

Tree report

- Land adjacent to 7 Countisbury Road Aldwick Bognor Regis West Sussex -



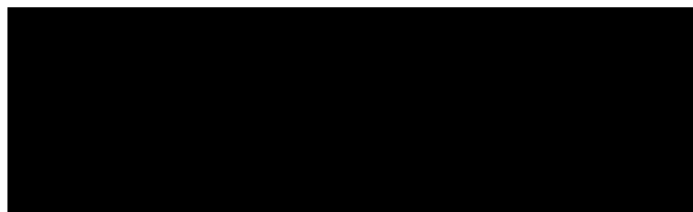
Planning Application: AW/141/16/PL

David Meagher – Landscape Architect

(BA Hons Landscape Architecture, PGCE, Prince2, Land Inst. Part II)

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15 Glenwood Avenue Bognor Regis PO22 8BS



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Survey objectives: – To survey subject trees located within the gardens of 5 Countisbury adjacent to the development of land known as Countisbury Lodge 7 Countisbury in order to assess relating to whether the offsite trees that could potentially be affected by the development process associated with the proposed construction works. (This includes off site trees where the root structure potentially intrudes into the development area. This report assesses their general condition and to provides a planning integration statement for the proposed development.

Location: Land adjacent to 7 Countisbury Close Aldwick Bognor Regis PO21 3QWSussex	Ref: Planning: AW/141/16/PL & AW/308/12	Date of Report: 07/07/2016
Report Prepared by: David Meagher (BA Hons) Landscape Architect	Date of Inspection:	
Survey Inspector(s): David Meagher	Local Authority Arun District Council	
Local Authority Tree officer: Dafydd Lloyd	Contact: 01903 737711	

1.1 Site Location



2.0 Summary

This report satisfies the condition stipulated by the district council arboriculture officer that 'any documentation relating to the trees that could potentially be affected by the development.' (see Appendix 7). This report specifies the measures which are to be taken to safeguard neighbouring trees from damage or harm that could occur to root systems intruding into the construction zone.

The site was inspected on Thursday July 7 2016 to determine the extent of intrusion by root systems from ornamental coniferous trees from 5 Countisbury Road entering the development area from both front and rear gardens.

Four trees were inspected, the first (T1) located in the front garden of the neighbouring property by the dividing fence on the West boundary of 5 Countisbury Road. T1 has been identified as *Chamaecyparis lawsoniana* 'Ellwoodii'*

Trees T2 & T4 located are located in the rear garden of 5 Countisbury Road and are also *Chamaecyparis lawsoniana* Ellwood Gold *. These ornamental conifers are also located adjacent to the rear fence and between 2-4 metres from the panel fencing which divides the neighbour's house from the development site next to the West boundary.

The individual T1 appears to be of good vigour, unaffected by foundations which have been dug prior to the lapse of outline planning permission. On closer inspection the foundation trench is devoid of roots structure, apart from a shallow root which appears to be severed, which may have been historically associated with a tree which had been removed prior to the planting of the Lawson's cypress.

Trees T2 -T4 located in the rear garden are unaffected as no structure or storage are within the vicinity of the root protection area (RPA). T3 a self-set *Malus domestica* (apple) is situated close to T4 and nearer the dividing fence. This tree is immature and has suffered stress due to heavy shade which has led to the formation of a narrow stem with a poorly shaped crown. The proposals for the area where roots may intrude is for the garden use with the planting of fruit trees. T2 & T4 trees have been poorly pruned with lower laterals reduced to form clear stems resulting in poor bushy growth.

None of the trees are designated with Tree preservation orders.

After considering the constraints of these trees, the development should go ahead if reasonable precautions are followed to protect roots of trees T1-T4. These solutions are listed under 'recommendations' which adequately to prevent damage to the root systems of the neighbour's trees. Therefore, I consider that the development should proceed as long as these measures are taken.



A Healthy specimen of Lawson's cypress (*Chamaecyparis lawsoniana*) located in the neighbouring property, the only tree potentially affected by the construction.

*Please note due to location, it was not possible to gain access to tree species. Condition, size and girth have been estimated.

3.0 Planning Context

An original application was made in 2012 (AW/308/12) when outline planning was received with subsequent full planning followed. Shortly before the successful application lapsed foundations were dug with the intention to construct. The works were approved by the NHBC but deemed insufficient by Arun District Council. There were no requirements listed regarding the trees located on along the neighbouring boundary. The trenches were dug despite the proximity to the roots of a Lawson's cypress in the front garden of 5 Countisbury Close. This report provides an assessment and recommendations which will prevent root damage to the trees with roots which may have intruded into the construction zone.

Nb. A silver birch which was located at the front of the property has since been removed by the highways authority.

4.0 Methodology

The onsite survey took place on Thursday July 7 2016. Three trees in total were inspected and surveyed in relation to the standard refusal notice issued by Arun District Council's Arboriculture Officer. The standard data collected on site for those trees was follows: Tree height, crown height clearance and diameter dimensions have been estimated as site access to the neighbouring property's garden was not possible. Crown spread on the four compass points was also estimated. Photographs were taken with a Canon 600D digital camera. The tree condition, in terms of Category Grading, was judged visually using the guidelines produced later in the report. The physiological and structure condition of each tree was assessed using the surveyor's skills and experience. Age class was estimated from an examination of the trees in question. The data collected is attached. The comments and recommendations for tree work were compiled using the data collected and the surveyors training and experience, together with his personal library of technical publications.

5.0 Tree protection measures - recommendations (see appendices 6,8 & 9)

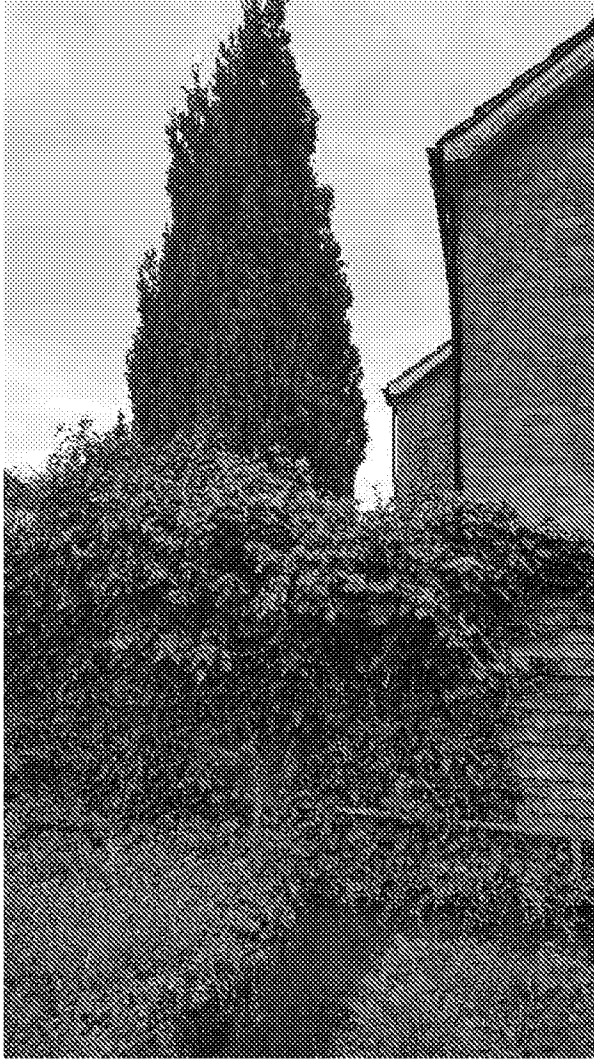
5.1 Root Protection Area: The BS5837 gives a root protection area [RPA] for each retained tree by reference to Table 2 in the BS. The RPA is usually described as a circle with a radius of the prescribed distance within which no unspecified activity should occur, though the shape and position of the RPA can be modified by an arboriculturist to meet individual site conditions according to the probable distribution of the tree roots (see appendix 5 for RPA equivalent radii).

5.2 Trees T1-T4: It is not envisaged that there will be a need for further excavations which will impact on T1. Services such as telecommunication fibre optics, water gas or electric services should be installed away from the RPA of T1 which should be afforded temporary protection with Arris fencing (See appendix 4). If there is a need for further excavation, it is recommended that excavation is by hand only (see appendix 3 Tree constraints plan).

T2 - T4 are situated away from the main excavation area. If tree roots intrude, they will be in an area which is designated as garden space. Within this area it is recommended that there is no storage of site construction materials. It is recommended that the standard RPA is protected by Arris fencing (see appendix 4). Fruit trees are to be planted in the area where these may occur. Care is to be taken when excavating the tree pits which should be done by hand. (see appendix 3 Tree constraints plan)

5.3 Recommended tree planting (see appendices 8 & 9)

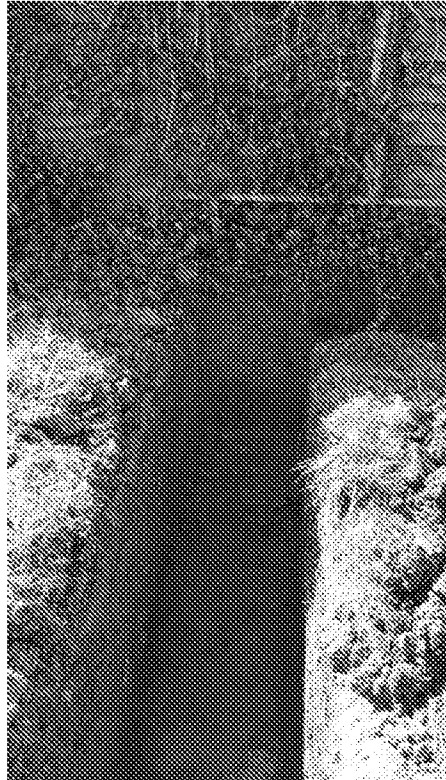
A prominent *Betula pendula* with considerable amenity values has been removed by highways. The tree appeared to have been obstructing the highway. To mitigate this loss, even though the action was taken before the applicant had acquired the site, a replacement tree of a smaller more suitable species is proposed for the front garden. An upright cherry *Prunus Amanogawa* provides amenity value, will be in proportion to garden size as well as contribute to ecosystem service. Part of the recommendation is to plant fruit trees in the rear garden of the proposed construction.



Appendix 1:

The foundation trench photographed recently (left and bottom)

The foundation trench when it was first excavated (below)





Neighbouring trees in relation to the development site



Appendix 2 Tree survey schedule:

Criteria used in conjunction with Tree Schedule/Tree Survey

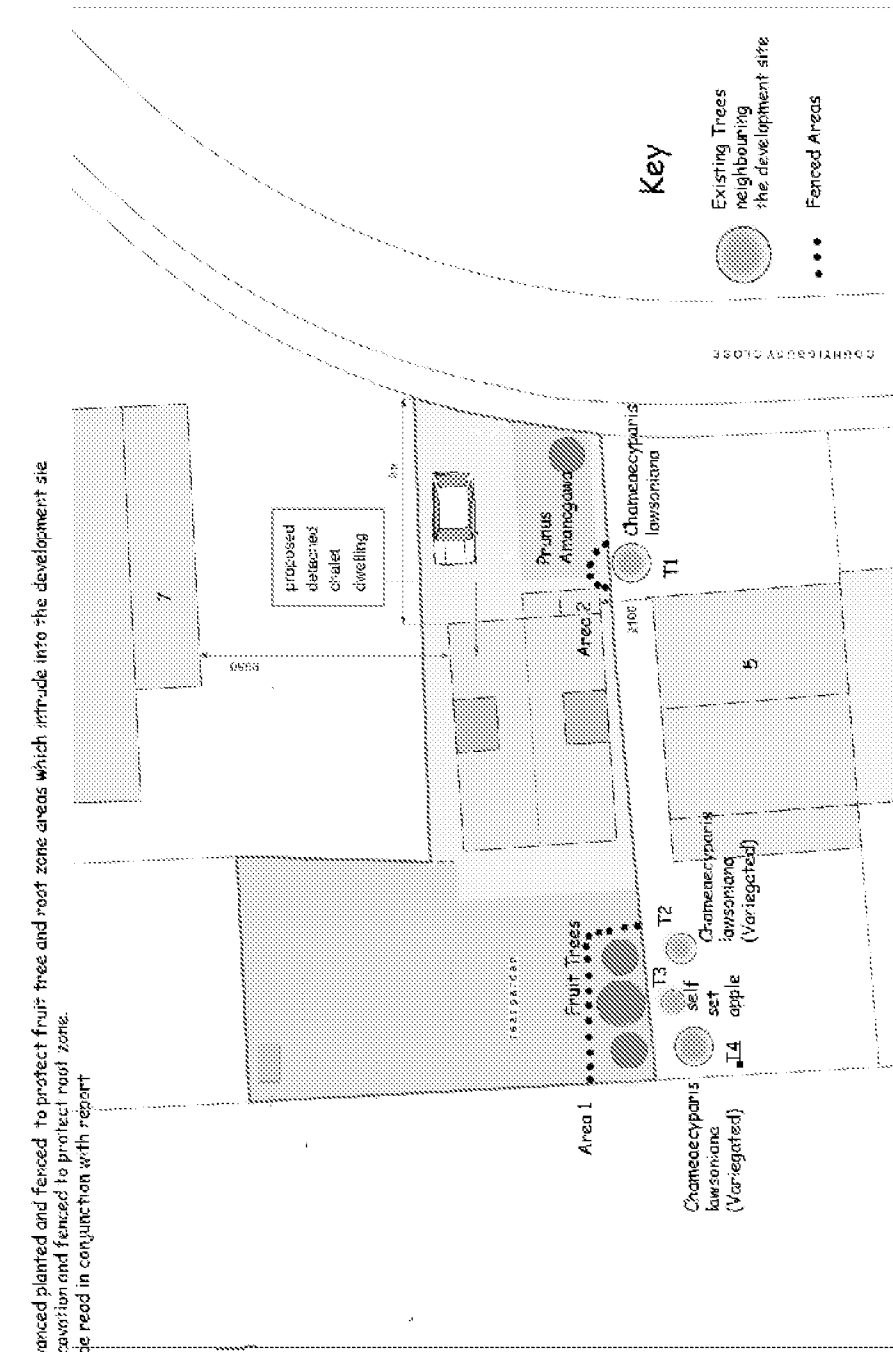
Key:	<u>Measurements</u>	<u>Age – Class</u>	<u>Overall Condition</u>	<u>BS 5837 2005 : Cascade Chart for Quality Assessment/Retention Category</u>	<u>Symbols:</u>
	MS – Multi-stemmed	YNG-MAT-Young Mature	G – Good	A – High	< = less than
	Ht - Height in metres	SM – Semi-mature	F – Fair	B – Moderate	~ = approximately
	Stem – Stem Diameter at 1.5m in mm	Mat – Mature	P – Poor	C - Low	> = greater than
	Crown – Crown spread in metres	OM – Over mature	D - Dead	R – Trees for Removal	
	TD - Trunk division (height in metres)	<u>Est Life Yrs.</u> – estimate of good healthy years remaining (>40 years; 20 –40 years; <20 years)		<u>Sub-categories:</u> 1 = mainly arboricultural values 2 = mainly landscape values 3 = mainly cultural values.	
RPA = Root protection area (equivalent to a circle with a radius 12 x the stem diameter for single stem trees and 10 x the basal diameter for trees with more than one stem arising below 1.5m above ground level).					

Tree survey schedule:

Countisbury Road

Tree	Species	Height m	Stem dbh mm	Stem Girth m	Branch Spread m	Height of Crown Clearance m	Age Classes	Physiolo gical condition	Structural condition	notes	Estimated remaining contribution	BS5 837 gradi ng	RPA DIA (M)
T1	Chamaecyparis	5	Unable to gain access	Unable to estimate due to dense foliage	At 1.5 breast height 1 m radius	n/a	Yng Mat	G	G	This tree is situated on the boundary in the neighbouring property's front garden. Despite excavations for footing close to the root plate at an estimated 1 metre from the stem there is no evidence of physiological damage to the specimen.	20-40	n/a	Excavation shows lack of root structure Intruding into development site
T2	Chamaecyparis	5	Unable to gain access 250mm	Estimate from sight 0.75mm	N-3 E-3 S-3 W-3	4m	Yng	G	P	Clear stem artificially formed and misshapen canopy, tree is leaning 60 degrees. Approx 4m from boundary fence	20-40	n/a	Positioned sufficiently from boundary
T3	Self set apple Malus domestica	5	Unable to gain access Estimated 100 mm	0.3	N-2 E-1 S-3 W-1	4.5	Yng	G	G	One sided young tree of uneven growth, overshadowed by neighbouring conifers situated approximately 12 metres from boundary fence	≤10	n/a	n/a
T4	Chamaecyparis	5	Unable to gain accessEsti mated 250mm	0.75	N-3 E-4 S-4 W-4	4m	Yng	G	G	Clear stem artificially formed with and misshapen canopy, Approx. 3m from boundary fence. Splits into two main stems at 2 metres	20-40	n/a	

Appendix 3 Tree Constraints Plan:



N



0 1m 2m 5m
Scale bar 1:200

Tree constraints drawing: Land Adjacent to 7 Countisbury Road Aldwick
08/07/2016

Client: @Herongate-Homes.com



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Appendix 4 Root protection barriers:

Preferred RPA barriers

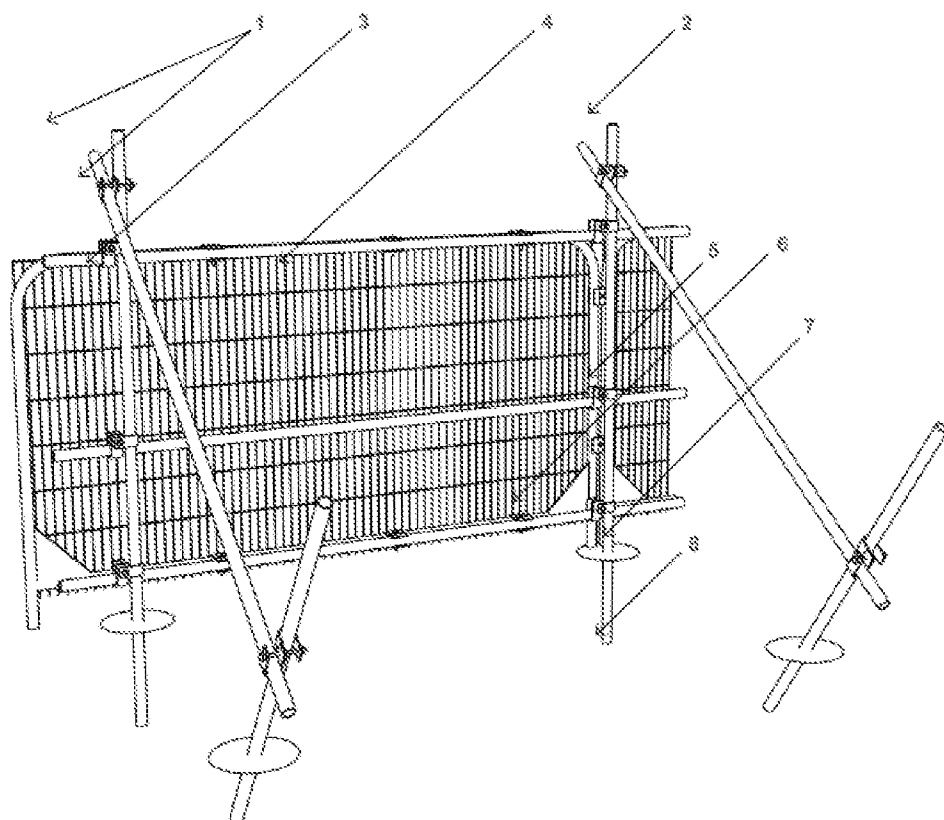


Figure 10: Protective barrier

- 1 Standard scaffold poles
- 2 Uprights to be driven into the ground
- 3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
- 4 Weldmesh wired to the uprights and horizontals
- 5 Standard clamps
- 6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
- 7 Ground level
- 8 Approx 0.8m driven into the ground

Appendix 5

RPA Radii Table

Root Protection Area radii in ½ metre graduations

The ½ metre graduations of RPA radii have been calculated back to produce diameter dimensions, which in turn have been rounded down to the nearest centimetre. If the BS5837 multiplier factor is plotted on a graph it produces a straight gradient and if the ½ metre steps are plotted they are all above that line, thus ensuring that the RPA radii err on the generous side.

<i>Multiple Stems up to diameter (mm)</i>	<i>Single Stem up to diameter (mm)</i>	<i>RPA Radius (m)</i>	<i>RPA (m²)</i>
1500	1250	15.0	707
1450	1210	14.5	660
1400	1170	14.0	616
1350	1120	13.5	573
1300	1080	13.0	531
1250	1040	12.5	491
1200	1000	12.0	452
1150	960	11.5	416
1100	920	11.0	380
1050	870	10.5	346
1000	830	10.0	314
950	790	9.5	284
900	750	9.0	255
850	710	8.5	227
800	670	8.0	201
750	620	7.5	177
700	580	7.0	154
650	540	6.5	133
600	500	6.0	113
550	460	5.5	95
500	420	5.0	79
450	370	4.5	64
400	330	4.0	50
350	290	3.5	38
300	250	3.0	28
250	210	2.5	20
200	160	2.0	13

Appendix 6 Excavations and tree roots notice:

Excavation for foundations and utilities must be considered in relation to the welfare of root systems. It is a common misconception that the root system of a tree extends in a narrow, deep band directly below the trunk. In reality the roots extend a large distance laterally at a shallow depth, often at approximately 60cm. Shallow foundations thus impact on the root systems. The closer the excavation is to the tree the greater the chance of damage. Construction, therefore, should not be within the protected zone of the tree. This also benefits the building as roots can damage foundations. Where foundations are to be located near major roots they should carefully bridge them. Construction also has an impact on the hydrological cycle with compaction of soils and the laying of tarmac reducing infiltration rates and increasing runoff. This affects water available for tree growth.

Ground level change should acknowledge the location of tree roots.

Reduction in ground level causes the severance of roots and an alteration of drainage rates which affect water availability. Increases in ground level causes compaction and can suffocate and damage shallow and fragile roots.

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Appendix 7 Arun District Council Tree Officer's comments:

Comments:

'The applicant has failed to provide any reports and any documentation relating to the trees that could potentially be affected by the development.'

Demolition of existing garage & erection of 1 No. dwelling

Location: Countisbury Lodge 7 Countisbury Close Aldwick PO21 3QW

Herongate Homes Pierpoint House Waterloo Square Bognor Regis West Sussex PO21 1TE

ADC PARKS & GREENSPACE ARBORICULTURE

Date: 27/06/2016

FROM: Dafydd Lloyd TO: Ross Leal

PLANNING APPLICATION: AW/141/16/PL

ADDRESS: Countisbury Lodge 7 Countisbury Close Aldwick PO21 3QW Road

BRIEF DESCRIPTION: Demolition of existing garage & erection of 1 No. dwelling

Appendix 8 Replacement Trees (fruit):

Fruit Trees – Uses Local supplier (sustainable / smaller carbon foot print)

<http://www.npnurseries.com/>



Appendix 9:



Chew Valley Trees
Specialist growers of native, fruit and ornamental trees, shrubs and hedging.

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Description

PRUNUS AMANOGAWA – Lombardy Cherry

Characteristics

Features



