



BS 5837:2012 Arboricultural Impact Assessment

SITE: Bunting Gardens, Waterloooville. PO8 9UW.

Site visit carried out by Stuart Campbell

Report prepared by

Stuart Campbell FdSc Arb (MArborA)



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1 Introduction

- 1.1 **Instruction:** We have been instructed by Helen Bergin (Landscape Architect) at Portsmouth City Council, to undertake a Arboricultural Method Statement (AMS) which is to be read in conjunction with the Arboricultural Impact Assessment (AIA). The AMS has been prepared by Gristwood and Toms, on behalf of Portsmouth City Council for the construction of three four-bedroom council houses with parking spaces. The AMS will be based on the British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* section 6.1.

2 Clients Brief

My brief is:

- a) To carry out a **survey of the trees** in accordance with BS 5837:2012 (Trees in relation to design, demolition and construction – Recommendations) My survey is to include the following:
- A pre-development table showing a survey of existing trees on the site, identifying species, sizes and category and comments on condition.
 - Referenced photographs of existing trees where possible
 - Note any works identified as being required at the time of the survey for safety/tree protection
 - Show methodology of assessment and categorization
 - Provide to scale plans for survey showing root protection zones
 - References and qualifications

2.1 Relevant Background Information

- a) We are required to *identify, plot and classify the tree quality, illustrating the root protection area for each tree.*
- b) It is necessary to identify at an early stage in the planning process those specimens that would be suitable for retention and would enhance any development, while at the same time highlighting any trees of limited value that potentially would be an unnecessary or unreasonable constraint to development.
- c) As part of this process consideration has to be given to (1) the above ground physical size and location of existing trees and (2) the root systems. It is important to recognise that tree roots are particularly vulnerable during any adjacent construction operations. Tree roots flourish where conditions are most favourable, these tend to be near the soil surface, for this reason the majority of tree roots grow in the upper 600mm of the soil. This means that disturbance such as shallow excavations, soil compaction by heavy plant or machinery or contamination by substances such as cement, diesel or chemicals can be damaging to the root system.
- d) The British Standard 5837:2012 provides guidance and specifies measures to be adopted in order to avoid or minimise damage to trees retained on or in proximity to construction sites. One of the key recommendations is that a Root Protection Area (RPA) should be established around individual or groups of trees identified as being worthy of retention.

2.2 **Information provided:** I have been provided with copies of the following drawings and documentation:

- Extent of possible tree survey and protection plans for planning
- Bunting Gardens, Waterlooville – Solent Surveys dxf

- Parking and Footpaths Setting Out and Levels (2637/2001/P1)
- Details for adoptable parking and pavements (2637/5302/P1)
- Parking Court Sections (2637/2010/P1)

2.3 Scope of this report:

a) This report includes:

- Arboricultural Impact Assessment
- Tree Protection Plan
- Arboricultural Method Statement.

b) The trees were inspected using the visual tree assessment method described by Mattheck and Breloer (The Body Language of Trees, DOE booklet Research for Amenity Trees No. 4. 1994). No detailed tree examinations were undertaken as none were warranted at this time.

3 Site Visit and Data Collection

3.1 Site Visit

The report was compiled by Stuart Campbell FdSc(Arb) M.ArborA on behalf of Gristwood and Toms Ltd. I carried out a site visit on the 30 June 2022. The weather at the time of my inspection was overcast and the visibility was good.

3.2 Brief Site Description

The site is located north of Waterloooville and the subject trees within a housing estate called Wecock Farm. The developmental area is predominantly grassed open space, surrounded by residential housing consisting of 2-storey blocks of flats, semi-detached and terraced houses. The trees of mixed species are of mature age and growing true to form as individual specimens.



Photo1.Site map showing location of Bunting Gardens, Wecock Farm

4 Tree Survey

4.1 Tree Survey method

- a) All my observations were from ground level without detailed investigations, and I measured all dimensions where I was able to gain access unless otherwise indicated.
- b) I surveyed all trees objectively with no reference to design proposals.
- c) All trees were measured as per BS 5837:2012 recommendations. Those trees with a stem diameter of less than 75 mm at 1.5 m above ground level were excluded from the survey. I used Pear Technology software on a Panasonic ToughPad tablet to locate and capture the individual tree data. All trees are numbered sequentially using self-generated tree numbers.

4.2 Appraisal/discussion trees surveyed

- a) The information on the trees I plotted and assessed are detailed in the attached schedule together with an explanation of the BS 5837:2012 tree grading criteria. (Appendix 2)
- b) I assessed **14** individual trees. The table below shows a breakdown of the tree grading and the quality assessment of the tree stock within the site.

Bunting Gardens		
Tree Category	Description	Total
A	High quality-remaining life expectancy at least 40 years	2
B	Moderate quality-remaining life expectancy of at least 20 years	6
C	Low quality-remaining life expectancy of at least 10 years	5
U	Such condition that they cannot realistically be retained as living trees.	1

4.3 Existing Trees

4.4 Category C Trees (2,3,4,5,14)

4.5 There are 5 trees of **low quality** – *unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.*

4.6 Trees on the schedule consisting of common hawthorn (*Crataegus monogyna*) forming a small group. All the trees have dense undergrowth of brambles and ivy to their lower stems extending into their crowns. All the trees are of poor condition and out of context with their surroundings.



Photo 2. Group of hawthorn trees (2,3,4,5) of poor quality and value.

4.7 Category B Trees (1,7,8,11,12,13)

4.8 There are 6 trees of **moderate quality** – *trees that might be included in Category A but are downgraded because of impaired condition, such that they are unlikely to be suitable for retention for beyond 40 years.*



Photo 3. Mature Italian alder (11)(*Alnus cordata*).



Photo 4. Mature Italian alder (12)(*Alnus cordata*)



Photo 5. Mature Italian alder (7)(*Alnus cordata*)



Photo 6. Mature False acacia (8) (*Robinia pseudoacacia*)

4.9 The mature alder trees (1,7,11,12 & 13) as shown above in photographs 3,4 and 5, are all single standalone trees and good examples of there species type.

4.10 The mature robinia (8) *Robinia pseudoacacia* (photo no.6) located within a front garden of an adjacent property to the west of the developmental area displays good vitality and is growing true to form.

4.11 Category A Trees (9,10)

4.12 There are 2 trees of **high quality** – *trees that are particularly good examples of their species.*

4.13 Tree 9 and 10, Italian alders (*Alnus cordata*) are of high quality and both growing true to form and a good example of their species.

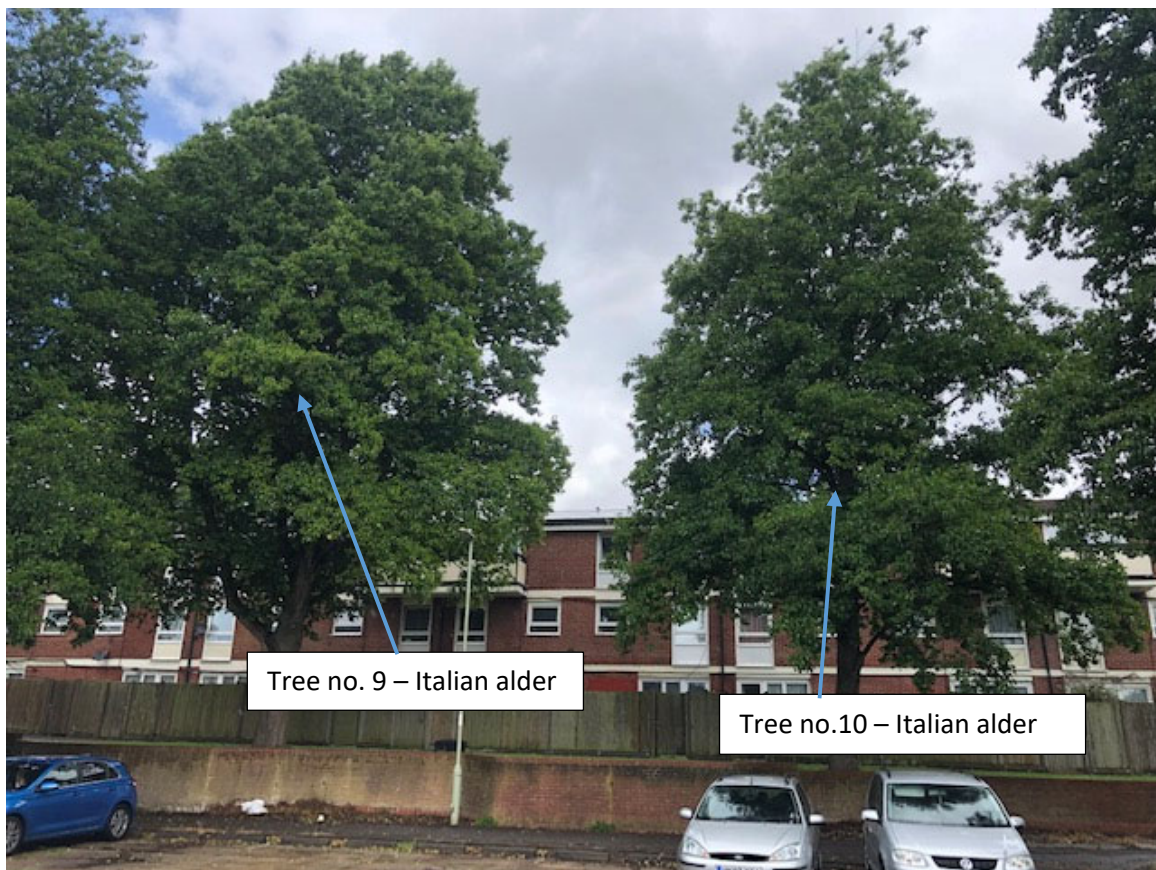


Photo 7. Trees 9 and 10 mature Italian alders (*Alnus cordata*)

4.14 Category U Trees (6)

4.15 There is 1 tree which is *in such a condition that it cannot realistically be retained as a living tree*.

4.16 I have recommended that tree no.6 Swedish whitebeam (*Sorbus intermedia*) to be felled. On investigation the tree was found to have extensive basal and lower stem decay.



Photo 8. Heavily leaning tree no.6 Swedish whitebeam (*Sorbus intermedia*)



Photo 9. Stem decay evident to tree no.6



Photo 10. Basal decay at ground level to tree no.6

5 Arboricultural Impact Assessment

- 5.1 An AIA is an assessment that evaluates the effects direct and indirect of the design proposal on the existing trees. The assessment considers the impact of any tree loss required to implement the design and potential damage to trees identified for retention. Where appropriate mitigation measures are recommended as are amendments to the proposal for the benefit of retained trees.
- 5.2 At the time of my inspection I was not made aware of any future developments proposed within the vicinity I have since been informed that a proposed new development may impact on subject trees 1,11 and 13.
- 5.3 I have not been made aware at the time of my inspection if the subject trees are included within a Conservation Area or have been served a Tree Preservation Order.

6 Evaluation of Tree Constraints.

- 6.1 **Root protection area – layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees vitality and where the protection of the roots and soil structure is treated as a priority.**(BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations)
- 6.2 In this instance I have been made aware of the potential impact of a future development which may encroach within the root protection area (RPA) of subject Tree 1, 11 and 13. In the eventuality for the need to erect protective fencing it should be positioned where possible to the distance indicated in the table below. It may be necessary to increase the extent of the tree protection barriers to contain the canopy and prevent it from becoming damaged. (ref: BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations)

Tree No. / Species	Stem diameter (mm)	Radius of nominal circle
1./Italian alder	530	6.36
11./Italian alder	730	8.76
13./Italian alder	800	9.60

6.3 The RPA as shown in the Root Protection site plan indicates the default position that structures are located outside the RPA's of trees to be retained. Where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to Tree 1,11 and 13.

6.4 The characteristics and condition of the subject trees should be taken into account with allowance and space for their future growth and maintenance requirements. Size and density of foliage can effect the availability of light.

6.5 To avoid damage to tree roots, existing ground levels should be retained within the RPA.

7 Tree Protection Measures

7.1 Tree Protection Fencing and Tree Protection Plan

7.2 The protection fencing shall be erected in accordance with the location set out on the Tree Protection plan (see attached plan) and will be erected prior to any site works

7.3 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. (Fig 1.)

7.4 In this instance the site circumstances may not necessitate the default level of protection and an alternative specification i.e 2 m tall welded mesh panels on rubber or concrete feet would need to be agreed with the local planning authority

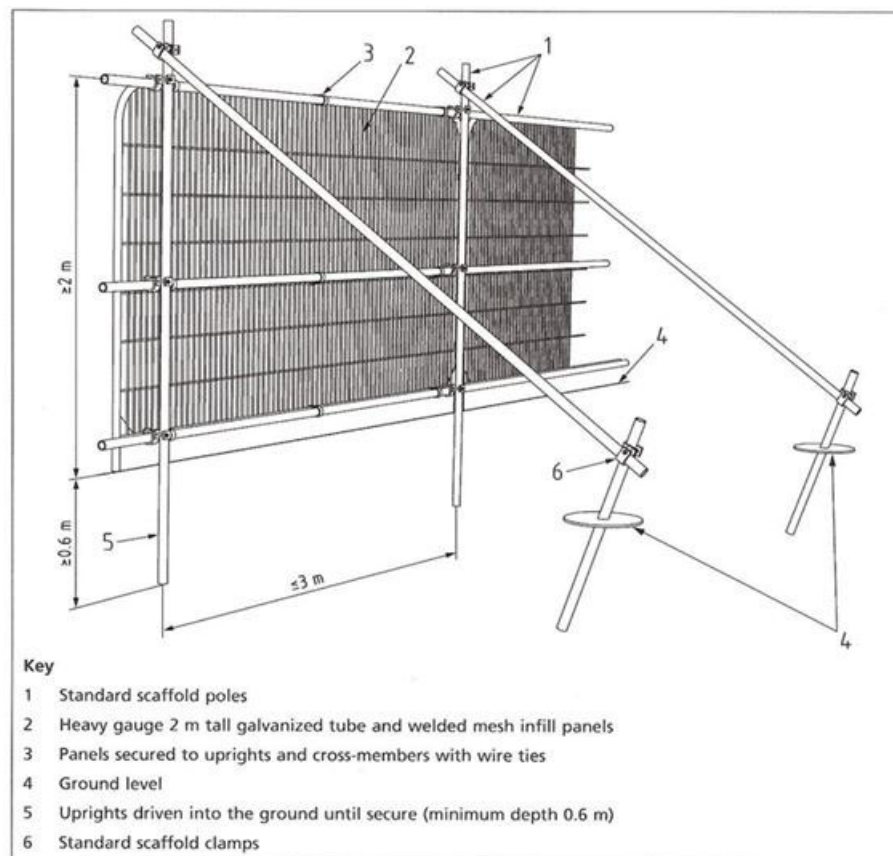


Fig 1. – Tree Protection Fencing

7.5 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
- Utility installation
- Completion of development
- Landscaping

7.6 Following erection of the protective fencing an inspection of the site by either the Council's Tree Officer or an Arboricultural Consultant will be arranged to confirm fencing has been installed in accordance with the Tree Protection Plan.

7.7 The area within the protection fencing is identified as the Construction Exclusion Zone (CEZ) and will be regarded as sacrosanct, the tree protective fencing shall not be taken down or relocated at any time without the written approval of Portsmouth City Council.

7.8 Where construction working space is required within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In this instance the hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction

7.9 In order to inform site personnel of the purpose of the fencing, information notices shall be fixed to the fencing at 5m intervals.(Appendix 3.)

8 Pre Development Site Works

8.1 In the interests of public safety I have recommended the following tree works as shown in the table below.

Tree No.	Species	Recommended Tree Works
1	Italian alder	Crown lift to 5m above ground level
11	Italian alder	Crown lift to 5m above ground level
13	Italian alder	Crown lift to 5m above ground level.

8.2 All permitted or approved tree works should be carried out in accordance with the British Standard “Tree work – Recommendations” BS 3998:2010, 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 the erection of protective fencing.

9 Utilities

- 9.1 Details of service locations have not been provided at the time of compiling this report. Unless specific occurrences are specified within this document, all new services will be routed outside of the RPA's of retained trees. Refer to NJUG 45 for further guidance.

10 General Considerations Within And Outside The Construction Exclusion Zone

10.1 Construction Exclusion Zone

- 10.2 Inside the Construction Exclusion Zone (CEZ) formed by the protective fencing there shall be **NO CONSTRUCTION ACTIVITY** unless otherwise agreed in writing with Portsmouth City Council prior to the specific activity taking place. Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier (ref: Tree Protection plan).
- 10.3 Where there is a risk of water logging, the design should incorporate appropriate land drainage. Land drainage within the RPA should be designed to avoid damage to the tree and soil structure.
- 10.4 Construction of the new path within the RPA of Tree no.1 consists of a permeable surface laid over a geotextile separator to ensure that its permeability is retained. Loose organic matter and or turf to be removed carefully using hand tools. The new surface to be established above the soil.
- 10.5 The addition of new parking bays encroach within the RPA of Tree no.11 and 13. The new surface should be established above the soil.

10.6 The excavation needed for the placement of kerbs, edgings and their associated foundations and haunchings can damage tree roots. This is to be avoided either by the use of alternative methods of edge support or by not using supports at all.

10.7 The parking and welfare area should be located outside the Construction Exclusion Zone.

10.8 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 the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
- Notice boards or other services shall not be attached to any part of the tree.

10.9 In order to protect tree canopies the following restrictions shall apply throughout the site:

- No machinery in excess of 2m shall pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged
- If materials require installation or delivery beneath tree canopies, this shall be done without the use of overhead cranes.
- The site access as indicated on the Tree Protection Plan is **not** to encroach within the root protection areas (RPA's) of trees 1 and 11. Where possible site traffic is to use existing surfaced carriageways.

11 Arboricultural Method Statement

- 11.1 *A precautionary approach towards tree protection should be adopted and any operations including access proposed within the root protection area or crown spread where this is greater should be described within an **arboricultural method statement** to demonstrate that the operations can be undertaken with minimal risk of adverse impact on retained trees*
- 11.2 Ideally, services will be installed at a depth greater than 1 metre using trenchless techniques.
- 11.3 All required excavation for service installation within the RPA will be carried out by hand using non-metallic tools. Roots greater than 25mm diameter or clusters of smaller roots will be retained and protected.
- 11.4 **Installation of new path** - As previously highlighted in section 10.4 the construction of the new path encroaches within the RPA of Tree 1. A cellular confinement system is to be incorporated for ground protection where tree roots might be at risk from soil compaction and where it is unacceptable to dig into the ground to lay a conventional sub-base. Repeated foot traffic can be detrimental to soil structure.
- 11.5 The use of an above-ground cellular confinement system involves laying a geocell mat on a non-woven geotextile laid on the surface of the ground, filling it with clean stone aggregate, and topping this sub-base with a wearing course.

11.6 The use of porous asphalt, an open-graded aggregate bound with asphalt cement to produce a permeable surface that allows water and air to pass through. It is the best surface to use over cellular confinement systems because it tends not to have cracking or pothole formation problems. Generally used for cyclepaths and footpaths.

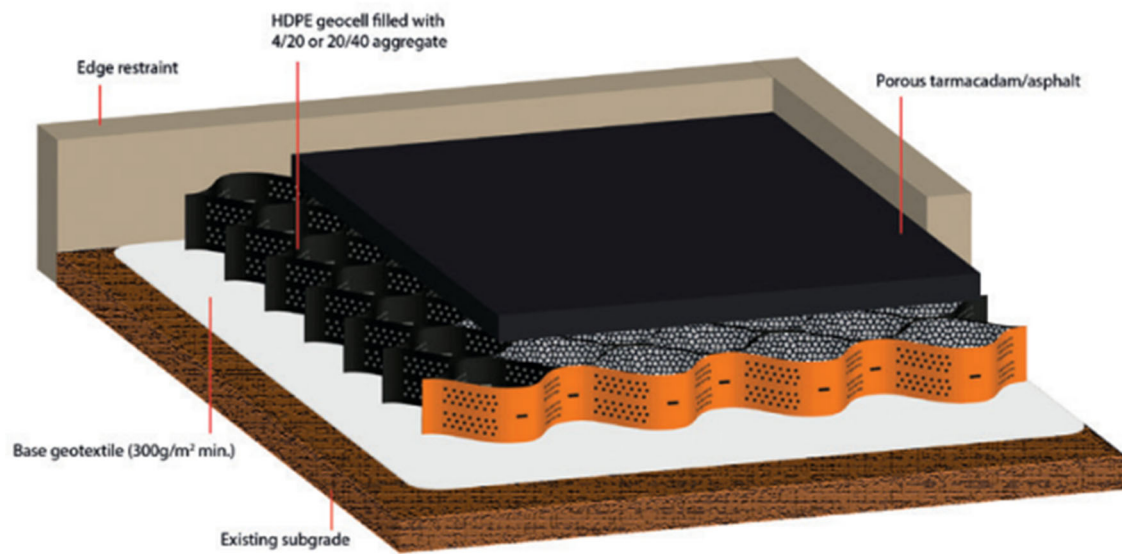


Photo 11. Typical composition of a porous asphalt surface with a geocell sub-base.

11.7 The design does not require excavation into the soil other than the removal of any turf layer or other surface vegetation to a depth of 40mm

11.8 Turf should be removed carefully using hand tools and the new surface established above the soil. **No-dig construction** within the root protection area. Roots must not be severed, cut or broken. Ground levels must not be changed.

11.9 The use of bitumen paving and resin-bonded gravels to be avoided as they consist of porous or impermeable material and become blocked by fines. A geocell system should be used for the construction of the new footpath within the root protection area of tree 1. Support to the path will be provided by metal edging which fixes into the base layer. (Kinley Alu-excel 25m x 5.5mm)



Photo 12. Kinley Alu-excel retaining edge.

12 Construction of parking bays (Tree no. 11,13)

12.1 *For tree roots to be retained undamaged there must be no excavation, no soil stripping and no grading of the site within the RPA of Tree 13 and 11. The design proposed requires excavating to a depth of 480mm. If there are no obvious surface roots **ground preparation works in the root protection zone may proceed under the supervision of an arboriculturalist** to make sure that significant roots (single roots >25mm diameter or clusters of roots 10-25mm in diameter) are preserved.*

12.2 A setting back of the Protective Fencing to tree 13 and 11 will be required as indicated in the Tree Protection plan and agreed by the arboriculturalist.

12.3 Movement of heavy plant and/or equipment is only to take place within the existing tarmac/concrete hardstanding areas and not within the construction exclusion zone (CEZ). The existing hard surfacing should be retained to act as temporary ground protection during construction.

Stuart Campbell FdSc Arb (MArborA)

27/4/2023

Appendix 1..

Tree Survey Explanatory Notes

- **Measurements/estimates:** All dimensions measures unless otherwise indicated.
- **Species:** I base the species identification on visual observations and list the botanical name
- **Height:** I estimated the average crown height to the nearest metre for individual trees.
- **Spread (SPD):** I estimated to the nearest metre the average crown spread from the centre of the trunk to the tips of the live lateral branches (Cardinal Points).
- **Diameter:** These figures relate to 1.5m above ground level or as per the BS 5837 recommendations and I record them in millimetres with a diameter tape.
- **Life Expectancy:** Remaining Contribution in years.
- **Age Class:** I indicate age class as **OM** = Over mature, **M** = Mature, **EA** = Early Mature **SM** = Semi Mature **Y** = Young
- **Root Protection Area (RPA m2):** This has been capped at 707m², which is equivalent to a circle with a radius of 15 metres or a square with approximately 26 metre sides. Where the linear root protection radius has been capped
- **Physiological Condition:** An assessment of the physiological condition (i.e. health/vitality) of the tree categorised into:
 - GOOD** a tree in a healthy condition with no significant problems
 - FAIR** a tree generally in good health with some problems that can be remediated
 - POOR** a tree in poor health with significant problems that can't be remediated
 - DEAD** a tree without sufficient live material to sustain life
- **Structural Condition**
An assessment of the structural/safe condition of the tree categorised into:
 - GOOD** a tree in a safe condition with no significant defects
 - FAIR** a tree in a safe condition at present but with defects or with significant defects that can be remediated
 - POOR** a tree with significant defects that can't be remediated

Notes related to both physiological and structural condition follow the categorization in order to support the statement and give greater detail on the true quality and value of the tree.

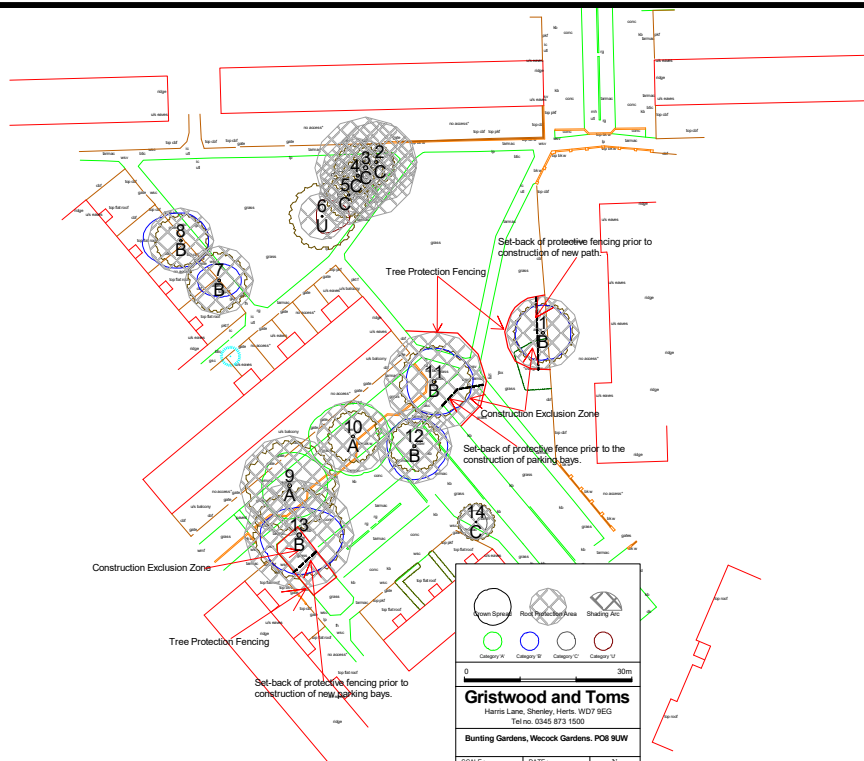
- **Preliminary Management Recommendations,**
These may include further investigations for the presence or extent of decay or climbed inspections, ivy removal or pruning works when access is a non-moveable aspect etc (NB this is not intended to be a specification for tree work and further advice maybe required prior to implementation). Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practicable.

Appendix 2.

Trees unsuitable for retention				
• Category and definition	• Criteria			Identification on plan
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve;			DARK RED
• Trees to be considered for retention				
Category and definition	Criteria - Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3. Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) Such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A classification	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
Category C Trees of low with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material or conservation or other cultural value	GREY



Appendix 3.



Category 'U'	Category 'B'	Category 'C'
Category 'U'	Category 'B'	Category 'C'

0 30m

Gristwood and Toms
Harris Lane, Shirley, Herts. WD7 9EG
Tel no. 0345 873 1590

Bunting Gardens, Weocock Gardens, PO8 9UW

SCALE: 1:1350 @ A4	DATE: 27/04/2023	N
MAP FILE NAME: SIS 16072610 Tree Protection Plan		

Map data obtained using various Ordnance Survey & products supplied by
Bunting Gardens, Weocock Gardens, PO8 9UW
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Contact Ordnance Survey on 0345 454 4544

BS5837:2012 Tree Survey

Gristwood and Toms

Client: Portsmouth City Council
 Project: Bunting Gardens
 Survey Date: 30/06/2022
 Surveyor: Stuart Campbell

Trafalgar House
 223 Southampton Road
 Portsmouth
 Hampshire
 PO6 4PY
 Phone: 01923 851568

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC		
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment					
1												Estimated Measurements				
Italian Alder <i>Alnus cordata</i>		12	1	530	N	5	1	M	A: 127.1 R: 6.36	Fair	C: Fair S: Ivy B: Fair	Raise low canopy :: To 3.0m Remove :: Ivy Ivy clad main stem. Good vitality, healthy crown.			B.1 20 to 40 yrs	
2												Estimated Measurements				
Common Hawthorn <i>Crataegus monogyna</i>		9	2	591 (Eq)	N	2		M	A: 157.8 R: 7.08	Poor	C: Fair S: Ivy B: Poor	Remove :: Ivy Ivy clad main stem. Ivy hindering inspection of lower stem.			C.2 <10 yrs	
3												Estimated Measurements				
Common Hawthorn <i>Crataegus monogyna</i>		9	1	740	N	2	1	M	A: 247.8 R: 8.88	Poor	C: Poor S: Ivy B: Poor	Remove :: Ivy Ivy hinders inspection.			C.2 <10 yrs	
4												Estimated Measurements				
Common Hawthorn <i>Crataegus monogyna</i>		8	3	549 (Eq)	N	1	1	M	A: 136.4 R: 6.58	Poor	C: Poor S: Ivy B: Poor	Remove :: Ivy Ivy hinders inspection.			C.2 <10 yrs	
Age Classifications:		N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:		Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition		ERC:	Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
5												Estimated Measurements	
Common Hawthorn <i>Crataegus monogyna</i>	8	2	430 (Eq)	N	1	1	M	A: 83.7 R: 5.16	Poor	C: Poor S: Ivy B: Poor	Remove :: Ivy Unable to access lower stem. Ivy hinders inspection.	C.2 <10 yrs	
6												Estimated Measurements	
Swedish Whitebeam <i>Sorbus intermedia</i>	6	1	340	N	3		M	A: 52.3 R: 4.08	Poor	C: Fair S: Poor B: Poor	Fell :: Fell and treat stump(s) Leaning, extensive basal and lower stem decay.	U.1 n/a	
7												Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	16	4	500 (Eq)	N	3		M	A: 113.1 R: 6	Fair	C: Fair S: Fair B: Fair	Raise low canopy :: To 3.0m Multi-stemmed tree. Healthy crown.	B.1 10 to 20 yrs	
8												Estimated Measurements	
Robinia <i>Robinia pseudoacacia</i>	15	1	480	N	5		M	A: 104.2 R: 5.75	Fair	C: Fair S: Fair B: Fair	Remove :: Minor dead wood Prune :: From buildings/structure/tree by1.5m Tree previously reduced. Minor deadwood throughout crown. Branches encroaching adjacent lamp column.	B.1 10 to 20 yrs	
9												Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	22	1	730	N	6	4	M	A: 241.1 R: 8.76	Good	C: Good S: Good B: Fair	Good quality and value.	A.1 20 to 40 yrs	
10												Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	20	1	530	N	6	3	M	A: 127.1 R: 6.36	Good	C: Good S: Good B: Fair	Good quality and value.	A.1 20 to 40 yrs	
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature			Condition:	C S B	Crown Stem Basal area		Stems: Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition ERC: Estimated Remaining Contributio		

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
11											Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	22	1	730	N E S W	6 7 6 5	3 2 3 4	M A: 241.1 R: 8.76	Good	C: Good S: Fair B: Fair	Raise low canopy :: To 3.0m Wounding to lower stem west side. Raised roots ground level on west side. Leaning stem.	B.1 10 to 20 yrs	
12											Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	18	1	550	N E S W	5 6 6 5	2 2	M A: 136.9 R: 6.6	Good	C: Good S: Fair B: Fair	Remove :: Epicormic growths Epicormic growth hindering lower stem inspection	B.1 10 to 20 yrs	
13											Estimated Measurements	
Italian Alder <i>Alnus cordata</i>	22	1	800	N E S W	5 8 7 7	 2 2 4	M A: 289.6 R: 9.6	Fair	C: Fair S: Ivy B: Fair	Ivy :: Sever/remove ivy Further inspection :: Of roots Ivy hinders inspection of lower stem. Further investigation required following removal of ivy.	B.1 20 to 40 yrs	
14											Estimated Measurements	
Silver Birch <i>Betula pendula</i>	7	1	260	N E S W	2 2 3 3	2 1 3 2	M A: 30.6 R: 3.12	Fair	C: Fair S: Fair B: Fair	Raise low canopy :: To 3.0m Distorted main stem. Occluded wound to lower stem.	C.1 10 to 20 yrs	

Report selection criteria.

Projects.

Bunting Gardens

Date Range.

Any Date

Work types.

----> Fell :: Fell and treat stump(s)
 ----> Further inspection :: Of roots
 ----> Ivy :: Sever/remove ivy
 ----> -No Selection made-
 ----> Prune :: From buildings/structure/tree by 1.5m
 ----> Raise low canopy :: To 3.0m
 ----> Remove :: Epicormic growths
 ----> Remove :: Ivy
 ----> Remove :: Minor dead wood

Latest Survey.

All surveys for the selected trees.
 ---> Last survey for each selected tree.

Work Completed.

---> Work Completed
 ---> Work Not Completed

Number of trees in selected Project(s) 14

Number of trees in Report selection 14

Age Classifications: N Newly planted EM Early Mature
 Y Young M Mature
 SM Semi-mature OM Over Mature

Condition: C Crown
 S Stem
 B Basal area

Stems: Ø Diameter
 (Eq) Equivalent stem diameter using BS5837:2012 definition
ERC: Estimated Remaining Contribution