. This will be done in a direction away from the tree protective fencing; all large machinery to be operated at least 2.5-3.0m outside of the tree protective fence line from where it is erected for the site preparation works.

- Any machinery used for this purpose is to stand and operate over existing hard surfaces wherever possible, but always outside the Construction Exclusion Zone as defined by the protective fencing.

- Lightweight structures will be demolished and removed by hand. Work will be carried out from existing hard surface. If the structure is not served by existing hard surface, ground protection will be laid in accordance with Figure 3 BS5837:2005 (shown on following page).

11.0 PHASING OF DEVELOPMENT

11.1 The process of the development should follow that of Figure 1 of BS5837:2005 (appended at CB6) in addition to any additional site-specific considerations and factors that need to occur, or be implemented in any one phase.

12.0 CONSTRUCTION WORK TIMINGS

12.1 This is for determination by Worthing Borough Council.

13.0 VEHICULAR MOVEMENTS

13.1 There should be minimal vehicular movement in the rooting zone outside the Root Protection Area.

13.2 It is not anticipated that there will be a need for excess vehicular movement near the retained trees, given that there are established access areas.

14.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

14.1 It is anticipated that all storage materials and deliveries shall make use of the existing accesses and hard standing areas within the site confines, in order to avoid unnecessary damage to tree roots.

14.2 The locations shall be agreed in writing with Worthing Borough Council prior to the actual undertaking, and will remain in only those agreed locations throughout the construction phases. If an alternative location is required, this must be agreed in writing with Worthing Borough Council. This will also include the delivery; storage and movement of all essential facilities, as well as aspects such as temporary contractor vehicle parking and site location of chemical mixing (e.g. concrete). All such locations will be outside of the Root Protection Areas and avoid areas where 'run off' of chemicals may flow into root protection areas.

14.3 Site Huts

All site huts (if required) that are to be situated on ground that is not existing hard surfacing, shall have appropriate footings or be situated on a temporary surface, which will aid in reducing the potential for compaction of the ground where they are in close proximity to the existing tree protective fencing line. Site huts can be used as part of the protective fencing boundary and in some cases can be beneficial.

14.4 Material Storage

This shall be accommodated outside of the Construction Exclusion Zone, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

15.0 UTILITY SERVICE CONNECTIONS

15.1 The following services will avoid the Root Protection Areas of trees and their roots where feasible, given site constraints:

Foul and surface water drains	*Electricity*
Land drains	*Telephone*
Soakaways	*Lighting*
Gas	*Signage*
Oil	*Water*

15.2 The location of all new service routes will be outside of the Root Protection Areas of the trees to be retained on site, to avoid disturbance of tree roots and ensure their healthy retention.

15.3 If services must unavoidably be installed within the Root Protection Areas of retained trees, works will be carried out using trenchless techniques such as moling, laser guided boring and/or in accordance with advice appended at CB8.

16.0 SITE MONITORING AND SUPERVISION

16.1 On-going arboricultural site monitoring for the duration of the proposed development will be carried out by the retained Arboricultural Consultant approved by Worthing Borough Council.

16.2 This work will be undertaken by a qualified and experienced arboriculturist at pre-determined and agreed time intervals. It will take the form of regular inspections (to be agreed, but at least one visit per month during the construction phase of the development is advised), on-going liaison with all personnel involved in the site development, Worthing Borough Council and its Tree Officer.

Examples of when an Arboriculturist would be required on site:
- ❖ *Inspection of the tree protective fencing*
- ❖ *Any works within the root protection areas of retained trees*

16.3 Any defects requiring rectification shall be notified to the Contractor/Site Manager and the client.

16.4 In addition, it is proposed that a site logbook is kept to record all stages of the development from the erection of the protective fencing, right through to the completion of the project. This will be made available to Worthing Borough Council if required, to show evidence of site monitoring.

Example pro-forma

Date	Activity	Checked	Comments/ damage noted	By whom	Signed	Action taken
13/08/10	Erection of protective fencing					
20/08/10	Inspection of protective fencing					

16.5 Worthing Borough Council's Tree Officer (or appropriate representative) will have free access to the site, and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

17.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

17.1 Care shall be taken when planning site operations, to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

18.0 REPORT DAMAGE TO TREES AND TREE PROTECTION FENCING

18.1 Should any damage be caused to trees noted for retention, either by the above works or as the result of any other action, the damage should be reported to the site supervisor immediately. The site supervisor shall report up the chain of responsibility to the retained consultant arboriculturist, or in the absence of such an appointment, to an appropriately qualified arboriculturist, to enable remedial measures to be implemented as necessary and as agreed with Worthing Borough Council.

18.2 Should protective fencing become damaged so as to impair its function in protecting trees, all work shall cease in the vicinity of the damage, until the fence has been returned to standard.

19.0 REMOVAL OF PROTECTIVE FENCING

19.1 When the development phase is complete, all drainage and service runs are in place, all site machinery has been removed and any landscaping for the principal area of the site has been implemented, the protective fencing will be dismantled.

19.2 This fence dismantling must be undertaken with great care, and will need to be supervised to avoid heavy machinery being used within the root protection areas. Hoarding, scaffolding and other fencing materials will need to be removed from site immediately.

20.0 COMPLETION MEETING

20.1 Upon completion of all the works specified above, and in line with procedures also specified, the retained arboricultural consultant will invite Worthing Borough Council's Tree Officer to meet on site, to discuss the project and to agree on any remedial works required.

21.0 FUTURE MANAGEMENT AND POST DEVELOPMENT TREE MANAGEMENT

21.1 The site owner will be under an obligation to maintain and manage the tree stock on site, and should seek to address this obligation through having regular tree inspections by a suitably qualified arboricultural consultant.

21.2 At Section 15 of BS5837:2005 emphasis is placed on the aftercare of trees following completion of development works. Whilst we support these recommendations, this is a matter for our clients to consider and for Worthing Borough Council to determine whether they wish to apply a Condition relating to this aspect of work.

Section 15 Post development management of BS5837:2005

15.1 Existing trees

15.1.1 *Trees growing on a site before development takes place may, if adversely affected, be in decline over a period of several years before they die. This varies greatly depending on the age, species and condition of the tree, the soil conditions, climate, and the extent of damage incurred during development. A programme of inspections and necessary work for the treatment of symptoms as they develop should be drawn up in conjunction with an arboriculturist. This programme may include recommendations for frequency of inspection and/or beneficial tree work and should take the form of an arboricultural management plan.*

15.1.2 *Where the trees in question are protected by planning controls, the planning authority should be informed and any necessary agreements obtained prior to such work.*

15.1.3 *Prior to handover, following completion of development, the arboriculturist should look for signs of intolerance to the change in conditions and the effect of the development and any accidental damage to identify the need for further tree works in addition to those originally specified at the beginning of the development process.*

15.1.4 *An arboriculturist should consider appropriate cultural operations. These may include irrigation, or measures to enhance the soil structure and organic nitrogen levels in the soil.*

15.1.5 *Where the development design incorporates the need for active management following the completion of construction works, a tree or landscape management plan should be prepared and a copy supplied to all parties who may have an interest in the future management of the site or parts of it.*

15.2 New plantings

Maintenance of newly planted trees is of particular importance during the critical establishment period, of at least two years and may, where required by planning conditions, be five years or more following planting A detailed maintenance schedule covering the establishment period should be prepared in conjunction with the landscape design proposals and appropriate arrangements made for its implementation

22.0 CONCLUSIONS

22.1 The proposal is in two sections, a new Breast Clinic with a permanent car park, and the provision of a temporary car park for the period of hospital reconfiguration works. The second section is for the proposed construction of a new hospital ward block at Worthing Hospital, Lyndhurst Road, Worthing, West Sussex. These proposals have been assessed broadly in accordance with British Standard 5837:2005 – *"Trees in Relation to Construction – Recommendations"*.

22.2 The Breast Clinic and car parking areas will involve the loss of 11 (eleven) individual trees, one group of trees and the partial loss of Hedge 3 of which no trees are covered by the Tree Preservation Order 1992 No.12. The new Ward Block will involve the loss of 3 (three) trees albeit that one of these, T31 will be lost subject to site investigations which may prove the tree can be retained. Trees 31 and 56 are protected by the Tree Preservation Order 1992 No.12.

22.3 Tree 31 (new Ward Block) is shown to be removed as part of the planning application due to potential root loss. However, due to the Tree Preservation Order and the existing area of hard standing, the tree will be protected and retained until the excavation and inspection under supervision is carried out along the building footprint within the Root Protection Area. This should be carried out during the initial construction phase to fully assess the impact on this tree. After inspection, if the works appear to imminently render the tree unsafe it will be removed and a significant replacement replanted (species and location to be approved by Worthing Borough Council).

22.4 Tree 56 appears on the map to be covered by the Tree Preservation Order 1992, No.12 by Worthing Borough Council (T26). However, there is a discrepancy between the species listed in the amended first schedule (listed as Sycamore) whereas CBA Trees has identified this as a London Plane, this may be a replacement planting for a previously removed tree.

22.5 Trees 29, 30 and 31 are protected by the Order, detailed as G5. The light pruning required will not have a detrimental affect on the amenity of Trees 29 and 30, and the development will not affect their long-term retention. Yew, as a species can respond and cope well with some root loss. It is the intention of CBA Trees to retain tree 31, subject to the further investigations detailed in paragraph 22.4.

22.6 It is our opinion that the trees identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.

22.7 It is our opinion that the loss of the trees, groups and hedges will not have a detrimental effect on the local visual amenity or significantly alter the visual treed character of the local area. As a comprehensive landscaping scheme will be submitted as part of the planning proposals, this will detail replacement tree planting which will provide new tree planting that will provide long term tree cover on the site.

22.8 Provided the recommendations included within this report are strictly adhered to, CBA Trees believes the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

23.0 CONTACT LIST

23.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:-

- Arboricultural Consultant
- Project Architect
- Highways Engineer
- Structural Engineer
- Landscape Architects
- Worthing Borough Council's Tree Officer
- Worthing Borough Council's Planning Case Officer
- Site Supervisor and Foreman

23.2 It is advised that the Site Supervisor establishes their own listing of contact details at the pre-start site meeting, and displays this in their office for general use as necessary.

24.0 BIBLIOGRAPHY

- British Standard 5837:2005 –
  "Trees in Relation to Construction –Recommendations"
- British Standard 3998:1989 –
  "Recommendations for Tree work"
- National Joint Utilities Group Publication Volume 4 –

"Guidelines for the planning, installation and maintenance of utility services in proximity to trees"

- Wildlife and Countryside Act 1981
- Town and Country Planning Acts

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CB1

TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2005 and current good arboricultural practice.

- Each tree has been numbered and, where instructed, for future identification on site, has been tagged using small durable metal or plastic tags.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, or immediately above the root flare for multi-stemmed trees, using a standard measuring tape as defined by British Standards, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which will be recorded on the tree survey plan.
- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

Y	**=**	**young trees**
MA	**=**	**middle aged trees**
M	**=**	**mature trees**
OM	**=**	**over-mature trees**
V	**=**	**veteran**

- An assessment of a tree's physiological condition is defined as:

Good	**=**	**fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure**
Fair	**=**	**fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure**
Poor	**=**	**a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure**
Dead	**=**	**dead**

- An assessment of a tree's structural condition is defined as:

  Good = no significant structural defects
  Fair = structural defects which could be alleviated through remedial tree surgery or management practices
  Poor = structural defects which cannot be alleviated through tree surgery or management practices
  Dead = dead

- An assessment of a tree's future life expectancy is defined as: **<10, 10-20, 20-40 or >40 years.**

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2005. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will however not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category R	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees in such a condition that any value would be lost within 10 years or should be removed for reasons of sound arboricultural management				**DARK RED**
Category A				
Trees of high quality and value: in such a condition as to make a substantial contribution (40 years or more is recommended)	Trees that are a particularly good example of their species, rare or unusual, essential components of groups or of formal or semi-formal features.	Trees, groups or woodlands providing definite screening of views in and out of the site, or softening effect to the locality, or those of particular visual importance.	Trees, groups or woodlands of significant conservation, historical or other value (e.g. veteran or wood-pasture)	**LIGHT GREEN**

Category B				
Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years.	Trees which might be included in the A category, but are downgraded due to impaired conditions/remediable defects.	Trees in numbers, that collectively form a distinct landscape feature but are not individually an essential component of a formal or semi-formal feature. These are likely to be trees situated mainly within the site with little visual impact on the surrounding locality.	Trees with clearly identifiable conservation or other cultural benefits.	**MID BLUE**
Category C				
Trees of low quality and value which might remain for a minimum of 10 years or young tress with stems of less than 150mm diameter.	Trees not qualifying in higher categories	Trees in groups or woodlands without having significant landscape value or offering low or temporary screening value	Trees with very limited conservation or other cultural benefits	**GREY**

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. It will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either "*full ground level inspection"* or "*climbing inspection required".* There may also be a further reference to the need for "*decay detection equipment"* to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

TREE SURVEY SCHEDULE

Client:	WSP Environmental & Energy	**Site:**	Worthing Hospital, Lyndhurst Road, Worthing, West Sussex
Date:	12th and 16th January 2009	**Consultant:**	Richard Harris *HND Forestry*
Tagged:	No	**Weather:**	Overcast

Notes:-
1. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
2. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
3. Tree Groups have been assessed with estimated and representative data.
4. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
5. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species which needs consideration prior to any tree surgery works commencing.

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
1	Silver Birch *Betula pendula*	6	S	90	1.5	1.5	1.5	1.0	1.5	1.5	1.5	1.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1
2	London Plane *Platanus x hispanica*	7	S	240	5.0	4.0	5.0	4.0	3.0	3.0	3.0	3.0	Y	Good	Good Trifurcated at 3m above ground level and previously pollarded at 4m above ground level Old pruning wounds in crown	None required at time of survey	>40	B1
3	London Plane *Platanus x hispanica*	6	S	220	5.0	4.0	5.0	3.0	3.0	3.0	4.0	3.0	Y	Good	Good Trifurcated at 3m above ground level and previously pollarded at 4m above ground level Old pruning wounds in crown	None required at time of survey	>40	B1
4	Silver Birch *Betula pendula*	7	S	120	2.0	2.0	2.0	1.0	1.5	1.5	1.5	1.5	Y	Good	Good Developing tree Good shape and form	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
5	Common Sycamore *Acer pseudoplatanus*	9	MS	390	3.5	3.5	4.0	4.0	2.0	2.0	2.5	3.0	Y	Good	Good Multi-stemmed at 1.5m above ground level Grows around BT pole and through lines Previously crown reduced at 5m above ground level	None required at time of survey	>40	B1
6	Common Ash *Fraxinus excelsior*	8	MS	515	5.0	5.0	5.0	5.0	4.0	3.0	2.0	2.0	Y	Fair	Fair Bifurcated at ground level Tight forks with included bark Bark crack on stem to South Dieback in stem to South Minor deadwood in crown	None required at time of survey	10-20	C1
7	Common Yew *Taxus baccata*	8	MS	540	2.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	MA	Good	Good Off-site tree Trifurcated at 1m above ground level Crown shape distorted due to group pressure Ivy on trunk	None required at time of survey	>40	B1
8	Common Lime *Tilia x europaea*	10	S	230	4.0	3.0	4.0	3.0	3.0	2.0	2.0	3.0	Y	Good	Good Off-site tree Crown shape distorted due to group pressure Crossing branches Tight forks with included bark Lower branches to East and South side over footpath reduced Bifurcated at 2.5m above ground level	None required at time of survey	>40	B1
9	Common Sycamore *Acer pseudoplatanus*	13	S	370	6.0	6.0	6.0	3.0	2.0	3.0	2.0	3.0	MA	Good	Good Off-site tree Trifurcated at 2m above ground level Crown shape distorted due to group pressure Minor deadwood in crown	None required at time of survey	>40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
10	Common Ash *Fraxinus excelsior*	13	MS	800	5.0	3.5	5.0	6.0	4.0	11.0	3.0	3.0	MA	Good	Good Off-site tree Trifurcated at ground level Ivy on trunk Crown shape distorted due to group pressure Tight forks with included bark Grows at foot of bank to South	None required at time of survey	20-40	C1
11	Fastigiate Hornbeam *Carpinus betulus 'Pyramidalis'*	14	S	320	3.5	5.0	5.0	3.0	3.0	3.0	2.0	3.0	MA	Good	Good Off-site tree Footpath to West at 0.2m Multi-stemmed at 2m above ground level Obscures street light to South at 4m	None required at time of survey	20-40	B1
12	Common Sycamore *Acer pseudoplatanus*	14	S	260	5.0	3.0	4.0	1.0	3.0	3.0	4.0	2.0	Y	Good	Good Off-site tree Crown shape distorted due to group pressure	None required at time of survey	20-40	C1
13	Silver Maple *Acer saccharinum*	14	S	390	7.0	5.0	4.0	5.0	4.0	3.0	10.0	2.0	MA	Good	Good Off-site tree Crown shape distorted due to group pressure Bark crack on trunk Basal suckers Crown weighted North	None required at time of survey	>40	C1
14	Silver Birch *Betula pendula*	6	S	220	2.0	4.0	4.0	4.0	2.0	2.5	4.0	2.5	MA	Fair	Fair Growing on bank Overhangs footpath Poorly crown lifted over footpath Crown shape distorted due to group pressure Poor shape and form	None required at time of survey	10-20	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
15	Scots Pine *Pinus sylvestris*	10	S	260	1.5	3.0	3.5	3.0	3.0	3.0	2.0	1.5	Y	Fair	Fair Crown shape distorted due to group pressure Low crown density Low branches reduced and dead Signs of stress	None required at time of survey	10-20	C1
16	Common Yew *Taxus baccata*	6	MS	470	3.5	3.5	3.5	3.5	2.0	2.0	2.0	2.0	Y	Good	Good Grows adjacent to footpath Bifurcated at 1m above ground level Tight forks with included bark Previously crown lifted to 2m above ground level Obscures road sign BT line above crown	Prune clear of road sign within 3 months	>40	B1
17	Common Lime *Tilia x europaea*	12	S	500	5.0	3.0	5.0	5.0	5.0	6.0	6.0	6.0	MA	Good	Fair Off-site tree Highway tree Restricted root zone Epicormics on trunk Previously pollarded at 6m above ground level Previously crown lifted to 6m above ground level Part of avenue	None required at time of survey	>40	B1+2
18	Common Lime *Tilia x europaea*	13	S	540 taken at 1m above ground level	6.0	5.0	4.0	4.0	6.0	6.0	6.0	6.0	MA	Good	Good Off-site tree Highway tree Restricted root zone Epicormics on trunk Previously pollarded at 6m above ground level Previously crown lifted to 6m above ground level Part of avenue	None required at time of survey	>40	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
19	Common Lime *Tilia x europaea*	13	S	470	4.0	5.0	4.0	3.5	6.0	6.0	6.0	6.0	MA	Good	Good Off-site tree Highway tree Restricted root zone Epicormics on trunk Bifurcated at 4m above ground level Previously pollarded at 6m above ground level Old pruning wounds on trunk	None required at time of survey	>40	B1+2
20	Rowan *Sorbus aucuparia*	4	S	Est 100	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	Y	Good	Good Developing tree Grows through dense crowns	None required at time of survey	>40	C1
21	Flowering Cherry *Prunus spp*	4	S	150	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5	Y	Good	Good Ornamental tree planted in shrub border along frontage Multi-stemmed at 2m above ground level Part of linear group	None required at time of survey	>40	C1+2
22	Flowering Cherry *Prunus spp*	5	S	150	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Y	Good	Good Ornamental tree planted in shrub border along frontage Multi-stemmed at 2m above ground level Part of linear group	None required at time of survey	>40	C1+2
23	Flowering Cherry *Prunus spp*	5	MS	160	3.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	Y	Good	Good Multi-stemmed at 1.2m above ground level Ornamental tree planted in shrub border along frontage Bark wound on trunk Tight forks with included bark	None required at time of survey	>40	C1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
24	Flowering Cherry *Prunus spp*	5	S	170	2.0	2.5	2.0	3.0	2.0	2.0	2.0	2.0	Y	Good	Good Multi-stemmed at 1.2m above ground level Ornamental tree planted in shrub border along frontage Bark wound on trunk Tight forks with included bark Ivy on trunk	None required at time of survey	>40	C1+2
25	Rowan *Sorbus aucuparia*	5	S	100	2.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0	Y	Good	Good Developing tree Low hanging branches Crown beginning to lean to East	None required at time of survey	>40	C1
26	Pine *Pinus spp*	6	S	190	2.0	2.0	2.0	2.0	0.5	0.5	0.5	0.5	Y	Good	Good Developing tree Good shape and form	None required at time of survey	20-40	B1
27	London Plane *Platanus x hispanica*	6	S	190	3.0	3.0	4.0	3.5	2.0	2.0	1.5	2.0	Y	Good	Good Grows in small gravel covered bed Low hanging branches over car park damaged by vehicles Bark wounds and tears Tight fork in crown split Will require formative prune Hanging branches	Crown lift over car park within 3 months	>40	C1
28	Common Lime *Tilia x europaea*	12	S	580	5.0	6.0	6.0	4.0	5.0	4.0	5.0	6.0	M	Good	Good Off-site tree Highway tree Restricted root zone Damaging kerb and footpath Basal suckers Epicormics on trunk Bifurcated a 4m above ground level Previously pollarded at 7m above ground level Old pruning wounds on trunk	None required at time of survey	>40	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
29	Common Sycamore *Acer pseudoplatanus*	9	MS	600	6.0	6.0	3.0	5.0	2.0	3.0	3.0	3.0	MA	Good	Fair Bifurcated at 1m above ground level Tight forks with included bark Old pruning wound on trunk Crown shape distorted due to group pressure	None required at time of survey	>40	C1
30	Bay *Laurus spp*	3	MS	320	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	MA	Good	Good Multi-stemmed at ground level Under-storey to T29 and T31 Provides winter amenity	None required at time of survey	20-40	C1
31	Common Yew *Taxus baccata*	8	S	540	5.0	5.0	2.0	2.0	3.0	1.0	1.0	1.0	MA	Good	Good Lower branches trimmed over footpath and driveway Crown shape distorted due to group pressure Local amenity value Bifurcated at 2m above ground level	None required at time of survey	>40	B1+2
32	Common Sycamore *Acer pseudoplatanus*	11	S	380	6.0	6.0	3.0	5.0	4.0	4.0	4.0	3.0	MA	Good	Fair Root growth affected by pavement to East Previously crown lifted to 4m above ground level Old pruning wounds on trunk Previously pollarded at 5m above ground level Poor shape and form Good amenity value Bark wound at base between buttress roots	None required at time of survey	10-20	C1
33	Spindle Tree *Euonymus europaeus*	3	MS	340	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	MA	Good	Good Dense bushy shrub Multi-stemmed at ground level	None required at time of survey	20-40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
34	Common Sycamore *Acer pseudoplatanus*	12	MS	305	1.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	Y	Fair	Fair Suppressed and stunted Bifurcated at 1m above ground level Tight forks with included bark Two stems twist around each other Crown shape distorted due to group pressure Poor quality tree	None required at time of survey	10-20	C1
35	Monterey Cypress *Cupressus macrocarpa*	14	MS	690	4.0	4.0	4.5	6.0	3.0	3.0	3.0	2.0	M	Good	Fair Multi-stemmed at 1m above ground level Crown shape distorted due to group pressure Exposed surface roots Growing on bank above car park (1m higher) Crown weighted West Tight forks with included bark	None required at time of survey	20-40	C1
36	Bay *Laurus spp*	5	MS	400	0.0	4.0	4.0	0.0	-	2.0	3.0	-	MA	Fair	Fair Multi-stemmed at ground level Suppressed and stunted Crown weighted South-east Poor quality tree	Advise removal within 12 months	<10	R

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
37	Common Lime *Tilia x europaea*	13	S	480	6.0	5.0	6.0	2.0	5.0	5.0	5.0	6.0	MA	Good	Good Off-site tree Highway tree Crown shape distorted due to group pressure Epicormics on trunk Part of avenue Multi-stemmed at 6m above ground level Previously pollarded at 7m above ground level Old pruning wounds on trunk	None required at time of survey	>40	B1+2
38	Holm Oak *Quercus ilex*	17	S	850	7.0	8.0	10.0	10.0	10.0	5.0	4.0	4.0	M	Good	Good Large buttress roots Bifurcated at 3m above ground level Crown weighted South and West Minor deadwood in crown BT line through crown Branches overhang building to West Very high amenity value	None required at time of survey	>40	A1
39	Holm Oak *Quercus ilex*	10	MS	510	4.5	7.0	7.0	3.0	2.0	2.0	2.0	2.0	MA	Good	Good Multi-stemmed at 1m above ground level Tight forks with included bark Old pruning wounds on trunk Previously crown lifted to 2m above ground level Low hanging branches Crown shape distorted due to group pressure	None required at time of survey	>40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
40	Rowan *Sorbus aucuparia*	8	MS	345	3.0	1.0	3.0	3.0	2.0	3.0	2.0	2.0	MA	Good	Fair Multi-stemmed at 0.5m above ground level Exposed surface roots Tight forks with included bark Crown shape distorted due to group pressure Crown weighted West	None required at time of survey	10-20	C1
41	Common Lime *Tilia x europaea*	13	S	Est 450	6.0	6.0	7.0	5.0	6.0	6.0	6.0	6.0	MA	Good	Fair Off-site tree Hedge line tree Forms part of avenue Restricted root zone Possible trenching and pavement repairs to West at 1m Epicormics on trunk Multi-stemmed at 4m above ground level Previously pollarded at 6m above ground level Old pruning wounds	None required at time of survey	>40	B1+2
42	Leyland Cypress *X Cuprocyparis leylandii*	2	MS	190	1.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3	Y	Good	Good Ornamental tree pruned to have a cubic crown	None required at time of survey	10-20	C1
43	London Plane *Platanus x hispanica*	6	S	150	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	Y	Good	Good Developing tree Good shape and form	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
44	Monterey Cypress *Cupressus macrocarpa*	17	S	1150	11.0	7.0	8.0	12.0	3.0	3.0	4.0	3.0	M	Fair	Fair Grows entirely surrounded by tarmac Old pruning wounds on trunk and in crown Major deadwood in crown Cavity in underside of branch union to West side at 6m above ground level Minor hazard beam formed in inner crown Snapped and hanging branch over footpath Bark wounds and cracks through crown	Aerial inspection of branch union and throughout crown Remove damaged branch within 1 month	20-40	B1+2
45	Irish Yew *Taxus baccata 'Fastigiata'*	5	MS	420	1.5	2.0	1.5	2.0	0.5	0.5	0.5	0.5	M	Good	Good Multi-stemmed at 1m above ground level	None required at time of survey	20-40	C1
46	Common Sycamore *Acer pseudoplatanus*	15	S	690	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	M	Fair	Fair Grows in car park Trifurcated at 4m above ground level Large buttress roots Previously crown lifted to 6m above ground level All three main stems topped at 10m above ground level Signs of decay at old pruning points Limited extension growth High amenity value	None required at time of survey	10-20	C1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
47	Common Beech *Fagus sylvatica*	15	S	670	9.0	6.0	7.0	7.0	2.0	3.0	4.0	4.0	M	Good	Good Footpath immediately to West appears new Possible root damage Exposed surface roots Multi-stemmed at 4m above ground level Minor deadwood in crown Growth appears stunted High amenity value	None required at time of survey	>40	B1+2
48	Common Sycamore *Acer pseudoplatanus*	11	S	400	5.0	5.0	5.0	4.0	3.0	3.0	3.0	3.0	MA	Good	Good Trunk sweeps East at base Multi-stemmed at 1.8m above ground level Crossing branches Branches reduced from building to North Partially obscures sight line to South-east	None required at time of survey	>40	B1+2
49	London Plane *Platanus x hispanica*	12	S	480	5.0	6.0	7.0	4.0	4.0	4.0	4.0	4.0	MA	Good	Good Part of avenue of trees Planted in block paving Managed as pollard to 4m above ground level Crossing branches Re-growth to West side pruned clear of building leaving stubs	None required at time of survey	>40	B1+2
50	London Plane *Platanus x hispanica*	9	S	290	6.0	7.0	5.0	3.0	3.0	2.5	3.0	4.0	Y	Good	Good Part of avenue Planted in block paving Managed as pollard to 4m above ground level Pollard development not as advanced as in other trees Previously crown lifted to 4m over road Branches to West side reduced clear of building	None required at time of survey	>40	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
51	London Plane *Platanus x hispanica*	11	S	385	7.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0	MA	Good	Good Part of avenue of trees Planted in block paving Managed as pollard to 4m above ground level Crossing branches Re-growth to West side pruned clear of building leaving stubs	None required at time of survey	>40	B1+2
52	London Plane *Platanus x hispanica*	10	S	300	7.0	6.0	6.0	4.0	4.0	3.0	3.0	4.0	Y	Good	Good Trunk sweeps East at base Multi-stemmed at 1.8m above ground level Crossing branches Branches reduced from building to North Partially obscures sight line to South-east	None required at time of survey	>40	B1+2
53	Common Sycamore *Acer pseudoplatanus*	10	S	310	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	Y	Good	Good Bifurcated at 4m above ground level Grows within 0.5m of wall, damaging wall Underground services around base	None required at time of survey	10-20	C1
54	Common Sycamore *Acer pseudoplatanus*	12	S	530	4.5	7.0	5.5	6.0	3.0	3.0	3.0	3.0	MA	Fair	Good Grows in area of grass surrounded by recent footpaths Cavity between buttress roots to South side with possible hollow stem Exposed surface roots and mechanical damage Previously pollarded at 8m above ground level Limited annual extension growth	None required at time of survey	20-40	B1
55	Common Sycamore *Acer pseudoplatanus*	6	S	180	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
56	London Plane *Platanus x hispanica*	6	S	215	4.0	4.0	3.0	3.0	2.0	2.0	2.0	2.0	Y	Good	Fair Trunk leans North-east Surrounded by hard surfaces Developing tree	None required at time of survey	>40	C1
57	Flowering Cherry *Prunus spp*	5	S	Est 100	1.0	1.5	0.5	0.5	3.0	3.0	3.0	3.0	Y	Good	Good Stake and tie present Developing tree Growing in mixed shrub bed	None required at time of survey	20-40	C1
58	Flowering Cherry *Prunus spp*	5	S	Est 100	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	Good	Good Stake and tie present Developing tree Growing in mixed shrub bed	None required at time of survey	20-40	C1
59	Flowering Cherry *Prunus spp*	5	S	100	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0	Y	Good	Good Developing tree	None required at time of survey	20-40	C1
60	London Plane *Platanus x hispanica*	12	S	470	6.0	6.0	5.0	4.0	4.0	5.0	4.0	3.0	MA	Good	Good Part of avenue Planted in block paving Multi-stemmed at 3m above ground level Previously pollarded at 6m above ground level Bark wound on trunk Old pruning wounds and stubs	None required at time of survey	>40	B1+2
61	London Plane *Platanus x hispanica*	10	S	390	6.0	5.0	5.0	4.0	5.0	5.0	4.0	4.0	MA	Good	Good Part of avenue Planted in block paving Multi-stemmed at 3m above ground level Previously pollarded at 5m above ground level Fire hydrant to South side at 0.5m	None required at time of survey	>40	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
62	London Plane *Platanus x hispanica*	11	S	430	6.0	5.0	4.0	3.0	4.0	5.0	5.0	4.0	MA	Good	Good Part of avenue Planted in block paving Multi-stemmed at 3m above ground level Previously pollarded at 5m above ground level Fire hydrant to South side at 0.5m Epicormics on trunk Old pruning wounds	None required at time of survey	>40	B1+2
63	London Plane *Platanus x hispanica*	11	S	420	6.0	5.0	7.0	4.0	4.0	5.0	3.0	4.0	MA	Good	Good Part of avenue Planted in block paving Multi-stemmed at 3m above ground level Previously pollarded at 5m above ground level Fire hydrant to South side at 0.5m Epicormics on trunk Old pruning wounds	None required at time of survey	>40	B1+2
64	Wild Cherry *Prunus avium*	5	S	150	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	Y	Good	Good Stake and tie present Bacterial canker on trunk Crossing branches Developing tree	None required at time of survey	>40	C1
65	Apple *Malus spp*	4	S	140	1.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	Y	Good	Fair Stake and tie present Developing tree Mechanical damage at base Epicormics on trunk and in crown	None required at time of survey	20-40	C1
66	London Plane *Platanus x hispanica*	6	S	230	5.0	4.0	2.0	3.0	3.0	3.0	3.0	3.0	Y	Good	Good Developing tree	None required at time of survey	>40	B1
67	Rowan *Sorbus aucuparia*	4	S	<75	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	Good	Good Developing tree	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
68	Apple *Malus spp*	5	S	170	2.0	2.5	2.5	2.5	3.0	3.0	3.0	3.0	Y	Good	Good Stake and tie preset Epicormics on trunk and in crown Developing tree	None required at time of survey	>40	C1
69	Common Beech *Fagus sylvatica*	6	S	90	1.0	1.0	1.0	0.5	3.0	3.0	3.0	3.0	Y	Good	Good Stake and tie present Developing tree	None required at time of survey	>40	C1
70	Common Beech *Fagus sylvatica*	5	S	90	1.0	1.0	1.0	0.5	2.0	2.0	2.0	2.0	Y	Poor	Fair Stake and tie preset Old pruning wounds on trunk Dieback in crown	None required at time of survey	<10	R
71	Apple *Malus spp*	4	S	120	1.5	2.0	2.0	1.0	2.0	2.0	2.0	2.0	Y	Good	Fair Bark wound on trunk Epicormics on trunk and in crown Crown shape distorted due to group pressure	None required at time of survey	20-40	C1
72	London Plane *Platanus x hispanica*	6	S	190	5.0	4.0	4.0	3.0	3.0	3.0	3.0	4.0	Y	Good	Good Developing tree Stake and tie present Multi-stemmed at 3m above ground level	None required at time of survey	>40	B1
73	Apple *Malus spp*	4	S	140	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Y	Good	Good Stake and tie present Epicormics on trunk and in crown Cankers in crown	None required at time of survey	20-40	C1
74	Common Sycamore *Acer pseudoplatanus*	4	S	90	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	Y	Good	Good Developing tree	None required at time of survey	>40	C1
75	London Plane *Platanus x hispanica*	8	S	195	4.0	4.0	4.0	3.0	2.0	2.0	2.0	3.0	Y	Good	Good Developing tree Trunk shape distorted Crown weighted East	None required at time of survey	>40	B1
76	Apple *Malus spp*	6	S	160	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Y	Good	Good Stakes present Epicormics on trunk and in crown	None required at time of survey	20-40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
77	London Plane *Platanus x hispanica*	8	S	200	4.0	4.0	3.0	2.5	2.5	3.0	3.0	3.0	Y	Good	Good Developing tree Crown shape distorted due to group pressure Crown weighted East Bark crack on trunk	None required at time of survey	>40	B1
78	Apple *Malus spp*	5	S	130	3.0	3.0	2.0	2.0	2.5	2.5	2.0	2.0	Y	Good	Good Bark damage caused by tree ties Epicormics on trunk and in crown	None required at time of survey	>40	C1
79	Flowering Cherry *Prunus spp*	5	S	130	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	Y	Good	Good Developing tree Stake and tie present Multi-stemmed at 3m above ground level	None required at time of survey	>40	C1
80	Flowering Cherry *Prunus spp*	6	S	140	2.0	2.0	2.0	1.5	3.0	4.0	3.5	3.0	Y	Good	Good Developing tree Stake and tie present Old pruning wounds on trunk	None required at time of survey	20-40	C1
81	Common Hawthorn *Crataegus monogyna*	3	S	90	2.0	1.0	2.0	1.0	1.5	1.5	1.5	1.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1
82	Common Hawthorn *Crataegus monogyna*	4	S	95	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	Y	Good	Good Developing tree Mechanical damage at base	None required at time of survey	>40	C1
83	Common Hawthorn *Crataegus monogyna*	4	S	120	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1
84	Common Hawthorn *Crataegus monogyna*	4	MS	190	1.5	2.0	1.5	1.5	0.5	0.5	0.5	0.5	Y	Good	Good Multi-stemmed at ground level Developing tree Lower branches reduced over footpath and car park	None required at time of survey	>40	C1
85	Fastigiate Hawthorn	6	S	130	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0	Y	Good	Good Developing tree	None required at time of survey	>40	C1
86	Fastigiate Hawthorn	5.5	S	110	0.5	0.5	0.5	0.5	2.5	2.5	2.5	2.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1
87	Fastigiate Hawthorn	5	S	110	1.0	0.5	0.5	0.5	2.5	2.5	2.5	2.5	Y	Good	Good Developing tree	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
88	Field Maple *Acer campestre*	4	S	120	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	Y	Good	good Developing tree Multi-stemmed at 2m above ground level Bark wound in crown	None required at time of survey	>40	C1
89	Fastigiate Hornbeam *Carpinus betulus 'Pyramidalis'*	5	S	120	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	Y	Good	Good Developing tree	None required at time of survey	>40	C1
90	Common Hawthorn *Crataegus monogyna*	3	S	120	2.0	2.5	1.0	2.0	2.0	2.0	2.0	2.0	Y	Good	Good Developing tree Multi-stemmed at 1.6m above ground level Bark wound on trunk	None required at time of survey	>40	C1
91	Blue Atlas Cedar *Cedrus atlantica*	8	S	180	3.0	3.0	3.0	2.0	1.0	1.0	1.0	1.0	Y	Good	Fair Lower branches to East and West reduced to stubs Crown shape distorted Tree donated to hospital	None required at time of survey	>40	C1
92	Common Lime *Tilia x europaea*	18	S	610	7.0	6.0	6.0	5.0	8.0	4.0	6.0	3.0	MA	Good	Good Recent demolition activity evident around base and in close proximity Epicormics on trunk and in crown Old pruning wound in crown Large buttress roots	None required at time of survey	>40	B1
93	Common Beech *Fagus sylvatica*	12	S	510	8.0	6.0	7.0	4.0	2.5	2.5	2.0	3.0	MA	Good	Good Crown shape distorted due to group pressure and prevailing wind direction Minor deadwood in crown High amenity value	None required at time of survey	>40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
94	Horse Chestnut *Aesculus hippocastanum*	16	S	860	7.0	7.0	7.0	8.0	4.0	4.0	4.0	4.0	M	Good	Fair Exposed surface roots and mechanical damage Large buttress roots Area of disturbed earth from recently demolished building to South Bark cracks with exudates on trunk Epicormics on trunk and in crown Old pruning wounds and stubs on trunk and in crown Previously pollarded at 8m above ground level Minor deadwood in crown	None required at time of survey	>40	B1
95	Horse Chestnut *Aesculus hippocastanum*	14	S	590	5.0	6.0	7.0	5.0	2.0	2.0	2.0	2.0	MA	Good	Fair Bark wound on trunk and in crown runs full length of main stem Bark wound is occluding Bifurcated at 3m above ground level Old pruning wound on trunk	None required at time of survey	>40	B1
96	Common Lime *Tilia x europaea*	7	S	270	3.0	4.0	3.5	3.5	1.5	1.5	1.5	1.5	Y	Good	Good Growing on bank Developing tree Multi-stemmed at 2m above ground level Low hanging branches Lower branches pruned to stubs Previously crown lifted to 2m to allow mowing	None required at time of survey	>40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
97	Common Lime *Tilia x europaea*	6	S	210	3.0	3.0	2.0	3.0	1.5	2.0	2.0	1.5	Y	Good	Good Growing on bank Trunk leans North Trunk shape distorted Previously crown lifted to 2m above ground level Old pruning wounds and stubs Developing tree	None required at time of survey	>40	B1
98	Common Lime *Tilia x europaea*	7	S	300	4.5	5.0	4.5	4.0	1.0	1.0	1.5	1.5	Y	Good	Good Growing on bank Exposed surface roots Recent building work around base Old pruning wounds on trunk and in crown Low hanging branches Possible root disturbance Developing tree	None required at time of survey	>40	B1
99	Scots Pine *Pinus sylvestris*	6	S	300	3.5	2.5	3.0	4.0	2.0	1.5	1.0	1.5	Y	Good	Good Developing tree Growing on bank Minor deadwood in crown Previously crown lifted Old pruning wounds and stubs	None required at time of survey	>40	B1
100	Scots Pine *Pinus sylvestris*	5	S	270	4.0	3.0	2.0	3.0	1.5	1.0	1.5	1.0	Y	Good	Fair Growing on bank Developing tree Trunk leans North Low hanging branches Dieback of lower limbs Crown weighted North	None required at time of survey	20-40	C1
101	Common Holly *Ilex aquifolium*	4	MS	130	0.5	1.0	0.5	1.5	1.0	1.0	1.0	1.0	Y	Good	Fair Grows in confined space between building and footpath Poor quality tree	None required at time of survey	10-20	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
102	Bay *Laurus spp*	6	MS	1300	3.0	4.5	4.0	4.0	1.0	0.0	0.0	0.0	M	Good	Fair Boundary line tree Provides screen to gas tanks Trimmed to East, South and West over road and footpath Pruned to give clearance of 2m from gas tanks	None required at time of survey	20-40	C1
103	Bay *Laurus spp*	9	MS	1420	2.0	7.0	7.0	7.0	4.0	2.0	1.0	3.0	M	Fair	Fair Off-site tree Multi-stemmed at ground level One dead stem Old pruning wounds Tight forks with included bark Bark wounds on trunk Basal suckers	None required at time of survey	10-20	C1
104	Common Sycamore *Acer pseudoplatanus*	12	S	380	5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	MA	Good	Fair Off-site tree Woodland edge tree Crown shape distorted due to group pressure Lower branches to East side pruned to boundary line leaving stubs Ivy on trunk Bifurcated at 4m above ground level Trunk leans East	None required at time of survey	>40	C1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
105	Common Beech *Fagus sylvatica*	15	S	870	12.0	9.0	9.0	3.0	2.0	4.0	5.0	7.0	M	Fair	Fair Off-site tree Growing on bank Exposed surface roots Large buttress roots Bark wounds on trunk Crown weighted East Very asymmetric crown Reduced annual growth rate Minor deadwood in crown Crown shape distorted due to group pressure	None required at time of survey	>40	B1
106	Leyland Cypress *X Cuprocyparis leylandii*	16	MS	640	4.0	5.0	5.0	3.0	0.2	0.2	0.2	0.2	M	Fair	Fair Multi-stemmed at 1m above ground level Crown shape distorted due to group to West Low crown density to West side Low hanging branches	None required at time of survey	10-20	C1
107	Common Ash *Fraxinus excelsior*	13	S	590	9.0	7.0	8.0	8.5	4.0	2.0	3.0	2.0	M	Poor	Fair Footpath immediately to North Old pruning wounds on trunk Bifurcated at 1.8m above ground level Epicormics on trunk and in crown and reduced annual growth Previously crown lifted to 2m above ground level Minor deadwood in crown Stressed tree	None required at time of survey	10-20	C1
108	Silver Birch *Betula pendula*	8	S	210	5.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	MA	Fair	Fair Grows in planting pit in concrete Trunk leans North Crown weighted North Trunk shape distorted	None required at time of survey	10-20	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
109	Common Lime *Tilia x europaea*	9	S	310	4.0	5.0	4.0	4.0	2.0	1.5	2.0	3.0	Y	Good	Good Previously crown lifted to 2m Crown shape distorted due to group pressure Bifurcated at 4m above ground level Tight forks with included bark	None required at time of survey	>40	B1+2
110	Common Lime *Tilia x europaea*	9	S	320	3.0	5.0	4.0	5.0	2.0	2.0	4.0	2.0	Y	Good	Good Previously crown lifted Good shape and form Bifurcated at 4m above ground level	None required at time of survey	>40	B1+2
111	Common Lime *Tilia x europaea*	8	S	310	5.0	4.0	5.0	4.0	2.0	1.5	2.0	2.0	Y	Good	Good Bifurcated at 2m above ground level Previously crown lifted to 2m above ground level Obscures sight line Possible cable runs through root protection area	None required at time of survey	>40	B1+2
112	Common Ash *Fraxinus excelsior*	12	S	550	6.0	8.0	6.0	8.0	3.0	5.0	3.0	2.0	M	Fair	Fair Hard surface 2m to South side Ivy on trunk Multi-stemmed at 4m above ground level Previously crown lifted to South side leaving stubs Dieback through centre of crown Major deadwood in crown Crown shape distorted due to group pressure	None required at time of survey	20-40	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
113	Common Ash *Fraxinus excelsior*	14	MS	500	5.0	4.0	6.0	4.0	10.0	3.0	3.0	3.0	MA	Good	Good Boundary line tree Bifurcated at 0.5m above ground level Crown shape distorted due to group pressure	None required at time of survey	>40	C1+2
114	Common Sycamore *Acer pseudoplatanus*	13	MS	760	4.0	3.0	4.0	3.0	5.0	5.0	5.0	5.0	MA	Good	Good Bifurcated at ground level Previously crown lifted to 5m above ground level	None required at time of survey	>40	C1+2
115	Common Sycamore *Acer pseudoplatanus*	12	S	190	3.0	3.0	3.0	0.5	3.0	3.0	3.0	3.0	Y	Fair	Fair Suppressed and stunted Crown shape distorted due to group pressure Ivy on trunk	Advise removal within 12 months	<10	R
116	Common Sycamore *Acer pseudoplatanus*	16	S	420	5.0	1.0	6.0	6.0	3.0	7.0	3.0	4.0	MA	Fair	Fair Boundary line tree Basal suckers Crown shape distorted due to group pressure Old pruning wounds on trunk	None required at time of survey	20-40	C1+2
117	Common Sycamore *Acer pseudoplatanus*	13	MS	320	1.0	4.0	2.0	3.0	6.0	3.0	4.0	4.0	Y	Good	Fair Ivy on trunk Bifurcated at ground level Crown shape distorted due to group pressure Minor deadwood in crown	None required at time of survey	20-40	C1+2
118	Common Sycamore *Acer pseudoplatanus*	12	MS	400	2.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0	Y	Fair	Poor Bifurcated at ground level Tight forks with included bark Ivy on trunk Bark wound and decay on trunk to North side from ground level to 2.5m above ground level Crown shape distorted due to group pressure	Advise removal within 12 months	<10	R

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
119	Common Sycamore *Acer pseudoplatanus*	12	S	250	0.0	4.0	5.0	4.0	-	3.0	3.0	3.0	Y	Good	Good Ivy on trunk Crown shape distorted due to group pressure	None required at time of survey	20-40	C1+2
120	Common Sycamore *Acer pseudoplatanus*	16	S	390	6.0	6.0	0.0	5.0	3.0	3.0	-	3.0	MA	Good	Fair Boundary line tree Crown weighted North due to trees of group 2 Trunk leans North	None required at time of survey	20-40	C1
121	Common Sycamore *Acer pseudoplatanus*	12	S	220	3.0	4.0	3.0	1.0	3.0	3.0	3.0	3.0	Y	Good	Good Ivy on trunk Crown shape distorted due to group pressure	None required at time of survey	20-40	C1+2
122	Lawson Cypress *Chamaecyparis lawsoniana*	13	MS	670	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	MA	Good	Good Exposed surface roots Bifurcated at ground level Direct damage to footpath Previously crown lifted to 2m above ground level	None required at time of survey	10-20	C1
123	Common Holly *Ilex aquifolium*	4	S	200	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Y	Good	Fair Ornamental garden tree managed at 4m high Previously crown lifted to 2m above ground level	None required at time of survey	10-20	C1
124	Common Ash *Fraxinus excelsior*	15	MS	560	4.0	5.0	4.0	6.0	3.0	3.0	3.0	3.0	MA	Good	Fair Large buttress roots Ivy on trunk Bifurcated at 1.3m above ground level Tight forks with included bark Epicormics in crown Minor deadwood in crown	None required at time of survey	20-40	C1
125	Common Elder *Sambucus nigra*	5	MS	490	3.0	3.0	3.0	1.0	2.0	2.0	2.0	2.0	M	Poor	Poor Bifurcated at 0.5m above ground level Major deadwood throughout crown Trunk leans North-east Crown weighted North-east	None required at time of survey	10-20	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
126	Common Holly *Ilex aquifolium*	4	S	300	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	MA	Fair	Fair Ornamental garden tree managed at 4m high Previously crown lifted to 2m above ground level	None required at time of survey	10-20	C1
127	Common Elder *Sambucus nigra*	5	MS	Est 350	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	M	Poor	Poor Bifurcated at 1m above ground level Ivy on trunk and in crown Smothered tree Poor quality tree	None required at time of survey	10-20	C1
128	Common Whitebeam *Sorbus aria*	4	S	170	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	MA	Good	Fair Grows in pavement Direct damage to pavement Trunk leans East Previously crown lifted to 2m above ground level Multi-stemmed at 2m above ground level Mechanical damage at base	None required at time of survey	20-40	C1
129	Common Ash *Fraxinus excelsior*	15	S	510	6.0	8.0	6.0	7.0	3.0	4.0	3.0	5.0	M	Good	Good Boundary line tree Large exposed roots running East and West Trifurcated at 2m above ground level Ivy on trunk Minor deadwood in crown	None required at time of survey	>40	B1
130	Lawson Cypress *Chamaecyparis lawsoniana*	5	S	150	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	MA	Fair	Fair Grows adjacent to Building Branches touch building minor deadwood in crown Sparse and brown foliage	Advise removal within 12 months	<10	R
131	Himalayan Cotoneaster *Cotoneaster frigidus*	4	MS	180	2.0	4.0	4.0	1.0	2.0	2.0	1.5	2.0	MA	Good	Fair Bifurcated at ground level Previously crown lifted Old pruning wounds on trunk and in crown Sparse crown	None required at time of survey	<10	R

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
132	Common Holly *Ilex aquifolium*	6	MS	290	2.0	2.0	3.0	2.0	3.0	3.0	3.0	3.0	MA	Good	Good Crown shape distorted due to group pressure Previously crown lifted to 3m above ground level Ornamental tree	None required at time of survey	20-40	C1
133	Lawson Cypress *Chamaecyparis lawsoniana*	12	S	340	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.5	MA	Good	Good Boundary line tree Good shape and form Trifurcated at 3m above ground level	None required at time of survey	>40	B1
134	Apple *Malus spp*	2	MS	160	0.5	5.0	0.5	0.5	1.5	1.5	1.5	1.5	MA	Fair	Poor Old stump with some live growth Bark necrosis	Advise removal within 12 months	<10	R
135	Flowering Cherry *Prunus spp*	3	MS	150	1.0	1.0	1.0	0.5	2.0	2.0	2.0	2.0	Y	Fair	Fair Grows in pavement Multi-stemmed at 1m above ground level Two stems heavily reduced Old pruning wounds and stubs Poor quality tree	None required at time of survey	10-20	C1
136	Common Hawthorn *Crataegus monogyna*	7	MS	550	2.0	3.0	4.0	4.0	5.0	2.0	2.0	3.0	M	Poor	Poor Trifurcated at ground level Tight forks with included bark Major decay at union Split forks Crossing branches Deadwood in crown Previously topped at 5m above ground level Poor quality tree	Advise removal within 12 months	<10	R

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
137	Common Sycamore *Acer pseudoplatanus*	10	S	430	6.0	6.0	5.0	5.0	3.0	3.0	3.0	3.0	MA	Fair	Fair Boundary line tree Ivy on trunk Bifurcated at 2m above ground level Crown weighted South Crown shape distorted due to group pressure Signs of stress evident Low rate of growth Dieback in crown	None required at time of survey	10-20	C1
138	Common Elder *Sambucus nigra*	5	S	400	5.0	4.0	2.0	3.0	1.0	2.0	3.0	1.5	M	Poor	Poor Off-site tree Boundary line tree Bifurcated at 0.5m above ground level Leans against wall to East Crown shape distorted due to group pressure Deadwood in crown Poor quality tree	Advise removal within 12 months	<10	R
139	Horse Chestnut *Aesculus hippocastanum*	16	S	960	6.0	7.0	7.0	5.0	2.0	2.0	2.0	2.0	M	Fair	Fair Off-site tree Swollen butt indicative of internal cavity Trifurcated at 4m above ground level Crown weighted South Overhangs site Bleeding canker on trunk	None required at time of survey	20-40	B1
140	Common Lime *Tilia x europaea*	15	S	420	8.0	3.0	3.0	8.0	1.0	5.0	3.0	1.0	MA	Good	Good Off-site tree Exposed surface roots Trunk leans North Crown weighted North Crown shape distorted due to group pressure Low hanging branches	None required at time of survey	>40	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
141	Common Ash *Fraxinus excelsior*	17	S	520	7.0	10.0	8.0	6.0	14.0	4.0	4.0	4.0	M	Good	Fair Off-site tree Crown weighted South-east Trifurcated at 3m above ground level Crown shape distorted due to group pressure Large surface root extends towards site boundary	None required at time of survey	20-40	B1
142	Common Walnut *Juglans regia*	8	S	500	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	M	Poor	Poor Off-site tree Ivy on trunk and in crown Severe decline throughout crown	Advise removal within 12 months	<10	R
143	Common Lime *Tilia x europaea*	16	S	490	5.0	5.0	5.0	5.0	3.0	3.0	3.0	3.0	MA	Good	Good Off-site tree Ivy on trunk Epicormics on trunk and in crown Multi-stemmed at 4m above ground level	None required at time of survey	>40	B1
144	Common Sycamore *Acer pseudoplatanus*	16	S	530	6.0	7.0	5.0	5.0	3.0	3.0	3.0	3.0	MA	Good	good Off-site tree Bifurcated at 2m above ground level Overhangs site Tight forks with included bark	None required at time of survey	>40	B1
Grp 1	Himalayan Birch Strawberry Tree	Av 6	MS	Av 240	-	-	-	-	-	-	-	-	Y	Fair	Fair Group of multi-stemmed trees and shrubs in area of landscaped grounds Two trees are dead/dying	None required at time of survey	10-20	C1+2
Grp 2	Monterey Cypress Blackthorn Common Hawthorn Norway Maple	Av 2	Ms	Av 80	-	-	-	-	-	-	-	-	Y	Good	Good Shrub and developing tree border between car park and access road	None required at time of survey	20-40	C1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
Grp 3	Blackthorn Common Hawthorn Monterey Cypress	Av 2.5	MS	Av 100	-	-	-	-	-	-	-	-	Y	Good	Good Shrub and developing tree border between car park and access road	None required at time of survey	20-40	C1+2
Grp 4	Monterey Cypress	3	S	<75	-	-	-	-	-	-	-	-	Y	Good	Good Four developing tree's	None required at time of survey	>40	C1
Grp 5	Common Holly Aucuba Privet Bay	Av 4	Ms	Av 350	-	-	-	-	-	-	-	-	MA	Good	Good Boundary line group of evergreen shrubs Most multi-stemmed at ground level	None required at time of survey	>40	C1+2
Grp 6	Silver Birch x 10	Av 6	S	Av 160	-	-	-	-	-	-	-	-	Y	Good	Fair Linear group All crown shapes distorted due to group pressure Most trunk shapes distorted Some multi-stemmed at various heights Some suppressed and stunted Some with bark wounds on trunks	None required at time of survey	10-20	C1+2
Grp 7	Portuguese Laurel Eleagnus	Av 2	MS	130	-	-	-	-	-	-	-	-	MA	Good	Good Boundary line group Provides good evergreen cover Pruned clear of road	None required at time of survey	20-40	C1
Grp 8	Leyland Cypress	20	MS	680	-	-	-	-	-	-	-	-	M	Fair	Fair Crown shape distorted due to group pressure Crown weighted South Minor deadwood in crown Large buttress roots	None required at time of survey	10-20	C1+2
Grp 9	Griselinia	Av 4	MS	Av 200	-	-	-	-	-	-	-	-	MA	Good	Good Two ornamental shrubs Previously crown lifted to 1.5m above ground level	None required at time of survey	10-20	C1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m) N	E	S	W	H't of Crown AGL (m) N	E	S	W	Age	Physio-logical Condition	Structural Condition and Relevant Comments	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
H1	Laurel	2	MS	Av 250	-	-	-	-	-	-	-	-	MA	Good	Good Formal boundary hedge maintained in tidy condition All multi-stemmed at ground level	None required at time of survey	20-40	B1+2
H2	Leyland Cypress Lawson Cypress	Av 6	S	230	-	-	-	-	-	-	-	-	Y	Fair	Fair Boundary line hedge Trees of varying heights Some dead/dying Previously crown lifted to 2m over car park Poor quality hedge	Remove and replace dead/dying within 12 months	10-20	C1+2
H3	Laurel Leyland Cypress Euonymus	Av 3	MS	Av 100	-	-	-	-	-	-	-	-	Y	Good	Good Formal boundary hedge	None required at time of survey	20-40	C1+2
H4	Leyland Cypress	5	S	Av 100	-	-	-	-	-	-	-	-	Y	Good	Good Formal boundary hedge Sides trimmed but not yet topped	None required at time of survey	20-40	C1+2



ABBREVIATIONS

AV	Air Valve	FH	Fire Hydrant	SI	Sign Post
AH	Arch Head Height	FL	Floor Level	SP	Arch Spring Point Height
BB	Bollards Beacon	FP	Flag Pole	SV	Stop Valve
BH	Bore Hole	GG	Gully Grate	SY	Stay
BL	Bed Level	GV	Gas Valve	Tac	Tactile Paving
BO	Bollard	HH	Hand Hole(s)	TC	Telecom Cover
BrP	Brace Post	IC	Inspection Cover	TH	Trial Pit
BS	Bus Stop	IL	Invert Level	THL	Threshold Level
BU	Bush	KO	Kerb Outlet	TL	Traffic Light
BX	Box (Utilities)	LP	Lamp Post	ToH	Top of Hill
C+Lev	Ceiling Level	MH	Manhole	TP	Telegraph Pole
CH	CB Height	MP	Marker Post	TV	Cable TV Cover
CL	Cover Level	NB	Name Board	UB	Universal Beam
COL	Column	PIW	Pershor Well	UC	Unknown Cover
DC	Drainage Channel	PM	Parking Meter	UK	Unknown Tree
DH	Door Head Height	PO	Post	UTL	Unable To Lift
DP	Down Pipe	PB	Post Box	UBB	Under Slab Beam
DR	Drain	RE	Rodding Eye	VP	Vent Pipe
EL	Eaves Level	RL	Ridge Level	WB	Waste Bin
EP	Electric Pole	RP	Reflector Post	WH	Windy Hole
ER	Earth Rod	RS	Road Sign	WL	Water Level
ET	ETH Transformer	RSD	Roller Shutter Door	WM	Water Meter
FB	Flicor Board Direction	RSJ	Rolled Steel Joist	WO	Wash Out

FEATURES

FENCE

WALL

HEDGE — AVERAGE ROOT LINE SHOWN

OVERHEAD LINE — INDICATIVE POSITION OF LINE

MEASUREMENTS TO INTERNAL WALLS HAVE BEEN TAKEN TO THE WALL FINISHES AT APPROX 1m ABOVE FLOOR LEVEL AND ASSUMED TO BE VERTICAL.

FENCE TYPES

B/W	BARBED WIRE	C/L	CHAIN LINK	I/R	IRON RAILINGS	P/R	POST AND RAIL
C/B	CLOSE BOARD	C/P	CHESTNUT PALING	Pan	PANEL	P/W	POST AND WIRE

SYMBOLS

FCH — FLOOR TO CEILING HEIGHT

FFC — FLOOR TO FALSE CEILING HEIGHT

CONTROL STATION

C14 — COLUMN

CELL HEIGHTS ARE MEASURED AS FLOOR TO CILL.
HEAD HEIGHTS ARE MEASURED FROM CILL TO TOP OF WINDOW.

SERVICES

FOUL SEWERS — PIPE POSITIONS AND ALIGNMENTS ARE INDICATIVE ONLY.

STORM SEWERS

ALL BELOW GROUND DETAILS INCLUDING DRAINAGE, VOIDS AND SERVICES HAVE BEEN IDENTIFIED FROM ABOVE GROUND AND THEREFORE ALL DETAILS RELATING TO THESE FEATURES INCLUDING SIZES, DEPTH, DESCRIPTION ETC WILL BE APPROXIMATE ONLY. ANY CRITICAL DIMENSIONS AND CONNECTIONS SHOULD BE CHECKED AND VERIFIED PRIOR TO STARTING WORK.

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THE CONTRACTOR MUST CHECK AND VERIFY ALL SITE AND BUILDING DIMENSIONS, LEVELS, UTILITIES AND DRAINAGE DETAILS AND CONNECTIONS PRIOR TO COMMENCING WORK.

ALL CRITICAL DIMENSIONS AND MEASUREMENTS SHOULD BE CHECKED AND VERIFIED WITH ANY ERRORS OR DISCREPANCIES NOTIFIED TO SURVEY SOLUTIONS IMMEDIATELY. THE ACCURACY OF THE DIGITAL DATA IS THE SAME AS THE PLOTTING SCALE IMPLIES. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.

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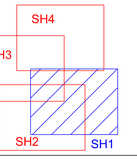
SHEET LAYOUT



CONTROL COORDINATES

STATIONS	EASTINGS	NORTHINGS	LEVEL	DESCRIPTION
ST01	515359.526	103289.326	3.141	PK Nail
ST02	515440.222	103268.671	2.951	PK Nail
ST03	515461.190	103237.680	4.397	PK Nail
ST04	515477.192	103209.016	5.124	PK Nail
ST05	515459.176	103060.018	7.124	PK Nail
ST06	515415.462	103061.863	7.133	PK Nail
ST07	515369.726	103060.324	6.802	PK Nail
ST08	515372.527	102999.270	6.812	PK Nail
ST09	515373.399	102941.747	6.787	PK Nail
ST10	515325.396	102940.540	6.787	PK Nail
ST11	515370.686	103130.417	6.089	PK Nail
ST12	515442.239	103222.583	5.132	PK Nail
ST13	515447.390	103238.842	5.011	PK Nail
ST14	515438.789	103251.214	6.441	PK Nail
ST15	515447.390	103238.842	5.011	PK Nail
ST16	515442.239	103222.583	5.132	PK Nail
ST17	515438.789	103251.214	6.441	PK Nail
ST18	515447.390	103238.842	5.011	PK Nail
ST19	515442.239	103222.583	5.132	PK Nail
ST20	515438.789	103251.214	6.441	PK Nail
ST21	515447.390	103238.842	5.011	PK Nail
ST22	515442.239	103222.583	5.132	PK Nail
ST23	515438.789	103251.214	6.441	PK Nail
ST24	515447.390	103238.842	5.011	PK Nail
ST25	515442.239	103222.583	5.132	PK Nail
ST26	515438.789	103251.214	6.441	PK Nail
ST27	515447.390	103238.842	5.011	PK Nail
ST28	515442.239	103222.583	5.132	PK Nail
ST29	515438.789	103251.214	6.441	PK Nail
ST30	515447.390	103238.842	5.011	PK Nail
ST31	515442.239	103222.583	5.132	PK Nail
ST32	515438.789	103251.214	6.441	PK Nail
ST33	515447.390	103238.842	5.011	PK Nail
ST34	515442.239	103222.583	5.132	PK Nail
ST35	515438.789	103251.214	6.441	PK Nail
ST36	515447.390	103238.842	5.011	PK Nail
ST37	515442.239	103222.583	5.132	PK Nail
ST38	515438.789	103251.214	6.441	PK Nail
ST39	515447.390	103238.842	5.011	PK Nail
ST40	515442.239	103222.583	5.132	PK Nail
ST41	515438.789	103251.214	6.441	PK Nail
ST42	515447.390	103238.842	5.011	PK Nail
ST43	515442.239	103222.583	5.132	PK Nail
ST44	515438.789	103251.214	6.441	PK Nail
ST45	515447.390	103238.842	5.011	PK Nail
ST46	515442.239	103222.583	5.132	PK Nail
ST47	515438.789	103251.214	6.441	PK Nail
ST48	515447.390	103238.842	5.011	PK Nail
ST49	515442.239	103222.583	5.132	PK Nail
ST50	515438.789	103251.214	6.441	PK Nail
ST51	515447.390	103238.842	5.011	PK Nail
ST52	515442.239	103222.583	5.132	PK Nail
ST53	515438.789	103251.214	6.441	PK Nail
ST54	515447.390	103238.842	5.011	PK Nail
ST55	515442.239	103222.583	5.132	PK Nail
ST56	515438.789	103251.214	6.441	PK Nail
ST57	515447.390	103238.842	5.011	PK Nail
ST58	515442.239	103222.583	5.132	PK Nail
ST59	515438.789	103251.214	6.441	PK Nail
ST60	515447.390	103238.842	5.011	PK Nail
ST61	515442.239	103222.583	5.132	PK Nail
ST62	515438.789	103251.214	6.441	PK Nail
ST63	515447.390	103238.842	5.011	PK Nail
ST64	515442.239	103222.583	5.132	PK Nail
ST65	515438.789	103251.214	6.441	PK Nail
ST66	515447.390	103238.842	5.011	PK Nail
ST67	515442.239	103222.583	5.132	PK Nail
ST68	515438.789	103251.214	6.441	PK Nail
ST69	515447.390	103238.842	5.011	PK Nail
ST70	515442.239	103222.583	5.132	PK Nail
ST71	515438.789	103251.214	6.441	PK Nail
ST72	515447.390	103238.842	5.011	PK Nail
ST73	515442.239	103222.583	5.132	PK Nail
ST74	515438.789	103251.214	6.441	PK Nail
ST75	515447.390	103238.842	5.011	PK Nail
ST76	515442.239	103222.583	5.132	PK Nail
ST77	515438.789	103251.214	6.441	PK Nail
ST78	515447.390	103238.842	5.011	PK Nail
ST79	515442.239	103222.583	5.132	PK Nail
ST80	515438.789	103251.214	6.441	PK Nail
ST81	515447.390	103238.842	5.011	PK Nail
ST82	515442.239	103222.583	5.132	PK Nail
ST83	515438.789	103251.214	6.441	PK Nail
ST84	515447.390	103238.842	5.011	PK Nail
ST85	515442.239	103222.583	5.132	PK Nail
ST86	515438.789	103251.214	6.441	PK Nail
ST87	515447.390	103238.842	5.011	PK Nail
ST88	515442.239	103222.583	5.132	PK Nail
ST89	515438.789	103251.214	6.441	PK Nail
ST90	515447.390	103238.842	5.011	PK Nail
ST91	515442.239	103222.583	5.132	PK Nail
ST92	515438.789	103251.214	6.441	PK Nail
ST93	515447.390	103238.842	5.011	PK Nail
ST94	515442.239	103222.583	5.132	PK Nail
ST95	515438.789	103251.214	6.441	PK Nail
ST96	515447.390	103238.842	5.011	PK Nail
ST97	515442.239	103222.583	5.132	PK Nail
ST98	515438.789	103251.214	6.441	PK Nail
ST99	515447.390	103238.842	5.011	PK Nail
ST100	515442.239	103222.583	5.132	PK Nail
ST101	515438.789	103251.214	6.441	PK Nail
ST102	515447.390	103238.842	5.011	PK Nail
ST103	515442.239	103222.583	5.132	PK Nail
ST104	515438.789	103251.214	6.441	PK Nail
ST105	515447.390	103238.842	5.011	PK Nail
ST106	515442.239	103222.583	5.132	PK Nail
ST107	515438.789	103251.214	6.441	PK Nail
ST108	515447.390	103238.842	5.011	PK Nail
ST109	515442.239	103222.583	5.132	PK Nail
ST110	515438.789	103251.214	6.441	PK Nail
ST111	515447.390	103238.842	5.011	PK Nail
ST112	515442.239	103222.583	5.132	PK Nail
ST113	515438.789	103251.214	6.441	PK Nail
ST114	515447.390	103238.842	5.011	PK Nail
ST115	515442.239	103222.583	5.132	PK Nail
ST116	515438.789	103251.214	6.441	PK Nail
ST117	515447.390	103238.842	5.011	PK Nail
ST118	515442.239	103222.583	5.132	PK Nail
ST119	515438.789	103251.214	6.441	PK Nail
ST120	515447.390	103238.842	5.011	PK Nail
ST121	515442.239	103222.583	5.132	PK Nail
ST122	515438.789	103251.214	6.441	PK Nail
ST123	515447.390	103238.842	5.011	PK Nail
ST124	515442.239	103222.583	5.132	PK Nail
ST125	515438.789	103251.214	6.441	PK Nail
ST126	515447.390	103238.842	5.011	PK Nail
ST127	515442.239	103222.583	5.132	PK Nail
ST128	515438.789	103251.214	6.441	PK Nail
ST129	515447.390	103238.842	5.011	PK Nail
ST130	515442.239	103222.583	5.132	PK Nail
ST131	515438.789	103251.214	6.441	PK Nail
ST132	515447.390	103238.842	5.011	PK Nail
ST133	515442.239	103222.583	5.132	PK Nail
ST134	515438.789	103251.214	6.441	PK Nail
ST135	515447.390	103238.842	5.011	PK Nail
ST136	515442.239	103222.583	5.132	PK Nail
ST137	515438.789	103251.214	6.441	PK Nail
ST138	515447.390	103238.842	5.011	PK Nail
ST139	515442.239	103222.583	5.132	PK Nail
ST140	515438.789	103251.214	6.441	PK Nail
ST141	515447.390	103238.842	5.011	PK Nail
ST142	515442.239	103222.583	5.132	PK Nail
ST143	515438.789	103251.214	6.441	PK Nail
ST144	515447.390	103238.842	5.011	PK Nail
ST145	515442.239	103222.583	5.132	PK Nail
ST146	515438.789	103251.214	6.441	PK Nail
ST147	515447.390	103238.842	5.011	PK Nail
ST148	515442.239	103222.583	5.132	PK Nail
ST149	515438.789	103251.214	6.441	PK Nail
ST150	515447.390	103238.842	5.011	PK Nail
ST151	515442.239	103222.583	5.132	PK Nail
ST152	515438.789	103251.214	6.441	PK Nail
ST153	515447.390	103238.842	5.011	PK Nail
ST154	515442.239	103222.583	5.132	PK Nail
ST155	515438.789	103251.214	6.441	PK Nail
ST156	515447.390	103238.842	5.011	PK Nail
ST157	515442.239	103222.583	5.132	PK Nail
ST158	515438.789	103251.214	6.441	PK Nail
ST159	515447.390	103238.842	5.011	PK Nail
ST160	515442.239	103222.583	5.132	PK Nail
ST161	515438.789	103251.214	6.441	PK Nail
ST162	515447.390	103238.842	5.011	PK Nail
ST163	515442.239	103222.583	5.132	PK Nail
ST164	515438.789	103251.214	6.441	PK Nail
ST165	515447.390	103238.842	5.011	PK Nail
ST166	515442.239	103222.583	5.132	PK Nail
ST167	515438.789	103251.214	6.441	PK Nail
ST168	515447.390	103238.842	5.011	PK Nail
ST169	515442.239	103222.583	5.132	PK Nail
ST170	515438.789	103251.214	6.441	PK Nail
ST171	515447.390	103238.842	5.011	PK Nail
ST172	515442.239	103222.583	5.132	PK Nail
ST173	515438.789	103251.214	6.441	PK Nail
ST174	515447.390	103238.842	5.011	PK Nail
ST175	515442.239	103222.583	5.132	PK Nail
ST176	515438.789	103251.214	6.441	PK Nail
ST177	515447.390	103238.842	5.011	PK Nail
ST178	515442.239	103222.583	5.132	PK Nail
ST179	515438.789	103251.214	6.441	PK Nail
ST180	515447.390	103238.842	5.011	PK Nail
ST181	515442.239	103222.583	5.132	PK Nail
ST182	515438.789	103251.214	6.441	PK Nail
ST183	515447.390	103238.842	5.011	PK Nail
ST184	515442.239	103222.583	5.132	PK Nail
ST185	515438.789	103251.214	6.441	PK Nail
ST186	515447.390	103238.842	5.011	PK Nail
ST187	515442.239	103222.583	5.132	PK Nail
ST188	515438.789	103251.214	6.441	PK Nail
ST189	515447.390	103238.842	5.011	PK Nail
ST190	515442.239	103222.583	5.132	PK Nail
ST191	515438.789	103251.214	6.441	PK Nail
ST192	515447.390	103238.842	5.011	PK Nail
ST193	515442.239	103222.583	5.132	PK Nail
ST194	515438.789	103251.214	6.441	PK Nail
ST195	515447.390	103238.842	5.011	PK Nail
ST196	515442.239	103222.583	5.132	PK Nail
ST197	515438.789	103251.214	6.441	PK Nail
ST198	515447.390	103238.842	5.011	PK Nail
ST199	515442.239	103222.583	5.132	PK Nail
ST200	515438.789	103251.214	6.441	PK Nail

THE SURVEY STATIONS LISTED ABOVE ARE ONLY INTENDED TO BE USED FOR TOPOGRAPHICAL SURVEYS AT THE STATED SCALE. ALL CONTROL MUST BE CHECKED AND VERIFIED PRIOR TO USE.

NOTES

1. ORDNANCE SURVEY NATIONAL GRID COORDINATES HAVE BEEN ESTABLISHED FOR STS5 USING GPS AND RELATED TO OSTN02(GB) AND OSGM02(GB). THE GRID IS ORIENTATED TO GRID NORTH, WITH A SCALE FACTOR OF 1.000.

2. ALL LEVELS RELATE TO THE ORDNANCE SURVEY LEVEL DATUM FOR CONTROL STATION STS5 ESTABLISHED WITH GPS USING OSGM02(GB).

3. ALL DIMENSIONS ARE IN METRES.

REV	DESCRIPTION	DRAWN	APPR	DATE

Survey Solutions
Land = Engineering = Architectural
SURVEY SOLUTIONS (South East)
CODHAM HALL, GREAT WARLEY
BRENTWOOD CM13 3JT
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southeast@survey-solutions.co.uk
www.survey-solutions.co.uk
BRENTWOOD NORWICH COVENTRY IPSWICH WEOVIL PERTH
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NOTE
Trees marked * are indicatively plotted only and should be verified by land surveyor.
Do not scale from this plan

KEY
- category A trees
- category B trees
- category C trees
- category R trees

CLIENT
WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Survey Plan
SHEET1 OF 4

DRAWING No.
CBA 7245.01

SCALE
1:200@AO

DRAWN
lg

DATE
20 Jan 2009

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CBA Trees, Apex House, Apex Centre, Church Lane, Colden Common, Winchester, Hampshire, SO21 1TR.
Tel: 01962 715555 Fax 01962 715449

check 05 21 Jan 2009

ORIGINAL SHEET SIZE A0H

T:\Jobs\Current\TSWORTHING HOSPITAL\Tree Drawings\TWORTHING HOSPITAL.DWG Last Saved by: lg at 20 Jan 2009, 13:00:09.61 (2:25.0)
PCP/PC 150 WL 1.5

WORTHING HOSPITAL

Lyndhurst Road

Nos.14-16

Nos.10-12

Nos.2-8

Private Dwellings

Grp1 Grp2 Grp3 Grp4 Grp5

INDICATIVE ONLY

ABBREVIATIONS

AV	Air Valve	FH	Fire Hydrant	SI	Sign Post
AH	Arch Head Height	FL	Floor Level	SP	Arch Spring Point Height
BB	Bollards Beacon	FP	Flag Pole	SV	Stop Valve
BH	Bore Hole	GG	Gully Grate	SY	Stay
BL	Bird Level	GV	Gas Valve	Tac	Tactile Paving
BO	Bollard	HH	Head Height	TC	Telecom Cover
BP	Brace Post	IC	Inspection Cover	TH	Trial Pit
BS	Bus Stop	IL	Invert Level	THL	Threshold Level
BU	Bush	KO	Kerb Outlet	TL	Traffic Light
BX	Box (Utilities)	LP	Lamp Post	TowY	Top of Wall
CCov	Ceiling Level	MH	Manhole	TP	Telegraph Pole
CH	Cill Height	MP	Marker Post	TV	Cattle TV Cover
CL	Cover Level	NB	Name Board	UB	Universal Beam
COL	Column	PAV	Partition Wall	UC	Unknown Cover
DC	Drainage Channel	PM	Parking Meter	UK	Unknown Tree
DH	Door Head Height	PO	Post	UTL	Unable To Lift
DP	Down Pipe	PB	Post Box	UB	Under Side Beam
DR	Drain	RE	Rodding Eye	VP	Vent Pipe
EL	Eaves Level	RL	Ridge Level	WB	Waste Bin
EP	Electric Pole	RP	Reflector Post	WH	Weep Hole
ER	Earth Rod	RS	Road Sign	WL	Water Level
ET	EP^Transformer	RSD	Roller Shutter Door	WM	Water Meter
FB	Fibre Board Dandion	RSJ	Rolled Steel Joist	WO	Wash Out

FEATURES

FENCE

WALL — Wall 1.2m

HEDGE — AVERAGE ROOT LINE SHOWN

OVERHEAD LINE — 11kv — INDICATIVE POSITION OF LINE

MEASUREMENTS TO INTERNAL WALLS HAVE BEEN TAKEN TO THE WALL FINISHES AT APPROX 1m ABOVE FLOOR LEVEL AND ASSUMED TO BE VERTICAL.

FENCE TYPES

BW	BARBED WIRE	CL	CHAIN LINK	IR	IRON RAILINGS
CB	CLOSE BOARD	CP	CHESTNUT PALING	Pan	PANEL
P/R	POST AND RAIL				
P/W	POST AND WIRE				

SYMBOLS

- FLOOR TO CEILING HEIGHT
- FTC FLOOR TO FALSE CEILING HEIGHT
- CONTROL STATION
- C/d COLUMN

CILL HEIGHTS ARE MEASURED AS FLOOR TO CILL.
HEAD HEIGHTS ARE MEASURED FROM CILL TO TOP OF WINDOW

SERVICES

FOUL SEWERS — PIPE POSITIONS AND ALIGNMENTS ARE INDICATIVE ONLY.

STORM SEWERS

ALL BELOW GROUND DETAILS INCLUDING DRAINAGE, VOIDS AND SERVICES HAVE BEEN IDENTIFIED FROM ABOVE GROUND AND THEREFORE ALL DETAILS RELATING TO THESE FEATURES INCLUDING SIZES, DEPTH, DESCRIPTION ETC WILL BE APPROXIMATE ONLY. ANY SUCH DETAILS REQUIRED FOR DESIGN AND CONNECTIONS SHOULD BE CHECKED AND VERIFIED PRIOR TO EXCAVATING WORK.

SERVICES AND DETAIL MAY NOT HAVE BEEN SURVEYED IF OBSTRUCTED OR NOT REASONABLY VISIBLE AT THE TIME OF SURVEY.

THE CONTRACTOR MUST CHECK AND VERIFY ALL SITE AND BUILDING DIMENSIONS, LEVELS, UTILITIES AND DRAINAGE DETAILS AND CONNECTIONS PRIOR TO COMMENCING WORK.

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DO NOT SCALE FROM THIS DRAWING

SHEET LAYOUT

SH4 SH3 SH2 SH1

CONTROL COORDINATES

STATIONS	EASTINGS	NORTHINGS	LEVEL	DESCRIPTION
ST01	515398.526	103398.528	3.161	PK Nail
ST02	515442.222	103308.671	2.611	PK Nail
ST03	515461.160	103237.680	4.267	PK Nail
ST04	515468.178	103185.014	5.124	PK Nail
ST05	515468.178	103085.014	7.124	PK Nail
ST06	515415.462	103061.893	7.122	PK Nail
ST07	515398.729	103066.529	6.802	PK Nail
ST08	515398.526	103398.528	3.161	PK Nail
ST09	515352.395	103394.771	6.712	PK Nail
ST10	515350.399	103464.990	6.747	PK Nail
ST11	515370.886	103530.417	6.088	PK Nail
ST12	515417.260	103530.842	5.211	PK Nail
ST13	515447.260	103288.842	5.011	PK Nail
ST14	515338.399	103134.214	6.441	PK Nail
ST15	515297.799	103083.192	6.441	PK Nail
ST16	515297.799	103083.192	5.007	PK Nail
ST42	515427.302	103330.343	3.661	PK Nail
ST43	515458.518	103173.351	5.043	PK Nail
ST45	515394.340	103299.120	5.078	PK Nail
ST46	515394.340	103299.120	5.078	PK Nail
ST51	515418.098	103140.701	5.626	PK Nail

THE SURVEY STATIONS LISTED ABOVE ARE ONLY INTENDED TO BE USED FOR TOPOGRAPHICAL SURVEYS AT THE STATED SCALE. ALL CONTROL MUST BE CHECKED AND VERIFIED PRIOR TO USE.

NOTES

1. ORDINANCE SURVEY NATIONAL GRID COORDINATES HAVE BEEN ESTABLISHED FOR ST50 USING GPS AND REALATED TO OSTN02(GB) AND OSGN02(GB). THE GRID IS ORIENTATED TO GRID NORTH, WITH A SCALE FACTOR OF 1.000.
2. ALL LEVELS RELATE TO THE ORDNANCE SURVEY LEVEL DATUM FOR CONTROL STATION ST50 ESTABLISHED WITH GPS USING OSGM02(GB).
3. ALL DIMENSIONS ARE IN METRES.

REV	DESCRIPTION

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BRENTWOOD NOTTINGHAM COVENTRY IPSWICH YEOVIL PERTH
Survey Solutions (South East) is the trading name of Land Survey Solutions (South East) Ltd

	DRAWN	APPR	DATE

NOTE
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Do not scale from this plan

KEY
- category A trees
- category B trees
- category C trees
- category R trees

CLIENT
WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Survey Plan
SHEET 2 OF 4

DRAWING No.
CBA 7245.01

SCALE
1:200@A0

DRAWN
lg

DATE
20 Jan 2009

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Tel: 01438 717706 Fax: 01582 716418

ORIGINAL SHEET SIZE A0

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ABBREVIATIONS

AV	Air Valve	FH	Fire Hydrant	SI	Sign Post
AH	Arch Head Height	FL	Floor Level	SP	Arch Spring Point Height
BB	Bellacia Beacon	FP	Flag Pole	SV	Stop Valve
BH	Bore Hole	GG	Gully Grate	SY	Stay
BL	Bed Level	GV	Gas Valve	Tac	Tactile Paving
BO	Bollard	HH	Head Height	TC	Telecom Cover
BrP	Brace Post	IC	Inspection Cover	TH	Trial Pit
BS	Bus Stop	IL	Invert Level	THL	Threshold Level
BU	Bush	KO	Kerb Outlet	TL	Traffic Light
BX	Box (Utilities)	LP	Lamp Post	ToW	Top of Wall
CoLe	Ceiling Level	MH	Manhole	TP	Telegraph Pole
CH	CB Height	MP	Marker Post	TV	Cable TV Cover
CL	Cover Level	NB	Name Board	UB	Unknown Boxes
COL	Column	PiW	Partition Wall	UC	Unknown Cover
DC	Drainage Channel	PM	Parking Meter	UK	Unknown Tree
DH	Door Head Height	PO	Post	UTL	Unable To Lift
DP	Down Pipe	PB	Post Box	USB	Under Side Beam
DR	Drain	RE	Rodding Eye	VP	Vent Pipe
EL	Eaves Level	RL	Ridge Level	WB	Waste Bin
EP	Electric Pole	RP	Reflector Post	WH	Weep Hole
ER	Earth Rod	RS	Road Sign	WL	Water Level
ET	ET=Transformer	RSD	Roller Shutter Door	WM	Water Meter
FB	Fibre Board Direction	RSJ	Rolled Steel Joist	WO	Wash Out

FEATURES

FENCE

WALL

HEDGE — AVERAGE ROOT LINE SHOWN

OVERHEAD LINE — INDICATIVE POSITION OF LINE

MEASUREMENTS TO INTERNAL WALLS HAVE BEEN TAKEN TO THE WALL FINISHES AT APPROX 1m ABOVE FLOOR LEVEL AND ASSUMED TO BE VERTICAL.

FENCE TYPES

BW BARBED WIRE	CL CHAIN LINK	IR IRON RAILINGS	P/R POST AND RAIL
C/B CLOSE BOARD	C/P CHESTNUT PALING	Pan PANEL	P/W POST AND WIRE

SYMBOLS

FLOOR TO CEILING HEIGHT — CONTROL STATION

F/C FLOOR TO FALSE CEILING HEIGHT — C/d COLUMN

CILL HEIGHTS ARE MEASURED AS FLOOR TO CILL
HEAD HEIGHTS ARE MEASURED FROM CILL TO TOP OF WINDOW

SERVICES

FOUL SEWERS — STORM SEWERS

PIPE POSITIONS AND ALIGNMENTS ARE INDICATIVE ONLY.

ALL BELOW GROUND DETAILS INCLUDING DRAINAGE, VOIDS AND SERVICES HAVE BEEN IDENTIFIED FROM ABOVE GROUND AND THEREFORE ALL DETAILS RELATING TO THESE FEATURES INCLUDING SIZES, DEPTH, DESCRIPTION ETC WILL BE APPROXIMATE ONLY. ANY DIMENSIONS, POSITIONS AND LEVELS SHOULD BE CHECKED AND VERIFIED PRIOR TO STARTING WORK.

SERVICES AND DETAIL MAY NOT HAVE BEEN SURVEYED IF OBSTRUCTED OR NOT REASONABLY VISIBLE AT THE TIME OF SURVEY.

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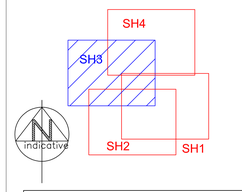
SHEET LAYOUT



CONTROL CO-ORDINATES

STATIONS	EASTINGS	NORTHINGS	LEVEL	DESCRIPTION
ST01	515359.526	103269.526	3.141	PK Nail
ST02	515443.222	103288.671	2.911	PK Nail
ST03	515466.277	103417.853	4.180	PK Nail
ST04	515466.177	103417.953	4.180	PK Nail
ST05	515496.170	103385.018	7.124	PK Nail
ST06	515415.462	103301.863	7.133	PK Nail
ST07	515358.724	103366.529	4.822	PK Nail
ST08	515352.286	103366.581	6.712	PK Nail
ST09	515352.286	103366.581	6.712	PK Nail
ST10	515305.394	103384.560	6.787	PK Nail
ST11	515443.286	103222.863	5.133	PK Nail
ST12	515443.286	103222.863	5.133	PK Nail
ST13	515447.380	103258.842	5.011	PK Nail
ST14	515447.380	103258.842	5.011	PK Nail
ST40	515348.755	103314.314	3.441	PK Nail
ST41	515397.085	103303.100	3.007	PK Nail
ST42	515406.018	103320.317	2.981	PK Nail
ST43	515406.018	103320.317	2.981	PK Nail
ST45	515348.340	103286.120	3.079	PK Nail
ST50	515438.343	103132.250	5.763	Peg Nail
ST51	515418.088	103140.781	3.936	PK Nail

THE SURVEY STATIONS LISTED ABOVE ARE ONLY INTENDED TO BE USED FOR TOPOGRAPHICAL SURVEYS AT THE STATED SCALE. ALL CONTROL MUST BE CHECKED AND VERIFIED PRIOR TO USE.

NOTES:

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2. ALL LEVELS RELATE TO THE ORDNANCE SURVEY LEVEL DATUM FOR CONTROL STATION ST50 ESTABLISHED WITH GPS USING OSGM02(GB).

3. ALL DIMENSIONS ARE IN METRES.

DESCRIPTION	DRAWN	APPR	DATE

Survey Solutions
Land = Engineering = Architectural

SURVEY SOLUTIONS (South East)
CODHAM HALL, GREAT WARLEY
BRENTWOOD CM13 3JT
Tel 01277 222700 Fax 01277 227221
southeast@survey-solutions.co.uk
www.survey-solutions.co.uk
BRENTWOOD NORWICH COVENTRY IPSWICH YEOVIL PERTH
Survey Solutions (South East) is the trading name of Land Survey Solutions (South East) Ltd

NOTE
Trees marked * are indicatively plotted only and should be verified by land surveyor.
Do not scale from this plan

KEY
- category A trees
- category B trees
- category C trees
- category R trees

CLIENT
WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Survey Plan
SHEET 3 OF 4

DRAWING No.
CBA 7245.01

SCALE 1:200@A0

DRAWN lg

DATE 20 Jan 2009

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CBA Trees, Apex House, Apex Centre, Church Lane, Calne, Wiltshire, SN11 0DG. Tel: 01249 706777 Fax: 01249 706699

ORIGINAL SHEET SIZE A0H

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ABBREVIATIONS

AV	Air Valve	FH	Fire Hydrant	SI	Sign Post
AH	Arch Head Height	FL	Floor Level	SP	Arch Spring Point Height
BB	Bellsha Beacon	FP	Flag Pole	SV	Stop Valve
BH	Bore Hole	GG	Gully Grate	SY	Stay
BL	Bed Level	GV	Gas Valve	Tac	Tactile Paving
BO	Bollard	HH	Head Height	TC	Telecom Cover
BrP	Brace Post	IC	Inspection Cover	TH	Trial Pit
BS	Bus Stop	IL	Invert Level	THL	Threshold Level
BU	Bush	KO	Kerb Outlet	TL	Traffic Light
BX	Box (Utilities)	LP	Lamp Post	ToW	Top of Wall
C+Lev	Ceiling Level	MH	Manhole	TP	Telegraph Pole
CH	C/E Height	MP	Marker Post	TV	Cable TV Cover
CL	Cover Level	NB	Name Board	UB	Universal Beam
COL	Column	PW	Partition Wall	UC	Unknown Cover
DC	Drainage Channel	PM	Parking Meter	UK	Unknown Tree
DH	Door Head Height	PO	Post	UTL	Unable To Lift
DP	Down Pipe	PB	Post Box	USB	Under Side Beam
DR	Drain	RE	Rodding Eye	VP	Vent Pipe
EL	Eaves Level	RL	Ridge Level	WB	Waste Bin
EP	Electric Pole	RP	Reflector Post	WH	Wasp Hole
EN	Earth Rod	RS	Road Sign	WL	Water Level
ET	EPh Transformer	RSD	Roller Shutter Door	WM	Water Meter
FB	Floor Board Direction	RSJ	Rolled Steel Joist	WO	Wash Out

FEATURES

FENCE

WALL

HEDGE — AVERAGE ROOT LINE SHOWN

OVERHEAD LINE — INDICATIVE POSITION OF LINE

MEASUREMENTS TO INTERNAL WALLS HAVE BEEN TAKEN TO THE WALL FINISHES AT APPROX 1m ABOVE FLOOR LEVEL AND ASSUMED TO BE VERTICAL.

FENCE TYPES

B/W	BARBED WIRE	CL	CHAIN LINK	IR	IRON RAILINGS	P/R	POST AND RAIL
C/B	CLOSE BOARD	C/P	CHESTNUT PALING	Pan	PANEL	P/W	POST AND WIRE

SYMBOLS

- FLOOR TO CEILING HEIGHT
- FLOOR TO FALSE CEILING HEIGHT
- CONTROL STATION
- COLUMN

CILL HEIGHTS ARE MEASURED AS FLOOR TO CILL
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SERVICES

FOUL SEWERS — PIPE SIZE

STORM SEWERS — PIPE SIZE

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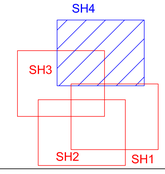

CONTROL COORDINATES

STATIONS	EASTINGS	NORTHINGS	LEVEL	DESCRIPTION
ST01	515359.326	103286.526	2.161	PK Nail
ST02	515442.222	103268.571	2.811	PK Nail
ST03	515461.190	103137.680	4.397	PK Nail
ST04	515466.178	103085.014	7.124	PK Nail
ST05	515466.178	103085.014	7.124	PK Nail
ST06	515415.462	103061.863	7.153	PK Nail
ST07	515359.728	103048.063	6.802	PK Nail
ST08	515372.027	103066.770	6.810	PK Nail
ST09	515393.588	103104.542	6.787	PK Nail
ST10	515393.588	103104.542	6.787	PK Nail
ST11	515370.686	102130.417	6.388	PK Nail
ST12	515441.390	102258.943	5.511	PK Nail
ST13	515441.390	102258.943	5.511	PK Nail
ST14	515338.390	102136.216	6.441	PK Nail
ST15	515349.705	102089.265	6.068	PK Nail
ST41	515367.080	103353.160	3.007	PK Nail
ST42	515447.302	103330.343	2.881	PK Nail
ST51	515418.088	102140.701	5.936	PK Nail

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3. ALL DIMENSIONS ARE IN METRES.

REV	DESCRIPTION	DRAWN	APPR	DATE

Survey Solutions
Land • Engineering • Architectural

SURVEY SOLUTIONS (South East)
CODHAM HALL, GREAT WARLEY
BRENTWOOD CM13 3JT
Tel 01277 222700 Fax 01277 227221
southeast@survey-solutions.co.uk
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BRENTWOOD • BRISTOL • COVENTRY • IPSWICH • YEOVIL • PERTH
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NOTE
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KEY
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- category B trees
- category C trees
- category R trees

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WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Survey Plan
SHEET 4 OF 4

DRAWING No.
CBA 7245.01

SCALE
1:200@A0

DRAWN
lg

DATE
20 Jan 2009

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CBA Trees, Apex Houses, Apex Centre, Church Lane, Colden Common, Winchester, Hampshire, SO20 7TL
Tel: 01962 715 777 Fax: 01962 715 949

ORIGINAL SHEET SIZE A0

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CB2

TREE ROOT PROTECTION AREA SCHEDULE

Client:	WSP Environmental & Energy	**Site:**	Worthing Hospital, Lyndhurst Road, Worthing, West Sussex
Date:	12th and 16th January 2009	**Consultant:**	Richard Harris *HND Forestry*

Notes:
1. This is an assessment of the Root Protection Area (RPA) required, based on the individual tree data collected and Table 2 of BS5837:2005.
2. At this juncture this document is for your sole guidance and ongoing discussions purposes only and is not intended for general circulation, as it assumes that all but the 'R' trees will be retained, which clearly may not be the case.
3. For all single stem trees with a stem diameter greater than 1250mm, and multi-stem trees with a stem diameter greater than 1500mm, the calculated RPA has been capped at 707m2 in accordance with Section 5.2.3 of BS5837:2005.

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
1	Silver Birch	C1	S	90	1.08	3.66
2	London Plane	B1	S	240	2.88	26.06
3	London Plane	B1	S	220	2.64	21.90
4	Silver Birch	C1	S	120	1.44	6.52
5	Common Sycamore	B1	MS	390	3.90	47.79
6	Common Ash	C1	MS	515	5.15	83.33
7	Common Yew	B1	MS	540	5.40	91.62
8	Common Lime	B1	S	230	2.76	23.93
9	Common Sycamore	B1	S	370	4.44	61.94
10	Common Ash	C1	MS	800	8.00	201.09
11	Fastigiate Hornbeam	B1	S	320	3.84	46.33
12	Common Sycamore	C1	S	260	3.12	30.59
13	Silver Maple	C1	S	390	4.68	68.82
14	Silver Birch	C1	S	220	2.64	21.90
15	Scots Pine	C1	S	260	3.12	30.59
16	Common Yew	B1	MS	470	4.70	69.41
17	Common Lime	B1+2	S	500	6.00	113.11
18	Common Lime	B1+2	S	540	6.48	131.93
19	Common Lime	B1+2	S	470	5.64	99.95
20	Rowan	C1	S	100	1.20	4.52
21	Flowering Cherry	C1+2	S	150	1.80	10.18
22	Flowering Cherry	C1+2	S	150	1.80	10.18

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
23	Flowering Cherry	C1+2	MS	160	1.60	8.04
24	Flowering Cherry	C1+2	S	170	2.04	13.08
25	Rowan	C1	S	100	1.20	4.52
26	Pine	B1	S	190	2.28	16.33
27	London Plane	C1	S	190	2.28	16.33
28	Common Lime	B1+2	S	580	6.96	152.20
29	Common Sycamore	C1	MS	600	6.00	113.11
30	Bay	C1	MS	320	3.20	32.17
31	Common Yew	B1+2	S	540	6.48	131.93
32	Common Sycamore	C1	S	380	4.56	65.33
33	Spindle Tree	C1	MS	340	3.40	36.32
34	Common Sycamore	C1	MS	305	3.05	29.23
35	Monterey Cypress	C1	MS	690	6.90	149.59
36	Bay	R	MS	400	-	-
37	Common Lime	B1+2	S	480	5.76	104.24
38	Holm Oak	A1	S	850	10.20	326.89
39	Holm Oak	B1	MS	510	5.10	81.72
40	Rowan	C1	MS	345	3.45	37.40
41	Common Lime	B1+2	S	450	5.40	91.62
42	Leyland Cypress	C1	MS	190	1.90	11.34
43	London Plane	C1	S	150	1.80	10.18
44	Monterey Cypress	B1+2	S	1150	13.80	598.36
45	Irish Yew	C1	MS	420	4.20	55.42
46	Common Sycamore	C1+2	S	690	8.28	215.41
47	Common Beech	B1+2	S	670	8.04	203.10
48	Common Sycamore	B1+2	S	400	4.80	72.39
49	London Plane	B1+2	S	480	5.76	104.24
50	London Plane	B1+2	S	290	3.48	38.05
51	London Plane	B1+2	S	385	4.62	67.06
52	London Plane	B1+2	S	300	3.60	40.72
53	Common Sycamore	C1	S	310	3.72	43.48
54	Common Sycamore	B1	S	530	6.36	127.09
55	Common Sycamore	C1	S	180	2.16	14.66
56	London Plane	C1	S	215	2.58	20.91
57	Flowering Cherry	C1	S	100	1.20	4.52
58	Flowering Cherry	C1	S	100	1.20	4.52

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
59	Flowering Cherry	C1	S	100	1.20	4.52
60	London Plane	B1+2	S	470	5.64	99.95
61	London Plane	B1+2	S	390	4.68	68.82
62	London Plane	B1+2	S	430	5.16	83.66
63	London Plane	B1+2	S	420	5.04	79.81
64	Wild Cherry	C1	S	150	1.80	10.18
65	Apple	C1	S	140	1.68	8.87
66	London Plane	B1	S	230	2.76	23.93
67	Rowan	C1	S	75	0.90	2.55
68	Apple	C1	S	170	2.04	13.08
69	Common Beech	C1	S	90	1.08	3.66
70	Common Beech	R	S	90	-	-
71	Apple	C1	S	120	1.44	6.52
72	London Plane	B1	S	190	2.28	16.33
73	Apple	C1	S	140	1.68	8.87
74	Common Sycamore	C1	S	90	1.08	3.66
75	London Plane	B1	S	195	2.34	17.20
76	Apple	B1	S	160	1.92	11.58
77	London Plane	B1	S	200	2.40	18.10
78	Apple	C1	S	130	1.56	7.65
79	Flowering Cherry	C1	S	130	1.56	7.65
80	Flowering Cherry	C1	S	140	1.68	8.87
81	Common Hawthorn	C1	S	90	1.08	3.66
82	Common Hawthorn	C1	S	95	1.14	4.08
83	Common Hawthorn	C1	S	120	1.44	6.52
84	Common Hawthorn	C1	MS	190	1.90	11.34
85	Fastigiate Hawthorn	C1	S	130	1.56	7.65
86	Fastigiate Hawthorn	C1	S	110	1.32	5.47
87	Fastigiate Hawthorn	C1	S	110	1.32	5.47
88	Field Maple	C1	S	120	1.44	6.52
89	Fastigiate Hornbeam	C1	S	120	1.44	6.52
90	Common Hawthorn	C1	S	120	1.44	6.52
91	Blue Atlas Cedar	C1	S	180	2.16	14.66
92	Common Lime	B1	S	610	7.32	168.36
93	Common Beech	B1	S	510	6.12	117.68
94	Horse Chestnut	B1	S	860	10.32	334.63

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
95	Horse Chestnut	B1	S	590	7.08	157.50
96	Common Lime	B1	S	270	3.24	32.98
97	Common Lime	B1	S	210	2.52	19.95
98	Common Lime	B1	S	300	3.60	40.72
99	Scots Pine	B1	S	300	3.60	40.72
100	Scots Pine	C1	S	270	3.24	32.98
101	Common Holly	C1	MS	130	1.30	5.31
102	Bay	C1	MS	1300	13.00	531.00
103	Bay	C1	MS	1420	14.20	633.55
104	Common Sycamore	C1+2	S	380	4.56	65.33
105	Common Beech	B1	S	870	10.44	342.46
106	Leyland Cypress	C1	MS	640	6.40	128.70
107	Common Ash	C1	S	590	7.08	157.50
108	Silver Birch	C1	S	210	2.52	19.95
109	Common Lime	B1+2	S	310	3.72	43.48
110	Common Lime	B1+2	S	320	3.84	46.33
111	Common Lime	B1+2	S	310	3.72	43.48
112	Common Ash	B1	S	550	6.60	136.87
113	Common Ash	C1+2	MS	500	5.00	78.55
114	Common Sycamore	C1+2	MS	760	7.60	181.48
115	Common Sycamore	R	S	190	-	-
116	Common Sycamore	C1+2	S	420	5.04	79.81
117	Common Sycamore	C1+2	MS	320	3.20	32.17
118	Common Sycamore	R	MS	400	-	-
119	Common Sycamore	C1+2	S	250	3.00	28.28
120	Common Sycamore	C1	S	390	4.68	68.82
121	Common Sycamore	C1+2	S	220	2.64	21.90
122	Lawson Cypress	C1	MS	670	6.70	141.04
123	Common Holly	C1	S	200	2.40	18.10
124	Common Ash	C1	MS	560	5.60	98.53
125	Common Elder	C1	MS	490	4.90	75.44
126	Common Holly	C1	S	300	3.60	40.72
127	Common Elder	C1	MS	350	3.50	38.49
128	Common Whitebeam	C1	S	170	2.04	13.08
129	Common Ash	B1	S	510	6.12	117.68
130	Lawson Cypress	R	S	150	-	-

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
131	Himalayan Cotoneaster	R	MS	180	-	-
132	Common Holly	C1	MS	290	2.90	26.42
133	Lawson Cypress	B1	S	340	4.08	52.30
134	Apple	R	MS	160	-	-
135	Flowering Cherry	C1	MS	150	1.50	7.07
136	Common Hawthorn	R	MS	550	-	-
137	Common Sycamore	C1	S	430	5.16	83.66
138	Common Elder	R	S	400	-	-
139	Horse Chestnut	B1	S	960	11.52	416.98
140	Common Lime	C1	S	420	5.04	79.81
141	Common Ash	B1	S	520	6.24	122.34
142	Common Walnut	R	S	500	-	-
143	Common Lime	B1	S	490	5.88	108.63
144	Common Sycamore	B1	S	530	6.36	127.09
Grp 1	Himalayan Birch Strawberry Tree	C1+2	MS	240	2.40	18.10
Grp 2	Monterey Cypress Blackthorn Common Hawthorn Norway Maple	C1+2	Ms	80	0.80	2.01
Grp 3	Blackthorn Common Hawthorn Monterey Cypress	C1+2	MS	100	1.00	3.14
Grp 4	Monterey Cypress	C1	S	75	0.90	2.55
Grp 5	Common Holly Aucuba Privet Bay	C1+2	Ms	350	3.50	38.49
Grp 6	Silver Birch x 10	C1+2	S	160	1.92	11.58
Grp 7	Portuguese Laurel Eleagnus	C1	MS	130	1.30	5.31
Grp 8	Leyland Cypress	C1+2	MS	680	6.80	145.29
Grp 9	Griselinia	C1+2	MS	200	2.00	12.57
H1	Laurel	B1+2	MS	250	2.50	19.64
H2	Leyland Cypress Lawson Cypress	C1+2	S	230	2.76	23.93

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
H3	Laurel Leyland Cypress Euonymus	C1+2	MS	100	1.00	3.14
H4	Leyland Cypress	C1+2	S	100	1.20	4.52


CB3

This plan is based on drwg nr. P1-100(PA)

Landscaped Buffer Zone

Temporary Car Park for Hospital staff use during Hospital Reconfiguration Works (70 Temporary Spaces) - Reinforced Grass

Temporary / Permanent Divide

Permanent Car park For Breast Clinic (10 Spaces + 6 DDA)

Grp8

Grp9

H1

H3

H4

Trees, groups and hedges to be retained and protected in accordance with CBA Arboricultural Development Statement (ADS) July 2010

Trees, groups and hedges to be lost subject to Local Authority approval

Trees to be removed for reasons of sound arboricultural management regardless of development proposals, subject to Local Authority approval

Root Protection Area (RPA)

Line of tree protective fencing forming Construction Exclusion Zone (CEZ)

Area of fit for purpose ground protection in accordance with ADS July 2010

NOTE
Trees marked * are indicatively plotted only and should be verified by land surveyor.
Do not scale from this plan

KEY
- category A trees
- category B trees
- category C trees
- category R trees

CLIENT
WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Protection Plan
BREAST CLINIC & TEMPORARY CAR PARKING

DRAWING No.
CBA 7245.02

SCALE 1:250@A1

DRAWN la

DATE July 2010

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CBA Trees, Apex House, Apex Centre, Church Lane, Colden Common, Winchester, Hampshire, SO21 1TN.
Tel: 01962 715427 Fax: 01962 715410

checked SR 13 July 2010

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Children's Centre

STAFF CAR PARK

EXISTING MAIN ENTRANCE



site location plan
not to scale

Trees to be retained and protected in accordance with BS5837:2005

Trees to be removed to facilitate development subject to Local Authority approval

Root Protection Area (RPA)

Location of tree protective fencing forming Construction Exclusion Zone (CEZ)

Wait
Disposal hold
Wait
Reception
Wait
Cleaners
Office
Clinic 1
Clinic 4
Interview
Interview
Clinic 2
Clinic 3
Consult Exam Room 1
WC WC B.fd B.Ch WC WC WC
Consult Exam Room 20
Consult Exam Room 2
Consult Exam Room 24
Consult Exam Room 23
DU
Pantry
CU
Consult Exam Room 22
Consult Exam Room 21
Consult Exam Room 19
Consult Exam Room 3
Consult Exam Room 18
Consult Exam Room 4
Clinical Measure
Treatment room 1
Change
Store
Store
Resus
WC
WC
Store
VENE
Treatment room (Plaster)
Change
Store
Treatment room 2
Clinical Measure
Store
Consult Exam Room 17
Consult Exam Room 5
Consult Exam Room 6
Consult Exam Room 7
Consult Exam Room 8
Consult Exam Room 9
Consult Exam Room 10
Consult Exam Room 11
Consult Exam Room 12
Consult Exam Room 13
Consult Exam Room 14
Consult Exam Room 15
Consult Exam Room 16

28
29
30
31
32
33*
34
35
56
57*
58*

KEY
- category A trees
- category B trees
- category C trees
- category R trees

CLIENT
WSP Environmental & Energy

JOB TITLE
Worthing Hospital
Lyndhurst Road
Worthing, West Sussex

DRAWING TITLE
Tree Protection Plan
NEW WARD BLOCK

DRAWING No.
CBA 7245.03

SCALE
1:250@A2

DRAWN
lg

DATE
July 2010

NOTE
Trees marked *are indicatively plotted only and should be verified by Land Surveyor.
Do not scale from this plan

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REG NO 180695
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CB4

	TREE WORKS SCHEDULE			
CBA Trees	**Client:**	WSP Environmental and Energy	**Site:**	Worthing Hospital
	Date:	July 2010	**Consultant:**	Stefan Rose BSc (Hons), Tech Cert (Arbor.A)

Tree No	Species	Recommended Works
29	Common Sycamore	• Prune West side lateral spread by a maximum of 1.5m
30	Bay	• Prune West side lateral spread by a maximum of 1.5m
31	Common Yew	• Remove (subject to further on-site investigation and approval from CBA Trees and Worthing Borough Council)
56	London Plane	• Remove
57	Flowering Cherry	• Remove
114	Common Sycamore	• Remove
115	Common Sycamore	• Remove
117	Common Sycamore	• Remove
118	Common Sycamore	• Remove
119	Common Sycamore	• Remove
121	Common Sycamore	• Remove
122	Lawson Cypress	• Remove
123	Common Holly	• Remove
124	Common Ash	• Remove
125	Common Elder	• Remove
126	Common Holly	• Remove
128	Common Whitebeam	• Remove
130	Lawson Cypress	• Remove
131	Himalayan Cotoneaster	• Remove
134	Apple	• Remove
135	Flowering Cherry	• Remove
136	Common Hawthorn	• Remove
138	Common Elder	• Remove
142	Common Walnut	• Remove

Tree No	Species	Recommended Works
Group 8	Leyland Cypress	• Crown lift southern side of canopy to achieve a ground clearance of 3m over the proposed car park
Group 9	Griselinia	• Remove
Hedge 3	Laurel Leyland Cypress Euonymus	• Remove section of hedge under footprint of proposed development which runs North-South

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.

- All tree works should be carried out in accordance with current best practice guidelines and BS3998 – Tree Works. Only natural target pruning method to be used.

- We recommend the use of an Arboricultural Association Approved Contractor or an ISA Certified Arborist/Tree Worker that is suitably insured and experienced to carry out the tree works.


CB5

CBA Tree Survey data cross-referenced with Tree Preservation Order 1992 No.12

TPO Number	CBA Number	TPO Species	CBA Species	Comments
1	92	Lime	Lime	-
2	94	Horse Chestnut	Horse Chestnut	-
3	95	Horse Chestnut	Horse Chestnut	-
4	93	Purple Beech	Beech	-
5	96	Lime	Lime	-
6	108	Silver Birch	Silver Birch	-
7	106	Leyland Cypress	Leyland Cypress	-
8	107	Ash	Ash	-
9	N/A	Sweet Chestnut	-	Not identified in CBA Tree Survey (tree may no longer exist)
10	112	Ash	Ash	-
11	114	Silver Birch	Silver Birch	Possible match
12	N/A	Variegated False Acacia	-	Not identified in CBA Tree Survey (tree may no longer exist)
13	N/A	Ash	-	Not identified in CBA Tree Survey (tree may no longer exist)
14	49	Plane	Plane	-
15	51	Plane	Plane	-
16	63	Plane	Plane	-
17	62	Plane	Plane	-
18	61	Plane	Plane	-
19	60	-	Plane	On TPO schedule Lime crossed out, new species not written in
20	6	Ash	Ash	-
21 (deleted)	-	-	-	-
22	136	Hawthorn	Hawthorn	An ‘R’ grade tree CBA has recommended for removal. Replacement tree will be required.
23	16	Yew	Yew	-
24	N/A	Bay	-	Not identified in CBA Tree Survey (tree may no longer exist)
25	N/A	Tree of Heaven	-	Not identified in CBA Tree Survey (tree may no longer exist)
26	56	Sycamore	Plane	A young tree, perhaps a replacement TPO planting.
27	54	Sycamore	Sycamore	-

TPO Number	CBA Number	TPO Species	CBA Species	Comments
28	43	Purple Beech	Plane	A young tree, perhaps a replacement TPO planting.
29	44	Monterey Pine	Monterey Pine	-
30	45	Irish Yew	Irish Yew	-
31	46	Sycamore	Sycamore	-
32	47	Purple Beech	Beech	-
G1	98 99 100	2x Scots Pine 1x Lime	2x Scots Pine 1x Lime	-
G2	N/A	2x Ash	-	Not identified in CBA Tree Survey, group may no longer exist.
G3	109 110 111	3x Lime	3x Lime	-
G4	116 120 Grp 8	2x Sycamore 1x Leyland Cypress	2x Sycamore 1x Leyland Cypress	-
G5	29 31 32 35 38 39	2x Sycamore 2x Holm Oak 1x Common Yew 1x Leyland Cypress	2x Sycamore 2x Holm Oak 1x Common Yew 1x Leyland Cypress	Species the same except Monterey Cypress and no Leyland Cypress

All trees should be checked with the Worthing Borough Council Tree Officer for confirmation.

Town and Country Planning Act 1990

Insert title of Order

Site at Worthing Hospital and adjacent land
Park Road, Park Avenue, Homefield Road and Lyndhurst Road, Worthing

TREE PRESERVATION ORDER, 1992. No 12

Insert name of local planning authority

The Borough Council of Worthing in this Order called "the authority", in pursuance of the powers conferred in that behalf by sections 198 and 199 [[and] 201*] [~~and] 300~~] of the Town and Country Planning Act 1990, and subject to the provisions of the Forestry Acts 1967 and 1979, hereby make the following Order:—

1. In this Order:—

"the Act" means the Town and Country Planning Act 1990;

"owner" means the owner in fee simple, either in possession or who has granted a lease or tenancy of which the unexpired portion is less than three years; lessee (including a sub-lessee) or tenant in possession, the unexpired portion of whose lease or tenancy is three years or more; and a mortgagee in possession; and

"the Secretary of State" means the [Secretary of State for the Environment] [~~Secretary of State for Wales~~]

2.—Subject to the provisions of this Order and to the exemptions specified in the Second Schedule hereto, no person shall, except with the consent of the authority and in accordance with the conditions, if any, imposed on such consent, cut down, top, lop, uproot, wilfully damage or wilfully destroy or cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of any tree specified in the First Schedule hereto or comprised in a group of trees or in a woodland therein specified, the position of which trees, groups of trees and woodlands is defined in the manner indicated in the said First Schedule on the map annexed hereto‡ which map shall, for the purpose of such definition as aforesaid, prevail where any ambiguity arises between it and the specification in the said First Schedule.

3.—An application for consent made to the authority¶ under Article 2 of this Order shall be in writing stating the reasons for making the application, and shall by reference if necessary to a plan specify the trees to which the application relates, and the operations for the carrying out of which consent is required.

4.—(1) Where an application for consent is made to the authority under this Order, the authority may grant such consent either unconditionally, or subject to such conditions (including conditions requiring the replacement of any tree by one or more trees on the site or in the immediate vicinity thereof), as the authority may think fit, or may refuse consent:

Provided that where the application relates to any woodland specified in the First Schedule to this Order the authority shall grant consent so far as accords with the principles of good forestry, except where, in the opinion of the authority, it is necessary in the interests of amenity to maintain the special character of the woodland or the woodland character of the area, and shall not impose conditions on such consent requiring replacement or replanting.

NOTE: Where appropriate this Order has been updated to reflect statutory amendments which have resulted in the need to show substitutions or repeals of the prescribed form.

* Include only where Order contains a direction under section 201 of the Act.

‡ Map to be to a scale of not less than 25 inches to one mile (1:2500), except in the case of large woodlands when the scale shall be 6 inches to one mile (1:10000 or 1:10560).

¶ NOTE: If it is proposed to fell any of the trees included in this Order and the felling requires a licence under the Forestry Act 1967, an application should be made in the first place to the Forestry Commission.

(2) The authority shall keep a register of all applications for consent under this Order containing information as to the nature of the application, the decision of the authority thereon, any compensation awarded in consequence of such decision and any directions as to replanting of woodlands; and every such register shall be available for inspection by the public at all reasonable hours.

5.—Where the authority refuse consent under this Order or grant such consent subject to conditions they may when refusing or granting consent certify in respect of any trees for which they are so refusing or granting consent that they are satisfied—

(a) that the refusal or condition is in the interests of good forestry; or

(b) in the case of trees, other than trees comprised in a group of trees or in a woodland, that the trees have an outstanding or special amenity value; or

(c) in the case of trees which are comprised in a group of trees or in a woodland, that the group of trees or the woodland, as the case may be, has an outstanding or special amenity value,

but a certificate shall not be given in the case of trees falling within *(c)* above if the application in respect of them has been referred by the Forestry Commissioners under section 15(1)(b) or 15(2)(a) of the Forestry Act 1967.

6.—(1) Where consent is granted under this Order to fell any part of a woodland other than consent for silvicultural thinning then unless—

(a) such consent is granted for the purpose of enabling development to be carried out in accordance with a permission to develop land under Part III of the Act, or

(b) the authority with the approval of the Secretary of State dispense with replanting,

the authority shall give to the owner of the land on which that part of the woodland is situated a direction in writing specifying the manner in which and the time within which he shall replant such land and where such a direction is given and the part is felled the owner shall, subject to the provision of this Order and section 204 of the Act, replant the said land in accordance with the direction.

(2) Any direction given under paragraph (1) of this Article may include requirements as to—

(a) species;

(b) number of trees per acre (hectare);

(c) the erection and maintenance of fencing necessary for protection of the replanting;

(d) the preparation of ground, draining, removal of brushwood, lop and top; and

(e) protective measures against fire.

7.—On imposing any condition requiring the replacement of any tree under Article 4 of the Order, or on giving a direction under Article 6 of this Order with respect to the replanting of woodlands, the authority shall if such condition or direction relates to land in respect of which byelaws made by the National Rivers Authority, an internal drainage board, a water undertaker or a sewerage undertaker (as defined in the Water Act 1989) or any other authority whose functions are now exercised by the above bodies, restrict or regulate the planting of trees, notify the applicant or the owner of the land, as the case may be, of the existence of such byelaws and that any condition or direction has effect subject to the requirements of the byelaws, and the condition or direction shall have effect accordingly.

8.—The provisions set out in the Third Schedule to this Order, being provisions of Part III of the Act adapted and modified for the purposes of this Order, shall apply in relation thereto.

9.—Subject to the provisions of this Order, any person who has suffered loss or damage in consequence of any refusal (including revocation or modification) of consent under this Order or of any grant of any such consent subject to conditions, shall, if he makes a claim on the authority within the time and in the manner prescribed by this Order, be entitled to recover from the authority compensation in respect of such loss or damage:

Provided that no compensation shall be payable in respect of loss or damage suffered by reason of such refusal or grant of consent in the case of any trees the subject of a certificate in accordance with Article 5 of this Order.

10.—In assessing compensation payable under the last preceding Article account shall be taken of:

(a) any compensation or contribution which has been paid whether to the claimant or any other person, in respect of the same trees under the terms of this or any other Tree Preservation Order under section 198 of the Act, or under the terms of any Interim Preservation Order made under section 8 of the Town and Country Planning (Interim Development) Act 1943, or any compensation which has been paid or which could have been claimed under any provision relating to the preservation of trees or protection of woodlands contained in an operative scheme under the Town and Country Planning Act 1932, and

(b) any injurious infection to any land of the owner which would result from the felling of the trees the subject of the claim.

11.—(1) A claim for compensation under this Order shall be in writing and shall be made by serving it on the authority, such service to be effected by addressing the claim to the authority and leaving it at or sending it by post to the principal office of the authority.

(2) The time within which any such claim shall be made as aforesaid shall be a period of twelve months from the date of the decision of the authority, or of the Secretary of State, as the case may be, or where an appeal has been made to the Secretary of State against the decision of the authority, from the date of the decision of the Secretary of State on the Appeal.

12.—Any question of disputed compensation shall be determined in accordance with the provisions of section 205 of the Act.

13.—[(1) The provisions of section 201 of the Act shall apply to this Order and the Order shall take effect on 28th August 1992 .]*

[(2) This Order shall apply to any tree specified in the First Schedule hereto, which is to be planted as mentioned therein, as from the time when that tree is planted.]†

NOTE: Any person contravening the provisions of this Order by cutting down, uprooting or wilfully destroying a tree, or by wilfully damaging, topping or lopping a tree in such a manner as to be likely to destroy it is guilty of an offence and liable on summary conviction to a fine not exceeding the prescribed sum§ or twice the sum which appears to the court to be the value of the tree, whichever is the greater, or on indictment to a fine. The penalty for any other contravention of this Order is a fine not exceeding Level 4 on the standard scale‡ on summary conviction and, in the case of a continuing offence when the contravention is continued after conviction, a person is liable on summary conviction to an additional fine not exceeding £5 for every day on which the contravention is so continued.

If a tree is removed, uprooted or destroyed in contravention of an order or, except in the case of a tree to which the Order applies as part of a woodland, is removed, uprooted or destroyed or dies at a time when its cutting down or uprooting is authorised only by section 198(6)(a) of the Town and Country Planning Act 1990 relating to trees which are dying or dead or have become dangerous, it is the duty of the owner of the land, unless on his application the local planning authority dispense with the requirement, to plant another tree of appropriate size and species at the same place as soon as he reasonably can. Except in emergency, not less than 5 days previous notice of the removal, etc., should be given to the authority to enable the latter to decide whether or not to dispense with the requirement. In respect of trees in a woodland it is sufficient to replace the trees removed, uprooted or destroyed by planting the same number of trees either on or near the land on which the trees removed, uprooted or destroyed stood or on such other land as may be agreed between the authority and the owner of the land, and (in either case) in such places as may be designated by the authority.

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* This provision is not to be included unless it appears to the authority that the Order should take effect immediately.

† This provision may be included in relation to trees to be planted pursuant to a condition imposed under section 197 of the Act.

§ This sum is currently £2000 but provision is made under the Planning and Compensation Act 1991 for a fine on summary conviction not exceeding £20,000. In addition the provision for daily fines for continuing offences will be abolished. These revised penalties will become operative on the coming into effect of section 23 of that Act.

‡ £1000 but subject to alteration by Order.

FIRST SCHEDULE

TREES SPECIFIED INDIVIDUALLY*

(encircled in black on the map)

No. on Map.	*Description.*	*Situation.*
As per attached Schedule		

TREES SPECIFIED BY REFERENCES TO AN AREA*

(within a dotted black line on the map)

No. on Map.	*Description*	*Situation.*
None		

GROUPS OF TREES*

(within a broken black line on the map)

No. on Map.	*Description.*	*Situation.*
As per attached Schedule		

* The word "NONE" must be entered where necessary.

FIRST SCHEDULE

No. on Plan	Species	Situation
T1	Lime	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T2	Horse Chestnut	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T3	Horse Chestnut	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T4	Purple Beech	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T5	Lime	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T6	Silver Birch	Grassed area, north-west of Worthing Hospital, adjacent to driveway
T7	Leyland Cypress	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T8	Ash	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T9	Sweet Chestnut	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T10	Ash	Northern part of grounds of Worthing Hospital, adjacent to Homefield Park
T11	Silver Birch	Northern part of grounds of Worthing Hospital, adjacent to driveway from Park Avenue
T12	Variegated False Acacia (Robinia Frisia)	North-eastern side of Worthing Hospital, adjacent to driveway
T13	Ash	Eastern side of grounds of Worthing Hospital (rear of 29-31 Park Avenue)
T14	Lime	Eastern side of Park Avenue (outside Nos.2/4)
T15	Lime	Eastern side of Park Avenue (outside No.12)

No. on Plan	Species	Situation
T16	Lime	Western side of Park Avenue (outside Hospital)
T17	Lime	Western side of Park Avenue (outside Hospital)
T18	Lime	Western side of Park Avenue (outside Hospital)
T19	Lime	Western side of Park Avenue (outside Hospital)
T20	Ash	North-western corner of rear garden of 31 Park Avenue
T21	Ash	Northern part of rear garden of 47 Park Avenue, adjacent to Homefield Park
T22	Hawthorn	Northern part of rear garden of 59-61 Park Avenue, adjacent to Homefield Park
T23	Yew	North-eastern corner of front garden, 53 Homefield Road
T24	Bay	Front garden of 49 Homefield Road
T25	Tree of Heaven	Rear garden of 33 Homefield Road
T26	Sycamore	Adjacent to western boundary of 'Homefield', Homefield Road
T27	Sycamore	Adjacent to western boundary of 'Homefield', Homefield Road
T28	Purple Beech	South-eastern corner of grounds of 'Homefield', Homefield Road/ Lyndhurst Road
T29	Monterey Cypress	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T30	Irish Yew	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T31	Sycamore	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T32	Purple Beech	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road

No. on Plan	Species	Situation
G1	Group consisting of 2 Scots Pine and 1 Lime	Western side of Worthing Hospital, (south of transformer station)
G2	Group of 2 Ash	Western side of Worthing Hospital, within grassed area adjacent to driveway to Park Road
G3	Group of 3 Lime	Northern part of grounds of Worthing Hospital, adjacent to Homefield Park
G4	Group of 2 Sycamore and 1 Leyland Cypress	Rear garden of No.37 Park Avenue, adjacent to Homefield Park
G5	Group of 2 Sycamore, 2 Holm Oak, 1 Common Yew and 1 Leyland Cypress	North-eastern side of grounds of 'Homefield', adjacent to Homefield Road

WOODLANDS*

(within a continuous black line on the map)

No. on Map.	*Description*	*Situation.*
None		

* The word "NONE" must be entered where necessary.

SECOND SCHEDULE

This Order shall not apply so as to require the consent of the authority to

(1) the cutting down of any tree on land which is subject to a forestry dedication covenant where
  (*a*) any positive covenants on the part of the owner of the land contained in the same deed as the forestry dedication covenant and at the time of the cutting down binding on the then owner of the land are fulfilled;
  (*b*) the cutting down is in accordance with a plan of operations approved by the Forestry Commission under such deed.

(2) the cutting down of any tree which is in accordance with a plan of operations approved by the Forestry Commission under a grant scheme under section 1 of the Forestry Act 1979 except a scheme which applies to a forestry dedication covenant.

(3) the cutting down, uprooting, topping or lopping of a tree
  (*a*) by or at the request of the Post Office where the land on which the tree is situated is land which has been acquired for the purpose of the Post Office's undertaking and either works on such land cannot otherwise be carried out or the cutting down, uprooting, topping or lopping is for the purpose of securing safety in the operation of the undertaking; or the lopping in pursuance of the power conferred on any operator of a telecommunications code system by virtue of paragraph 19 of Schedule 2 to the Telecommunications Act 1984;
  (*b*) by or at the request of
    (i) a statutory undertaker or a holder of a licence under section 6(1) of the Electricity Act 1989 where the land on which the tree is situated is operational land as defined by the Act and either works on such land cannot otherwise be carried out or the cutting down, uprooting, topping or lopping is for the purpose of securing safety in the operation of the undertaking;
    (ii) a licence holder within the meaning of Part I of the Electricity Act 1989, where such tree obstructs the construction by the licence holder of any electric line within the meaning of Part I of the said Act of 1989 or interferes or would interfere with the maintenance or working of any such line;
    (iii) the National Rivers Authority or an internal drainage board established under the Water Act 1989, where the tree interferes or would interfere with the exercise of any of the functions of such authority or drainage board in relation to the maintenance, improvement or construction of water courses or of drainage works; or a water undertaker or sewerage undertaker appointed under section 11 of the Water Act 1989 in relation to their duties as such undertakers; or
    (iv) the Secretary of State for Defence, the Secretary of State for Transport, the Civil Aviation Authority, or in relation to any airport managed by a company to which any property, rights or liabilities have been transferred in pursuance of a scheme made under section 1 or 15 of the Airports Act 1986, the person for the time being having the management of the airport, where in the opinion of such Secretary of State, Authority or person the tree obstructs the approach of aircraft to, or their departure from, any airport or hinders the safe and efficient use of aviation or defence technical installations;
  (*c*) where immediately required for the purpose of carrying out development authorised by the planning permission granted on an application made under Part III of the Act, or deemed to have been so granted for any of the purposes of that Part;
  (*d*) which is a fruit tree cultivated for fruit production growing or standing on land comprised in an orchard or garden.

THIRD SCHEDULE

Provisions of the following parts of Part III of the Town and Country Planning Act 1990 as adapted and modified to apply to this Order.

75.—(1) Without prejudice to the following provisions as to the revocation or modification of consents, any consent under the Order, including any direction as to replanting given by the authority on the granting of such consent, shall (except in so far as the consent otherwise provides), enure for the benefit of the land and of all persons for the time being interested in it.

77. **Reference of applications to the Secretary of State.**—(1) The Secretary of State may give directions to the authority requiring applications for consent under the Order to be referred to him instead of being dealt with by the authority.

(2) a direction under this section may relate either to a particular application or to applications of a class specified in the direction.

(3) Any application in respect of which a direction under this section has effect shall be referred to the Secretary of State accordingly.

(4) Where an application for consent under the Order is referred to the Secretary of State under this section, the provisions of Articles 4 and 5 of the Order shall apply as they apply to such an application which falls to be determined by the authority.

(5) Before determining an application referred to him under this section the Secretary of State shall, if either the applicant or the authority wish, give each of them an opportunity of appearing before, and being heard by, a person appointed by the Secretary of State for the purpose.

(7) The decision of the Secretary of State on any application referred to him under this section shall be final.

78. **Appeals against decisions or in default of decision.**—(1) Where an authority—

(*a*) refuse an application for consent under the Order or grant it subject to conditions, or

(*b*) give any certificate or direction, on granting consent,

the applicant may by notice appeal to the Secretary of State.

(2) A person who has made an application for consent under the Order may also appeal to the Secretary of State if the authority have neither—

(*a*) given notice to the applicant of their decision on the application; nor

(*b*) given notice to him that the application has been referred to the Secretary of State in accordance with directions given under section 77 above,

within two months from the date of receipt of the application, or within such extended period as may at any time be agreed upon in writing between the applicant and the authority.

(3) Any appeal under this section shall be made by notice in writing served within such time as is specified in subsection (4) below.

(4) The service of such a notice must be within—

(*a*) 28 days from the receipt of notification of the decision, certificate or direction, as the case may be, or such longer period as the Secretary of State may allow; or

(*b*) in the case of an appeal under subsection (2), 28 days or such longer period as the Secretary of State may allow from the end of the period of two months or, as the case may be, the extended period agreed.

(5) In relation to an appeal under subsection (2), it shall be assumed that the authority decided to refuse the application in question.

79. **Determination of appeals.**—(1) On an appeal under section 78 the Secretary of State may—

(*a*) allow or dismiss the appeal,

(*b*) reverse or vary any part of the decision of the authority (whether the appeal relates to that part of it or not), or

(*c*) cancel any certificate or cancel or vary any direction,

and may deal with the application as if it had been to him in the first instance.

(2) Before determining an appeal under section 78 the Secretary of State shall, if either the appellant or the authority so wish, give each of them an opportunity of appearing before and being heard by a person appointed by the Secretary of State for the purpose.

(5) The decision of the Secretary of State on such an appeal shall be final.

97. **Power to revoke or modify the consent under the Order.**—(1) If it appears to the authority that it is expedient to revoke or modify any consent under the Order granted on an application made under Article 3 of the Order, the authority may by Order revoke or modify the consent to such extent as they consider expedient.

(3) The power conferred by this section may be exercised at any time before the operations for which consent has been given have been completed.

(4) The revocation or modification of consent shall not affect so much of those operations as has been previously carried out.

98. Procedure for s.97 Orders: opposed cases.—(1) Except as provided in section 99, an Order under section 97 shall not take effect unless it is confirmed by the Secretary of State.

(2) Where an authority submit such an Order to the Secretary of State for confirmation, they shall provide the Secretary of State with a statement of their reason for making the Order and shall serve notice together with a copy of the statement on—

(*a*) the owner of the land affected,

(*b*) the occupier of the land affected, and

(*c*) any other person who in their opinion will be affected by the Order.

(3) The notice shall specify the period within which any person on whom it is served may require the Secretary of State to give him an opportunity of appearing before, and being heard by, a person appointed by the Secretary of State for the purpose.

(4) If within that period such a person so requires, before the Secretary of State confirms the Order he shall give such an opportunity both to him and to the local planning authority.

(5) The period referred to in subsection (3) shall be 28 days from the service of the notice.

(6) The Secretary of State may confirm an Order submitted to him under this section either without modification or subject to such modifications as he considers expedient.

(7) Where a notice has been served in accordance with the provisions of subsection (2) of this section, no operations or further operations as the case may be, in pursuance of the consent granted, shall be carried out pending the decision of the Secretary of State under this section.

99. Procedure for s.97 Orders: unopposed cases.—(1) This section applies where—

(*a*) the authority have made an Order under section 97 above; and

(*b*) the owner and occupier of the land and all persons who in the authority's opinion will be affected by the Order have notified the authority in writing that they do not object to it.

(2) Where this section applies, instead of submitting the Order to the Secretary of State for confirmation the authority shall advertise the fact that the Order has been made and the advertisement must specify—

(*a*) the period within which persons affected by the Order may give notice to the Secretary of State that they wish for an opportunity of appearing before, and being heard by, a person appointed by the Secretary of State for the purpose; and

(*b*) the period at the expiration of which, if no such notice is given to the Secretary of State, the Order may take effect by virtue of this section without being confirmed by the Secretary of State.

(3) The authority shall also serve notice to the same effect on the persons mentioned in subsection (1)(b).

(4) The period referred to in subsection 2(a) must be not less that 28 days from the date the advertisement first appears.

(5) The period referred to in subsection 2(b) must be not less than 14 days from the expiration of the period referred to in subsection (2)(a).

(6) The authority shall send a copy of any advertisement published under subsection (2) to the Secretary of State not more than three days after the publication.

(7) If—

(*a*) no person claiming to be affected by the Order has given notice to the Secretary of State under subsection (2)(a) within the period referred to in that subsection, and

(*b*) the Secretary of State has not directed within that period that the Order be submitted to him for confirmation,

the Order shall take effect at the expiry of the period referred to in subsection 2(b) without being confirmed by the Secretary of State as required by section 98(1).

(8) This section does not apply to an Order revoking or modifying a consent granted or deemed to have been granted by the Secretary of State under Part III, Part VII or Part VIII of the Act.

GIVEN under the Common Seal of the

BOROUGH COUNCIL OF WORTHING

the 28th August 19 92 .

.....

.....

Dated 28th August 19 92 .

WORTHING BOROUGH COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

TREE PRESERVATION ORDER

relating to

Site of Worthing Hospital and adjacent land, Park Road, Park Avenue, Homefield Road and Lyndhurst Road, Worthing, West Sussex.

Cat. No. TCP 38
Shaw & Sons Ltd., Shaway House, Crayford, Kent DA1 4BZ
LLE 13591

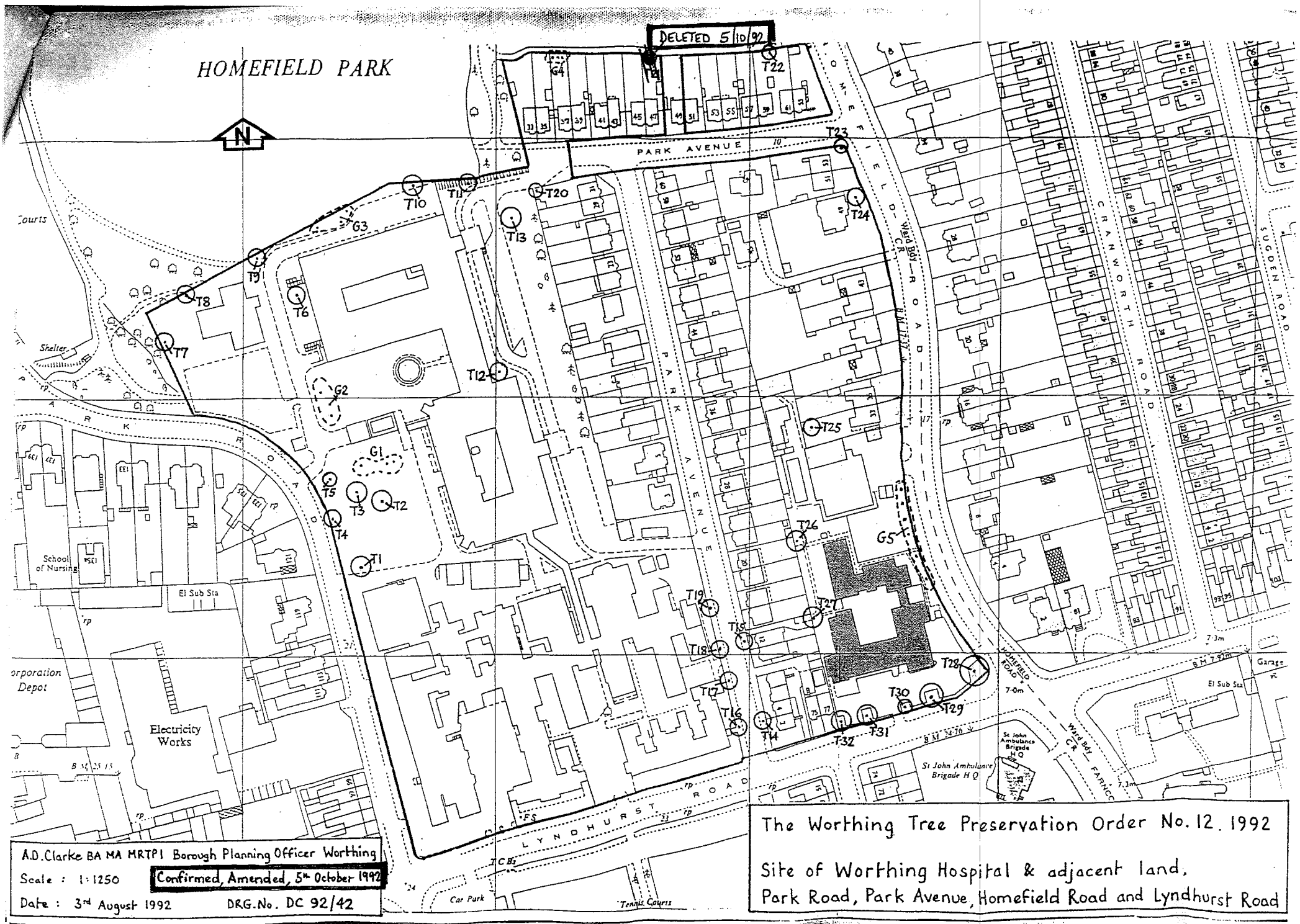
FIRST SCHEDULE

Amended 5th October 199

No. on Plan	Species	Situation
T1	Lime	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T2	Horse Chestnut	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T3	Horse Chestnut	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T4	Purple Beech	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T5	Lime	Grassed area, western side of Worthing Hospital, adjacent to Park Road
T6	Silver Birch	Grassed area, north-west of Worthing Hospital, adjacent to driveway
T7	Leyland Cypress	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T8	Ash	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T9	Sweet Chestnut	North-western part of grounds of Worthing Hospital, adjacent to Homefield Park
T10	Ash	Northern part of grounds of Worthing Hospital, adjacent to Homefield Park
T11	Silver Birch	Northern part of grounds of Worthing Hospital, adjacent to driveway from Park Avenue
T12	Variegated False Acacia (Robinia Frisia)	North-eastern side of Worthing Hospital, adjacent to driveway
T13	Ash	Eastern side of grounds of Worthing Hospital (rear of 29-31 Park Avenue)
T14	~~Lime~~ Plane	Eastern side of Park Avenue (outside Nos.2/4)
T15	~~Lime~~ Plane	Eastern side of Park Avenue (outside No.12)

No. on Plan	Species	Situation
T16	~~Lime~~ Plane	Western side of Park Avenue (outside Hospital)
T17	~~Lime~~ Plane	Western side of Park Avenue (outside Hospital)
T18	~~Lime~~ Plane	Western side of Park Avenue (outside Hospital)
T19	~~Lime~~	Western side of Park Avenue (outside Hospital)
T20	Ash	North-western corner of rear garden of 31 Park Avenue
Deleted ~~T21~~	~~Ash~~	~~Northern part of rear garden of 47 Park Avenue, adjacent to Homefield Park~~
T22	Hawthorn	Northern part of rear garden of 59-61 Park Avenue, adjacent to Homefield Park
T23	Yew	North-eastern corner of front garden, 53 Homefield Road
T24	Bay	Front garden of 49 Homefield Road
T25	Tree of Heaven	Rear garden of 33 Homefield Road
T26	Sycamore	Adjacent to western boundary of 'Homefield', Homefield Road
T27	Sycamore	Adjacent to western boundary of 'Homefield', Homefield Road
T28	Purple Beech	South-eastern corner of grounds of 'Homefield', Homefield Road/ Lyndhurst Road
T29	Monterey Cypress	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T30	Irish Yew	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T31	Sycamore	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road
T32	Purple Beech	Southern side of grounds of 'Homefield', adjacent to Lyndhurst Road

No. on Plan	Species	Situation
G1	Group consisting of 2 Scots Pine and 1 Lime	Western side of Worthing Hospital, (south of transformer station)
G2	Group of 2 Ash	Western side of Worthing Hospital, within grassed area adjacent to driveway to Park Road
G3	Group of 3 Lime	Northern part of grounds of Worthing Hospital, adjacent to Homefield Park
G4	Group of 2 Sycamore and 1 Leyland Cypress	Rear garden of No.37 Park Avenue, adjacent to Homefield Park
G5	Group of 2 Sycamore, 2 Holm Oak, 1 Common Yew and 1 Leyland Cypress	North-eastern side of grounds of 'Homefield', adjacent to Homefield Road



A.D. Clarke BA MA MRTPI Borough Planning Officer Worthing

Scale : 1:1250

Date : 3rd August 1992

Confirmed, Amended, 5th October 1992

DRG. No. DC 92/42

The Worthing Tree Preservation Order No. 12. 1992

Site of Worthing Hospital & adjacent land, Park Road, Park Avenue, Homefield Road and Lyndhurst Road


CB6

TREES AT_____:

SUMMARY OF

TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under **LEGAL PROTECTION** and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.
FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.
MYTH: Trees will quickly heal over any bark wound, with no ill effect.
FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by fencing.

This fencing must be respected at all times and no attempts shall be made to damage, bypass or ignore it.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- **No** digging or scraping
- **No** storage of plant or materials
- **No** vehicular access
- **No** fire lighting
- **No** handling, discharge or spillage or any chemical substance
- **No** water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.

- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaved of 20m.

Avoiding Damage to Stem and Branches

Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **CBA Trees** as follows:

Office Telephone: 01962 715407

REMEMBER:

ALL TREE DAMAGE IS AVOIDABLE –

SO AVOID IT!



PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



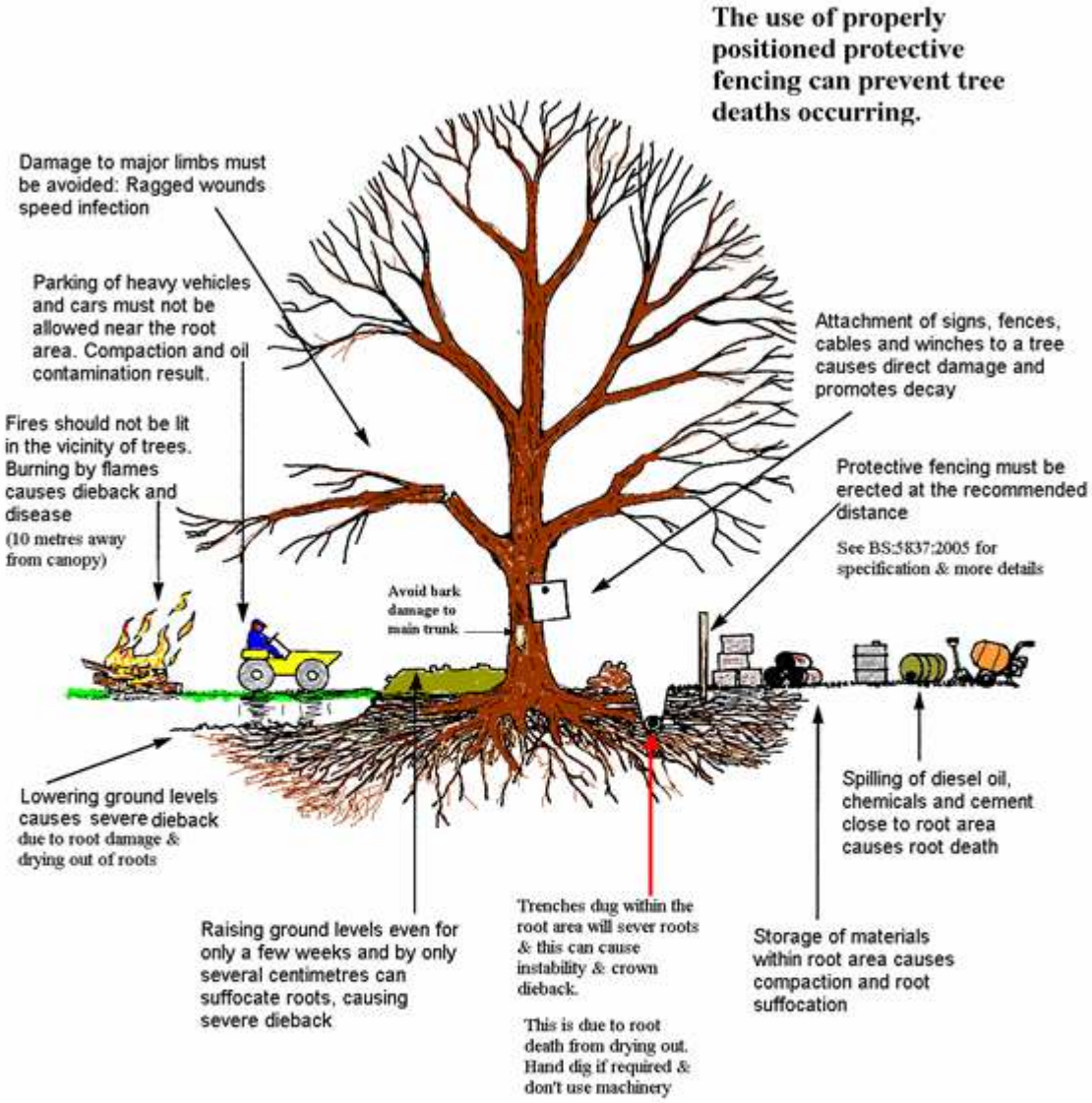
TREE PROTECTION AREA

KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

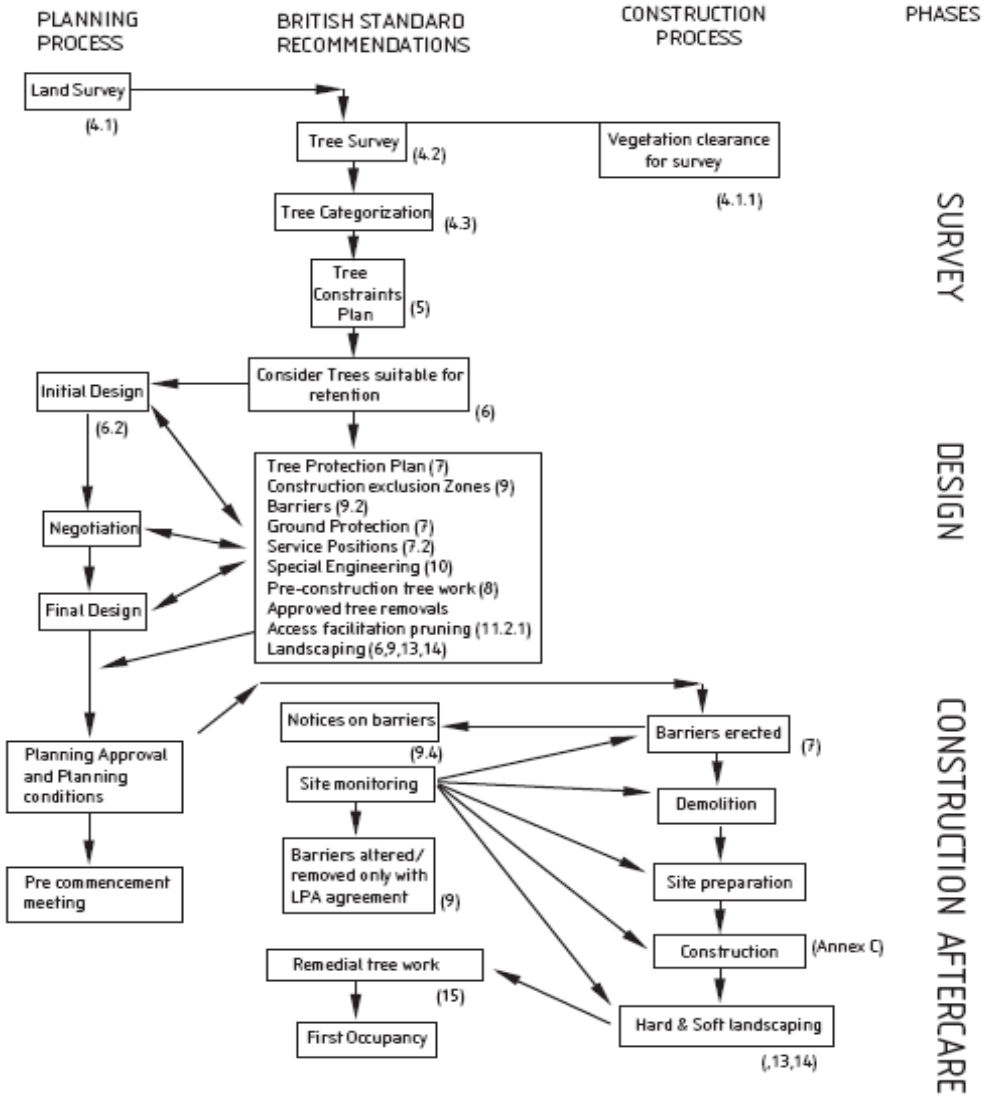
Common causes of Tree Death



Please use copies of this as an on-site poster for personnel

(Source: Arboricultural Information Exchange website, 2005)


CB7



Figures in brackets refer to Clause numbers.

Figure 1 — Flow diagram, summarizing planning for trees on development sites

3.2.2 The layout of this standard follows the sequence of the flow diagram in Figure 1. Following the land survey (see 4.1) the existing trees on and adjacent to the site should be surveyed (see 4.2) and categorized (see 4.3). The constraints these trees pose should be plotted on a tree constraints plan (see Clause 5) and those selected for retention should be plotted on a tree protection plan as a result of the negotiations within the design process (see Clause 7). Areas for new landscaping should be identified at this time (see 6.2.2). The position of all excavations and any special engineering required can be specified in the form of arboricultural method statements. Once work is due to begin on site the arboriculturist should meet the site agent at a pre start meeting to ensure the correct erection of barriers and ground protection forming the construction exclusion zone (see Clause 9).


CB8

UTILITIES SERVICE CONNECTION GENERAL METHOD STATEMENT

The location of any new service routes will not be within the Root Protection Area of the trees to be retained within and around the site.

Any existing services located within the Root Protection Area of trees to be retained, which require excavation must be done so using a soil pick initially to look for any large roots before proceeding with a mini digger that will be tracked.

All proposed service installations should be carried out in accordance with the guidelines set out in NJUG Publication Volume 4, and Section 11.3.5 and 11.7 of BS5837:2005. Great care should be taken to preserve and work around roots greater than 25mm in diameter, and clusters of smaller roots avoiding damage to bark. Where it is necessary to sever roots greater than 25mm in diameter, arboricultural advice must be sought. Where smaller roots must be severed, they should be cut back cleanly using secateurs or a sharp pruning saw.

Backfilling of initial trenches at either end of the proposed service route should be carried out using the excavated soil, which should be worked in around roots and lightly "tamped" not compacted, and respecting the original soil profile. The backfill should be left proud of surrounding levels to allow for settlement.

Trenches must not be left open overnight, and arboricultural supervision is to be provided during excavation of trenches through Root Protection Areas. If the trench is to remain open for any period of time during the day and the weather is hot, to prevent the roots from drying out, it is advised that moist Hessian sacking is wrapped around the exposed roots and/or trench, to prevent such desiccation from occurring or temperature changes. The reason for this is to reduce the potential for root tip death through lack of moisture.

The importance of tree roots is set out below, as per the guidance from within the National Joint Utilities Group Publication Volume 4 (2007).

Importance of tree roots

Tree roots are generally found in the top 600mm of soil, extending radially in any direction for distances frequently in excess of the tree's height. Excavation or other works within this area are liable to damage the roots. They often grow out further than the tree's height. If roots are damaged;

1. **Close to the trunk**. The anchorage and stability of the tree may be adversely affected rendering the tree immediately hazardous.

2. **Anywhere along there length**. The distal portion including the fine roots they serve, will be destroyed. Damage to fine roots by severance of a main root, or by compaction or alteration of ground levels, will prevent fine roots from absorbing the water and nutrients which are essential for the well-being, growth and anchorage of the tree.

3. **By successive excavations**. Multi-utility excavations close to a tree can cumulatively damage a root system.

Even a short distance (3m) from a large mature tree, most roots will be less than 10mm diameter, but these may extend to well beyond the branch spread of the tree. A mass of fine roots, less than 1mm diameter, develop off all parts of this root system. These fine roots absorb the water and nutrients which are essential for the growth of the tree. The main structural roots (close to the trunk); develop as the tree grows in response to the need for the tree to have physical stability.

Beyond these major roots, root growth is influenced by the availability of water, air and nutrients in the soil. Disturbance of soil provides ideal conditions for root growth. Root systems can be damaged by:-

1. **The severance of a root**, for example by trenching will destroy all parts of the root beyond that point. Even roots less than 10mm in diameter may be serving the fine roots over a wide area. The larger the root severed, the greater the impact on the tree.

2. **Damage to the bark on the root.** The bark protects the root from decay, and is also essential for further root growth. It is loosely attached and easily damaged. If damage to the bark extends around the whole circumference, the root beyond that point will be killed.

3. **Compaction of the soil**. Incidental compaction may occur from storage of materials and / or the passing of heavy equipment over the roots. This can restrict or even prevent gaseous diffusion through the soil, and thereby asphyxiate the roots. The roots must have oxygen for survival, growth and effective functioning.

4. **Alterations in soil level**. Lowering the level will strip out the mass of roots near the surface. Raising levels will have the same effect as soil compaction.

5. **The application of herbicide**. Frequently used to clear weed growth on operational land (e.g. substations). The wide-ranging root system of a tree may extend into the operational land and absorb herbicides, which have been applied to the ground. Herbicide absorbed in one part of the root system can kill the whole tree.
   Note: The selection and application of herbicides must be undertaken by a Competent person in accordance with Control of Substances Hazardous to Health (COSHH) regulation.

6. **Spillage of oils or other materials**, (e.g. diesel oil, cement, resins spillage can permeate into the soil and damage root systems.

(As per NJUG Volume 4)

SOIL PICK GUIDANCE

The **Soil Pick** is a selective soil excavator. Selective in the sense that it fractures, pulverizes and displaces porous and semi-porous soils at a high rate of speed, yet leaves non-porous objects unaffected. The Soil Pick excavates soil without risk of damaging buried utilities. The Soil Pick employs converging/diverging nozzle technology to accelerate compressed air to supersonic speed (to 1500 mph). The high velocity air stream travels approximately 4 inches from the distal end of the Soil Pick - "the cutting edge" - before decompressing to atmospheric pressure with sufficient violence to pulverize and displace soil.



What separates the MBW Soil Pick from other excavation tools employing converging/diverging nozzle technology? The answer is safety. MBW holds US and international patents on the combination of dielectric and non-sparking characteristics embodied in the Soil Pick. Non-conductive, non-sparking tools are of obvious benefit to those working in environments that may be gas enriched and/or are in close proximity to live electric lines. The length of a supersonic excavator's "cutting edge" can be shortened or lengthened by changing the configuration of the tool's converging/diverging nozzle. For reasons of safety, MBW has chosen to standardize its cutting edge at approximately 4 inches. A 4" cutting edge is long enough to facilitate rapid excavation, yet short enough to minimize the potential for personal injury caused by misuse and misdirection of the cutting edge. Loosening of soil beyond the area of intended excavation is minimized. Scatter of soil particles, rock and pavement debris is minimized, and the operator is better able to control the air stream when excavating in the immediate area of a gas leak.

The Soil Pick's non-sparking, brass nozzle is relatively heavy (4.2 ounces). It is imperative that the nozzle does not detach from the barrel assembly to become a high velocity projectile. For this reason, the nozzle is threaded into the barrel assembly and permanently cemented in place with Hydraulic Loctite. Some manufacturers promote easily exchanged nozzles. MBW's view is that easy exchange of nozzles brings with it an unacceptable trade-off in safety. The Soil Pick requires no periodic maintenance. A pressure gauge on the handle assembly advises the operator if the tool is working at acceptable pressure. The Soil Pick weighs 6.5 lbs., has zero hand/arm vibration, and can be used for extended periods without fatigue.

Specifications	MODEL SP-125
Weight	6.5 lb (3 kg)
Length	52 in (132 cm)
Barrel Diameter	1.25 in (3 cm)
Airstream Velocity	1475 mph (2375 km/h)
Effective Cutting Depth*	4 in (10 cm)
Air Volume	125 cfm (3540 1/min)
Pressure at tool inlet	100 psi (6.9 bar)
Claw Type Quick Connector	3/4 in (2 cm)
Extension Tube	42 in (107 cm) part # 03848
Extension Tube	21 in (53 cm) part # 03849
Cart assembly for crack cleaning	7.5 in (19 cm) part # 11542

* dependent on soil type( )Metric Measurements.
Specifications subject to change without notice.


CB9



The Professional Arboricultural Consultancy

QUALIFICATIONS OF STEFAN ROSE
ARBORICULTURAL CONSULTANT
CBA TREES

Stefan Rose *BSc.Hons. AA Tech.Cert.* joined CBA Trees in 1998 as a junior surveyor/arborist, he has gained experience in almost every field of our work, under the guidance and supervision of the senior consultants, and is currently undertaking advisory work for several Local Authorities. He has also been prominent in the use of our 'state of the art' decay detection equipment and has formulated procedures for its use with our Senior Consultant.

Stefan has attained the position of Consultant in the practice, and is responsible for the supervision of the more junior members of surveying staff. Stefan has recently undertaken work for Southampton City Council as a locum Tree Officer, and has provided professional assistance to Rushmoor Borough Council in respect of Tree Preservation Orders, as well as working on behalf of his own portfolio of clients.

Stefan has nearing completion of further studies to gain the *Dip.Arb (RFS*) and has passed the 6 academic modules required, with a view to completing the management modules later in 2010, to reinforce his consultant status.