

Simon Pryce Arboriculture

Arboricultural Report, Method Statement and Tree Protection Plans

Client: Mr M Saluja

Site: 2 Linksway, Northwood, HA6 2XB

Inspection date: 11 January 2018

Document date: 28 January 2018

Reference: 17/117

Author: Simon Pryce, BSc, FArborA, RCarborA, CBiol, MICFor

I Introduction

- 1.1 This report has been prepared on the instructions of Simon Hands Associates, on behalf of Mr Manoj Sanduja in connection with building work at 2 Linksway, Northwood HA6 2XB.
- 1.2 They have recently applied to construct a new front fence or wall, gates and cycle store, reference 36910/APP/2017/3995 and Hillingdon Council have made the comments below:
- 1.3 *This site is covered by TPO 391. There are several large, mature, protected trees along the front boundary of this site. It is not clear whether any of the trees will need to be removed. Furthermore, the trees could be detrimentally affected by the foundations required for the fence, gate and cycle store. In order to show that this scheme makes adequate provision for the protection and long-term retention of valuable trees, the following detail is required (in accordance with BS 5837:2012: A Tree Survey to categorise the trees on and off site An Arboricultural Impact Assessment (if any trees are to be removed, mitigation measures are also required); A Tree Protection Plan to show how retained trees will be protected during development; An Arboricultural Method Statement to show how any works within root protection areas (RPAs) will be carried out. Conclusion (in terms of Saved Policy BE38): Please re-consult on receipt of the requested information; if the information is not forthcoming, then the scheme will be considered unacceptable because it does not make adequate provision for the protection and long-term retention of valuable trees.*
- 1.4 This document addresses these points. It follows on from my previous surveys and reports reference 12/120 carried out for Mr K Vhora. This report is based on the current plans supplied by Simon Hands Associates and a site visit and reinspection of the trees on 11 January 2018. Comments and recommendations in the previous reports still apply unless contradicted in this one, which also follows the guidelines set out in British Standard 5837: 2012, Trees in relation to design, demolition and construction.
- 1.5 Tree protection measures are specified in detail in Part 2 of this document and illustrated on the plan showing the proposed layout, which serves as the tree protection plan (TPP) specified by BS5837.

2 Background

The site

- 2.1 The existing house has now been extended as per the plans with the previous reports and the front garden paved and two vehicle entrances constructed.

Proposal

- 2.2 This is shown on the drawings produced by Simon Hands and Associates and has two elements:
 1. Construction of a steel railing fence set back about 1.7m from the existing front boundary with electric sliding gates at each end. The fence runs through the strip of soft ground retained next to the trees and steps back at the gates, which are 3m back from the front boundary, 5.2m from the highway edge. The fence and gates are supported on small concrete bases in hand dug holes.
 2. The alternative is to construct a wall on the same line with identical electric gates.
 3. Construction of a cycle store 2.7m x 3.2m set back to the right of the right hand gate.

3 Trees

- 3.1 Given the time since the previous survey in 2013 the trees were resurveyed on 11 January 2018 and the updated schedule is attached.

- 3.2 The main changes are that trees 1 and 2 on the left hand side boundary have been removed and tree 17, an oak that was growing on the council owned land to the north was felled because it was dying. Tree 18 has been dying back progressively and has had some major dying branches removed.
- 3.3 In 2015 the red cedars, trees 4 - 7, had lower branches removed up to 4m to facilitate the building work and the tree 19, the oak to the rear of the house had upper branch ends on that side shortened to increase clearance. (Hillingdon ref 36910/TRE/2015/115). Since the extension of the house and construction of the hard surface and new front wall the row of red cedars along the front boundary have become sparser, especially trees 4 - 7 at the left hand end.

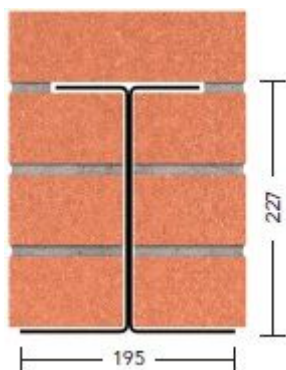
4 Impact assessment

General comments

- 4.1 British Standard 5837: 2012, Trees in relation to design, demolition and construction – Recommendations, specifies measures to avoid or minimise construction damage to trees. One of these is that root protection areas (RPAs) are established round retained trees and that no ground work takes place within them. They are normally fenced to exclude construction access, if that cannot be avoided suitable alternative measures should be taken, such as installing protection on soft ground.
- 4.2 The starting point is that a single trunked tree's RPA has an area equivalent to a circle with a radius 12 times the trunk diameter measured at 1.5m above ground. Where existing site conditions or other factors indicate that root spread is asymmetrical, the RPA shape can be adjusted to a polygon of the same area, provided this reflects a sound assessment of likely root distribution. Most of the trees here have uniform rooting conditions so the circular RPAs shown on the plans will be a reasonably accurate reflection of the actual root spread.

Fence / wall and gates

- 4.3 The fence and gates are lightweight structures that are to be supported on bases set in hand dug holes. This is well within the root protection areas of trees 4 - 13 along the frontage, some of which are showing signs of decline, which will make them vulnerable to any further disturbance. Therefore with the fence or wall any further disturbance will have to be kept to a minimum and suitable protective measures will be needed, particularly to avoid any incidental damage.
- 4.4 The wall is to be supported on bases in hand dug holes 450 x 450 x 600mm deep. It will be built off a steel ground beam with its lower side at ground level and a narrower upper web as shown in the figure below, so that the brick work starts from ground level with any gap underneath hidden by mulch and ground vegetation.



- 4.5 The existing drive and hard surfaces round the trees will safeguard underlying roots, but the main work area is on the limited area of soft ground now available to the trees. That will need to be protected against any further disturbance, particularly compaction and contamination. The loads from this work should not be high, so the most practical option would be heavy duty plywood sheeting cut or arranged to expose the ground in the places where excavation is needed.
- 4.6 After completion this area is to be planted with new laurel bushes. Lightly cultivating all the soft ground and mulching with ground bark or a similar material will aid their establishment as well as helping the trees to recover from any adverse effects from the work.

Store

- 4.7 This is a small structure set back from the frontage at the right hand end. It is within the RPAs of trees 12 - 14 and 18, but the extent to which it impinges into them is small.

Tree no.	RPA m ⁽²⁾	Area in RPA m ⁽²⁾	%
12	33	1.7	5%
13	120	4.2	3.5%
14	148	4.3	2.9%
18	310	7.9	2.5%

- 4.8 All these figures are small and well within that the trees will tolerate, but nos. 12 - 14 are close to the work area and will need some protection against incidental damage, although the existing fence between the front and rear gardens and the drive surface will also provide some protection.
- 4.9 The method statement on the following pages specifies the measures in detail and they are illustrated on the plans showing the proposed layout, which serve as the tree protection plans (TPPs) specified by BS5837.

Simon Pryce

Simon Pryce, BSc, FArborA, RCarborA, CBIol, MICFor

Part 2 - Arboricultural method statement

This document is to be read in conjunction with the survey report and tree protection plan [TPP]. Any queries are to be referred to the arboriculturist.

Preliminaries

1. Before any work starts the contractor and arboriculturist are to agree all work affecting trees, particularly protective fencing, access routes and storage areas.

Tree work

2. Any tree works detailed in the arboricultural survey report and any other necessary pruning or felling are to be carried out.

Ground protection (fence / wall)

3. The soft ground next to the front boundary is to be protected - the options for this are:
 - for pedestrian movements only, scaffold boards or 18mm min plywood on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a Terram ® or similar geotextile membrane, cut or arranged to provide gaps to dig bases and install the fence.
 - There are also proprietary systems, figure 4 shows a typical one.
4. No fencing or other tree protection is to be moved or dismantled without the agreement of the arboriculturist.

Fencing (cycle store)

5. Protective fencing is to be erected so as to provide a barrier round the trees to be retained, as shown on the TPP. If it is more practical or convenient distances from the trees may be increased, but they must not be reduced without the agreement of the arboriculturist.
6. Fencing is to be at least 2m high and sectional welded mesh fencing [e.g. Heras], or plywood, on a scaffolding framework as in figure 1. Diagonal braces are to be anchored to scaffold poles driven into the ground or the proprietary concrete weighted base plates.
7. Each run of fence is to have at least one warning sign, as shown in figure 2, or a suitable alternative giving the same information.

Work methods

8. No work is to take place within protected areas without the prior agreement of the arboriculturist and without suitable alternative protective measures.
9. No equipment, machinery or structure shall be attached to or supported by a retained tree.
10. Outside fenced and protected areas there are no arboricultural constraints on working methods.
11. Any roots found outside protected areas are unlikely to be significant, but any over 50mm diameter found within them and not obviously from recently felled trees should be covered to prevent them drying out and the arboriculturist notified. Smaller roots can be cut cleanly.

12. Cement and concrete mixing must take place as far as possible from protected areas, over a suitable hard surface to prevent soil contamination from spillage or washing out into rooting zones.

Storage

13. No materials are to be stored within protected areas except on existing impermeable hard surfaces.
14. Potential contaminants such as diesel oil and cement must be stored as far from protected areas as practical, with provision made for any spillage or run off to be contained away from rooting areas.

Landscaping

15. Protective fencing is to remain in place until all demolition, construction and hard landscaping are complete.
16. Outside the protected areas there are no arboricultural restrictions on hard landscaping.
17. Within the soft ground near trees 4 - 11 only soft landscaping is to take place. No levels are to be changed beyond what is required for planting and any irrigation pipes are to be above ground or dug in by hand.
18. No persistent soil acting herbicides are to be used.

Completion

19. Once site work is complete the trees are to be reinspected and any necessary final pruning or other work is to be carried out.

Supervision schedule

20. The arboriculturist is to check the installed tree protection measures before any work starts. Further inspections are to be made at monthly intervals, with one off visits if the need arises, for instance if large or significant roots are encountered in work areas.

Contact details

Position	Name	Phone	Mobile	e mail
Arboriculturist	Simon Pryce	01923 467600	07710 224906	info@simonpryce.co.uk
Architect	Simon Hands Associates	020 8575 5959		enquiries@shandsassociates.co.uk
Owner	Mr M Saluja			
Main contractor	TBA			
Site manager	TBA			

Figure 1 - Tree protection fence details - after BS5837 2012

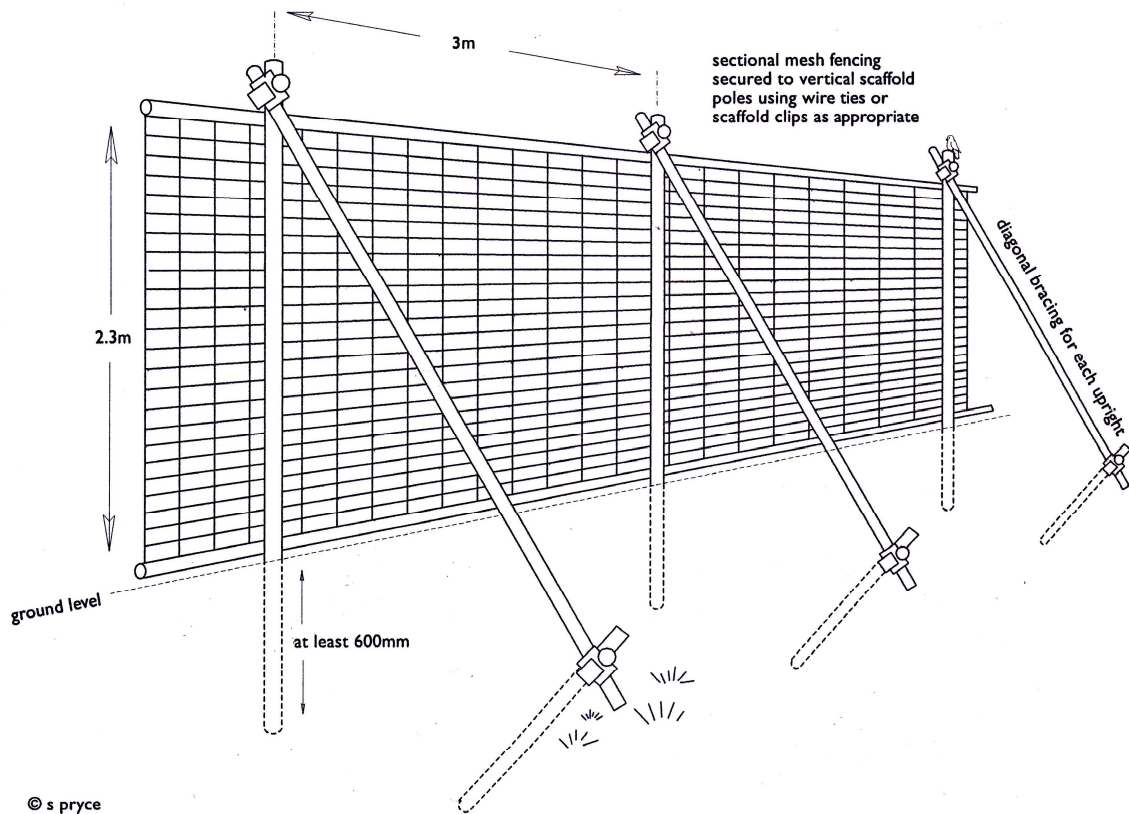


Figure 2 - Warning sign for tree protection fence



Figure 3 - Proprietary ground protection system



Site: 2 Links Way, Northwood, Middlesex, HA6 2XB
 Inspection date: 11 January 2018 by Simon Pryce, updates survey of January 2013

Tree no.	Species	Age / vigour	Ht. m	Spread				Dia. mm	RPA rad m	RPA area m²	Crwn ht. m	Comments and recommendations	Cat
				N	S	E	W						
The trees are described in order, starting near the south east corner of the site and going round anti clockwise, a shown on the site plan. Asterisks denote trees in other properties.													
1 *	2 no. red cedar <i>Thuja plicata</i>	Removed since the previous survey											
2 *	Red cedar <i>Thuja plicata</i>	Removed since the previous survey											
3 *	Oak <i>Quercus robur</i>	M/N	17	9	9	10	7	960	12.0	412	5	Has some minor dead wood in the crown, but that is normal and it is still healthy looking. Has a <i>Ganoderma</i> bracket on the base of the trunk indicating internal decay, which is not uncommon in older trees like this.	A 1
4	Red cedar <i>Thuja plicata</i>	MA/N	18	1	2.5	3.5	3.5	400	4.8	72	3	Row of trees, probably planted as a hedge as some are multiple trunked or have kinks at about 3.5m, indicating that they were topped at that height in the past and possibly trimmed on a regular basis. Since then they have been allowed to grow on for many years to form natural looking crown. Foliage has become sparser since previous surveys. Tree 7 is smaller where it has been shaded by the oak. Tree 4 has a bulge on the lower trunk where it had deformed round the original front wall, but	C 2
5	Red cedar <i>Thuja plicata</i>	MA/N	16	0.5	1	3.5	3.5	380	4.6	66	3		C 2
6	Red cedar <i>Thuja plicata</i>	MA/N	16	2	0.5	3.5	3.5	370	4.4	62	3		C 2
7	Red cedar <i>Thuja plicata</i>	MA/N	10	2.5	1	3.5	3.5	240	2.9	26	3		C 2
8	Oak <i>Quercus robur</i>	MA/N	16	5	7	7	5	640	7.6	127	5	Contains some minor dead wood, lower growth slightly suppressed by the red cedars, otherwise sound and healthy.	A 1
9	Red cedar <i>Thuja plicata</i>	MA/N	15	2	2.5	3.5	3.5	370	4.5	63	3	Continuation of 4 - 7, also topped at about 3.5m and left to grow on, foliage is also sparse.	C 2
10	Red cedar <i>Thuja plicata</i>	MA/N	14	1.5	1.5	3	3	300	3.6	41	3		C 2
11	Red cedar <i>Thuja plicata</i>	MA/N	15	3	1.5	3	3	350	4.2	38	3		C 2
12	Tulip tree <i>Liriodendron tulipifera</i>	Y/N	13	3	2	3.5	3.5	270	3.2	33	3	Young tree with an irregularly branched crown, possibly planted to fill a gap. Has some recent scars at the base.	C 1
13	Red cedar <i>Thuja plicata</i>	MA/N	19	4	4	4	1.5	510	6.2	120	2.5	Co dominant pair of trees, probably also planted as a hedge but have grown on more vigorously than the others and both are good individuals.	B 2
14	Red cedar <i>Thuja plicata</i>	MA/N	18	4	4	1.5	4	570	6.9	148	2		B 2

Site: 2 Links Way, Northwood, Middlesex, HA6 2XB
 Inspection date: 11 January 2018 by Simon Pryce, updates survey of January 2013

Tree no.	Species	Age / vigour	Ht. m	Spread				Dia. mm	RPA rad m	RPA area m ²	Crwn ht. m	Comments and recommendations	Cat
				N	S	E	W						
15	Holly <i>Ilex aquifolium</i>	M/L	7	2	2	1	2.5	120	1.5	6.5	2	Has very sparse foliage, but is reasonably sound. Contributes to screening provided by shrubs on this boundary.	C 2
16	Holly <i>Ilex aquifolium</i>	MA/L	5	3	2.5	1.5	3.5	140	1.7	9.5	2	Also sparse, but healthier looking than the previous one.	C 2
17 *	Oak <i>Quercus robur</i>	Council owned tree on the verge, removed several years ago.											
18	Oak <i>Quercus robur</i>	M/N	19	8	7	9	9	830	9.9	310	6	Large specimen, lower branches have been removed in the past. Uppermost foliage has become markedly sparser over the years since the first inspection and some major dead branches have been removed or shortened.	C 1
19	Oak <i>Quercus robur</i>	M/N	19	8	8	8	8	830	9.9	310	7	Branches growing towards the house had been shortened in the past and more recently since the building work. Slightly sparse but is sound and healthy looking.	A 1
20	Red cedar <i>Thuja plicata</i>	MA/N	13	3.5	5	3.5	2	400	4.8	72	2	Between the two oaks and slightly shaded by them but is not unduly suppressed.	C 1
21 *	Oak <i>Quercus robur</i>	MA/N	16	5	5	5	4	730	8.8	242	5	Has been crown reduced several years ago and is growing on. Looks sound and healthy.	B 1

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Site: 2 Links Way, Northwood, Middlesex, HA6 2XB
Inspection date: 11 January 2018 by Simon Pryce, updates survey of January 2013

Notes

Observations are made from ground level unless stated otherwise.

Trunk diameters are measured in millimetres at 1.5m above ground or at the narrowest point between the root buttresses and branch flare in multiple trunked trees; in such cases this is indicated by [c].

Crown spreads are taken from the trunk centre to the end of the longest live branches in the directions indicated [usually the four cardinal compass points]

Crown height is the clearance under the lowest significant branches.

Tree ages are estimated as below, based on the normal life expectancy of a tree of the species concerned on the site:

Immature.	[IM]	Newly planted or self-set tree.
Young	[Y]	Young tree that is established but has not yet attained the size or form of a fully developed example of its type.
Middle aged	[MA]	Between one third and two thirds of its estimated lifespan.
Mature	[M]	Over two thirds of its estimated life span.
Over mature	[OM]	Declining and/or approaching the end of its natural lifespan.
Dying/Dead	[D]	Dead/dying or so badly decayed that it should be removed without delay if a potential threat.

Vigour is assessed on the basis of what is normal for that the species concerned as:

High	[H]
Normal	[N]
Low	[L]
Dead / dying	[D]

Root protection areas [RPAs] - BS5837:2012

For single trunked trees these are calculated as an area equivalent to a circle with a radius 12 times the trunk diameter at 1.5m. For multiple trunked trees it is based on the diameter of a single trunk that would have the same cross sectional area at 1.5m.

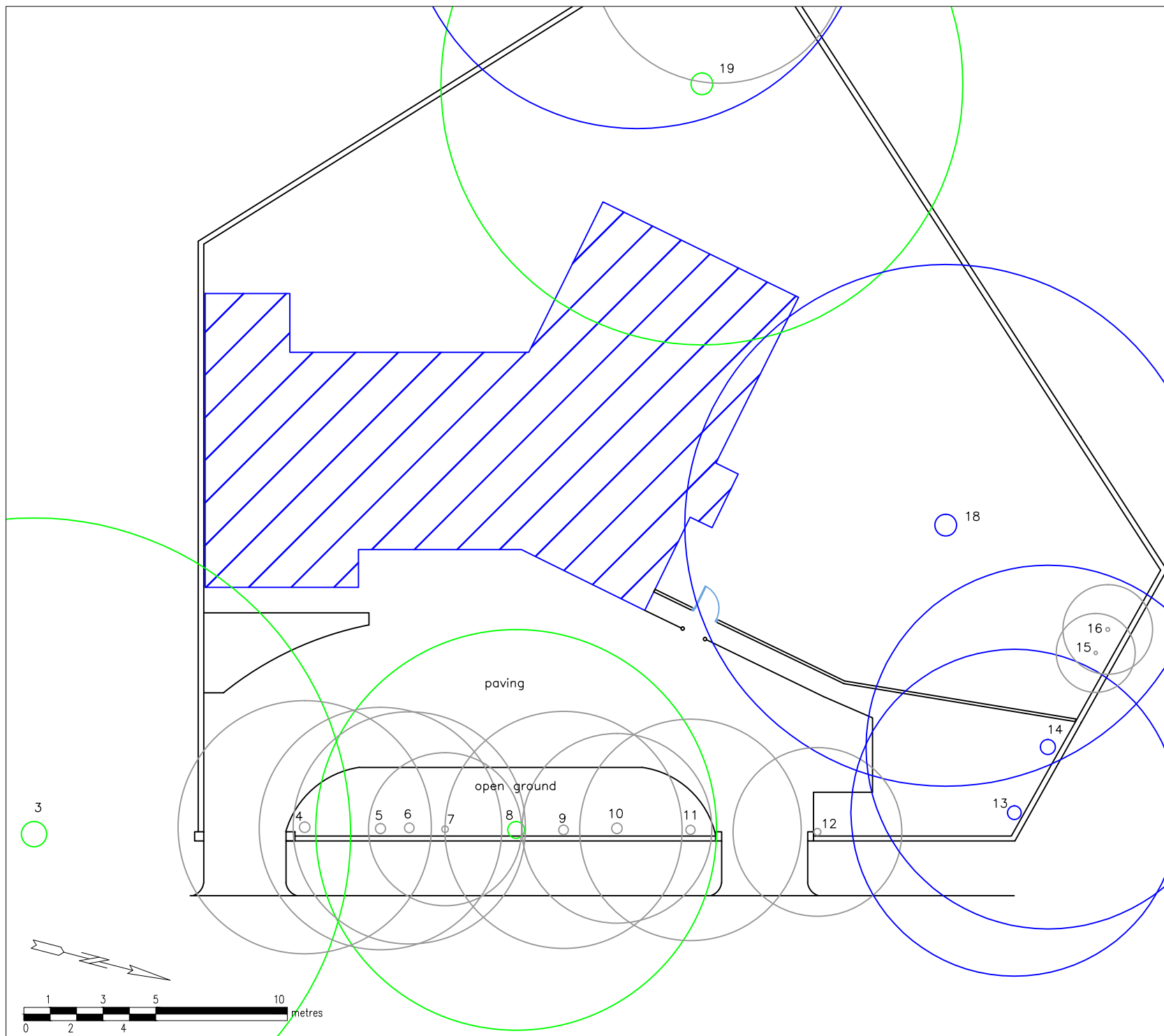
Any deviation from a circular plot should take into account the following factors whilst still providing adequate protection for the roots.

- The shape and disposition of the root system when known to be influenced by past or existing site conditions, such as the presence of roads, structures and underground services.
- Topography and drainage.
- The soil type and structure.
- The likely tolerance of the tree to root disturbance based on factors such as species, age and past management.

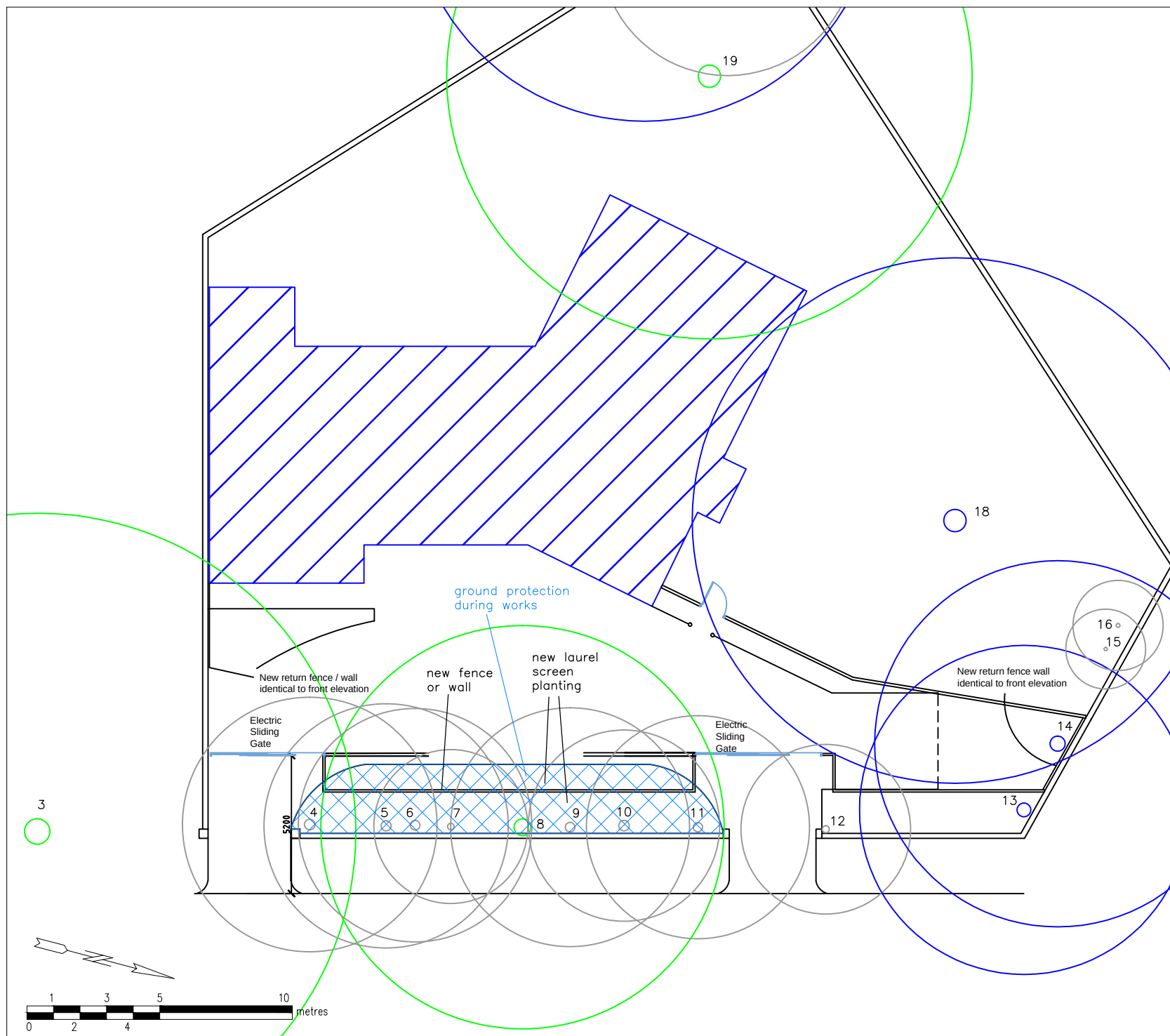
Site: 2 Links Way, Northwood, Middlesex, HA6 2XB
 Inspection date: 11 January 2018 by Simon Pryce, updates survey of January 2013

Tree categories – based on BS5837: 2012, Trees in relation to design, demolition and construction - Recommendations

Trees for removal				
Category and definition				Identification on plan
Category U				Red
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 in the foreseeable future, including any that will become unviable after the removal of other U category trees. (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning. - Trees that are dead or showing signs of significant immediate and irreversible decline. - Trees infected with pathogens significant to the health and/or safety of other trees nearby, or very low quality trees suppressing better ones nearby. NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve.			
Trees for retention				
Category and definition	Criteria – sub categories			Identification on plan
	1 – mainly arboricultural values	2 – mainly landscape values	3 – mainly cultural / conservation values	
Category A				Green
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 particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant historical, commemorative or conservation value. (e.g. veteran trees or wood -pasture)	
Category B				Blue
Trees of moderate quality with an estimated remaining life expectancy 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 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 benefits.	
Category C				Grey
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 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 benefit.	



Simon Pryce Arboriculture	
Client: Mr M Saluja	
Site: 2 Linksway, Northwood, HA6 2XB	
Title: Existing layout	
Date: 9 January 2018	
Ref: 17/115	Rev:
Scale: 1:200 at A4	
CP House, Otterspool Way, Watford, WD25 8HP tel 01923 467600 info@simonpryce.co.uk www.simonpryce.co.uk	
Original drawing: Simon Hands and Associates	
Root protection areas [RPAs] are colour coded according to retention category from BS5837:2012, Trees in relation to demolition, design and construction: A = green B = blue C = grey U = red - dashed - also used to denote dead trees with no RPA Tree protection = mid blue Crown spreads = mid green	



Simon Pryce Arboriculture

Client:

Mr M Saluja

Site:

2 Linksway, Northwood, HA6 2XB

Title:

Trees and proposed fence and gates proposed layout

Date: 9 January 2018

Ref: 17/115

Rev:

Scale: 1:200 at A4

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Original drawing:

Simon Hands and Associates

Root protection areas [RPAs] are colour coded according to retention category from BS5837:2012, Trees in relation to demolition, design and construction:

A = green

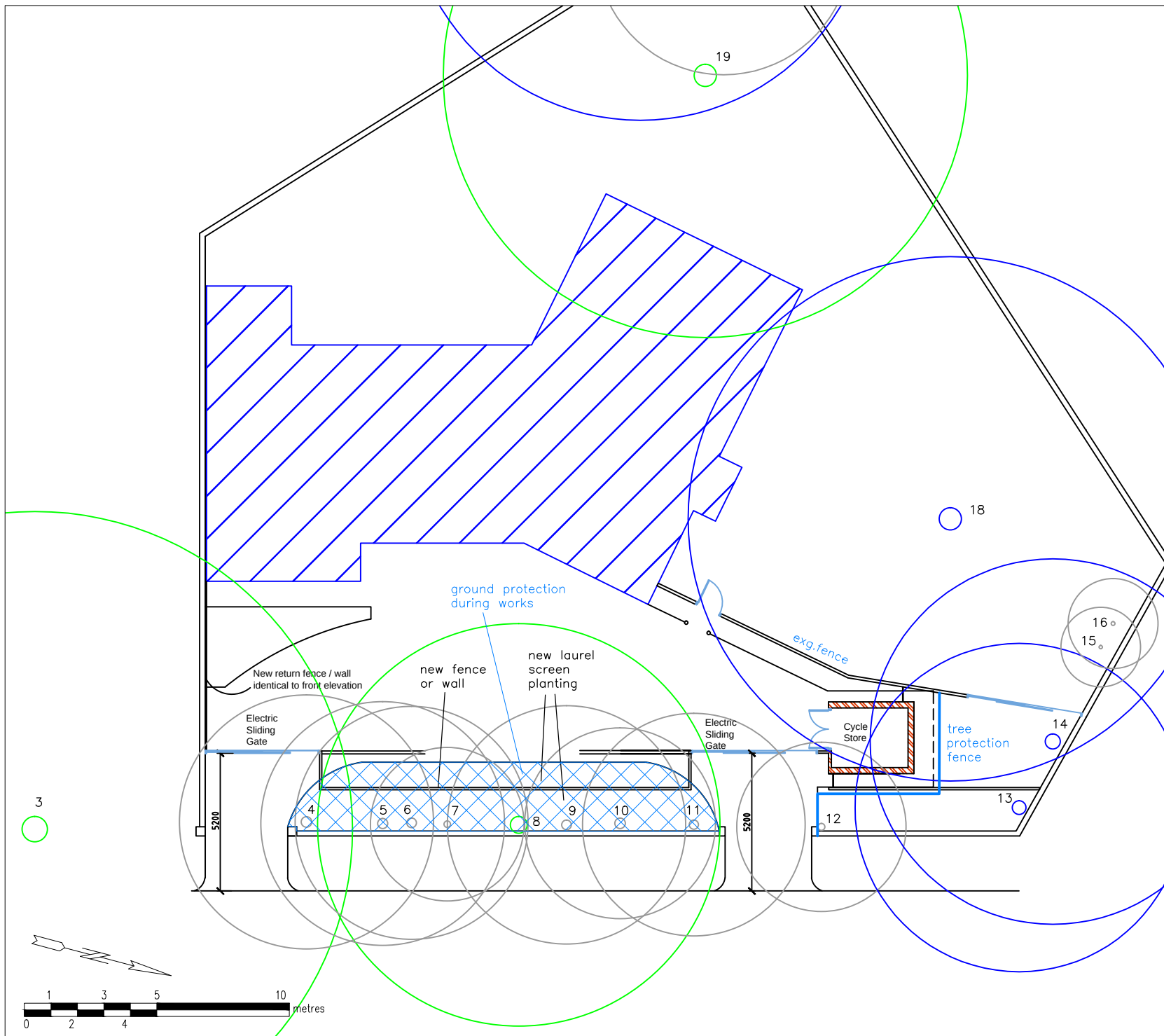
B = blue

C = grey

U = red - dashed - also used to denote dead trees with no RPA

Tree protection = mid blue

Crown spreads = mid green



Simon Pryce Arboriculture

Client:
Mr M Saluja

Site:
2 Linksway, Northwood, HA6 2XB

Title:
Trees and proposed fence, gates and cycle store - proposed layout

Date: 9 January 2018

Ref: 17/115

Rev:

Scale: 1:200 at A4

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Tree protection = mid blue

Crown spreads = mid green