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Tree Report

PRESENTED TO

Zolbury Limited
Proposed Large Scale Residential Development, Blackglen Road, Sandyford, Dublin 18

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- The inspection has been carried out from ground level using visual observation methods only.

- Trees are living organisms whose health and condition can change rapidly. Trees should be checked on a regular basis, preferably once a year. The conclusions and recommendations of this report are valid for one year.
- The fruiting bodies of some important species of decay fungi only emerge at certain times of the year and may not have been visible during this inspection.
- There is no such thing as a 100% safe tree in all conditions, since even perfectly healthy trees may fall or suffer branch break.
- Climbing plants such as Ivy can obscure structural defects and some symptoms of disease, where such plants prevent a thorough examination it is recommended that the climber be cut at ground level and the tree re-inspected when it has died back.
- Some of the trees included in the survey drawing originate outside the boundary fence of the site; these trees were not fully accessed, and so the condition assessments are preliminary and the tree dimension measurements are estimated.

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1 INTRODUCTION

Enviroguide Consulting was commissioned by Brock McClure Planning Consultants, acting on behalf of Zolbury Limited, to undertake an Tree report and survey for a proposed Large Scale Residential Development (LRD) at Lands at Blackglen Road, Sandyford, Dublin 18.

It is planned to develop an area as outlined below in figure 1 to accommodate a building development.

The site includes hedgerows (native and ornamental), groups of trees and individual trees. This report has been commissioned to provide an arboricultural assessment of the trees to input into the design and layout of the project and to form part of the planning package for the project.

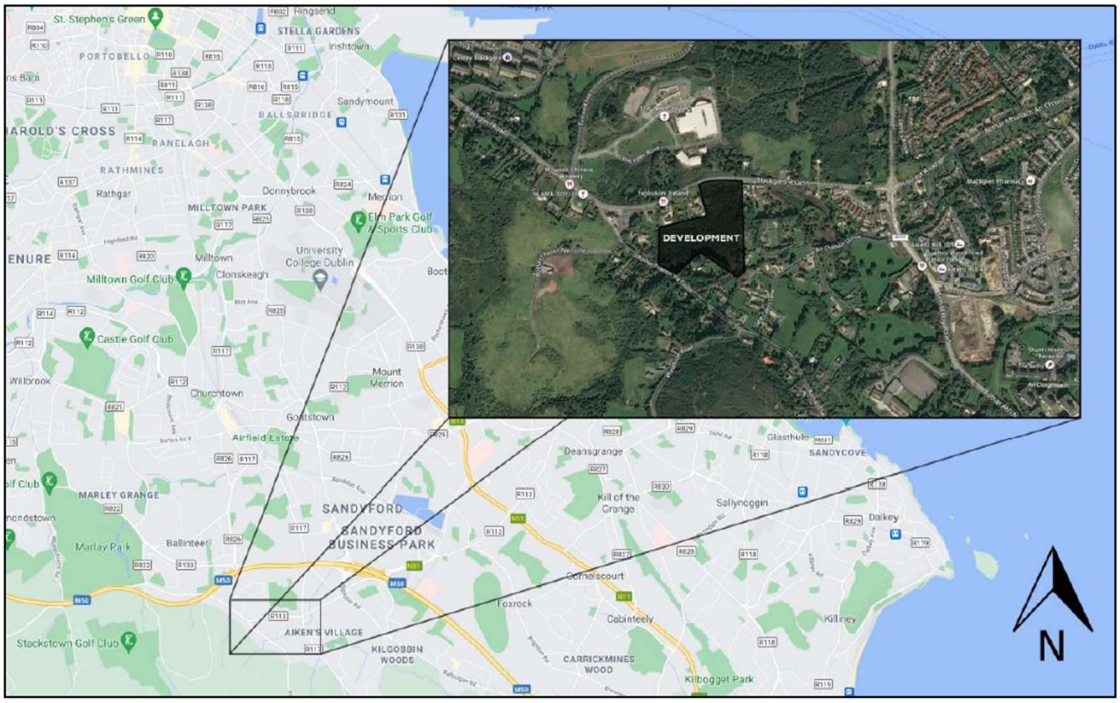


Figure1.

1.1 Project Objective

The overall objective of this tree report is to carry out a Tree Report and prepare an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan compliant with BS5837: Trees in relation to design, demolition and construction (2012) of the trees and hedges located on and around the site.

1.2 Project Overview

Zolbury Ltd., intend to apply to Dun Laoghaire Rathdown County Council for permission for development for a Large Scale Residential Development (LRD) on a site of approx. 3.86ha on lands at Blackglen Road, Sandyford, Dublin 18.

The development will consist of 192 no. residential units ranging from 2-5 storeys in height, associated resident amenity facilities, a childcare facility, all boundary treatment and landscaping works, site services connections and all site development works to include:

a) Construction of 192 no. residential units, in the form of 6 no. new apartment buildings (A1 – B4), 40 duplexes (C1, C2, C2A) and 14 houses (D1 & D2), to include 33 no. 1-beds, 84 no. 2 -beds, 61 no. 3-beds and 14 no. 4-beds as follows:

- Block A1 (4 storeys) comprising 15 no. apartments (3 no. 1 bed units, 6 no. 2 bed units & 6 no. 3 bed units); a crèche facility of approx. 378.2 sq. m with associated outdoor play space of approx. 170 sq. m; and resident amenity facilities of approx. 31.6 sq. m.

- Block A2 (3-4 storeys) comprising 26 no. apartments (2 no. 1 bed units, 20 no. 2 bed units and 4 no. no. 3 bed units) and resident amenity facilities of approx. 353.6 sq. m.

- Blocks B1 and B2 (2-5 storeys) comprising 51 no. apartments (15 no. 1 bed units, 29 no. 2 bed units, 7 no. 3 bed units).

- Blocks B3 and B4 (2-5 storeys) comprising 46 no. apartments (13 no. 1 bed units, 23 no. 2 bed units and 10 no. 3 bed units).

- Duplex Units C1 (4 storeys), C2 and C2A (3 storeys) comprising 40 duplexes (6 no. 2 bed units, 20 no. 3 bed units and 14 no. 4 bed units).

- House Units D1 and D2 (2 storeys) comprising 14 houses (14 no. 3 bed units).

b) Total Open space (approx. 10,854 sq. m) is proposed in the form of public open space (approx. 8, 686 sq. m), and residential communal open space (approx. 2,168 sq. m). Each residential unit is afforded with associated private open space in the form of a garden/terrace/balcony.

c) The development will be served via a new vehicular access via Blackglen Road. This will be designed as a priority junction with pedestrian and cycle crossings where required to tie in with the Blackglen Road Improvement Scheme.

d) A new toucan crossing is proposed across Blackglen Road just to the east of the new vehicular access. This toucan crossing has been designed as per TL607 of the Cycle Design Manual to allow crossing of pedestrians and cyclists to the northern side of Blackglen Road for improved public transport access.

e) Emergency access only is proposed via Woodside Road.

f) A dedicated wildlife corridor is proposed to the east/south-east side of the site and a public open space (approx. 307 m in length) tree trail to the west/north-west side of the site.

g) Basement/Podium car park areas are proposed below Blocks B1, B2, B3 and B4. A total of 226 no. car parking spaces are proposed, which includes 2 no. car club spaces, 12 no. accessible spaces and 47 no. EV charging spaces (198 no. long-stay spaces, 18 no. visitor space & 10 no. car parking spaces for creche use), in addition to 9 no. motorcycle spaces.

h) A total of 484 no. bicycle spaces are proposed in the form of 442 no. long stay bicycle spaces 42 short-term stay visitor parking.

i) 2 no. ESB substations at surface level.

j) Bin Storage areas for the Duplex blocks are proposed at ground level adjacent to the Duplex blocks.

k) All associated site and infrastructural works to include provision for water services; foul and surface water drainage and connections; internal roads, attenuation proposal; permeable paving; all landscaping works including green infrastructure zones; green roofs; and general plant areas; photovoltaic panels; landscaped boundary treatment; footpaths; public lighting; and electrical services.

2 SURVEY METHODOLOGY

The significant individual trees inside and adjacent to the site were assessed from ground level using Visual Tree Assessment (VTA) techniques and relevant observations and findings were recorded in compliance with the industry standard document BS5837: Trees in relation to design, demolition and construction (2012).

2.1 Survey Key

Tree Numbers

Trees on and adjoining the site were inspected. Undergrowth restricted the tagging of major trees.

Tree Species

Common and botanical names of the tree species were recorded.

Tree Crown Dimensions

Tree height (Ht), crown clearance (Cl) and crown-spread (NESW cardinal points) measurements are in metres and are estimated.

Stem Diameter (Dbh)

Measurements are in millimetres and taken at 1.5m from ground level, multiple stems (St) are recorded as a function of the BS:5837 RPA formulae described below.

Tree age classes

Age classes were recorded as:

Y	Young	Recently planted (with 5 years or so)
SM	Semi-Mature	Well established young tree
EM	Early Mature	Established tree not yet fully grown
M	Mature	Full or near full grown tree
LM	Late Mature	Older specimen in full maturity
OM	Over Mature	Reached full maturity now declining through natural causes

Vet	Veteran	Notable due to large size, old age, ecological importance

Tree Physiological and Structural condition

Tree condition was graded as

Good:	No obvious defects visible, vigour and form of tree good.
Fair:	Tree in average condition for its age and the environment.
Poor:	Tree shows signs of ill health/structural defect
Bad:	Tree in seriously bad health/major structural problem

Work Recommendations

Preliminary management recommendations are made where necessary and pertain to current site conditions unless otherwise stated.

Estimated Remaining Contribution (ERC)

The approximate number of years that a tree should continue to live and contribute amenity, conservation or landscape value to the site under current site conditions.

2.2 Tree Retention Category (Cat) (BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations)

The tree retention category system grades a tree's suitability for retention within a development:

A Indicates a tree of high quality and value. These are trees that are particularly good examples of their species, which also provide landscape value. These trees are in such a condition as to be able to make a substantial contribution. (A minimum of 40 years is suggested)

B Indicates a tree of moderate quality and value. Trees that might be included in the high category, but are downgraded because of impaired condition. These trees are in such a condition as to make a significant contribution. (A minimum of 20 years is suggested)

C Indicates a tree of low quality and value - trees with an estimated remaining life expectancy of at least 10 years, or younger trees with a stem diameter of below 150mm and/or <10m in height.

U Trees that are 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.

Sub Categories

Tree categories may be further categorised using the following sub-categories (e.g. C1, C2 or C3) - 1 mainly Arboricultural qualities, 2 mainly landscape qualities, 3 mainly cultural values.

2.3 Root Protection Area

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is recorded as a radius in metres measured from the tree stem and is shown on the tree survey/constraints drawing as a circle with the tree stem in the centre.

For single stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

For trees with more than one stem, one of the two calculation methods below should be used.

The calculated RPA for each tree should be capped to 707 m^2.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$\sqrt{((\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \ldots + (\text{stem diameter 5})^2)}$

b) For trees with more than five stems, the combined stem diameter should be calculated as follows:

$\sqrt{((\text{mean stem diameter})^2 \times \text{number of stems})}$

3 FINDINGS

Offsite trees and shrubs were assessed during a site visit on the 31st May 2024. The field data for the trees is contained in the accompanying Tree Survey Schedule. Tree location, BS5837 category, RPA and approximate crown shape are shown on the Tree Survey Drawing.

As site vegetation within the site was not significant on the day of inspection and just the close to boundary vegetation remained, it was deemed appropriate to assess each boundary individually (boundary 1 to 9). The planned development of the site requires the removal of 7 Category B trees. There will be a 1042%% increase in the number of trees on site (% increase= Final number – Initial/initial number)

Full details of the individual trees assessed on the site are listed in the Tree Survey Schedule in the appendices of the report.

4 PRELIMINARY MANAGEMENT RECOMMENDATIONS

Preliminary management recommendations for the trees assessed are listed in the tree survey schedule in the appendices; these pertain to *current* site conditions unless otherwise stated. As the vegetation is site boundary vegetation it is recommended that consultation with adjoining land owners is carried out and any proposed works to boundary vegetation are agreed. All tree work should be carried out by qualified and experienced tree surgeons; all tree work should be in accordance with *BS3998 (2010) Tree Work – Recommendations.*

5 SITE PHOTOGRAPHS



Figure 5-1 Boundary 1



Figure 5-2 Boundary 2



Figure 5-3 Boundary 3



Figure 5-4 Boundary 4



Figure 5-5 Boundary 5 southern end



Figure 5-6 Boundary 6 (looking north)



Figure 5-7 Boundary 7



Figure 5-8 Boundary 8



Figure 5-9 Boundary 9

6 ARBORICULTURAL IMPACT OF THE NEW DEVELOPMENT

The planned development of the site requires the removal of 7 Category B trees. Sturdy tree protection fencing as detailed below will be put in place as indicated on the tree protection plan. Any works inside the Tree Protection Fencing will follow:

1. the Guidance for working in Root Protection Areas (see p11).
2. The Arboricultural Association Guidance Note 12“The use of cellular confinement systems near trees – A guide to good practice”

The proposed works along Boundary 2 and to a much less extend along Boundary 3 will require works within the Root Protection Area of some trees. The works along Boundary 2 will be in accordance with The Arboricultural Association Guidance Note 12“The use of cellular confinement systems near trees – A guide to good practice” and will entail the build up on top of existing ground levels of a cellular geo textile confinement system in a series of geocells arranged in a honeycomb-like formation that is combined with an underlying geotextile and angular stone to spread loads in such a way as to minimise compaction of underlying soil by the proposed carparking. To allow the construction of the new footpaths/carparking/and road along Boundary 2 and 3 the encroachment within these RPAs should equate to less than 20% of the cohesive RPAs. Therefore, the level of impact can be rated low.

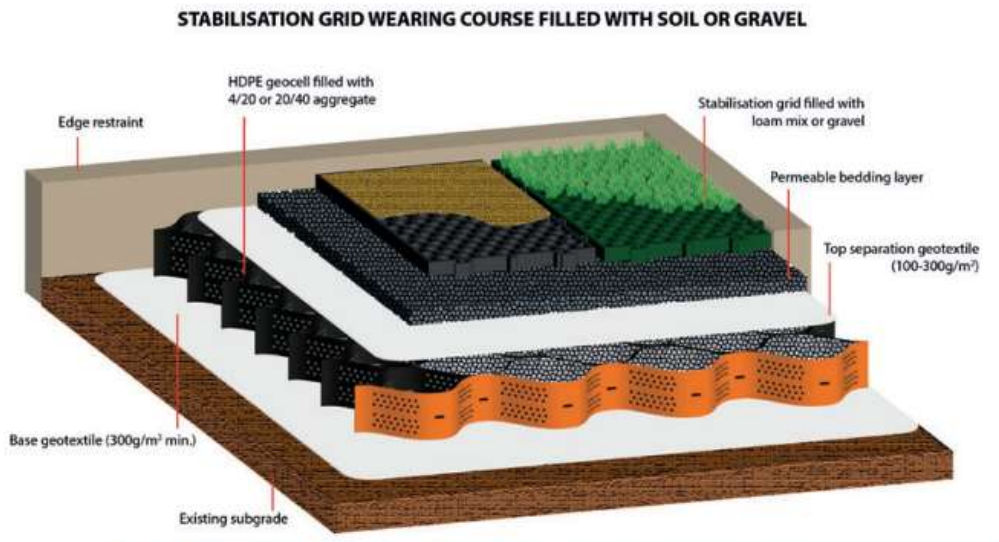


Figure 7: The sub-base configuration required for gravel or grass surfacing *[image courtesy of Core LP]*.

The much smaller works along Boundary 3 will be managed in a similar fashion to Boundary 2.

Boundary 4, 5, 6, 7, 8 and 9 require no works within the Root Protection area of the existing trees and hedges.

The redevelopment of the site includes a major new landscape scheme that will see significant 375 new trees in and around the site. The existing tree or shrub cover around the perimeter of the site will be added to by high quality new planting stock in a coherent landscape layout that will create a marked improvement in the arboricultural value of the site, especially as the planting scheme matures.

Quantity surveyed	Total to be retained	Total to be felled	Total proposed	Total proposed
36	**29**	**7**	**375**	**375 + 36= 411**
	81%	**19%**		**1,042% increase in number of trees**

Table 1 Summary of tree population and quantification of impacts/losses/gains.

6.1 Design Iteration

In order to achieve an optimal solution that meets Dun Laoighre Rathdown County Council Tree Strategy and its Development Plan standards in respect of tree preservation and tree retentions, through out the design process the design team worked in conjunction with each

other so as to minimise impacts to trees on and off the site in line with BS5837 Trees in relation to design, demolition and construction (2012).

7 ARBORICULTURAL METHOD STATEMENT

7.1 Tree Work Operations

The 7 trees will be felled and the stumps removed. Specialist tree workers will not necessarily be required for this site clearance operation. All arisings will be processed and either disposed of in an appropriate green waste facility or preferably recycled as mulch on site.

7.2 Tree Protection Measures

Sturdy tree protection fencing (see figure 1 below) or site hoarding will be erected along the lines shown on the Tree Protection Plan Drawing to prevent construction work encroaching into the root protection areas of the trees and scrub in the neighbouring property. The tree protection measures will be put in place *before* demolition or construction work commences and should remain in place until their removal or re-location is authorised by a qualified arborist.

7.3 Tree Protection on Construction Sites – General Recommendations

Trees being retained should be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the Construction Exclusion Zone (CEZ). Sturdy protective fencing will be erected along the points identified in the Tree Protection Plan **prior** to any soil disturbance and excavation work starting; this is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: *Trees in relation to design, demolition and construction (2012)* specifies appropriate fencing; see figure 2 below.



Figure 2. Protective fence specification

For light access works within the CEZ the installation of suitable ground protection in the form of scaffold boards, woodchip mulch or specialist ground protection mats/plates may be acceptable.

All weather notices will be erected on the fence with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing will be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work has finished and its removal is authorised by a qualified arborist.

Trench digging or other excavation works for services etc. will not be permitted in the CEZ unless approved and supervised by a qualified arborist using methods outlined in BS5837: *Trees in relation to design, demolition and construction (2012)*.

Care will 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 can result in serious damage to them and might make their safe retention impossible.

Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, will not be discharged within 10 m of a tree stem.

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

Notice boards, wires and such like will not be attached to any trees. Site offices, materials storage and contractor parking will all be outside the CEZ.

7.4 Guidance for Working in Root Protection Areas (RPAs)

Introduction

The following sets out the guidance for working in RPAs that should be followed to ensure successful tree retention. It is based on the guidelines and recommendations set out in British Standard 5837 2012 Trees in relation to design, demolition and construction - Recommendations (hereinafter BS5837) and the National Joint Utilities Group: Guidelines for the planning, installation and maintenance of utility services in proximity to trees. Volume 4, issue 2. London: NJUG, 2007 (hereinafter NJUG 4).

General Guidance for Working in RPA's

What is the purpose of this guidance?

The purpose of this guidance is to set out the general principles that must be followed when working in RPAs as follows;

a) pre site commencement: to demonstrate that tree protection issues have been properly considered and sets out how they must be implemented, and

b) post site commencement: to inform all site personnel of their obligations towards protected trees and how to meet them.

What are RPAs?

RPAs are the areas of root protection where;

a) roots must not be severed, cut or broken i.e. no excavation, no soil stripping

b) ground levels must not be changed i.e. no soil stripping, no soil level raising

c) soil must not be compacted - no movement of vehicles

All RPAs close to the construction area are illustrated on the tree protection plan within this report. Any and all works within RPAs must be carried out with great care if trees are to be successfully retained.

When must this guidance be followed?

This guidance must be followed by all personnel entering into or working within an RPA.

The main scenarios where this guidance must be followed are;

a) demolition,

b) construction of new hard surfacing,

c) construction of new structures,

d) subterranean construction,

e) underground and above-ground utility apparatus, and

f) landscaping activities.

Broad definitions of surfacing, services, structures and landscaping are set out in the following sections.

Arboricultural supervision:

All work within RPAs must be carried out with care if trees are to be successfully retained. An arboriculturist must be consulted if there is any risk of misunderstanding or misinterpretation. Ongoing work must be inspected regularly and, on completion, the work must be signed off by the arboricultural consultant.

Demolition within RPA's

Basic principles:

Demolition within the RPA should accord to the principle that the tree and soil structure take priority, and the most reliable way to ensure this is to preserve the RPA completely undisturbed. The ability of a tree to tolerate some disturbance and alteration of its growing conditions depends on specific circumstances, including prevailing site conditions, and in general, the older the tree, the less successfully it will adapt to new conditions.

Avoiding physical damage to the roots during demolition:

To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be

retained in situ. However, limited manual excavation within the RPA might be acceptable, subject to justification. Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement.

Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.

Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability.

Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

Construction of New Hard Surfacing within RPA's

Basic principles:

The design should not require excavation, including changes of soil levels other than the removal, of turf or other surface vegetation.

The new hard surface must avoid localized compaction by evenly distributing the loading over the track width and wheelbase of any vehicles expected to use the access.

New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA. If the new surface is likely to be subject to de-icing salt application, an impermeable barrier should be incorporated to prevent contamination of the rooting area and run-off should be directed away from the RPA.

Where a permeable surface is to be used by vehicular traffic, a geotextile should be used at the base of construction to help prevent pollution contamination of the rooting area below. Where there is a risk of water logging suitable land drainage must be incorporated. The new hard surface should be resistant to or tolerant of deformation by tree roots, and should be set back from the stem of the tree and its above ground root buttressing by a minimum of 500 mm to allow for growth and movement.

Mature and over-mature trees are more prone to suffer because of these changes than young and middle aged trees. Adverse impact on trees can be reduced by minimising the extent of these changes within RPAs.

The actual specification of the surfacing is an engineering issue that needs to be considered in the context of the bearing capacity of the soil, the intended loading and the frequency of loading.

Product and specification are beyond the scope of this guidance and must be provided separately by the appropriate specialist.

Sub-base and finishing layers:

Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems. Alternatively, piles, pads or elevated beams can be used to support surfaces to bridge over the RPA or, following exploratory investigations to determine location, to provide support within the RPA while allowing the retention of roots greater than 25 mm in diameter.

Suitable surface finishes include washed gravel, permeable tarmac or block paviours set on a sand base. However, for lightly loaded surfacing or limited widths (<3m) such as pedestrian paths, pre-formed concrete slabs may be appropriate if the sub-base preparation is as set out above.

In some situations, limited width floating concrete rafts constructed directly on to the soil surface may be acceptable but the design must not include any strip supports.

Edge retention:

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

Installing new hard surfacing on top of existing surfacing:

In some instances, existing surfacing can be retained and used as a base for new surfacing. Normally, this will not result in significant excavation that could expose roots so special precautions are not necessary.

If large roots already protrude above the proposed sub-base level, then the precautions and procedures set out above must be observed.

Construction of New Structures within RPA's

Basic principles:

Construction within the RPA should accord to the principle that the tree and soil structure take priority, and the most reliable way to ensure this is to preserve the RPA completely undisturbed.

The ability of a tree to tolerate some disturbance and alteration of its growing conditions depends on specific circumstances, including prevailing site conditions, and in general, the older the tree, the less successfully it will adapt to new conditions.

Where alternative design solutions are not available such that construction is proposed within the RPA, the potential impact of the proposals on the tree should be assessed and a tree protection plan and arboricultural method statement produced. Details of design proposals should be developed in conjunction with the project arboriculturist and, where required, input from a suitably qualified engineer.

In order to demonstrate that the proposals are technically feasible such details should be included within planning applications. The exception to this is the installation of underground utility apparatus, where it can be demonstrated that this is achievable by the use of trenchless technology and where entry and retrieval pits can be formed outside the RPA.

Where utility operations do not require planning permission, including those performed by statutory undertakers, they should still be undertaken in accordance with these principles.

Avoiding physical damage to the roots during construction:

To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be retained in situ. However, limited manual excavation within the RPA might be acceptable, subject to justification. Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement.

Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.

Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability.

Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

Subterranean construction within RPAs

Basic principles:

Where it is proposed to form subterranean structures, e.g. basement extensions, within the RPA, it is essential to avoid excavating down through rootable soil if trees are to be retained. In some cases, it might be technically possible to form the excavation by undermining the soil beneath the RPA.

Underground and above-ground utility apparatus within RPAs

Basic principles:

Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the routeing and methods of installation of all underground apparatus.

Wherever possible, apparatus should be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA.

Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routeing should be drawn up in conjunction with the project arboriculturist. In such cases, trenchless insertion methods should be used with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected excavation using handheld tools might be acceptable for shallow service runs.

Landscaping within RPA's

Basic principles:

The general treatment of areas around newly planted and existing trees should allow for adequate infiltration of water and free gas exchange, reduction of water evaporation and the retention of an open soil structure to encourage root growth.

Soil compaction and remediation measures:

Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites.

Compacted soil will adversely affect drainage, gas exchange, nutrient uptake and organic content, and will seriously impede or restrict root growth. The risk of soil compaction is greatest in soils with significant clay content and in wet conditions.

8 CONCLUSIONS

The planned development of the site requires the removal of 7 Category B trees. There will be a 1042% increase in the number of trees on site (% increase= Final number – Initial/initial number). The redevelopment of the site includes a major new landscape scheme that will see significant 375 new trees in and around the site. The existing tree or shrub cover around the perimeter of the site will be added to by high quality new planting stock in a coherent landscape layout that will create a marked improvement in the arboricultural value of the site, especially as the planting scheme matures.

9 TREE SURVEY SCHEDULE

Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Clear Crown-Height. (m)	Age Class[1]	[2]Physical .Condition	Structural Condition Other Comments visual defects	Preliminary Recommendation	[3]Remain Contribution in yrs	[4]Cat. Grade
1	Sycamore Acer pseudo-platanus	15	300mm	2m	EM	Fair.	Bly forked at base, root damage (To be removed for the development)		20+	B
2	Willow *Salix sp.*	10	4x200	0	EM	Fair	Unstable, leaning over (To be removed for the development)		10+	B
3	Sycamore Acer pseudo-platanus	15	400	3	EM	Fair	Light ivy growth, crown lobsided (To be removed for the development)	Control ivy	20+	B
4	Sycamore Acer pseudo-platanus	15	600	2	EM	Fair	Strong ivy growth. Badly forked	Control ivy	20+	B
5	Willow Salix sp.	10	200	0	EM	Fair	Die back, badly forked		20+	B
6	Sycamore Acer pseudo-platanus	10	350	0	EM	Fair	Overgrown with ivy, multiple forks	Control ivy	20+	B
7	Group of holly *Ilex aqui.*	10	150	1.5	EM	Fair	Heavily covered in briar	Control briar	20+	B

[1]**Age Class:** Y=Young (less then 10yrs) SM=Semi mature (1/3rd height) EM=Early mature (1/3-2/3 Ht) M=Mature (expected Ht) OM=Over mature (end of life cycle)

[2]**Physical Condition**: Good - no major defects Fair - minor defects Poor - lots decay/dangerous [3]**Remain Contribution in yrs** <10 10+ 20+ 40+

[4]**Cat. Grade** A high qty min 40yrs B mod qty min 20yrs C low qty min 10yrs U less than 10yrs

Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Clear Crown-Height. (m)	Age Class[1]	[2]Physical .Condition	Structural Condition Other Comments visual defects	Preliminary Recommendation	[3]Remain Contribution in yrs	[4]Cat. Grade
8	Sycamore Acer pseudo-platanus	15	300mm	2m	EM	Fair.	Lobsided growth	Monitor	20+	B
9	*Mixed species*	10-20	300 650 400	0	EM	Fair	Behind fence line, off site?	Monitor	10+	B
10	Spruce and lawson cypress group	10-20	450	2	EM	Fair	Some broken branches	Monitor	20+	B
11	Willow Salix sp.	8	400	1	EM	Fair	Heavy ivy growth	Control ivy	20+	B
12	Blackthorn *Prunus Spinosa*	6	150	0	EM	Fair	Ivy growth	Control ivy	20+	B
13	Willow *Salix sp.*	6	150	1	EM	Fair	Poorly formed	prune	20+	B
14	Blackthorn Prunus Spinosa	5	150	0	EM	Fair	Multiple forks	prune	20+	B
15	Mixed native hedgerow	7	250	0	EM	Fair		Monitor	20+	B

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Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Clear Crown-Height. (m)	Age Class[1]	[2]Physical .Condition	Structural Condition Other Comments visual defects	Preliminary Recommendation	[3]Remain Contribution in yrs	[4]Cat. Grade
16	Sycamore *Acer pseudoplatanus*	10	400	1	EM	Fair	Multiple forks	prune	20+	B
17	Ash *Fraxinus excelsior*	10	300	2	EM	Fair	Heavy ivy growth	Control ivy	20+	B
18	Ash *Fraxinus excelsior*	10	200	1	EM	Fair	Heavy ivy growth	Control ivy	20+	B
19	Ash *Fraxinus excelsior*	10	250	2	EM	Fair	Heavy ivy growth	Control ivy	20+	B
20	Ash *Fraxinus excelsior*	10	350	1	EM	Fair	Leaning heavily	prune	20+	B
21	Ash *Fraxinus excelsior*	10	400	1	EM	Fair	Badly forked	prune	20+	B
22	Ash *Fraxinus excelsior*	5	400	1	EM	Fair	Forked	prune	20+	B
23	Scots Pine *Pinus sylvestris*	12	450	5	EM	Fair	Outside site?	Outside site?	20+	B

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Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Clear Crown-Height. (m)	Age Class[1]	[2]Physical .Condition	Structural Condition Other Comments visual defects	Preliminary Recommenda-tion	[3]Remain Contribution in yrs	[4]Cat. Grade
24	Mixed hedge, wil-low,blackthorn, briar, hawthorn, buddelia	7 to 10	300	0	EM	Fair	Trim/regenerate if in control	prune	20+	B
25	Sycamore Acer pseudoplata-nus	10	4x200	0	EM	Fair	Multiple stems	prune	10+	B
26	Willow Salix sp.	5	300	1	EM	Fair	(removed during road widening)		20+	B
27	grisellinia	2.5	300	1	EM	Fair	Coppice to reform hedge	prune	20+	B
28	Sycamore Acer pseudoplata-nus	10		1	EM	Fair	Multiple forks	prune	20+	B
29	grisellinia	6		1	EM	Fair	Lobsided	prune	20+	B
30	Hawthorn *Crataegus mono.*	10	300	1	EM	Fair	Badly forked	prune	20+	B
31	Willow Salix sp.	15	300	1	EM	Fair	Heavy ivy growth	Control ivy	20+	B

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Tree ref.	Tree species	Height (m)	Stem Diameter (mm)	Clear Crown-Height. (m)	Age Class[1]	[2]Physical .Condition	Structural Condition Other Comments visual defects	Prelimi-nary Recom-menda-tion	[3]Re-main Contri-bution in yrs	[4]Cat. Grade
32	Willow Salix sp.	10	300	1	EM	Fair	Previously pol-larded	prune	20+	B
33	Willow *Salix sp.(3 trees)*	10	200	0	EM	Fair	Unstable, leaning over (To be removed for the development)	prune	10+	B
34	Sycamore Acer pseudoplata-nus	15	350	1	EM	Fair	Multistemmed	prune	20+	B
END										

[1]**Age Class:** Y=Young (less then 10yrs) SM=Semi mature (1/3rd height) EM=Early mature (1/3-2/3 Ht) M=Mature (expected Ht) OM=Over mature (end of life cycle)
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