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Arboricultural Report
Impact Assessment & Method Statement

Little Coppice
Kington Lane
Thornbury
BS35 1NA

9 February 2024

Compiled for:

Joshua Stott

By

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Validation statement for LPA registration

This report is submitted to South Gloucestershire Council to accompany a planning application. The report contains tree information relating for the demolition of the existing house and erection of a new dwelling at Little Coppice, Kington Lane, Thornbury, BS35 1NA

For local planning authority (LPA) validation purposes, this report contains the following:

- A full tree survey compliant to the requirements of BS5837:2012 'Trees in relation to design, demolition and construction – recommendations' undertaken by a competent and qualified arboriculturist.
- A suitably scaled plan with a north point showing the site boundaries and the tree survey information.
- An assessment of the impacts of the proposed development on the existing tree. This includes recommendations of which trees should be removed/retained and the proposed protection measures.
- An arboricultural method statement outlining appropriate methods of tree protection and any specific technical construction methods needed to implement the design proposals with minimal detriment to retained trees.

Summary

The owner, Mr Joshua Stott wishes to demolish the existing house and build a replacement dwelling at Little Coppice, Kington Lane, Thornbury, BS35 1NA

Contents

ARBORICULTURAL METHOD STATEMENT

INTRODUCTION

1.1 Instruction:

I am instructed by Mr Joshua Stott, to inspect all the trees that could affect or be affected by the proposal to demolish the existing house and build a replacement dwelling at Little Coppice, Kington Lane, Thornbury, BS35 1NA. This report, in compliance with BS5837:2012 'Trees in relation to design, demolition and construction - recommendations' is required to accompany the submission of a planning application.

My instruction is to prepare the following information:

- A schedule of the relevant trees including tree data and condition assessment.
- A tree constraints plan.
- An arboricultural impact appraisal.
- An arboricultural method statement.
- A tree protection plan.

1.2 Documents provided:

Tree constraints plan, tree retention/removal plan and tree protection plan are derived from the following drawings which were supplied to me by the client:

- Site location plan 1:1250
- Existing block plan 1:100
- Proposed block plan 1:100

1.3 Limitations:

My survey was a preliminary assessment undertaken from ground level and observations have been made solely from visual inspections for the purposes of assessment in terms relevant to planning and development. Only binoculars, mallet and a probe have been used to aid tree assessment. No invasive or non-invasive internal decay detection devices have been used in assessing tree condition.

The recommendations and conclusions in this report relate only to the conditions found on this site at the time of the site visit and inspection. The recommendations contained within this report are valid for a period of 12 months from the date of this report. Any significant alteration to the site that may affect the trees that are present or have planning implications (level changes, additional tree works, post extreme weather events, hydrological changes) and will necessitate a reassessment of the trees and the site.

The tree survey that forms part of this report is not a tree safety inspection. The survey has been carried out in order to inform the planning process. Where obvious risks have been observed, they have been addressed in the 'preliminary recommendations' (see Appendix 1 – Tree Schedule). Potential hazards and levels of risk are likely to change as the site usage changes during and post development.

1.4 Ecological Constraints:

The Wildlife and Countryside Act 1981 and amendments made within and subsequent to the Countryside and Rights of Way act 2000 provides statutory protection to bats, birds and other species that inhabit or use trees. The protection afforded to these species could impose significant constraints on the use of a particular site as well as significantly restrict the timing of any works that may be necessary. Any restrictions are in addition to the tree restriction highlighted in this report. Whilst I have some working knowledge of these potential issues they are outside my area of expertise and you must seek advice from a qualified ecologist to ascertain if any further restrictions apply.

1.5 Tree preservation orders and/or conservation area protection:

I have consulted South Gloucestershire councils interactive planning map to enquire whether the trees at the address are subject to tree any preservation orders, and they are not.

The site is not within a conservation area.

Any tree works recommended for trees subject to a TPO or within a Conservation Area may need to be applied for (or notified to the council in the case of a conservation area) separately unless full planning permission is granted and this report constitutes an approved document with the main planning application.

SITE VISIT AND DATA COLLECTION

2.0 Site Visit:

I visited the site on 8 February 2024. All observations were made from ground level (aided by the Visual Tree Assessment method – Mattheck and Breloer, 1994) and all measurements except stem diameter were estimated unless otherwise stated in the tree schedules. The weather at the time of the visit was overcast with light rain; these conditions in no way hindered my ability to view the trees.

2.2 Site Description:

The site comprises the main house, Little Coppice (detached) set back from the road with gravel driveway and lawn to the front with a rear garden.

2.3 Data Collection:

Each tree or group was inspected and allocated an identification number as indicated in the tree schedule (appendix 1) and tree survey plan. For each tree the following information was collected:

- species
- height (m)
- stem diameter (mm)
- average radius of crown to 4 cardinal points (m)
- height of first significant branch
- average height of canopy clearance
- life stage
- observations regarding condition
- preliminary recommendations
- safe useful life expectancy

As encouraged in BS5837:2012, each tree or group was allocated to one of four categories (A,B,C or U), which reflects its suitability for retention in context of the development. Please see table 1 for explanation of the criteria for tree categorisation.

Table 1: cascade chart for tree assessment, adapted from Table 1 of BS5837:2012

	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values inc. conservation
Category A Trees of high quality with an estimated remaining life expectancy of >40 yrs	Particularly good examples of their species, esp if rare or unusual. Those that are essential components of groups or formal or semi-formal arboricultural features	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
Category B Trees of moderate quality with an estimated remaining life expectancy of >20 yrs	Trees that might be included in category A but are downgraded because of impaired condition such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit category A designation.	Trees present in numbers, usually growing as groups or woodlands such that they attract a higher collective rating that they might as individuals. Trees occurring as collectives but situated so as to make little visual contribution to the area.	Trees with material conservation or other cultural value
Category C Trees of low quality with an estimated remaining life expectancy of >10 years, or young trees with a stem diameter <150mm	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 landscape benefits.	Trees with no material conservation or other cultural value.
Category U Trees in such a condition that they cannot realistically be retained as living trees in the context of current land use for >10 yrs	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 • Trees that are dead or showing signs of significant, immediate and irreversible decline • Trees infected with significant pathogens affecting health or safety, or very low quality trees suppressing trees of better quality		

2.4 Interpretation of Data:

Section 4.6 of BS5837:2012 recommends that the trunk diameter measurement is used to calculate the RPA which can then be interpreted to identify the design constraints of a particular site. Once the design principal has been established the construction exclusion zone and location of protective measures can be identified.

ARBORICULTURAL IMPACT APPRAISAL

A total of 9 items were surveyed within and adjacent to the development site. These items comprised 9 individual trees and 0 groups. The chart below shows the ratio of tree retention categories on the site.

It is proposed to remove 4 of the trees to facilitate the erection of the replacement dwelling, and 1 due to poor condition.

T7 Corkscrew willow is in poor form and is not viable in the long term anyway and T4, T5 and T6 are minor trees, which do not contribute to the setting.

T1 Hazel is in poor condition and needs to be removed due to this fact rather than the intended building works.

To mitigate the loss of these trees a comprehensive tree planting schedule has been created, to ensure no net loss for the site, it is proposed to plant 7 native species. See landscaping plans, appendix 7 and 8.

The carefully thought out landscape enhancements, will mean the proposals have an altogether positive impact on on the setting, ecology and wider views.

3.1 Below Ground Constraints

Below ground constraints refer to tree roots. These are easily overlooked during construction operations as they are unseen and often little is understood about their importance. It is essential to ensure that roots are not damaged during building operations as they are the life blood of each tree, providing structural stability by anchoring the tree to the ground and providing transportation of water and nutrients from the soil to the foliage.

In reality the spread of roots for trees will rarely be distributed in a perfect circle as the environment below ground level is highly variable. The presence of structural foundations, pipes, impermeable surface coverings and differing soil conditions mean that tree roots will extend in to areas that offer a preferential environment; where water is most available and the soil is least compacted.

Root protection areas (RPAs) are shown as a circle centred on the base of the stem unless site conditions such as nearby structures indicate that the shape of the rooting area deviates from this format.

3.2 Above ground constraints

The proposed new dwelling will generate no above ground constraints.

3.3 Trees to be retained

Of the 9 trees and 0 groups surveyed, four are proposed to be retained.

Retention category	Proposed for removal due to development	Proposed for removal due to poor condition	Total number of removals
A	0	0	0
B	0	0	0
C	4	1	5
U	0	0	0
Totals	4	1	5

3.4 Planting schedule

Seven new species will be planted to enhance the site. These will be planted within two months of the completion of the building project.

The trees will be:

- Staked, the stake shall be attached to the tree at no higher than 1/3rd the clear height of the stem (to promote incremental movement)
- Protected from deer by using tree spirals
- Adequately watered: 25 litres per tree every other week from April to September for the first two years (weekly during drought periods)
- Be weeded and mulched: 75mm of bark mulch to be applied around the planting bed and topped up yearly for 5 years.
- Be feed one season after planting
- Have formative pruning
- The ties will be adjusted and the stakes removed after two growing seasons

Suggested suitable species to be planted are:

- Bird cherry
- Rowan
- Hawthorn

The client is happy to accept the recommendation from the arboricultural officer in regards to the species, if no species is specified then one of the above will be chosen.

4.0 ARBORICULTURAL METHOD STATEMENT

Control measures for construction works in or near to the root protection zone are detailed in this chapter. This will form the method statement of works and will be the exact principle/methodology utilised during construction periods.

4.1 Tree works prior to construction

Following the approval of South Gloucestershire Council's appointed Tree officer, all tree works will be carried out to BS 3998 “Recommendations for Tree Work” (2010) or BS 5837 “Trees in relation to design, demolition and construction - Recommendations” (2012) or as modified by more recent research. Tree works will be undertaken before commencement of other site operations. No tree works are necessary.

4.2 Protective fencing

Before the commencement of any works on site protective fencing shall be erected to the dimensions shown on the accompanying drawing ‘tree protection plan’. Individual root protection areas at the measured m² will be erected for the duration of the development around retained trees. Although these protection measures will be in place for the duration of the development on site monitoring will allow for the successful retention of the subject trees.

The dimensions shown on the tree protection plan are the minimum allowable to ensure adequate protection of the RPA. It maybe that the actual size of the protected area will be larger than indicated depending upon the length of the fencing used. Heras fencing is usually 3.4-3.5m long.

Signs will be affixed to the existing fencing to inform on-site contractors of the importance of the fencing barriers (see Appendix).

The construction exclusion zones (CEZs) are to be treated as sacrosanct and the following guidelines must be followed:

- **NO mechanised excavations**
- **NO movement of construction traffic or parking of vehicles**
- **NO storage of building materials**
- **NO storage of chemicals or fuels**
- **NO fires to be lit in close proximity to trees**

Signs must only be removed once all on-site construction activity has been completed.

4.3 Site access

The site shall be accessed via Kington Lane.

4.4 Contractors car parking

Parking will only be on the existing gravel driveway.

4.5 Site huts and storage

Any storage required for materials, spoil, plant or welfare facilities shall be positioned outside the RPA of retained trees. Mixing of cement shall be in a designated area where runoff will not enter the RPAs of retained trees. Ground protection in the form of a geotextile membrane will ensure no leaching of mixings enters the soil and kick boards around the perimeter will ensure that runoff is contained.

4.6 Service installation

I have not been supplied with details of the routing of underground services that may affect the trees on site. The provision of underground services must be led by the site's tree constraints. Should the routing of services cause conflict with the specified RPAs, a detailed and specific method of work will be provided in writing to the LPA for approval prior to installation of services. But after reviewing the plans, it is not envisaged that services will be be in conflict with the RPA's, as there is plenty of space to bring these in, well away from any RPA.

4.7 Ground level changes

There shall be no changes in ground levels during the construction within the RPA.

4.8 Foundations within Root Protection Areas

No foundation work within the RPA will take place.

4.9 Hard surfaces within Root Protection Areas

There shall be no hard surfaces within RPAs of retained trees.

4.10 Soft landscaping within exclusion zones

Soft landscaping must respect the rooting areas of retained trees. Removal of spoil and the import of materials must be outside the specified RPAs.

No level changes or disturbance to the soil will take place within RPAs of retained trees. This includes in particular any rotavating of the ground. Should the soils require cultivating, the use of an airspade can be employed under an arboricultural watching brief.

4.11 Responsibilities

It will be the responsibility of the main contractor to ensure that any planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.

The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.

If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 Recommendations for Tree Works 2010.

The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective signs will remain in position until completion of ALL construction works on the site.

The fencing and signs must be maintained in position at all times and checked on a regular basis by an onsite person designated that responsibility.

4.12 Arboricultural supervision/monitoring

A number of short inspections of the subject trees will be undertaken by the project arboriculturist familiar with BS5837:2012 operations during the extent of the project to ensure that methods of works are in accordance with this method statement.

Arboricultural supervision is to be provided at all crucial stages throughout the development process to ensure that all aspects of the TPP are carried out as per the approved methodology.

The main stages of the building programme would be: the setting up of protective fencing, all foundation works and any other works which are close to the RPZ's.

This supervision will require the project arboriculturalist to be present throughout the tasks, to ensure all the arboricultural objectives are met. If the task is lengthy, provided the arboriculturalist is satisfied, the supervision may be reduced to telephone contact between the site project manager and project arboriculturalist.

The local authority arboriculturalist will have free access to the site and pass any recommendations direct to the project arboriculturalist.

Any works required within the RPA of retained trees that is not covered in this document can only be done so with the written permission of the Local Planning Authority, in accordance with a detailed arboricultural method statement and under an arboricultural watching brief.

Tim Rudge
BSc (hons) Forestry, Dip Arb (RFS)
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9 February 2024

Phasing of arboricultural works

Phase	Requirements	Method
1. Prior to any construction works on site	Erection of the fencing	Ensure the fencing matches the TPP
2. Start of development	Commencement of development	Monitoring of the works to ensure the requirements contained within this report are followed.
3. Completion of works	Removal of the fencing	It is essential that the fences are only removed once all works have been completed.

Appendix 1

Arboricultural Survey Data Sheet

Site: Little Coppice, Kington Lane, Thornbury, BS35 1NA

Ref	Species	Height	Crown	Stem Diameter	Crown spread	Crown spread	Crown spread	Crown spread	Life stage	Condition	BS Category	Observations	Preliminary	Estimated Remaining	Root Protection	Root Protection
		(m)	Clearance	(mm)	North	South	East	West			(A,B,C,U, 1,2,3)		Recommendations	Contribution	Area sq m2	Radius m
T01	Hazel	4	0.5	272	2	2	1	2	M	P	C2	D/W, bark damage, heavy old pruning cuts		10	33	3.2
T02	Hawthorn	6	1	143	3	2	3	2	M	P	C2	Ivy clad, poor form	Remove ivy	10	10	1.7
T03	Oak	8	1	215	2	2	2	3	Y	F	B2	Asymmetric growth		20	21	2.6
T04	Magnolia	3	0.5	94	1	1	1	1	Y	F	C2	Heavy lean to E, support in place		20	4	1.1
T05	Hazel	3	1	133	2	2	2	1	Y	F	C2	Poor form	Prune and shape	20	8	1.6
T06	Mahonia	4	0	219	2	2	1	2	M	F	C2	Poor form	Prune and shape	20	22	2.6
T07	Corkscrew willow	9	2	438	4	3	4	4	M	P	C2	Major fungi growth and D/W, split trunk	Fell	10	88	5.3
T08	Hazel	7	1	268	4	4	5	4	M	G	B2	Balanced and good form		20	33	3.2
T09	Scots pine	10	4	538	6	6	5	6	M	G	B2	W side cut to trunk, asymmetric		20	132	6.5

Survey Key:

Life stage: Young, Semi-Mature, Early Mature, Mature, Over-Mature, Veteran

Condition: Good, Fair, Poor, Dead D/W = deadwood

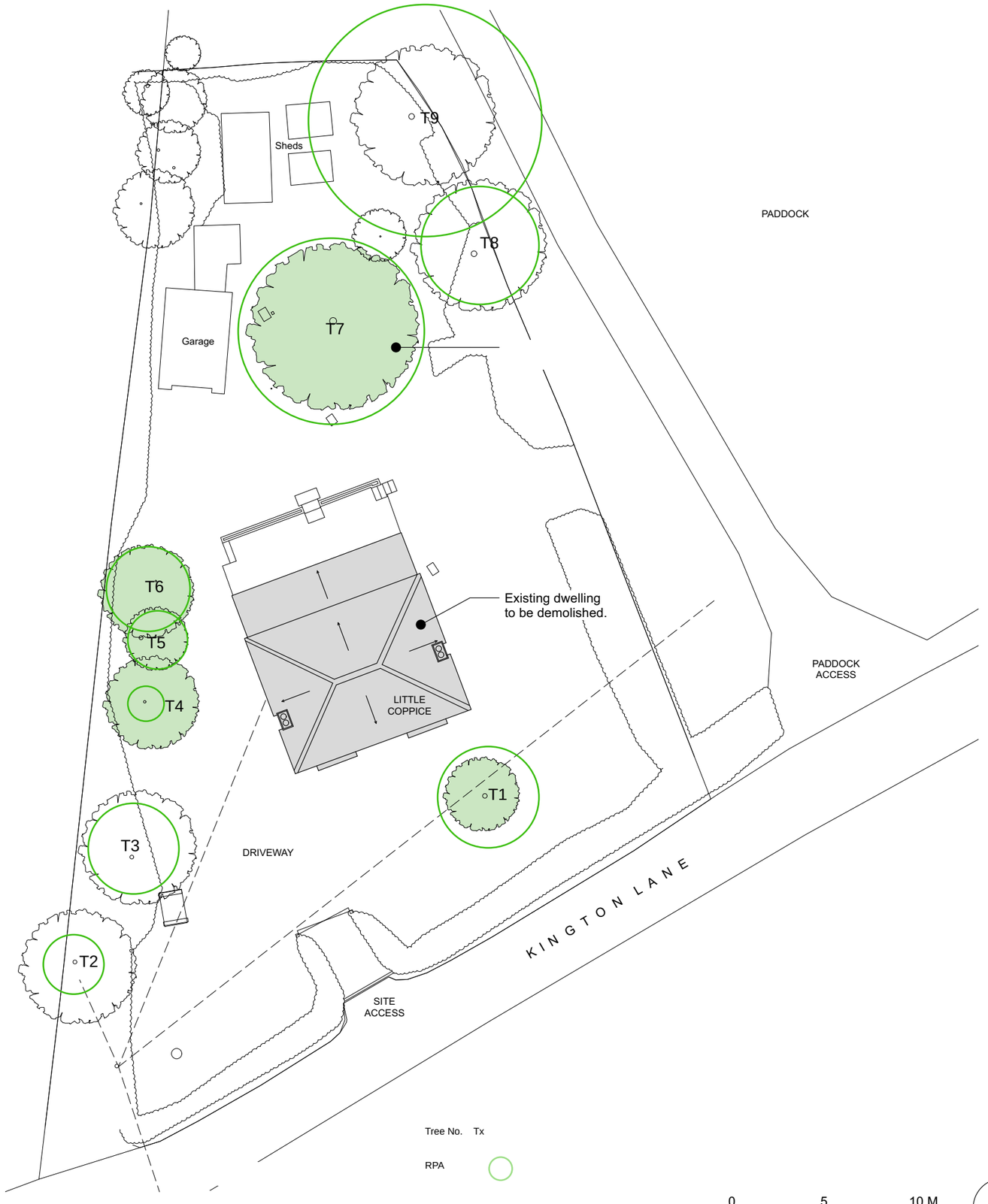
BS Category grading:

A: Trees of high quality with an estimated remaining life expectancy of at least 40 years
B: Tree of moderate quality with an estimated remaining life expectancy of at least 20 years
C: Trees of low quality with an estimated remaining life expectancy of at least 10 years
U: Trees in such condition that they cannot be retained as living tree

BS Sub Category grading:

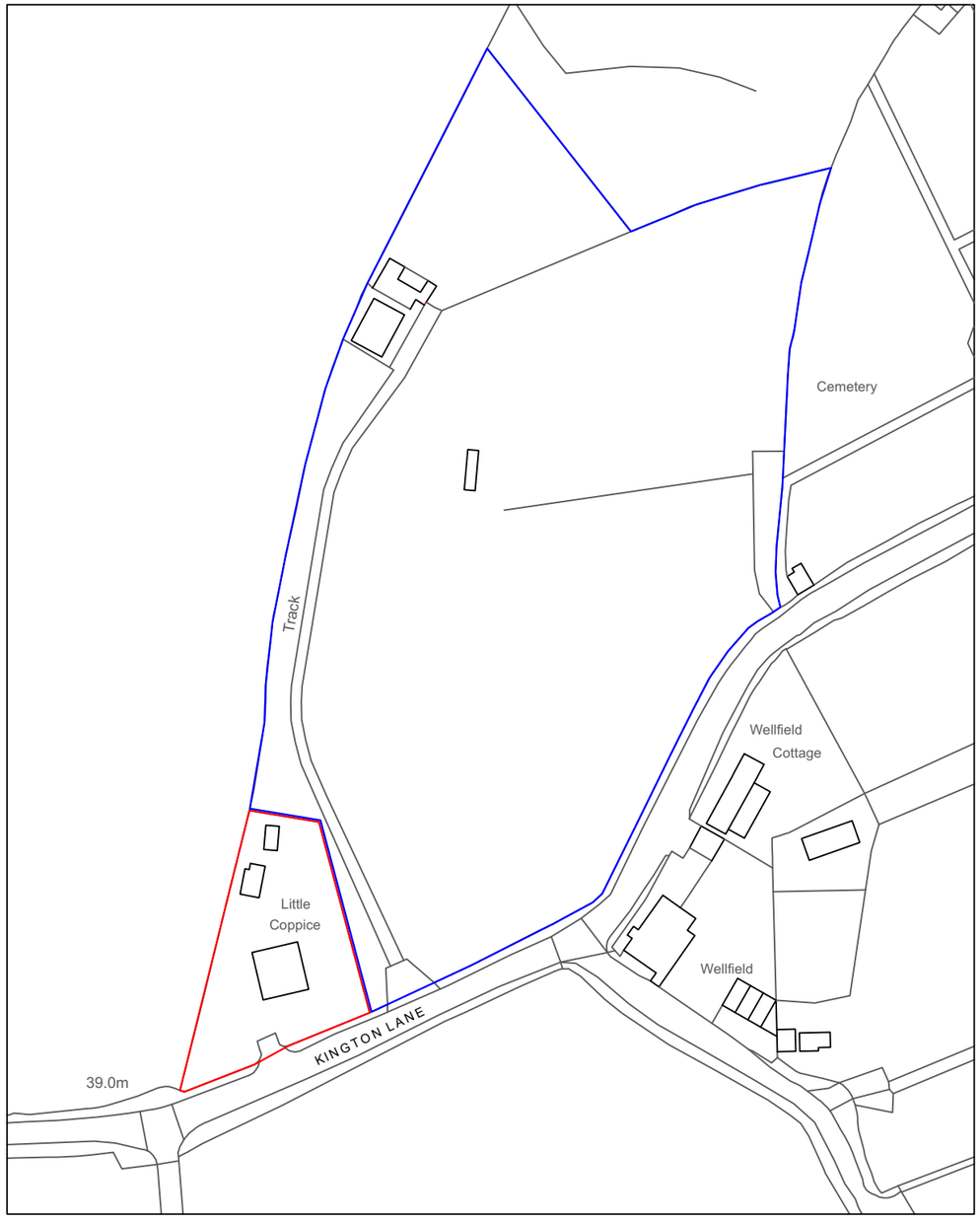
1 Mainly arboricultural qualities
2 Mainly landscape qualities
3 Mainly cultural values

RPA: Root protection area, measured in m2



SITE BLOCK PLAN

SCALE 1:250

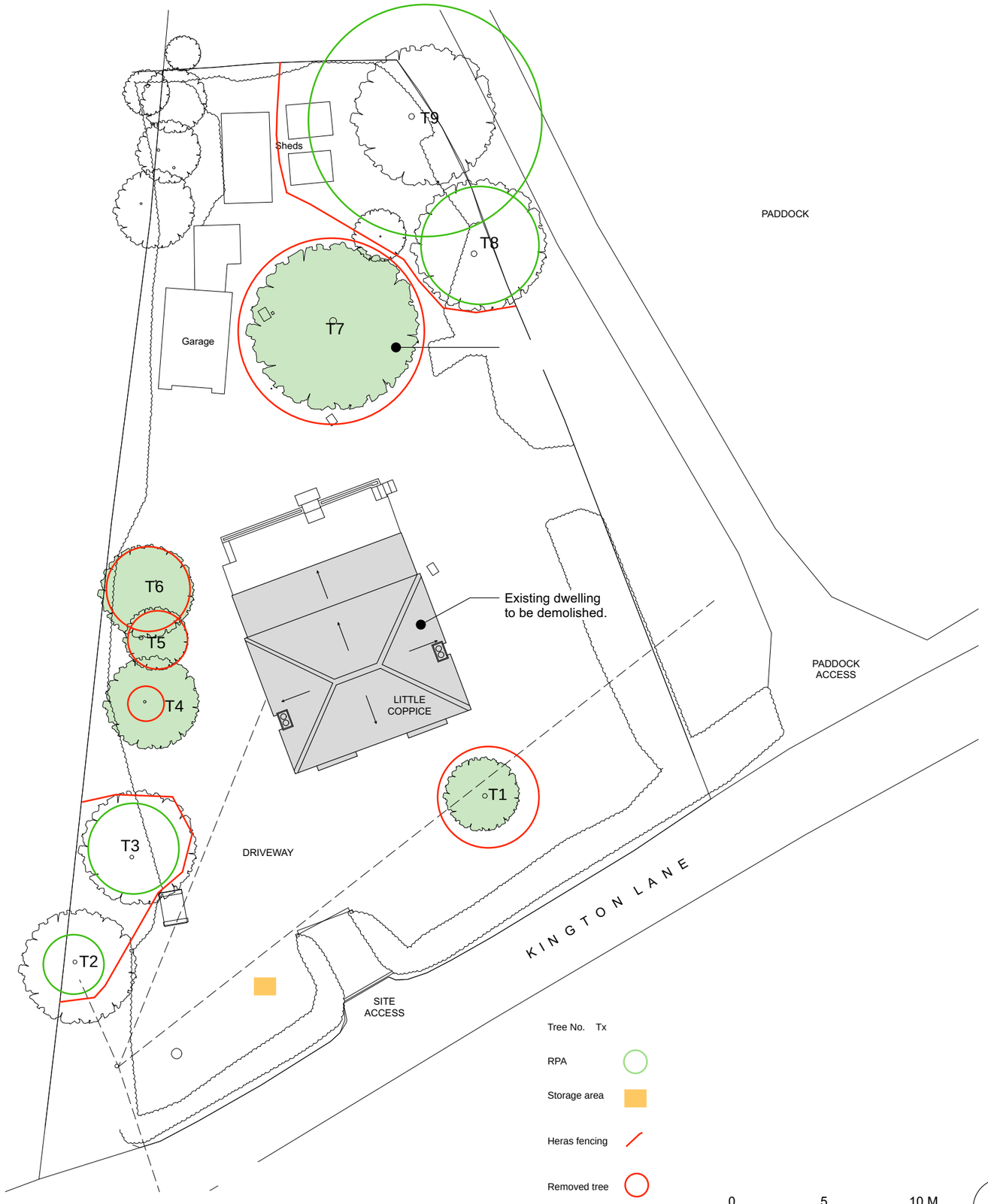


SITE LOCATION PLAN

SCALE 1:1250

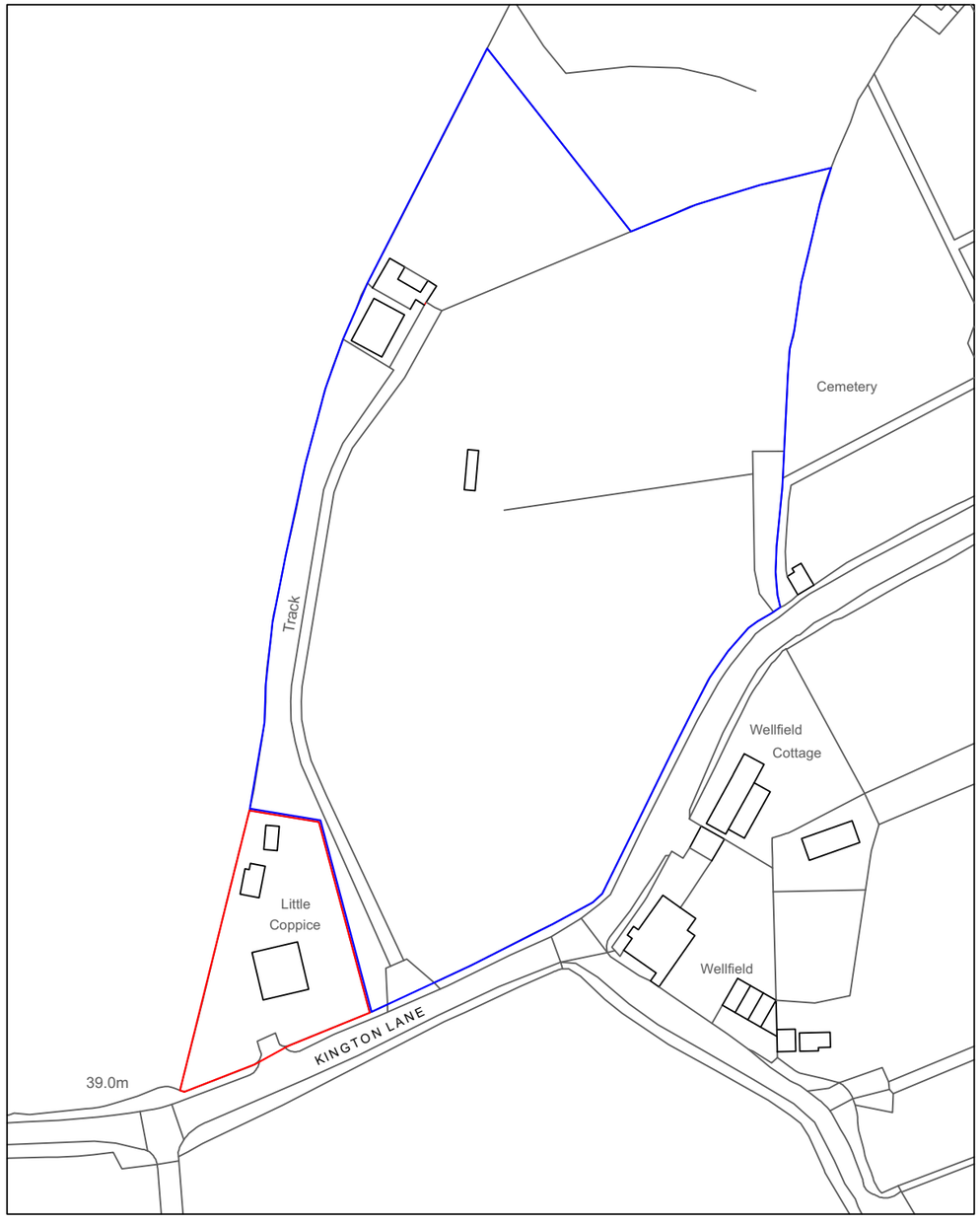
studio fourpointten
studio@fourpointten.co.uk

DRAWING	APPENDIX 2: Tree constraints plan		SCALE	various@A3		



SITE BLOCK PLAN

SCALE 1:250



SITE LOCATION PLAN

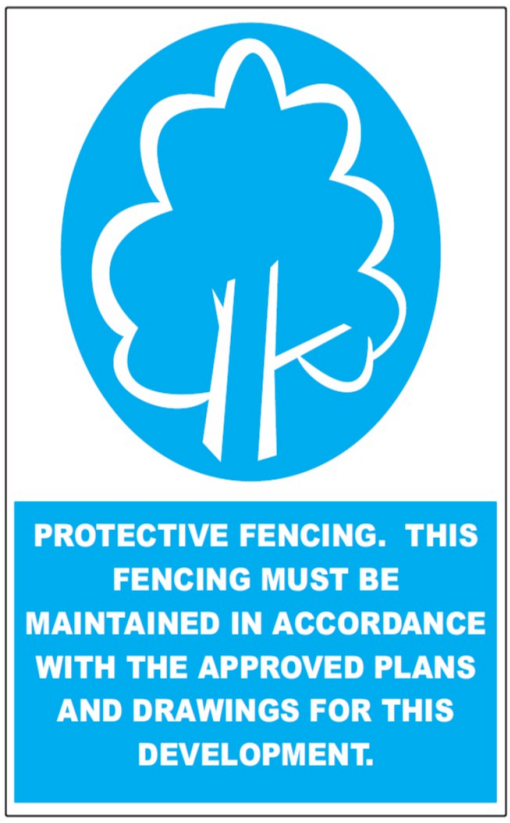
SCALE 1:1250

0 50 M

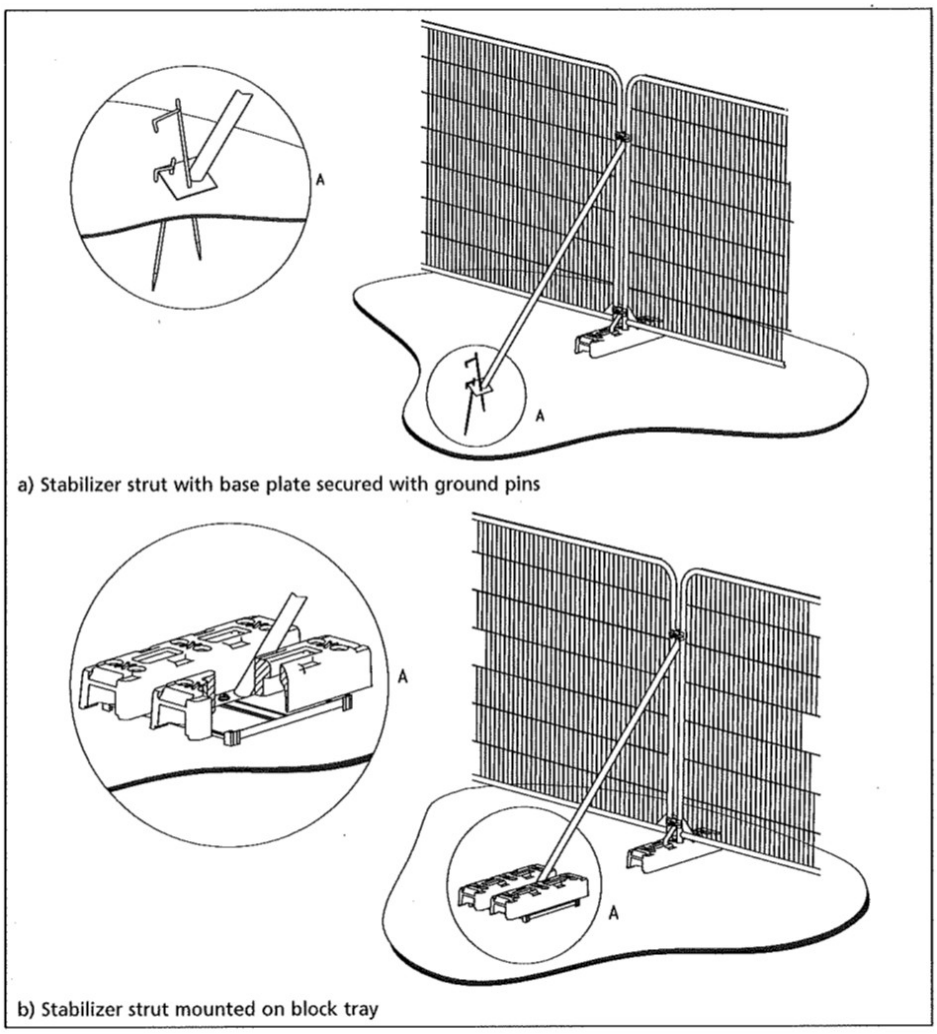
studio fourteen
studio@fourpointten.co.uk

DRAWING	APPENDIX 3: Tree protection plan		SCALE	various@A3		

APPENDIX 4: Tree protection fencing signs



APPENDIX 5: Tree protection fencing (source: BS5837:2012)



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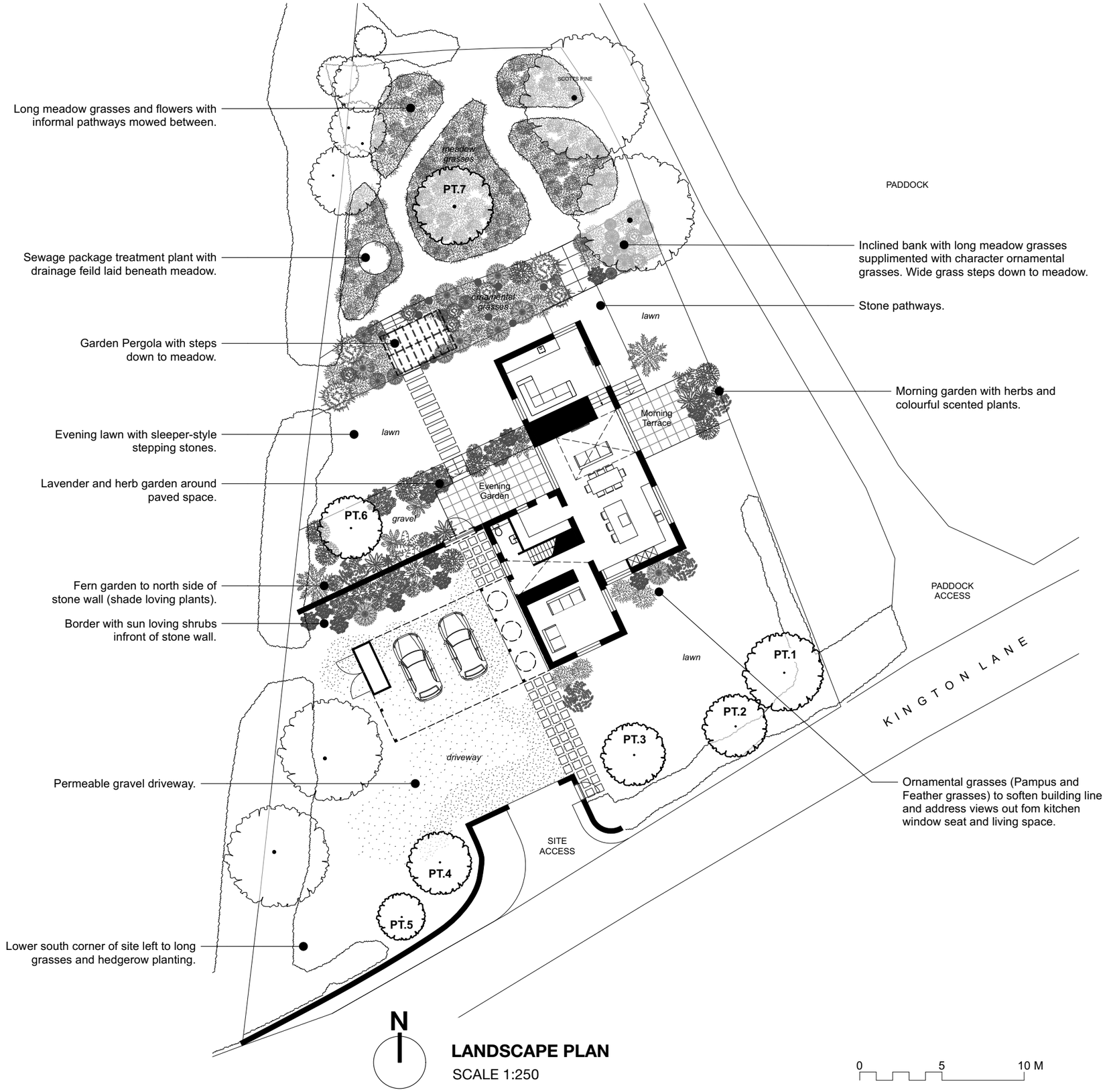
Site Monitoring Form

Date of Visit		**Site**	
Consultant in Attendance			

Observations/Status of Tree Protection/Comments:

Recommendations (if necessary):

Date of Next Visit		**Signature**	



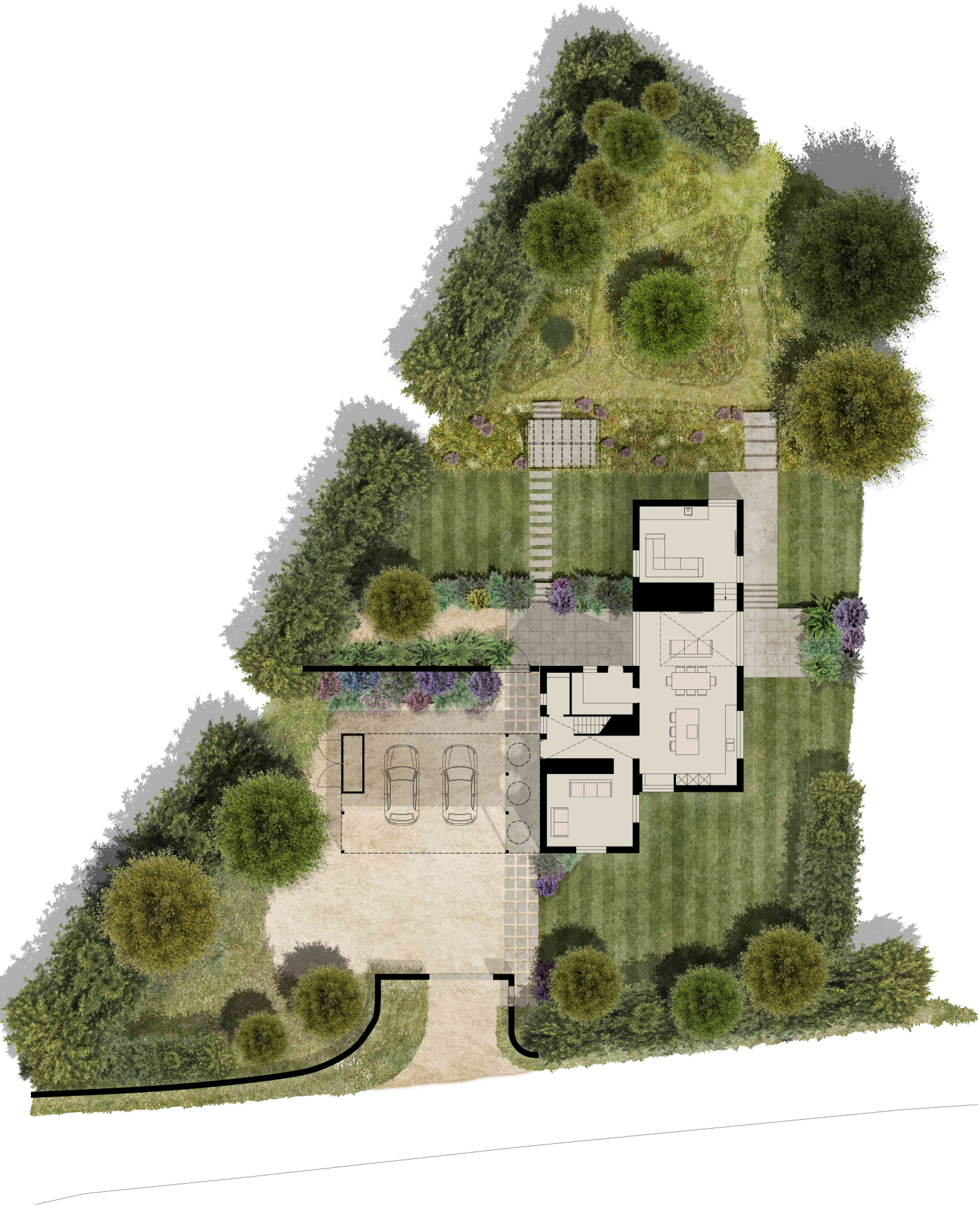
LANDSCAPE PLAN

SCALE 1:250

studio four point ten
studio@fourpointten.co.uk
01225 688410

DRAWING	APPENDIX 7: Proposed lanscaping plan		**SCALE**	1:250@A3		**JOB TITLE**	Kington Lane, Thornbury, Bristol BS35 1NA

APPENDIX 8: Proposed lanscaping plan



References

BSI Standards Publication (2012) BS5837 Trees in relation to design, demolition and construction – Recommendations BSI: London

BSI Standards Publication (2010) BS3998 Tree Works – Recommendations BSI: London

Lonsdale, D (1999) Principles of Tree Hazard Assessment and Management, TSO: London

Matheny, N.P & Clark, J.R (1994) Evaluation of Hazard Trees in Urban Areas 2nd Ed ISA Illinois

Mattheck, C & Breloer, H (2003) The Body language of Trees, TSO: London

Read, H (2000) Veteran Trees: A guide to good management, English Nature: London

Strouts, R.G & Winter, T.G (2004) Diagnosis of Ill-Health in Trees, TSO: London