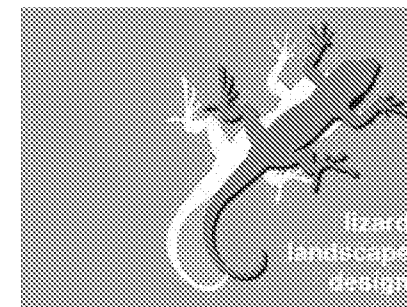




77 PROPERTY LIMITED

59 ELM GROVE, BARNHAM, WEST SUSSEX

TREE RETENTION AND PROTECTION PLAN

Existing Tree Schedule

Approved By: Joe Jackson

Signed:

Position: Principal

Date: 12th December 2014

Rev: 00

December 2014 – Planning Issue

LLD789/KM/12.12.14

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
T 01	Crataegus monogyna (Hawthorn) (5.7m Radius of nominal circle; 102m² RPA)	472 mm CSD	8.0 m Clear Stem Height 2.0m	N 3.0 m E 3.0 m S 4.0 m W 4.0 m	Mature 10 yrs+	Mature Hawthorn to property frontage; Twin stemmed from bole; Included co-dominant union; Light dead wood within congested canopy; Ivy clad; Low amenity value. Ground Protection Measures: No Dig construction to be implemented.	C 1	Retain
H 02	Mixed species hedge (Bay, Berberis, Dogwood, Holly) (1.5m RPA offset)	N/A	1.2 m Clear Stem Height N/A	As shown	N/A	Mixed species hedgerow vegetation to property frontage becoming overgrown; Self seeding / bramble within merging with scrub development extending within garden. <i>Scrub should ideally be removed within boundary.</i>	C 1	Retain hedge / Remove scrub
T 03	Fraxinus sp. (Ornamental Ash) (4.2m Radius of nominal circle; 55m² RPA)	340 mm CSD	6.0 m Clear Stem Height 2.0m	N 3.0 m E 1.0 m S 2.0 m W 3.0 m	Mature 10 yrs+	Ornamental Ash to property frontage; Multi-stemmed (7no.) from bole; Splayed form, upright habit; Light dead wood within canopy; Minor tree surgery works evident; Ivy clad; Low amenity value.	C 1	Retain
T 04	Prunus sp. (Cherry) (2.7m Radius of nominal circle; 23m² RPA)	211 mm CSD	6.0 m Clear Stem Height 2.0m	N 4.0 m E 2.0 m S 3.0 m W 2.0 m	Mature 10 yrs+	Cherry tree to property frontage; Multi-stemmed (3no.) from bole; Upright form, congested habit; Deformation (inclination) of lower trunk; Tree surgery works evident to base; Low amenity value.	C 1	Retain
T 05	Acer pseudoplatanus (Sycamore) (2.1m Radius of nominal circle; 14m² RPA)	175 mm CSD	8.0 m Clear Stem Height 1.8m	N 2.0 m E 1.0 m S 1.0 m W 1.0 m	Over-mature <10 yrs	Over mature Sycamore to frontage; Multi-stemmed (4no.) regenerative development from collapsed remnant trunk; Deformation (open scarring) of lower regenerative trunk; Low amenity value. <i>Unviable in long term – tree should be removed due to condition.</i>	U	Remove

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
T 06	Taxus baccata (Yew) (8.4m Radius of nominal circle; 222m² RPA)	700 mm CSD	9.0 m Clear Stem Height N/A feathered from base	N 5.0 m E 4.0 m S 5.0 m W 6.0 m	Mature 20 yrs+	Prominent Yew to eastern property boundary; Substantial twin stemmed codominant leaders from bole; Broad spreading crown, reduced to eastern aspects in proximity to adjacent property; Moderate amenity value; but under pressure for containment due to proximity to adjacent properties.	B 1	Retain
T 07	Fraxinus sp. (Ornamental Ash) (3.0m Radius of nominal circle; 28m² RPA)	248 mm CSD	8.0 m Clear Stem Height 2.5m N	N 3.0 m E 3.0 m S 1.0 m W 1.0 m	Mature 10 yrs+	Ornamental Ash to driveway edge; Twin-stemmed from bole (included union); Irregular form – upright stems with short spreading branches; reduced high held canopy; Low amenity value. <i>Unviable in long term – tree should be removed due to condition.</i>	U	Remove
T 08	Prunus sp. (Cherry) (2.1m Radius of nominal circle; 14m² RPA)	158 mm CSD	7.0 m Clear Stem Height N/A feathered from base	N 2.0 m E 3.0 m S 4.0 m W 3.0 m	Semi-mature / mature 10 yrs+	Cherry tree to western property boundary; Multi-stemmed (4no.) from bole; Shrub like form, congested habit; Canopy partially carried above adjacent boundary; Low amenity value.	C 1	Retain
H 09	Mixed species shrub hedgeline (Lonicera; Privet; Camellia; Yew, Sycamore, Cherry)	N/A	3.0 m Clear Stem Height N/A	As Shown	N/A	Mixed species shrub planting; Becoming overgrown; Poor condition; Dominated by bramble scrub; Yew, Sycamore and Cherry self - seeded within. <i>Unviable in long term – remove due to condition.</i>	U	Remove

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
T 10	Laurus nobilis (Bay) (3.0m Radius of nominal circle; 28m² RPA)	234 mm CSD	5.0 m Clear Stem Height N/A feathered from base	N 2.0 m E 1.0 m S 1.0 m W 2.0 m	Semi-mature 10 yrs+	Shrub like bay specimen adjacent to property; Multi-stemmed (4no.) from bole; Irregular form due to location spreading to open aspect; congested habit; Regenerative multi-stemmed growth from bole.	C 1	Retain
T 11	Ilex altaclarensis (Holly) (2.7m Radius of nominal circle; 23m² RPA)	210 mm	10.0 m Clear Stem Height 1.8m	N 3.0 m E 2.0 m S 2.0 m W 3.0 m	Mature 10 yrs+	Mature Holly situated to western rear boundary; Narrow columnar form; Sparse branch development, devoid of foliage to southern aspect; Irregular crown of pendulous habit. The tree is situated adjacent to existing garage buildings and hard standing; the RPA is compromised due to the impingement of existing construction elements. The garage is proposed for demolition potentially undermining the stability of the tree and longer term adverse associated risk. <i>T11 is proposed to be removed to accommodate the development proposals.</i>	C 1	Remove
T 12	Acer pseudoplatanus (Sycamore) (2.7m Radius of nominal circle; 23m² RPA)	216 mm	4.0 m Clear Stem Height N/A	N 1.0 m E 1.0 m S 1.0 m W 5.0 m	Over-mature <10 yrs	Over mature Sycamore to western boundary; Severe deformation of truncated leader; Heavily inclined to the western aspect; Multiple reduction of boughs with weak regenerative growth. <i>Unviable in short term – tree should be removed due to condition.</i>	U	Remove

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
T 13	Malus sp. (Apple) (2.7m Radius of nominal circle; 23m² RPA)	216 mm	5.0 m Clear Stem Height 1.8m SE	N 3.0 m E 4.0 m S 5.0 m W 3.0 m	Over-mature <10 yrs	Apple tree to rear garden; Twin-stemmed from bole; Western trunk dead; Congested canopy carried to south eastern aspects. Cavity decay to trunk bole. <i>Remove dead western bough for short term benefits;</i> <i>Unviable in longer term – tree should be ultimately removed due to condition.</i>	U	Remove
T 14 + T 15	Sambucus nigra (Elder) (2.4m Radius of nominal circle; 18m² RPA)	191 mm CSD	5.0 m Clear Stem Height N/A	N 2.0 m E 2.0 m S 1.0 m W 2.0 m	Over-mature <10 yrs	Shrub like Elder trees situated within overgrown area of scrub; Multi-stemmed trees; Dead and collapsed stems within; Poor canopy development. <i>Unviable in longer term – trees should be ultimately removed due to condition.</i>	U	Remove
T 16	Fraxinus excelsior (Ash) (5.4m Radius of nominal circle; 92m² RPA)	140 mm	13.0 m Clear Stem Height 3.0m SE	N 6.0 m E 7.0 m S 3.0 m W 5.0 m	Mature 20 yrs+	Mature tree situated to northern boundary; Wide spreading branches extending to open aspects; Branches of gently ascending habit; Constrained form to southerly aspects due to adjacent mature vegetation.	B 1	Retain
T 17	Acer pseudoplatanus (Sycamore) (5.7m Radius of nominal circle; 102m² RPA)	461 mm	12.0 m Clear Stem Height 3.0m SE	N 6.0 m E 5.0 m S 2.0 m W 3.0 m	Mature 10 yrs+	Ivy clad mature Sycamore tree situated to northern boundary; Twin stemmed; codominant leaders developed from 1.8m height; Wide spreading branches extending to open aspects only; Constrained form to southerly aspects due to adjacent mature vegetation. Tree surgery works evident to suckering stems.	C 1	Retain

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
T 18	Acer pseudoplatanus (Sycamore) (3.6m Radius of nominal circle; 41m² RPA)	286 mm	15.0 m Clear Stem Height 8.0m	N 3.0 m E 3.0 m S 3.0 m W 3.0 m	Mature 10 yrs+	Mature Sycamore tree situated to north eastern boundary; Single stemmed tree carrying high held crown; stem denuded of branch development; Regenerative top growth only; Compressed form due to adjacent mature vegetation.	C 1	Retain
T 19	Acer pseudoplatanus (Sycamore) (5.4m Radius of nominal circle; 92m² RPA)	445 mm	14.0 m Clear Stem Height 3.0m S	N 4.0 m E 5.0 m S 5.0 m W 2.0 m	Mature 10 yrs+	Mature Sycamore tree situated within wooded garden edge; Narrow compressed form; Devoid of branch development due to adjacent mature vegetation. Canopy carried to open western aspects only upon gently ascending branches; Ivy clad.	C 1	Retain
T 20	Acer pseudoplatanus (Sycamore) (4.8m Radius of nominal circle; 72m² RPA)	398 mm	14.0 m Clear Stem Height 4.0m	N 5.0 m E 2.0 m S 5.0 m W 5.0 m	Mature 20 yrs+	Large mature Sycamore tree situated within wooded garden edge; Complex crown structure; Canopy predominantly held to open south western aspects; Slender codominant leaders (included union) rising from 3.0m height; Ivy clad to lower trunk.	B 1	Retain
TG 21	Acer pseudoplatanus (Sycamore) (i) 3.3m Radius of nominal circle; 34m² RPA) (ii) 6.3m Radius of nominal circle; 124m² RPA)	i) 254 mm ii) 508 mm CSD	9.0 m Clear Stem Height 3.0m	i) ii) 2.0 N 2.5 2.0 E 2.5 2.0 S 2.5 2.0 W 2.5	Mature 10 yrs+	2 no. Sycamore trees to eastern boundary; Slender upright forms rising above boundary scrub vegetation; Compressed due to surrounding vegetation; TG21 ii) deformed low trunk regenerating with a number of limbs developing as leading stems.	i) C 1 ii) C 1	Retain Retain

Ref.no.	Species	Diameter (@1.5 m height)	Height (approx.)	Spread (approx.)	Age Class / Contribution	Condition / Preliminary Management Recommendations	Cat.	Status
TG 22	Prunus species (Cherry) (i) 4.5m Radius of nominal circle; 64m² RPA) (ii) 3.0m Radius of nominal circle; 28m² RPA)	i) 386 mm CSD ii) 238 mm	7.0 m Clear Stem Height N/A	i) ii) 6.0 N 2.5 4.0 E 1.5 2.0 S 2.0 3.0 W 2.0	Over mature <10 yrs	2 no. Cherry trees developed within close proximity upon eastern boundary; TG21 i) Regenerative development rising from collapsed boughs; partial decay evident to trunk bole. TG22 ii) deformed low trunk; Regenerative growth forming congested scrub canopy to boundary. <i>Trees unviable in longer term – trees should ideally be removed due to condition.</i>	i) U ii) U	Remove Remove
T 23	Corylus avelana (Hazel) (3.6m Radius of nominal circle; 41m² RPA)	295 mm CSD	6.0 m Clear Stem Height N/A	N 4.0 m E 2.0 m S 4.0 m W 4.0 m	Mature 10 yrs+	Multi-stemmed Hazel to eastern boundary; Broad spreading, shrub like form; Numerous stems rising from bole; Steeply upright habit.	C 1	Retain
T 24	Juglans regia (Walnut) (4.8m Radius of nominal circle; 72m² RPA)	387 mm CSD	8.0 m Clear Stem Height 1.8m	N 5.0 m E 5.0 m S 5.0 m W 4.0 m	Mature 20 yrs+	Multi-stemmed Walnut to north of existing property. 4 no. codominant leaders rising to carry broad spreading, rounded dome; Southern crown spreading in close proximity to property.	B 1	Retain
T 25	Prunus species (Cherry) (3.9m Radius of nominal circle; 48m² RPA)	312 mm	7.0 m Clear Stem Height 1.8m	N 4.0 m E 4.0 m S 3.0 m W 4.0 m	Mature 10 yrs+	Mature Cherry of standard form situated to northern edge of existing property; Splayed crown with dense outer canopy, open to centre, carried in round; Pollarded 1.8m height; Cavity evident to lower trunk; included bark to crown bole unions. Ground Protection Measures: No Dig construction to be implemented.	C 1	Retain

CATEGORY DIVISION - BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'**Trees to be considered for retention****1. Mainly Arboricultural Qualities****2. Mainly Landscape Qualities****3. Mainly cultural values, including conservation****Category A**

- Trees whose retention is most desirable to include; trees of high quality having an estimated longevity of over 40 years;

- Trees that are particularly good examples of their species, especially if rare or unusual

- Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

- Trees of significant historical, commemorative or other value, or good specimens of rare or unusual species

Category B

- Trees where retention is desirable to include; trees of moderate quality having an estimated longevity of over 20 years;

- Trees that might be included in the higher category, but because of significant impaired but remediable condition are downgraded

- Trees present in numbers offering a higher collective categorisation than as individually rated; trees occurring in groups but due to situation, offering little contribution in the context of the wider locality

- Trees having some material conservation or cultural value

Category C

- Trees of low quality having an estimated longevity of over 10 year, or young trees with a stem diameter below 150mm;

- Trees in adequate or impaired condition, or those which can be retained with minimal tree surgery, but not worthy for inclusion in the high or moderate category

- Trees present in numbers without having significant landscape value

- Trees having no material conservation or other cultural value

Trees unsuitable for retention**Category U - Trees not for retention within the context of existing land use;**

- Trees that are unviable due to serious, irremediable structural defect; early loss is expected due to collapse;
- Trees that are dead or showing signs of significant, immediate, irreversible decline;
- Trees infected with pathogens of significance to health and subsequent safety, and threat thereof to trees nearby;
- Trees of very low quality suppressing the development of those of greater quality;
- Trees that will become unviable after the removal of other trees for reasons above.

CSD – Combined Stem Diameter;

- Root Protection Areas calculated for multiple stemmed trees based upon a combined stem diameter in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'.

- The location and constraints of existing trees and vegetation within the survey site are illustrated within drawing; LLD789/ 01 – Tree Constraints Plan.
- The impact of the proposed development proposals upon, and the protection of existing trees and vegetation within the survey site, is illustrated within drawing; LLD759/ 02 – Tree Retention and Protection Plan.

Arboricultural Impact Assessment – Summary

The site of 59 Elm Grove, Barnham was surveyed upon the 10/12/14. The survey identifies existing trees on site and establishes the extent of significant or extensive vegetation. The survey was carried out following the guidance of *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The condition of the trees has been assessed and categorised as illustrated within the above schedule.

The existing site comprises a residential property and gardens with areas of hard standing, paths and an array of temporary and more permanent outbuildings and sheds. The property benefits from existing vegetation to the site boundaries and within the site demise. The front garden is largely laid out to lawn with frontage shrub planting. The garden is becoming dominated by scrub to the planting areas. The existing small trees to the frontage are of variable condition and offer low amenity value. The trees would remain largely free of impact due to the development proposals and would be retained and protected by 2.0m height Tree Protection Fencing - 'Heras' Welded Wire Mesh Fencing, secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing Tree Root Protection Area, or as specified. Tree Protection fencing has been specified to contain existing trees within proximity to the existing property and to the woodland tree group to the north eastern garden demise.

Tree T01 *Crataegus monogyna* (Hawthorn) is situated in proximity to the existing driveway access which overlays the Root Protection Area of the tree. The proposals would maintain the vehicular access to the development within the footprint of the existing driveway. The RPA of T01 *Crataegus monogyna* (*Hawthorn*) shall be protected through the implementation a No Dig Construction Method within the RPA of the tree, in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - recommendations'*. Existing ground levels shall be maintained and there shall be no excavation within the Root Protection Areas of existing trees to be retained. All existing hard landscape and sub-base materials are to be removed manually and by hand within the tree RPAs. Any new hard surfacing within the Root Protection Area shall comprise a permeable construction utilising a three dimensional geo-cell system capable of supporting the anticipated loading without deformation. Tree T25 *Prunus* species (*Cherry*) shall be protected through a No Dig Construction Method to implement the extension of the proposed vehicular access to be formed to the proposed residential development.

Tree T11 *Ilex altaclarensis* (*Holly*) is situated adjacent to existing garage buildings and hard standing; the RPA is compromised due to the impingement of existing construction elements. The garage is proposed for demolition potentially undermining the stability of the tree in the future. It is recommended that the tree be removed prior to the demolition of the building to avoid likely longer term adverse associated risk.

The development proposals have been developed such that the majority of existing trees are to be retained on site; a number are proposed to be removed due to existing poor condition or expected reduced longevity. The majority of trees is of lower quality and generally lack amenity value beyond the site boundaries. It is recommended that the existing trees within the site area and to the site boundaries are not a constraint to development. Trees that are removed due to condition following arboricultural assessment or as a result of the proposed development should be replaced within any new proposals.

Refer to the accompanying *LLD789 59 Elm Grove, Barnham - Method Statement* for details of Tree Protection Fencing, Ground Protection Measures and Manual Excavation Methods.