

**Crosby Croft,
Crosby Street,
Cudworth**

Phase 2 Pre-development Arboricultural Report Rev 1

**Prepared at the request of
Peter Thompson Architect**

10 April 2019

**By
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Summary

I have been instructed by Peter Thompson Architect to carry out a pre-development tree survey of the significant trees growing in the eastern part of the garden of Crosby Croft, Cudworth.

The location and spread of 12 individual trees are recorded on Plan 1 that shows the existing layout. Table 1 records their species, dimensions, age, life expectancy, categorisation and root protection areas. This information was collected, interpreted and recorded in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

The most significant trees form a group of lime trees along the frontage of the site. One is growing in the neighbouring property at Crosby Court. These have been included in the second highest retention category B because of their good health and local prominence.

The remaining trees are growing in the centre and rear of the garden. These are a mixture of fruit trees and conifer trees. These trees are in good health but have been included in the lowest retention category (C) because they are much less significant to the amenity of the area.

Plan 2 shows the proposed layout.

Trees 1 to 7 to the rear of the site are all category C trees. These would need to be removed to accommodate the proposed layout.

The proposed driveway encroaches into the northern half of the root protection areas of Trees 8 to 12. Provided the site levels will allow, a porous 'no-dig' driveway could be constructed on top of the existing ground levels.

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1.0 Introduction

1.1 Instruction

I have been instructed by Peter Thompson Architect to carry out a pre-development survey of the trees in a part of the garden to the east of the house.

The tree survey is intended to provide a structured, impartial assessment of the tree population within the proposed development area.

The survey is intended to be informative to all stages of the development process and was carried out in accordance with *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations*.

1.2 Documents and Information Provided

I was provided with the following documents:

A plan that identifies the area of land being considered for development, together with a proposed layout.

1.3 Limitations

This report is concerned only with assessing the condition of the trees, their importance in the local landscape and any cultural and conservation values.

It takes no account of the affects the trees may have on the soil, such as heave where trees are removed or shrinkage where trees are retained.

Trees are dynamic organisms influenced by weather, pests and diseases. Therefore, this report can only remain valid for a period of 24 months.

Any works around the trees such as trenching, pruning, storage of materials and trafficking that has not first been approved by a suitably qualified arboriculturalist will invalidate this report.

No decay detection equipment was used to gather information on the condition of the trees.

All survey and inspection was completed at ground level.

2.0 Site Visit and Observations

2.1 Site Visit

The site visit took place on 12 December 2018. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated.

The weather at the time of inspection was over cast but bright. Visibility was good throughout and winds were light.

2.2 Brief Site Description

Crosby Croft is a large detached residential property on the corner of Crosby Street and Royston Road. A garage fronts onto Crosby Street. The house is situated slightly to the northwest within the plot. There is a large garden on all sides but most of the garden extends to the east.

The area of the garden included in this survey is the area to the east of the detached garage. The trees growing on the southwest corner and eastern boundary of the property were not surveyed and are not included in the report.

2.3 Development Proposals

I have been provided with a plan that proposes two dwellings with associated gardens to the rear, driveway to the front and car parking to the side.

2.4 Locations of the Trees

The positions of the trees were plotted by me using fixed known points to triangulate from. I am not a land surveyor but I believe the positions are sufficiently accurate for the purposes of this report.

2.5 Tree Observations

All trees within the site of the proposed development were inspected in detail. Information on their size, condition and retention category is included in Table 1 below.

Table 1. The Tree

Tree number	Species	Height (M)	Stem diameter (DBH in MM)	Branch spread (M)	Ht first branch above GL* (M)	Ht of canopy above GL (M)	Life stage	Vitality	General observations on the health and condition of the trees.	Estimated life in years	Category
1	Pear	12.0	585	North – 4.5 South – 5.0 East – 3.0# West – 5.7	2.5	2.0	Mature	Normal	There a number of small, old pruning wounds to the main stem that are occluding well. It is a large tree for the species, it is healthy and has good form. It is not particularly prominent outside the garden of Crosby Croft.	20+	C (1)
2	Apple	4.5	230, 213	North–2.3 South– 3.6 East – 1.9 West – 4.0	1.8	2.5	Mature	Normal	A small fruit tree. The tree is healthy with no significant defects. It provides no amenity outside the garden.	20+	C (1)
3	Apple	7.7	192, 251	North – 3.4 South – 2.7 East – 1.6 West – 3.4	2.0	2.0 – 3.0	Mature	Normal	A small fruit tree. It has been topped in the past at around 5m. There a few small dead lateral branches but otherwise no significant defects. It provides no amenity outside of the garden.	20+	C (1)
4	Plum	11.6	346	North – 3.7 South – 3.0 East – 1.9 West – 4.3	3.0	2.0	Mature	Normal	A large, well-formed fruit tree. It has no significant defects. The stem and crown are weight biased to the southwest. It provides limited amenity outside of the garden.	20+	C (1)

5	Norway spruce	14.0	330	North – 1.0 South – 3.9 East – 2.0 West – 3.2	1.8	2.0	Juvenile mature	Normal	The tree is still young and small for the species. It is healthy and well formed with no significant defects. The crown is weight biased to the south. The tree is becoming large enough to provide some amenity outside of the garden.	40+	C (1)
6	Larch	17.0	250, 446	North – 5.2 South – 5.4 East – 4.7 West – 1.9	2.5	2.5	Young mature	Normal	A relatively young and small tree still for the species. The tree is in good health with no significant defects. It is becoming large enough to provide some amenity outside of the garden.	40+	C (1)
7	Lawson cypress	17.0	43	North – 2.8 South – 2.5 East – 2.8 West – 2.5	GL	GL	Young mature	Normal	A healthy well-formed tree with no significant defects. It is still relatively young for the species but is beginning to reach a size where it has some limited amenity outside of the garden.	40+	C (1)
8	Lime	15.0	600	North – 6.5 South – East – 3.8 West – 4.5#	0.25	0.25	Semi mature	Normal	A prominent tree on the frontage of the property. It forms a cohesive group with three other lime trees. The tree is in good health with no significant defects.	40+	B (1&2)
9	Lime	16.0	650#	North – 6.1 South – 4.5 East – 2.7 West – 2.0	2.0	2.0	Mature	Normal	Another prominent tree on the frontage of the property. The tree is in good health with no apparent significant defects but the dense basal growth did limit inspection of the base and lower stem.	40+	B (1&2)
10	Yew	5.0	120	North – 2.5 South – 2.5 East – 2.5 West – 2.5	GL	GL	Semi mature	Normal	A small, slightly suppressed tree. It has no significant defects. It has limited amenity beyond the garden due to its small size and the presence of the larger limes.	40+	C (1)

11	Lime	17.0	650	North – 6.0 South – 4.5 East – 3.0 West – 2.0	2.0	2.0	Mature	Normal	A large, prominent tree on the frontage that forms part of a cohesive group with three other limes. The tree is in good health with no apparent significant defects but the dense basal growth did limit inspection of the base and lower stem.	40+	B (1&2)
12	Lime	16.0	550#	North – 6.0# South – 4.0 East – 4.0# West – 4.0#	2.0	2.0	Mature	Normal	A large prominent tree. It is growing in the neighbouring garden but forms part of a cohesive group with the three limes at Crosby Croft. A detailed inspection was not completed. Inclusion in category B assumes that the tree has no significant defects.	40+	B (1&2)

-Estimated. GL - Ground Level.

3.0 Interpretation of Information and References

My interpretation and appraisal of information gathered from the survey is based on experience of tree species, visual risk hazard assessment and the guidance set out in BS5837:2012 *Trees in Relation to Design, Demolition, Construction – Recommendations*. My qualifications and experience in arboriculture are included in appendix 1.

3.1 BS5837:2012 Tree Retention Categories

All trees have been assessed and assigned a category in accordance with Table 1 of the standard. A copy of Table 1 is included as Appendix 2. This categorisation is intended to rank trees according to their importance in terms of quality, health, life expectancy, amenity and landscape value, together with wildlife and cultural importance. This ranking assists in determining the suitability and appropriateness of trees for retention in any development. Categories A to C are those considered for retention, 'A' being highest. Category 'U' trees are those not suitable for retention because of impaired condition.

Generally category A and B trees should be given more consideration in layouts than category C trees as these are considered more valuable because of their condition, landscape value, future life expectancy or, on occasions because of their more favourable habitat value.

3.2 Below Ground Constraints; Root Protection Areas (RPAs)

The root protection area is the area of land considered necessary for trees should they be retained as part of any development. This is calculated using the stem diameter measured at 1.5 metres from ground level. This protection area is shown diagrammatically as a circle centred on the base of the tree where it is expected that rooting has not been impeded in any one direction and where disturbance has not taken place. See Plan 1. Where rooting has been impeded or disturbance taken place then the shape and size of the root protection area is modified according to an assessment of where rooting is likely to take place.

Where trees are to be retained, it is optimal to locate structures and services outside the RPA. However, where incursion becomes necessary, technical solutions may be possible to limit damage, areas lost can be compensated elsewhere, or the soil environment can be improved. In these circumstances an arboricultural method statement will be necessary to ensure that works are undertaken sympathetically and do not damage the below ground parts of the trees.

3.3 Above Ground Constraints; Crown Spreads

Ideally, working areas and construction will be out with the crown spreads of trees to be retained. However where access by high sided vehicles and machinery for construction or erection of scaffolding is necessary within the crown spreads of trees to facilitate development an arboricultural method statement will be necessary to ensure pruning works are carried out sympathetically prior to construction works commencing.

Any permanent development within the canopy spread of a tree will also require a method statement. However, the effects of shade and other perceived inconveniences of trees this close to property should also be considered, together with the future growth potential of the trees and the maintenance obligation this will bring.

3.4 Conception and Design

The constraints imposed by trees should assist with site design and layout, together with the other competing needs of development. Generally the trees in the higher categories (A and B) should be given greater consideration in any layout than the lowest retention category (C).

As well as the footprint of buildings, the provisions of services, infrastructure layout and the access space required for construction itself should be considered.

4.0 Arboricultural Impact Assessment and Method Statement

4.1 Arboricultural Impact Assessment

Trees 1 to 7

These trees would need to be removed to accommodate the dwelling. These are all considered to be category C trees and do not make a significant contribution to the landscape outside of the garden of Crosby Croft.

Trees 8 to 12

Trees 8, 9, 11 and 12 are growing at a slightly elevated position from the neighbouring highway ground levels.

The root protection areas for these trees have been positioned off centre to the north. The highway area to the south is unlikely to support much rooting due to the difference in levels and the hard surfacing. The trees are more likely to have exploited the more favourable soil conditions to the north. For this reason the RPAs of the trees are shown on Plans 1 to 3 as being offset to the north.

The proposed driveway would encroach into the northern half of the RPA of the trees. The driveway would be between 3.5 and 5m from the stems of the trees with a grass buffer between the stems and the driveway.

The driveway would need to be constructed using special engineering solutions that constructs the driveway on top of existing ground levels using a product such as Geocell <http://www.terram.com/products/geocells/tree-root-protection-geocell.html> or Cellweb <http://www.geosyn.co.uk/product/cellweb-tree-root-protection>. Other products are available.

These technologies sit approximately 200mm above the existing ground levels. This includes the finished surface. For this solution to be an option it will be necessary to establish whether these additional levels can be accommodated.

4.2 Arboricultural Method Statement

Method statements are produced to avoid damage to the above and below ground parts of existing trees that are to be retained during development operations.

If the proposed layout is agreed and planning consent granted then a method statement will be necessary that details how the development will proceed whilst protecting the trees.

Broadly the following operations will be necessary in the following order:

1. Temporary tree protection barriers are erected at the positions shown on Plan 3.
2. Demolish the existing garage.
3. The driveway is constructed in the area shown on Plan 3 in accordance with the manufacturers recommendations.
4. The construction works are completed.
5. The temporary fencing is removed.

5.0 Conclusions

There are 12 trees that have been inspected in detail. 11 are growing at the property and one is growing in the neighbouring garden to the east.

All of the trees are in good health and they have few defects.

The trees on the frontage with Crosby Street are large and prominent making a contribution to the amenity of the area. These have been included in retention category B.

The remainder of the trees are in the centre of the garden and to the rear. These are much less significant because they are small and/or set back from a public place. These have been included in retention category C.

Trees 1 to 7 would need to be removed to accommodate the dwelling.

Provided the site levels allow, a no-dig driveway could be constructed within the RPAs of the trees.

6.0 Legal Considerations

Protected trees

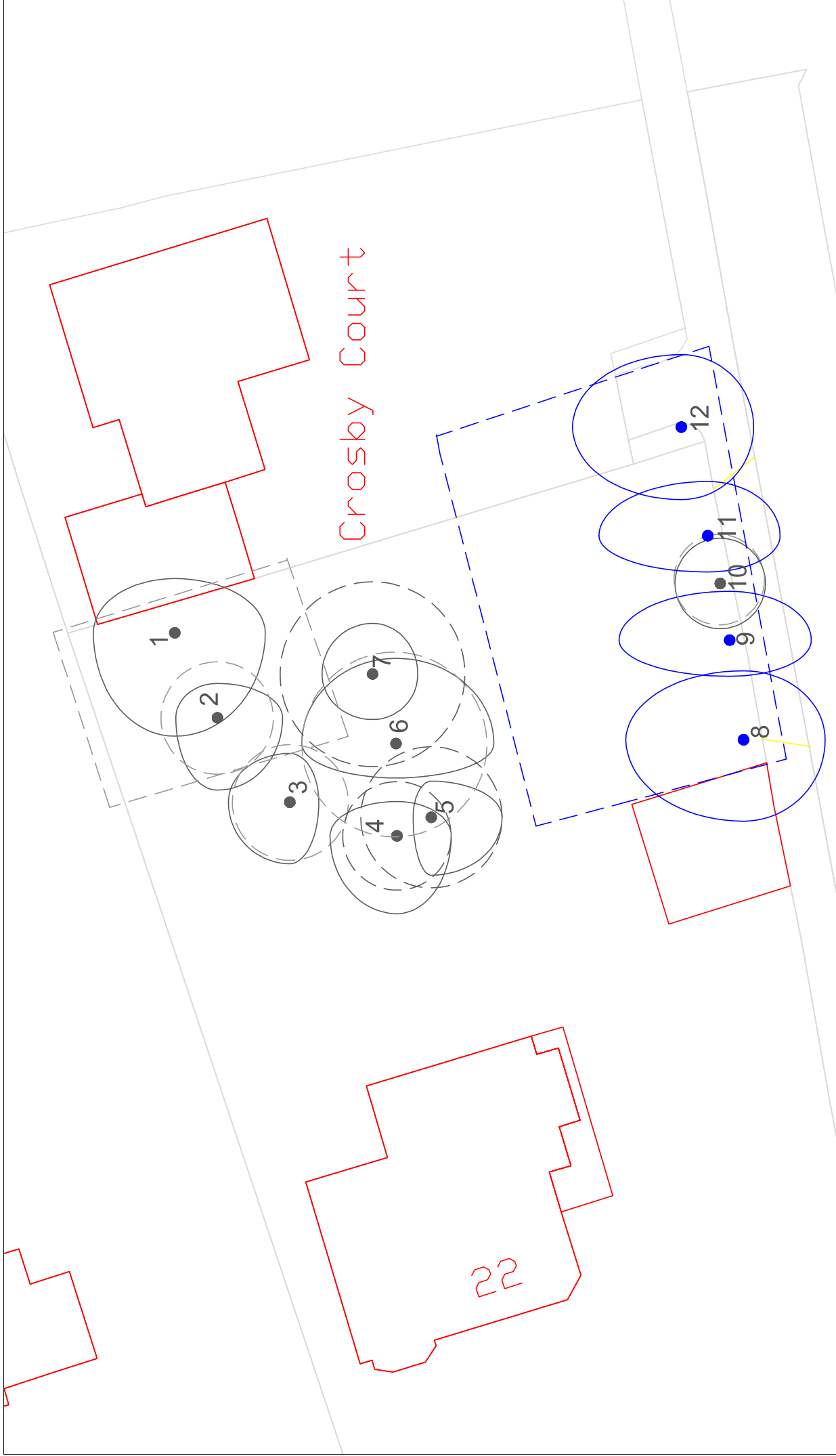
No checks have been made with the Local Planning Authority for Tree Preservation Orders, other planning conditions or inclusion of the site in a Conservation Area. However, if any of the trees subject to this report are protected it will be necessary to apply to the local planning authority (LPA) for permission before any work, other than certain exempted operations, can be carried out.

Wildlife conservation legislation

Breeding birds are protected, together with bats and their roosts, whether their roosts are in use or not.

Consideration should be given to the presence of protected species prior to any proposed tree removal or maintenance. This will include breeding birds, principally between March and August, and bats at any time of year.

Tree surgeons should also be aware of their duties under legislation to protect wildlife and carry out their site assessment and work accordingly.

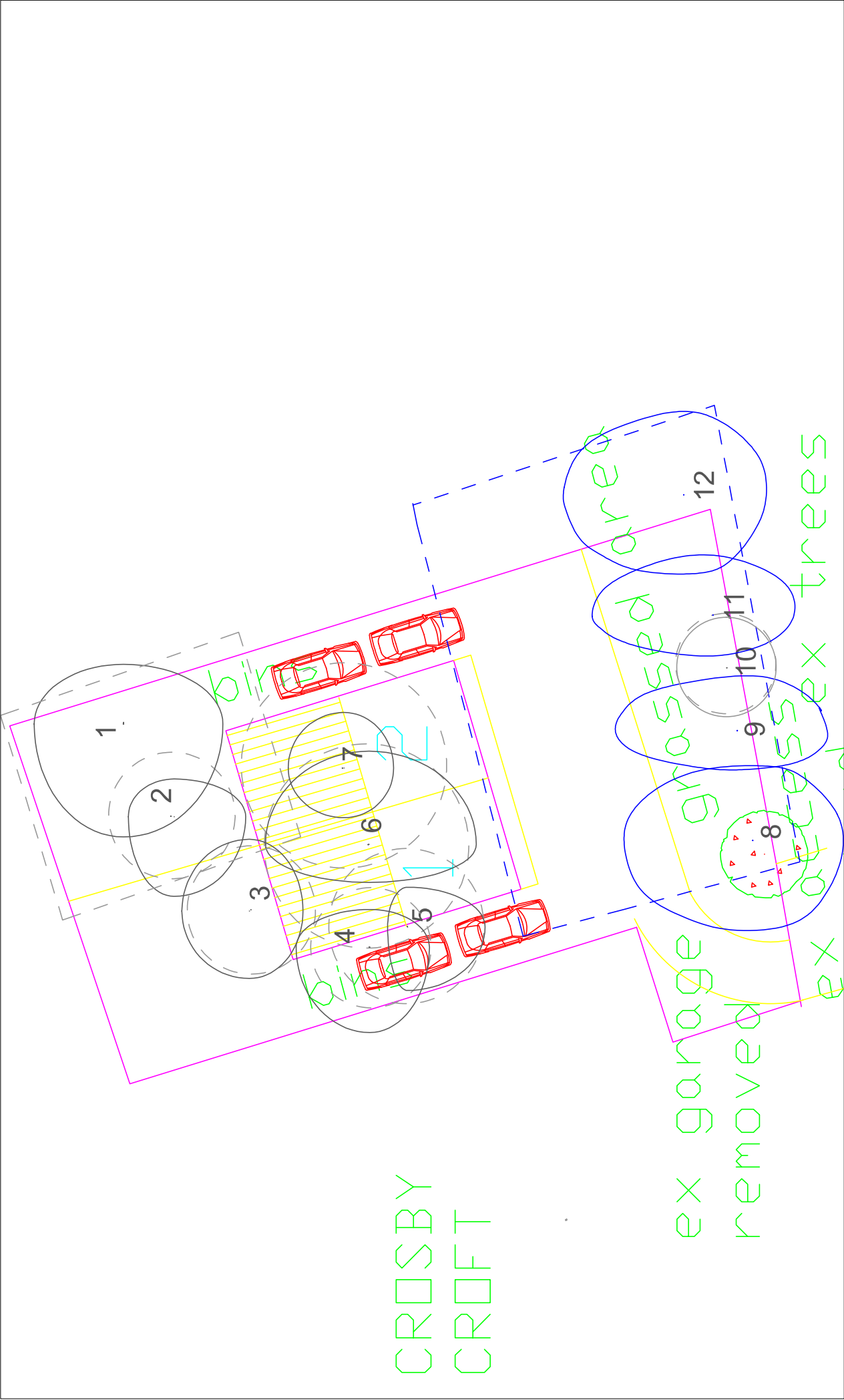


Plan 1 Tree Constraints Plan showing the existing layout

Key

- Category B crown
- Category B stem
- Category B RPA
- Category C crown
- Category C stem
- Category C RPA

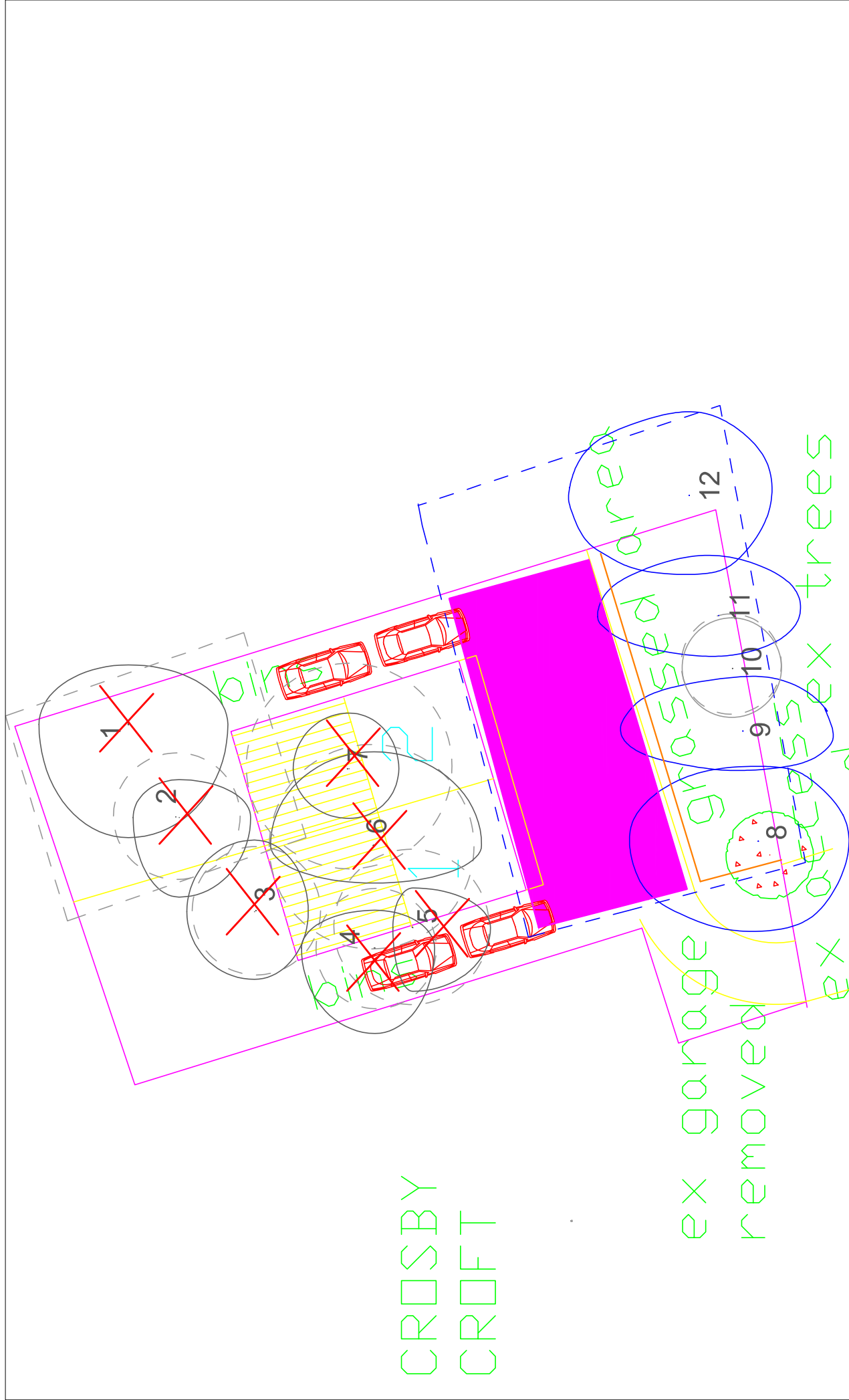
Scale 1:200 @ A3



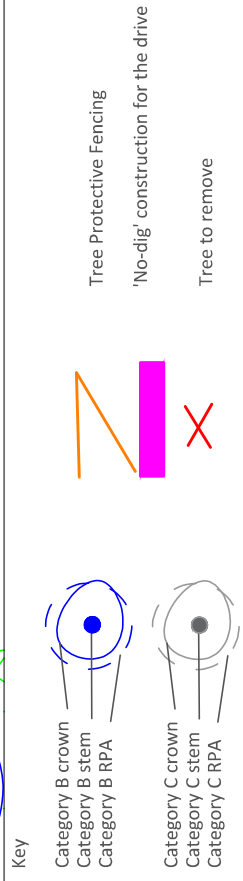
Plan 2 Tree Constraints Plan showing the proposed layout

Key





Plan 3 Tree Protection Plan showing the proposed layout



Appendix 1. Qualifications and Experience of Ian Kennedy

1. Qualifications

Ian graduated from the Scottish Agricultural College in August 1995 with a Higher National Diploma in Horticulture (HND) with Distinction.

In 1998 Ian graduated from the University of Aberdeen with a BSc (Hons) Upper second class in Forestry with Arboriculture and Amenity Forestry.

He passed the LANTRA Professional Tree Inspection examination in 2006.

In 2009 his application to become a professional member of the Arboricultural Association was assessed to fulfil all the necessary requirements and he became a professional member of the Association that year.

In 2011 he passed the final examination of the Institute of Chartered Foresters and became a member of that institute in January 2012.

2. Practical experience

Presently Ian is working in private practice as an independent arboricultural and woodland management consultant undertaking tree conditions surveys, pre-development tree surveys to the BS5837:2012 standard, mortgage reports and woodland management planning works. Clients range from home owners and farmers to architects, building companies, local authorities, schools and larger development companies.

Prior to private practice Ian held a number of positions in local government. Firstly he was the arboriculturalist within a planning office in Essex. Ian gained considerable experience regarding trees in relation to development, in particular BS 5837.

Development work formed the core of his duties and applications ranged from small back garden developments to major schemes such as the redevelopment of Ministry of Defence land for private residential development. Ian also undertook all functions associated with Tree Preservation Orders (TPOs), including the making of new TPOs, assessing suitability of applications to work on protected trees and trees in conservation areas.

Ian went on to managed a 500 hectare woodland estate for a local authority in South Yorkshire that included a mix of urban and rural woodlands. This included preparation and implementation of detailed management plans for multiply use woodlands. He undertook all aspects of silvicultural management from marking to contract tendering and monitoring. He also managed the access, conservation, landscape and archaeological requirements of the estate. Ian was directly involved in the estate achieving Forest Stewardship Council certification in 2003 and personally ensured continued certification.

Ian has worked extensively with Forestry Commission to obtain the necessary licences for management works and ensured the estate benefited fully from the full range of grants available.

Latterly at the same authority Ian went on to manage the trees and woodlands unit, having overall responsibility for management of the authority's tree and woodland stock and associated staff, together with delivery of other tree related services such as those associated with the Town and Country Planning Acts.

3. Continuing professional development

Ian regularly attends meetings, seminars and training events hosted by The Arboricultural Association. Institute of Chartered Foresters, Royal Forestry Society and Forestry Commission and benefits from the respective journals, briefings and newsletters available to members of the first three of the organisations listed.

4. Relevant experience

Ian Kennedy has spent 18 years working with trees, including as the arboricultural advisor to planning officers for Local Planning Authorities and manager of a trees and woodlands unit for another local authority with overall responsibility for trees, including in relation to the Town and Country Planning Acts.

Appendix 2. Tree Retention Categories

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
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, 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 NOTE <i>Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>	See Table 2
Trees to be considered for retention		
1 Mainly arboricultural qualities		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or 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 significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B 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 downgraded 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 with material conservation or other cultural value
Category C Trees of low quality with an estimated 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 with no material conservation or other cultural value
2 Mainly landscape qualities		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	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)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	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
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	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
3 Mainly cultural values, including conservation		

Appendix 3.Explanatory notes for terms used in this report

- **Compass Bearing:** N = north; S = south; E = east; W = west;
- **Age Class:** Assessed as either:
 - Young = a size which could be easily transplanted;
 - Semi-mature = prior to seed bearing age and could be transplanted with care;
 - Young Mature = early maturity, not fully grown but of seed bearing age and may have achieved mature height;
 - Mature = fully grown, annual growth is much reduced;
 - Old Mature = old for the species, possibly starting to decline;
- **Trunk Diameter:** These figures relate to the diameter of the trunk at a given distance above ground level and are recorded in centimetres measured with a diameter tape.
- **Estimated size: #**
- **Health:**
 - Normal Vitality = normal growth and twig extension;
 - Moderate Vitality = reduced twig extension but other than that few signs of ill-health;
 - Early Decline = reduced twig extension and some dead twigs in the outer canopy;
 - Mid-decline = small internodes, the canopy may be thinning and contain dead twigs and/or branches in the outer canopy, older branch wounds that haven't occluded may be decaying and forming cavities;
 - Severe Decline = sparse crown, numerous dead twigs and branches in the outer canopy, older branch wounds likely to be decaying and forming cavities;
 - Dead.
- **Structural Condition**
 - Acute stem union = a weak union between two or more stems at the main forking point caused by the formation of reaction wood. Mechanical pressure at the forking point increases as secondary thickening occurs increasing the risk of failure at that point.
 - Acute branch union = the same principle as acute stem unions but between a stem and a branch or two branches rather than 2 main stems.

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