

September 2024

ARBORICULTURAL IMPACT ASSESSMENT

Office Outbuilding

**Down Park Place, Turners Hill Road,
Crawley Down, W. Sussex. RH10 4HQ**

Prepared By

DOLWIN & GRAY

ARBORICULTURE, FORESTRY & LANDSCAPE

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Introduction

Dolwin & Gray were instructed by Mr. M. Tuppen, to carry out a Survey of trees within the vicinity of an existing outbuilding at Down Park Place which may be affected by proposed building works in accordance with BS 5837:2012 and advise on the root protection area (RPA) and tree protection.

Site Description

The subject area is to the East of Down Park Place on the opposite side of the access drive. Prior to recent clearance works the area had been unmanaged for many years and used for general storage. The area was overgrown with weed growth and shrubby vegetation, mainly Laurel. Much of the area to the front (West) of the existing outbuilding is surfaced with hardcore etc. and probably has in the past been used for vehicular access. Overall, the site is quite level and flat sharing the existing vehicular access to Down Park Place.

Documents Provided

Topographical Survey.

Topographical survey with proposed overlaid.

The supplied drawings have been used as base drawing for Tree Constraints Plan and Tree Protection Plan.

Survey Details (BS 5837: 2012)

A site visit was carried out by the undersigned on Wednesday 7th August 2024 in good sunny weather conditions.

The data collected was from a visual inspection of the trees from ground level only, with no detailed inspection of the internal structure/condition of any of the trees undertaken. Where considered necessary a more detailed inspection will be recommended.

The Root Protection Area calculated as per BS5837:2012 and recommended Tree Protection Barrier positions are illustrated on the Tree Constraints Plan.

The categories of information obtained for each tree is listed below.

- 1 Tree Reference No.
- 2 Species.
- 3 Height in metres.
- 4 Trunk diameter in millimetres.
- 5 Crown spread in metres.
- 6 Approximate height of crown above ground level.
- 7 Age class.
- 8 Vigour.
- 9 Structural Condition.
- 10 Preliminary Management Recommendations.
- 11 Estimated remaining period of significant contribution in years.
- 12 Category to BS 5837: 2012

As stated above the structural condition of the trees was inspected visually to assess the crown and stem for any weakness, including hollows, forks or other defects that may affect its stability and safe and useful life expectancy within a domestic garden.

Arboricultural Impact Assessment.

Risk Assessment

Tree species characteristics have been taken into account with species known to have a propensity to shed limbs etc given lower Category grading and reduced estimated remaining contribution in years. The risk from trees increases in areas of regular usage. Where structures are within the falling range of trees, the risk is constant.

Trees have a lightweight structure, which is designed to resist imposed loads and stresses by adaptive growth in any areas of weakness. They cannot adapt to unforeseen forces and hence failure of a tree or its parts can never be ruled out.

Development Proposal

The development proposal is for the: -

Demolition of the existing outbuilding and construction of a replacement outbuilding, on a similarly sized footprint to the South-east of the existing.

All as shown on the supplied documents.

Tree Details

See attached Tree Schedule

Impact of Development on Tree Retention

In order for trees on development sites to be retained account has to be taken of the area around each tree which can be left undisturbed. The Root Protection Area (RPA) required is calculated as per BS5837:2012 Annex D.

Details of the required minimum RPA for each of the surveyed trees are included within the Tree Schedule. This Schedule also gives the radius from the centre of each tree required to achieve the RPA. The RPA does not have to be a circle. Subject to arboricultural advice the RPA can be of any shape provided it covers the required area.

The Root Protection Areas are annotated on the Tree Constraints and Protection Plan.

Works within a Root Protection Area (RPA)

The information provided shows that only a small section of the rear elevation of the existing outbuilding is within an RPA of T7, and that it is on the periphery of the RPA of T6.

Any foundations to the existing outbuilding within 1m of an RPA can be left in situ. Therefore, the removal of this building will have no effect on the retained trees.

The proposed building is to be constructed outside the RPA of all retained trees and this will have no effect on any of the retained trees.

The gravel parking/turning area to the front of the proposed building will, where it is within the RPA of retained trees, be constructed on a no dig basis using a three-dimensional cellular confinement system. This is to be installed prior to any other demolition and construction works commencing.

Tree Protection

The following tree protection measures must be installed prior to any demolition and construction works commencing.

Protective Barriers

The RPA of all trees to be retained will need to be protected from disturbance during all construction works.

Tree Protection Barriers will need to be erected prior to the commencement of works where access within an RPA is not prohibited by other site features and remain in place until construction works are completed.

BS5837:2012 requires the barriers to be “fit for purpose”. The default design consists of a scaffold framework with weld mesh panels attached, however it is not always possible, practical or indeed necessary, to construct the barriers to this design. On this site the level of development is very low and there is no requirement to encroach within an RPA other than as discussed above. We consider that standard herras type fencing erected as per Fig. 3 BS5837:2012 will be sufficient with the struts (where access permits) secured by ground pins. (Copy of Fig 3 attached) The positions of the barriers are shown on the Tree Protection Plan

All weather notices with wording such as TREE PROTECTION AREA. KEEP OUT should be fixed at intervals to the barriers.

The barriers should be positioned as per the Tree Protection Plan and described below.

1. The barriers to the front of the dwelling should follow the line of existing driveway edging stones.
2. If T1 is to be retained the barrier should erected outside the RPA during the demolition phase of the works but could be moved closer to the tree during the construction phase. Any excavations within the RPA should be carried out by hand works to minimise root loss and increase chance of survival.

Ground protection

Compaction of the soil within an RPA can cause asphyxiation of the roots. Where access is required within the RPA of any tree the ground must be protected from compaction. The design of ground protection must be suitable for the expected maximum loading. The protection can be temporary, i.e. removed following completion of the works, or can be part of the permanent works. E.g. a new driveway.

No access within the RPA other than described above is considered necessary at present. Therefore, no additional ground protection will be required.

If at a later date access within an RPA is required, full details including mitigation measures must be approved by the LPA in writing prior to works commencing.

Tree surgery works to enable construction.

No tree surgery works are necessary to enable the construction.

Permission for tree works.

Arboricultural Impact Assessment.

Make enquiries with the LPA if any trees are protected by Tree Preservation Order (TPO) or are within a Conservation Area.

Underground services

Underground services should not be routed through the RPA. If this is unavoidable any trenching should be carried out by hand digging with an air pick to avoid root damage.

No work within an RPA should be undertaken without consulting an Arboriculturist and the Local Planning Authority and obtaining written approval from the Local Authority.

Though not detailed on the supplied drawings, it is understood that a new sewage/wastewater system is to be installed which is to be located outside the RPA of all trees.

Storage of materials on site.

No materials can be stored within the Root Protection Areas unless suitable ground protection is in place.

The storage of any potentially injurious materials such as fuels, oils, chemicals and cement should be at least 10m from the stem of any tree or within a bunded container.

Care needs to be taken as to the direction of any run-off to ensure it does not contaminate any proposed planting areas or the RPA of any retained tree.

Summary

Provided the tree protection measures described in this report are adhered to, the proposed development should not have any adverse effect on the retained trees.

Liability & Duration

This Report has been prepared for the sole benefit of the client, Mr. M. Tuppen to whom responsibility is limited and no responsibility will be accepted by Dolwin & Gray to any Third Party.

The information in this Report is subject to any changes of circumstances that may take place following the date of inspection.

This document is not a report on the safety of the subject tree.

Colin L. Goss
Dolwin & Gray

26th September 2024

TREE SCHEDULE – Down Park Place Outbuilding, Turners Hill Road, Crawley Down. RH10 4HQ													
Tree No	Species	Height	Trunk	Crown	Height of Crown	Age	Vigour	Structural Condition	Preliminary Management Recommendations	Years	Category	RPA radius (M)	RPA area (M ²)
1	Sycamore	20	480	N-6 S-2 W-3 E-5	4	Mature	Fair	Light basal growth. Localised crown dieback East side.	Remove deadwood.	10+	C1	5.76	104.23
2	Oak	22	700	N-8 S-6 W-5 E-6	6	Mature	Good	Somewhat drawn up with vertical growing limbs rather than horizontal.	None	20+	B2	8.40	221.67
3	Beech	22	290	N-3 S-3 W-1 E-3	6	Young	Fair	Old scaring to root claw on East side with reaction wood. Drawn up with poor height:stem diameter ratio.	None	10+	C1	3.48	38.05
4	Sycamore	18	330, 380	N-5 S-1 W-4 E-1	4	Semi-mature	Fair	Twin stem from 1m with tight fork. Drawn up & suppressed crown development due to adjacent large Ash tree now removed due to disease.	None	10+	C1	6.04	114.61
5	Oak	18	520	N-3 S-6 W-5 E-8	7	Mature	Good	Distorted stem growth due to group pressure with lean & crown weight to East.	None	20+	B1,2	6.24	122.33
6®	Oak	20	600	6	7	Mature	Good	Off site. No inspection. Appears good condition.	None	20+	B1,2	7.20	162.86
6®	Oak	20	600	6	7	Mature	Good	Off site. No inspection. Appears good condition.	None	20+	B1,2	7.20	162.86
7®	Oak	20	760	6	5	Mature	Good	Off site. No inspection. Appears good condition.	None	20+	B1,2	9.12	261.30
8®	Oak	19	960	13	7	Mature	Good	Good. Typical wide spread crown with large heavy limbs.	None	20+	B1,2	11.5	416.9
®	Denotes limited access												

TREE SCHEDULE EXPLANATION SHEET BS 5837: 2012

Number: As numbered on survey plan.

Species: Common name.

Height: Estimated height (metres).

Trunk: Diameter (millimetres)
Measured as per BS5837:2012

Crown: Average crown spread radius (metres). Individual measurements given where there is a significant difference.

Height of Crown Average height of crown above ground.

Age:

Y	-	Young	-	Less than one third life expectancy.
MI	-	Middle Aged	-	One third to two thirds life expectancy.
M	-	Mature		
OM	-	Over Mature		

Vigour: Physiological condition: G – Good
F – Fair
P – Poor
D – Dead

Structural Condition: e.g. Collapsing.
Presence of decay.
Physical defect

Preliminary management recommendations:

Initial recommendations including: the need for more detailed investigation of suspected defects.

The potential for wildlife habitat.

Remedial works to help prevent collapse/remove obvious danger.

Years: Estimated remaining years of worthy contribution to landscape.

Category: To British Standard 5837:2012 Trees in Relation to Design, Demolition & Construction – Recommendations
See attached, Table 1 – Cascade chart for tree quality assessment.

Table 1 – Cascade chart for tree quality assessment. BS5837:2012

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TREES FOR REMOVAL				
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 might be desirable to preserve;			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
	Criteria – Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Those 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 category A., 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 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 or other cultural value.	MID BLUE
Category C Those of low quality with an estimate remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	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 screening benefit.	Trees with no material conservation or other cultural value.	GREY

Figure 3 Examples of above-ground stabilizing systems



