



January 2016
CBA10529 v1

Mipa Paints Limited

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
Dunsbury Business Park



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The Complete Arboricultural Consultancy

ARBORICULTURAL STATEMENT

Client:	Mipa Paints Limited
Site:	Dunsbury Business Park
Arboricultural Consultant:	James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, TechArbor.A</i>
Date:	January 2016

SUMMARY

The proposal is for the construction of a new warehouse, office space and spray workshop at the site of Dunsbury Business Park, Fulflood Road, Leigh Park.

This Arboricultural Statement demonstrates the protection measures for the retained trees and should be read in association with the Tree Protection Plan CBA10529.02_TPP. 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 BS5837:2012 and current best practice.

A total of 11 (eleven) individual trees and 1 (one) group of trees can be retained adjacent to the proposed development as detailed within this report.

There are no trees that need to be removed to facilitate the proposed development layout.

There is 1 (one) tree that should be removed for sound arboricultural management regardless of any development proposals. However, this tree is located off site and it is the tree owner's responsibility to make sure that this tree does not cause harm to a third party.

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 (including Root Protection Area Schedule)
CB2	Tree Survey Plan CBA10529.01
CB3	Tree Protection Plan CBA10529.02_TPP
CB4	Pre-Commencement Tree Works Schedule

GUIDING PRINCIPLES/APPENDICES:

CB5	Tree Protection Guidance Leaflet
	Construction Exclusion Zone Site Notice
	Common Causes of Damage During Construction Works
CB6	Qualifications and Experience

PART 1

ARBORICULTURAL IMPLICATIONS ASSESSMENT

1.0 INTRODUCTION

- 1.1 There is a development proposal for the site of Dunsbury Business Park, Fulflood Road, Leigh Park. The site is located off Fulflood Road, just to the north of High Lawn Way and south of Little Hackets.
- 1.2 The proposal is for the construction of a 1920sqm Warehouse, 890sqm Offices/ancillary buildings, 218sqm Spray Workshop and 30 car parking spaces. There will also be a refuse compound and covered pallet store.
- 1.3 Document disclosure provided:
 - Existing Site Survey (Ref C27974-PD100 RevA)
 - Proposed site layout by PDP Architecture LLP (Ref 27974-PD101 Rev A)
- 1.4 The client provided the original site plans and locations of the trees have been indicatively plotted, 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 BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"* and current best practice advice.
- 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 a 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 BS5837:2012 and current best practice advice.
 - To undertake a Tree Survey (schedule including Root Protection Areas appended at CB1).
 - To produce a Tree Survey Plan that relies on the accuracy of the survey provided by the client. (Plan CBA10529.01 appended at CB2).
 - To undertake an Arboricultural Implications Assessment (AIA) of the proposed 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 Statement detailing the methodologies for the retention of the tree stock where feasible, in relation to the proposed development layout including a Tree Protection Plan CBA10529.02_TPP appended at CB3.
- 2.2 The advice provided is in support of the current planning application and has been formulated without discussion with the main construction contractors who at this stage have not been appointed. Once the main contractors are appointed, amendments to this Method Statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and approved in writing by Havant Borough Council.

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ARBORICULTURAL IMPLICATIONS ASSESSMENT

3.0 DESCRIPTION OF THE SITE

- 3.1 The site appears to be used for the storage of vehicles and materials. The site is relatively flat and there are no buildings or trees on site. There is a linear group of trees located along the southern boundary. These trees are located off site in an area that is open to the public. There is an existing retaining wall along half of the southern boundary (central to western side).
- 3.2 **Photograph 1:** A view of the site from the west



- 3.3 **Photograph 2:** A view of the retaining wall and drop in level to the south



4.0 THE TREE STOCK

- 4.1 A tree survey was undertaken by CBA Trees on 12th January 2016 that identified 12 (twelve) individual trees and 1 (one) group of trees. The Tree Survey Schedule is appended at CB1 and Tree Survey Plan CBA10529.01 is appended at CB2.

4.2 Tree Categorisation Method

Category U = 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 was 1 (one) 'U' grade tree adjacent to the site at the time of surveying (Tree 7).

Note: BS5837:2012 states -
"Category U trees are 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."

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 were no individual 'A' grade trees on or adjacent to the site at the time of surveying.

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were no individual 'B' grade trees on or adjacent to the site at the time of surveying.

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 11 (eleven) individual 'C' grade trees and 1 (one) 'C' grade group of trees adjacent to the site at the time of surveying (Trees 1-6 and 8-12 and Group 1), all of which were given an interim grade and should therefore be re-surveyed in line with the advice contained in the Tree Survey schedule at CB1.

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.

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

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ARBORICULTURAL IMPLICATIONS ASSESSMENT

5.0 TREE PRESERVATION ORDER/CONSERVATION AREA

- 5.1 CBA Trees was not instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area. The client is advised to obtain written confirmation from Havant Borough Council to establish the legal status of these trees prior to any works being undertaken, outside the remit of an approved planning application.

6.0 PROPOSED TREE RETENTION AND TREE LOSS

- 6.1 In accordance with the recommendations contained within BS5837:2012, an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA). The implications of the proposed development are detailed below, along with any mitigating measures to ensure the retention of these trees.
- 6.2 As part of the assessment, dimensions have been scaled from the proposed development drawing (Ref 27974-PD101 Rev A), which has been prepared and modified, to include the relevant Tree Survey data and the information as shown on Plan CBA10529.02_TPP, appended at CB3.
- 6.3 Tree 7 has been advised for removal for reasons of sound arboricultural management, regardless of any proposed development. This tree is located off site and is therefore not under our management. It is recommended that the landowner is made aware of this tree so appropriate action can be taken.

7.0 SUMMARY OF ARBORICULTURAL IMPLICATIONS

- 7.1 The following summary of implications (table shown on next page) relates to only those trees that will require mitigation measures to allow for construction operations.

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Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
1	Lombardy Poplar	C1+2 Interim	Proposed refuse and palette store within RPA.	Off site trees, retained.	Existing boundary fence retained will provide sufficient tree protection barrier for duration of works.
2	Lombardy Poplar	C1+2 Interim	Proposed hard standing within RPA.	Impact damage to trunk and branches from site machinery causing bark wounds.	Tree protection barriers as detailed in Section 11 of this report will be erected in the location specified on the Tree Protection Plan CBA10529.02_TPP appended at CB3 for the duration of the main site works.
3	Lombardy Poplar	C1+2 Interim	Proposed development in close proximity to trees.	Damaged or severed roots during excavations	Proposed refuse store and palette store have not been fully detailed and could be timber framed/timber type structure to reduce the impact on Trees 1-4.
4	Common Alder	C1+2 Interim			- Proposed hard standing within RPA's of trees 3 and 4 will be of a 'No Dig' construction as detailed in Section 12 of this report. - Tree 4 will require facilitation pruning as detailed within the Tree Works Schedule (TWS) appended at CB4. Crown lift to 3m above ground level over the site.
5	Lombardy Poplar	C1+2 Interim	Proposed development in close proximity to trees.	Off site trees, retained.	Retaining wall along boundary, trees grow 1-2m below the level of the site. RPA's have been amended to take account of retaining wall.
6	Lombardy Poplar	C1+2 Interim		Impact damage to trunk and branches from site machinery causing bark wounds.	Existing boundary fence will be retained and will provide sufficient level of tree protection for the duration of the site works.
8	Lombardy Poplar	C1+2 Interim			Tree 11 will require facilitation pruning as detailed within the Tree Works Schedule (TWS) appended at CB4. Crown lift to 3m above ground level over the site.
9	Lombardy Poplar	C1+2 Interim			
10	Common Ash	C1+2 Interim			
11	Common Alder	C1+2 Interim			
12	Common Alder	C1+2 Interim			

8.0 PRE-COMMENCEMENT SITE MEETING

- 8.1 It is recommended that a pre-commencement site meeting is held prior to any works commencing on site, to agree all approved processes with the arboricultural consultant, the construction personnel and Havant Borough Council. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work.
- 8.2 **General Site Management:** It is the developer's responsibility to ensure that the details of this arboricultural statement and any agreed amendments are known, understood and carried out by all site personnel.

9.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

- 9.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet (appended at CB5) 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.
- 9.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be of all-weather construction and shall be substantially in the form of the specimen provided at appendix CB5 and replaced as and when necessary.

10.0 PRE-COMMENCEMENT TREE WORKS

- 10.1 All tree works will be undertaken prior to the commencement of site preparation and construction works.
- 10.2 **All permitted or proposed tree work** should be carried out in accordance with the British Standard "*Recommendations for Tree Work*" BS3998:2010, 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 erection of protective barriers.
- 10.3 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.
- 10.4 Due to the official bird nesting season considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. Therefore if tree work is to be carried out within June, July or August the project ecologist must be consulted to:
- Complete or advise on a pre-works survey which needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds

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will be nesting in trees, and it is down to contractors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds*.

- 10.5 Should additional tree works become apparent during the construction process; written consent will be required from Havant Borough Council prior to these additional works being undertaken.
- 10.6 All tree works that are required to facilitate the proposed development are detailed within the Pre-Commencement Tree Works Schedule appended at CB4.

11.0 TREE PROTECTION MEASURES

11.1 Tree Protection

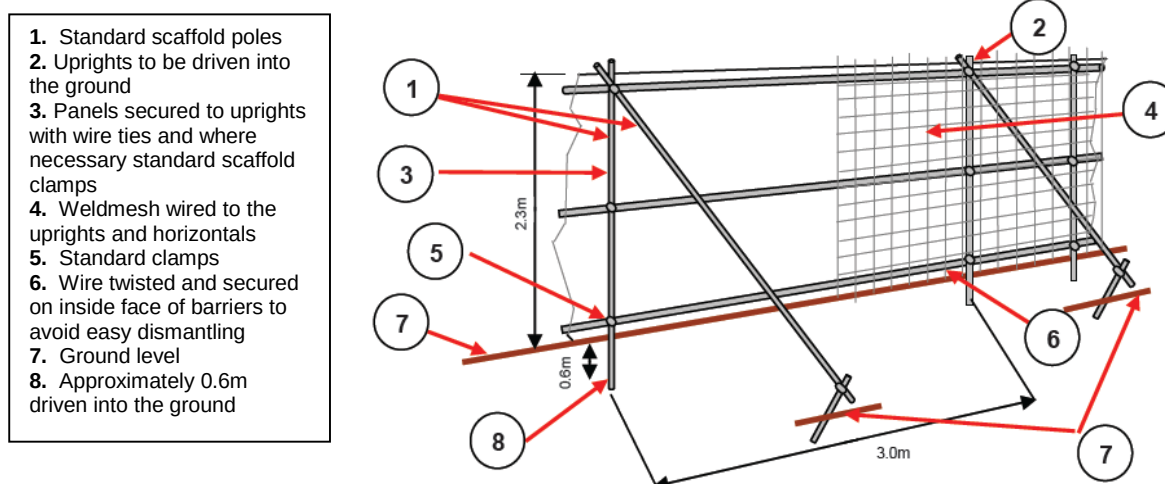
Before starting any works on site, tree protection will be installed in accordance with Tree Protection Plan CBA10529.02_TPP (appended at CB3). This will occur immediately following the completion of tree works and prior to any site preparation works starting.

It is recommended that a copy of the Tree Protection Plan is displayed in the site office and canteen as a point of reference.

11.2 Tree Protective Barrier

Trees 1-4 are adjacent to areas of construction activity and will be protected by installing the following protective barrier as indicated on Tree Protection Plan CBA10529.02_TPP. 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 should be securely fixed with wire or scaffold clamps.

Figure 1: Protective Barrier



Example of protective barrier:



Once the barriers are in place they must remain *in-situ* throughout the following:

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

The area within the Tree Protection Barriers shall be known as the Construction Exclusion Zone (CEZ) and will be regarded as **sacrosanct**. The tree protective barriers shall not be taken down or relocated at any time without the written approval of Havant Borough Council. An example of a CEZ notice is appended at CB5.

12.0 'NO DIG' CELLWEB

12.1 Plan CBA10529.02_TPP indicates where no-dig hard surfaces are to be installed within the RPA's of retained trees. These surfaces must comply with the following requirements:

- The proposed hard surface will consider site-specific factors and will be designed in accordance with advice from a structural engineer drainage engineer and arboricultural consultant. This will result in a design that is fit for purpose, adequate for the task and sympathetic to the biological requirements of the trees.
- If ground levels are to be raised, this should be achieved with a granular material that does not inhibit gaseous exchange (such as no-fines gravel, washed aggregate or cobbles).
- Sub-base will consist of a non-binding, no fines granular material, which does not inhibit water percolation or gaseous exchange.
- Depending on the load-bearing capacity of the soil determined through engineering testing, and the expected loads to be exerted on the soil, it may be necessary to incorporate a load suspension layer such as a 3-dimensional cellular confinement system. This layer must allow gaseous exchange both

vertically and horizontally. Any load suspension system should only be used in accordance with the manufacturer's guidelines, and its installation should comply with any relevant health and safety guidance. CBA Trees can provide further information relating to appropriate systems on request.

- If the proposed area of no-dig hard surfacing is greater than 3 metres wide on one side of the tree, or it covers more than 20% of the RPA, it shall be finished with a surface treatment which is permeable to gaseous and water movements.
- If water logging is likely to be a concern on a site, any proposed no-dig hard surfacing should be designed to direct water away from the base of the tree or provision made for the inclusion of surface water drainage.
- Any proposed no-dig hard surfacing will be designed to allow future growth of the roots and the base of the trunk, and as such should be no closer than 500mm from the trunk base. This will avoid future damage, both to the tree and engineered surface.

12.2 Wearing courses that could be installed over the granular material include:

- Washed Gravel – This is particularly useful as it retains its porosity (unless excessively consolidated), and can accommodate irregular shapes and changes in level. It is rarely suitable where vehicle or heavy pedestrian access is expected. Any gravel should have a low fines content to avoid low permeability resulting from consolidation.
- Paving Slabs and Pavers – These can be installed with infiltration spaces between the slabs, and should be installed dry-jointed and on a sharp sand-foundation.
- In-situ Concrete – This is an impermeable surface, so would require holes of at least 50mm diameter at 300-600mm spacings, (under advice from a structural engineer), which when filled with a no-fines gravel would allow for the movement of both water and gases to the rooting zone.
- Bitumen Paving – If implemented, this must be of a porous construction however, such surfaces will eventually become clogged with silt, and provision must be made for regular vacuum sweeping within the future maintenance of the surface or be installed in a similar way to the *in-situ* concrete, or be limited to less than 20% of the RPA.
- Other surfaces may be used but the final design of any no-dig hard surface should always be in agreement with a structural engineer and the retained arboriculturist.

If edge supports are required, they will be designed so as not to require any excavation of the existing soil surface, and should be in the form of either wooden or other edging materials, approved by a structural engineer and the retained arboriculturist. These edgings should be pinned in place, and the location of the pins should seek to avoid exposed surface or structural roots exceeding 25mm diameter.

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Construction of the surface will be considered at the design stage. All work will need to be completed, either from existing hard surface, or as a rolling construction working from the finished hard surface to avoid the need for additional ground protection. This will prevent damage to the roots and rooting environment of retained trees.

13.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

- 13.1 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, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

14.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

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

- 14.2 The locations of 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) will be outside of the RPAs, and avoid areas where 'run off' of chemicals may flow downhill into RPAs of retained trees or into watercourses.

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 barrier line. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

14.4 Material Storage

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

15.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE

- 15.1 Inside the CEZ formed by the protective barrier, the following prohibitions shall apply:

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- No construction activity will occur within the CEZ unless otherwise stated in this report, or agreed in writing with Havant Borough Council prior to the specific activity taking place.
- 15.2 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, branches, RPA or watercourses. This should take into consideration the topography of the site, to avoid liquids such as concrete washings running downhill towards retained trees.
 - Fires shall not be lit in a position where their flames can extend to within 10 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 CB5 Common Causes of Damage During Construction Works)

16.0 REPORT DAMAGE TO TREES AND TREE PROTECTION BARRIERS

- 16.1 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 arboricultural consultant, or in the absence of such an appointment, to an appropriately qualified arboriculturist, to enable remedial measures to be implemented.
- 16.2 Should damage occur to a protective barrier to impair its function in protecting trees, all work will cease near the damage, until the barrier has been returned to standard.

17.0 REMOVAL OF PROTECTIVE BARRIERS

- 17.1 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 barriers will be dismantled.
- 17.2 This barrier 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 barrier materials will need to be removed from site immediately.

18.0 CONCLUSIONS

- 18.1 The development proposals for the construction of new warehouse, office space and spray workshop at the site of Dunsbury Business Park, Fulflood Road, Leigh Park have been assessed broadly in accordance with BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"*.
- 18.2 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.
- 18.3 A total of 11 (eleven) individual trees and 1 (one) group of trees can be retained adjacent to the proposed development as detailed within this report. There are no trees that need to be removed to facilitate the proposed development layout. There is 1 (one) tree that should be removed for sound arboricultural management regardless of any development proposals. However, this tree is located off site and it is the tree owners' responsibility to make sure that this tree does not cause harm to a third party.
- 18.4 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.

19.0 CONTACT LIST

- 19.1 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
 - Drainage Engineer
 - Landscape Architects
 - Havant Borough Council's Tree Officer
 - Havant Borough Council's Planning Case Officer
 - Site Supervisor and Foreman
- 19.2 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.

20.0 BIBLIOGRAPHY

- British Standard 5837:2012 –
“Trees in Relation to Design, Demolition and Construction - Recommendations”
- British Standard 3998:2010 –
“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
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts







The Professional Arboricultural Consultancy

TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best 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, 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
SM	=	semi-mature trees
EM	=	early mature trees
M	=	mature trees
OM	=	over-mature trees

- 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+ or 40+ years.**

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2012. 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 U				Identification colour on plan
Trees 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, or very low quality trees suppressing adjacent trees of better quality			DARK RED
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
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 those that are essential components of groups or 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	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are down-graded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and 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 designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation value or other cultural value	MID BLUE
Category C	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of low quality 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 collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. This 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.

	BS5837:2012 TREE SURVEY REPORT	
	Site:	Dunsbury Business Park
	Date:	12 th January 2016
	Consultant:	James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, TechArbor.A</i>
	Tagged:	No

Notes:

1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
2. 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.
3. 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.
4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
5. Tree Groups have been assessed with estimated and representative data.
6. 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.
7. 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.
8.
 - a) At this stage the Root Protection Area (RPA) information is for your guidance and ongoing discussion purposes only as it assumes that all but the 'U' grade trees will be retained, which may not be the case.
 - b) 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 4.6.1 of BS5837:2012.

Trees that are marked with * are indicatively plotted on the associated Tree Survey Plan.

TREE PRESERVATION ORDER/CONSERVATION AREA:

CBA Trees has not been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area.

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
1*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	900	366	10.8	N 3 E 3 S 3 W 3	N 4 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Minor deadwood in crown Ivy on trunk Tree set back approximately 4-5m from boundary fence Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim
2*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	600	163	7.2	N 3 E 3 S 3 W 1	N 4 E 4 S 4 W 4	Early Mature	Fair	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Crown shape distorted due to group pressure Minor deadwood in crown Tree set back approximately 4-5m from boundary fence Tree to west has previously failed Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim
3*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	900	366	10.8	N 3 E 1 S 3 W 3	N 4 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Minor deadwood in crown Crown shape distorted Tree set back approximately 3-4 m from boundary fence Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim

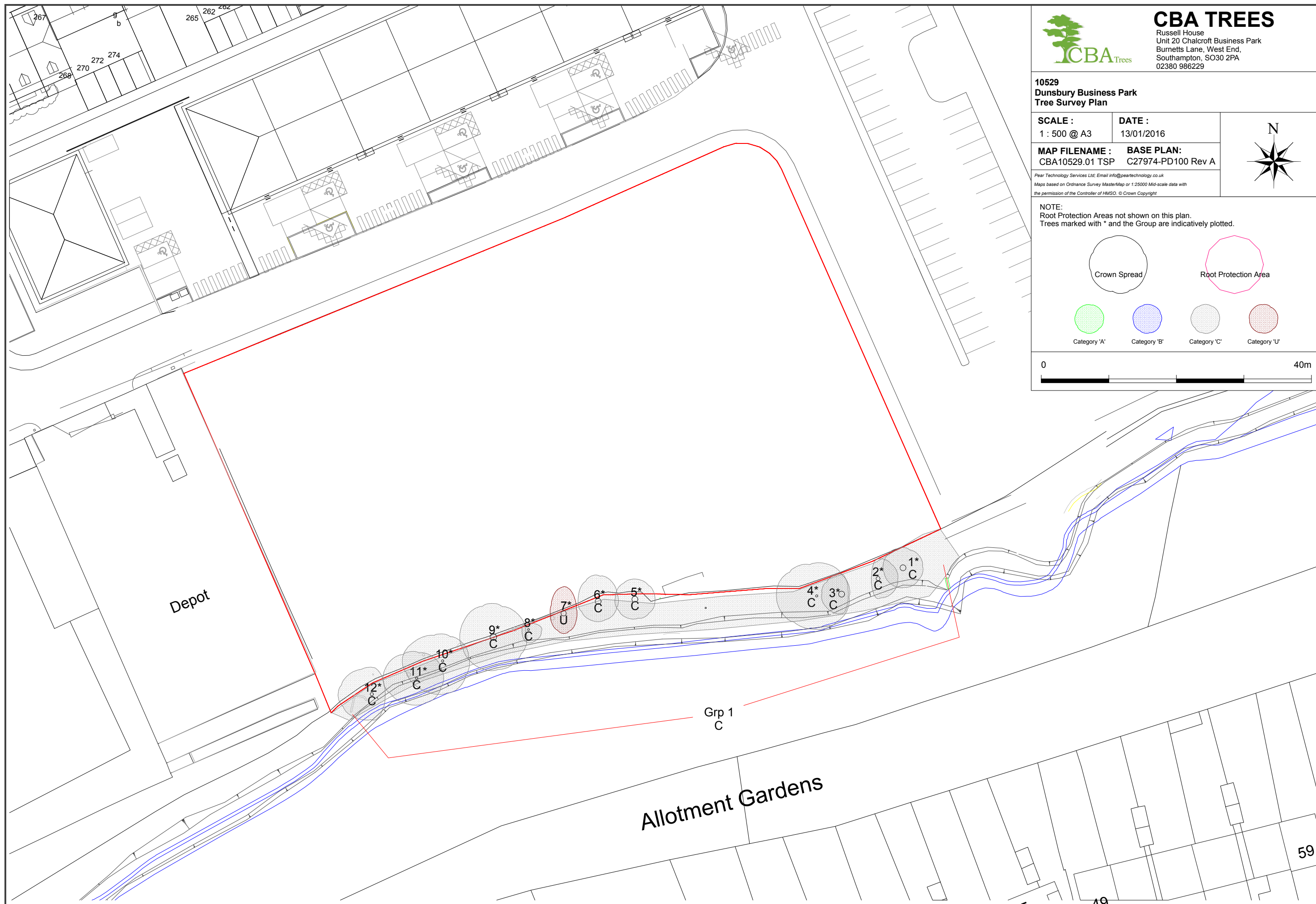
Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
4*	Common Alder <i>Alnus glutinosa</i>	12	S	350	55	4.2	N 5 E 5 S 5 W 6	N 2 E 2 S 2 W 2	Semi-mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Minor deadwood in crown Ivy on trunk Tree set back approximately 4-5m from boundary fence Estimated data Canopy overhangs site by 3m	Gain access and resurvey within 1 month	20+	C1+2 Interim
5*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	900	366	10.8	N 3 E 3 S 3 W 3	N 4 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Boundary line tree Growing on bank Minor deadwood in crown Tree set back approximately 1m from boundary fence Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim
6*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	900	366	10.8	N 4 E 3 S 3 W 3	N 3 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Boundary line tree Ivy on trunk and in crown Tree set back approximately 1m from boundary fence Retaining wall along boundary Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
7*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	800	-	-	N 4 E 2 S 3 W 2	N 4 E 4 S 4 W 4	Early Mature	Good	Structural Condition - Poor Offsite tree Unable to verify health and safety due to no access Boundary line tree Minor deadwood in crown Tree set back approximately 1m from boundary fence Retaining wall along boundary Cavities in trunk at 8m above ground level on north side Estimated data	Advise removal Inform owner of duty of care	<10	U
8*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	16	S	300	41	3.6	N 1 E 2 S 2 W 1	N 4 E 4 S 4 W 4	Semi-mature	Fair	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Boundary line tree Minor deadwood in crown Ivy on trunk Tree set back approximately 1m from boundary fence Retaining wall along boundary Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim
9*	Lombardy Poplar <i>Populus nigra</i> 'Italica'	22	S	1000	452	12.0	N 5 E 5 S 5 W 5	N 3 E 3 S 3 W 3	Mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Boundary line tree Minor deadwood in crown Ivy on trunk Tree set back approximately 1m from boundary fence Retaining wall along boundary Estimated data	Gain access and resurvey within 1 month	10+	C1+2 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
10*	Common Ash <i>Fraxinus excelsior</i>	15	S	350	55	4.2	N 4 E 4 S 5 W 6	N 4 E 4 S 4 W 4	Semi-mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Boundary line tree Ivy on trunk Minor deadwood in crown Tree set back approximately 2m from boundary fence Retaining wall along boundary Estimated data Bifurcated at 4m above ground level	Gain access and resurvey within 1 month	20+	C1+2 Interim
11*	Common Alder <i>Alnus glutinosa</i>	12	S	350	55	4.2	N 4 E 4 S 4 W 5	N 2 E 4 S 4 W 2	Semi-mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Boundary line tree Ivy on trunk Minor deadwood in crown Tree set back approximately 4m from boundary fence Retaining wall along boundary Estimated data	Gain access and resurvey within 1 month	20+	C1+2 Interim
12*	Common Alder <i>Alnus glutinosa</i>	12	MS	350 350	111	5.9	N 4 E 2 S 4 W 5	N 3 E 4 S 4 W 2	Semi-mature	Good	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Boundary line tree Ivy on trunk Bifurcated at ground level Tree set back approximately 2m from boundary fence Retaining wall along boundary Estimated data	Gain access and resurvey within 1 month	20+	C1+2 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
Grp 1	Elder Alder Ash	8	S	200	18	2.4	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Off site group Scrubby group Makes up understorey to larger trees Fence and retaining wall to north Stream to south Poor quality group	None required at time of survey	10+	C2





CBA TREES

Russell House
Unit 20 Chalcroft Business Park
Burnetts Lane, West End,
Southampton, SO30 2PA
02380 986229

10529
Dunsbury Business Park
Tree Survey Plan

SCALE :
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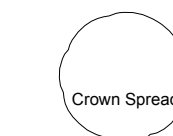
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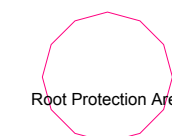
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NOTE:
Root Protection Areas not shown on this plan.
Trees marked with * and the Group are indicatively plotted.



Category 'A'



Root Protection Area



Category 'B'

Category 'C'

Category 'U'







CBA TREES

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Unit 20 Chalcroft Business Park
Burnetts Lane, West End,
Southampton, SO30 2PA
02380 986229

10529
Dunsbury Business Park
Tree Protection Plan

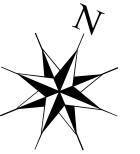
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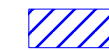
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KEY



ROOT PROTECTION AREA



EXISTING OFFSITE TREES TO BE
RETAINED AND PROTECTED IN
ACCORDANCE WITH BS5837:2012



'U' GRADE TREE THAT SHOULD BE
REMOVED REGARDLESS OF ANY
PROPOSED DESIGN LAYOUT.
ADVISE OWNER OF DUTY OF CARE



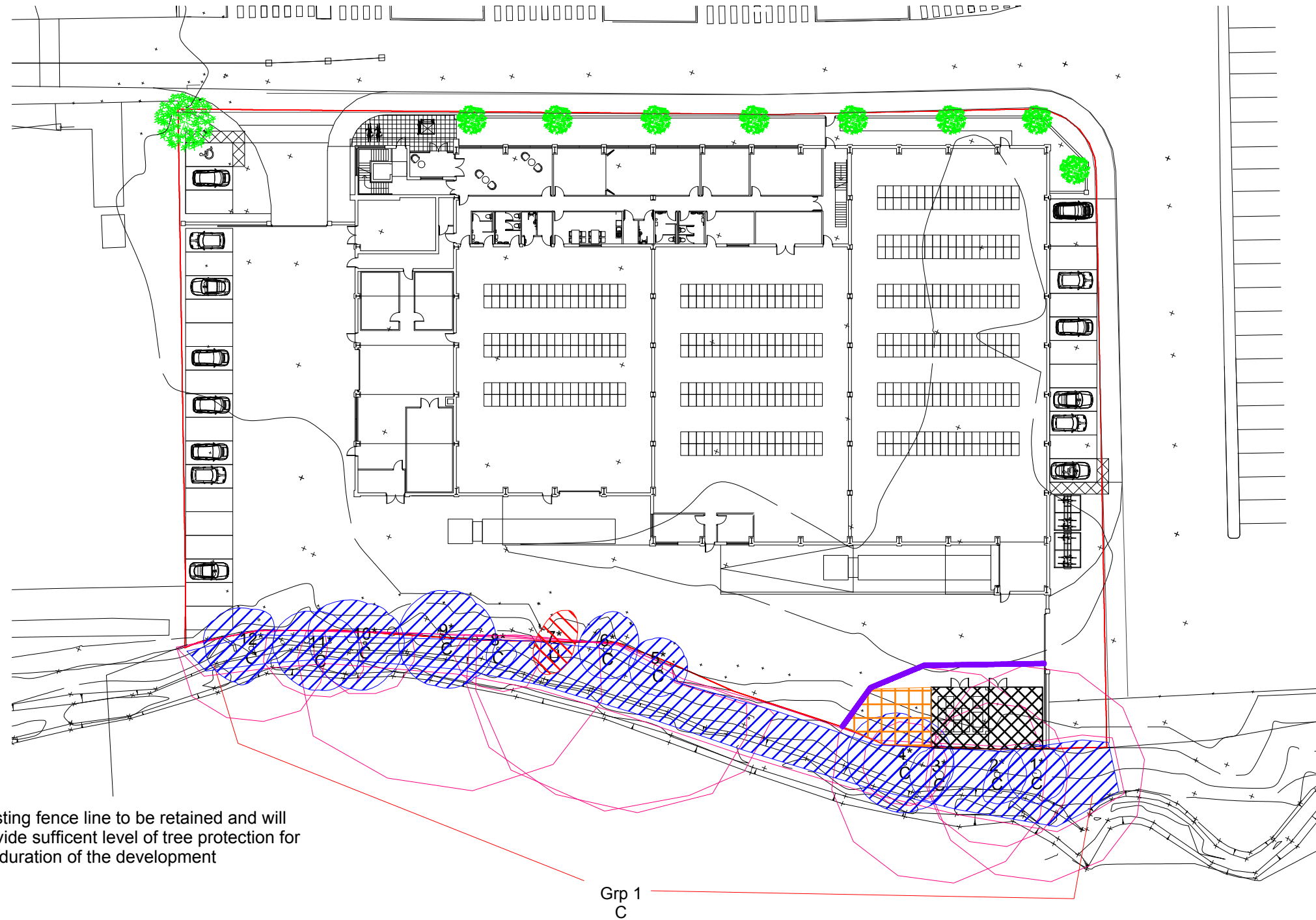
PROPOSED LOCATION OF 'NO DIG'
HARD SURFACE TO BE CONSTRUCTED
AS DETAILED IN SECTION 12 OF
CBA TREES JANUARY 2016
ARBORICULTURAL STATEMENT



TIMBER FRAMED STRUCTURE



LOCATION OF TREE PROTECTION
BARRIER TO BE CONSTRUCTED AS
DETAILED WITHIN SECTION 11 OF
CBA TREES JANUARY 2016
ARBORICULTURAL STATEMENT



Existing fence line to be retained and will
provide sufficient level of tree protection for
the duration of the development

Grp 1
C



	TREE WORKS SCHEDULE		
	Client:	Mipa Paints Limited	Site: Dunsbury Business Park
	Date:	January 2016	Consultant: James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, TechArbor.A</i>

Tree No.	Species	Recommended Works
1	Lombardy Poplar	• N/A
2	Lombardy Poplar	• N/A
3	Lombardy Poplar	• N/A
4	Common Alder	• Crown lift to 3m above ground level on north side over site
5	Lombardy Poplar	• N/A
6	Lombardy Poplar	• N/A
7	Lombardy Poplar	• Remove – Advise owner of duty of care
8	Lombardy Poplar	• N/A
9	Lombardy Poplar	• N/A
10	Common Ash	• N/A
11	Common Alder	• Crown lift to 3m above ground level on north side over site
12	Common Alder	• N/A
Grp 1	Mixed Species	• N/A

- 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 suitably insured and experienced to carry out the tree works.





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 tree protection barriers.

These barriers must be respected at all times and no attempts shall be made to damage, bypass or ignore them.

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 of 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: 020 8098 6229

REMEMBER:

**ALL TREE DAMAGE IS
AVOIDABLE –**

SO AVOID IT!

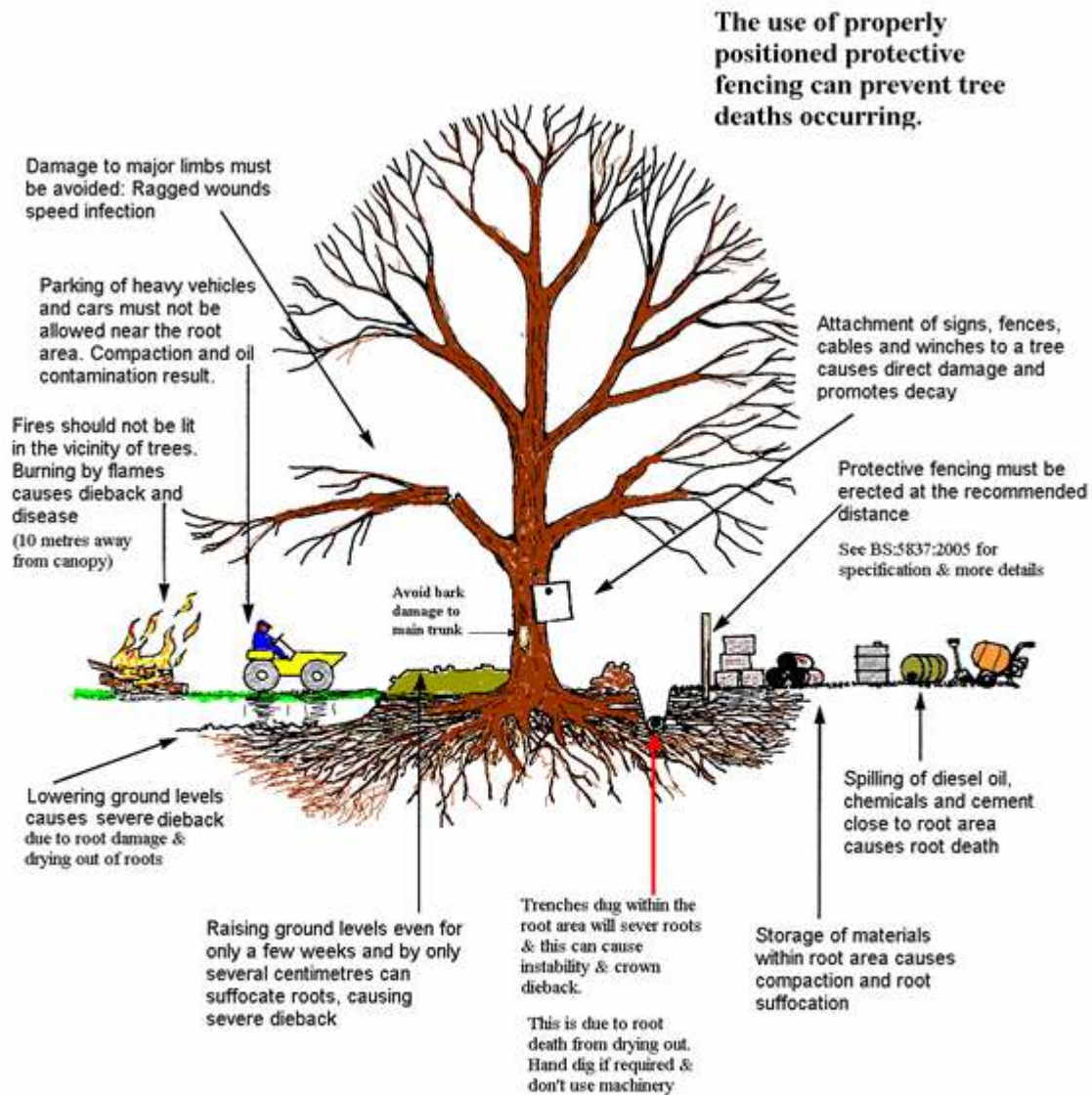


**PROTECTIVE BARRIERS.
THESE BARRIERS MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**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)







The Professional Arboricultural Consultancy

Qualifications of James Fuller Senior Consultant

James Fuller FdSc.Arb, BTEC Nat.Dip Arb, TechArbor.A joined CBA Trees in 2007 as a gap-year junior surveyor/arborist having attained the Foundation Degree in Arboriculture at Sparsholt College near Winchester and has more recently acquired the Professional Tree Inspector's Certificate.

Over the years James has gained experience in every field of our work, undertaking all elements of consultancy including large BS5837:2012 tree surveys using the latest data capture equipment to produce Implication Assessments and Method statements for planning applications.

Having broadened his knowledge and gained considerable experience, James is now a retained Senior Consultant, undertaking site assessments, site monitoring, and provision of advice to prominent development companies for large and complex projects.