



ARBORICULTURAL PLANNING CONSULTANTS

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ARBORICULTURAL METHOD STATEMENT

For Protection of Trees

at

Avon Road

Littlehampton

West Sussex



SJA ams 20587-01a

December 2020

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1. Statement of purpose

1.1. The purpose of this method statement is to detail what actions need to be taken to ensure the proposed development at Avon Road does not cause any unacceptable damage to the off-site trees to be retained.

1.2. This method statement has been drawn up to comply with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations*.

1.3. Details of the trees can be found in the tree survey schedule at **Appendix 1**. Their locations are shown on the tree protection plan (SJA TPP 20578-041a) at **Appendix 2**. This plan is based on the proposed site layout by Urban Symbiotics, drawing no. 201201-SP-LS-RT-Z-EX-01.

1.4. The key words and phrases used in this statement are defined in **Table 1** below.

Arboricultural consultant	Arboricultural expert instructed by the developer to oversee the retention and protection of trees adjacent to the development site.
Arboricultural monitoring	Regular inspections of retained trees by the arboricultural consultant, in order to monitor their health and condition; and to inspect the effectiveness of the tree protection measures implemented.
Arboricultural supervision	Pre-arranged attendance on site of appointed arboricultural consultant for the duration of specific construction activities that could otherwise result in unacceptable damage to retained trees. Whilst on site the consultant will control, supervise and where appropriate assist in the undertaking of these activities.
Construction Exclusion Zone ('CEZ')	Area based on the root protection area (RPA), normally surrounded with protective fencing, from which access is prohibited during development works.
Ground boarding	Temporary ground covering, designed to prevent compaction of soil in which significant roots of retained trees are growing.
Protective fencing	Temporary fencing, erected for the duration of demolition and construction activities; designed to prevent access and disturbance to the trunks and root protection areas of trees.
Pruning	The removal of living or dead parts of a tree, especially branches, to reduce size, to maintain shape, health, safety, or to regulate growth.
Root Protection Area ('RPA')	The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Tree Protection Plan ('TPP')	Drawing based upon the finalised proposals; showing trees for retention and illustrating the tree and landscape protection measures.

Table 1 Key words & Phrases 1

1.5. This statement is designed to reflect the principles of the proposed layout only insofar as these relate to the protection of trees to be retained and should **not** be read as a definitive engineering or construction method statement for this development.¹

2. Planning and communication

2.1. Unless otherwise agreed with the Local Planning Authority (LPA), the following actions are to be taken, in the order specified in the Sequence of Works at **Table 2**.

2.2. The developer will appoint an arboricultural consultant to oversee all aspects of tree care and protection for the duration of demolition and construction works.

2.3. Prior to the commencement of works, the project manager will send copies of any demolition or construction method statements that might have implications for existing trees to the arboricultural consultant for his comments. The arboricultural consultant will liaise with the project manager to ensure that there are no conflicts between the demolition or construction method statements and this arboricultural method statement.

2.4. Prior to the start of any site clearance, demolition or construction works the developer will convene a pre-commencement site meeting. This shall be attended by the developer's contract manager or site manager, the demolition contractor, the fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. At that meeting contact numbers will be exchanged, and the methods of tree protection outlined in this statement shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement required as a result of the meeting shall be circulated to all parties in writing.

2.5. The developer will immediately inform the arboricultural consultant if at any time during site clearance, demolition or construction the site manager or agent is replaced

¹ Reference should be made to the architect or structural engineer over any matters of construction detail, specification, engineering performance standards or regulatory requirements, relating to structures, surfaces or underground services to be constructed. As arboricultural consultants, Simon Jones Associates Ltd. can accept no liability for any matters relating to the structural integrity or engineering performance of structures, surfaces or underground services described, proposed or eventually constructed. The responsibility for satisfying any Health & Safety requirements relating to any operations described in this method statement remains with those commissioning or undertaking the operations concerned.

or transferred. The arboricultural consultant will convene a site meeting with the incoming/replacement site manager, to be held within five working days, to explain all outstanding tree protection measures detailed in this method statement.

2.6. A copy of this method statement shall be supplied to all site personnel who have control over works of any nature within the Root Protection Areas (RPAs) of trees to be retained, or within the footprints of their canopies. The contractor will provide adequate instruction on its implementation for all relevant staff. This instruction will be carried out by, or to the approval of, the arboricultural consultant.

Order	Works	Details at Section:	Arb. supervision required:
1	Pre-commencement site meeting	2	Yes
3	Erection of protective fencing; protective trunk wrapping for trees 4, 5, 6 and 7.	4	Yes
4	Break out and removal of existing boundary wall adjacent to off-site trees nos. 4-7.	5	Yes
6	Removal and replacement of existing hard surfacing within the RPAs of off-site trees nos. 4-7.	5 & 7	Yes
11	Clearance of machinery/materials from site, reinstatement and landscaping.	9	-
12	Removal of protective fencing.	9	-

Table 2 Sequence of works (relevant to protection)

3. Tree works

3.1. The amendments to the proposed layout since our previous method statement now mean that no existing trees need to be removed or pruned.

4. Protective fencing

4.1. No site clearance, demolition or construction shall commence on site, and no demolition or construction vehicles or plant will enter the site until the RPAs of the trees to be retained have been safeguarded by the erection of protective fencing to the specification recommended in BS 5837:2012, Section 6.2.2, as shown in Figure 3 of that document (see **Figure 1** below). Site hoarding, if appropriate, could also act as effective tree protection fencing.

4.2. The protective fencing will be located in the positions shown by the **continuous bold blue lines** on the TPP.

4.3. Scaffolding construction shall be to BS EN 12811-1:2003; uprights shall be at minimum 3.5m centres and every other one shall be supported on the side closest to the trees by struts braced to the ground at an angle of 45°. If used, 'Heras' panels shall be secured to two cross members between the uprights with heavy-duty cable ties. Notices stating "Tree Protection Zone, Keep Out!" will be attached to every third panel with cable ties.

4.4. The protective fencing shall be at least 2.1m in height, comprising "Heras" welded mesh panels; every other one braced with a 45 degree strut that is pinned to the ground; and seated in concrete or plastic bases pinned to the ground by scaffold uprights sunk to a minimum depth of 600mm. Individual panels will be fixed to each other with at least two clamps, one of which will be a security clamp. "TREE PROTECTION ZONE - KEEP OUT" or similar notices will be attached to every third panel with cable ties.

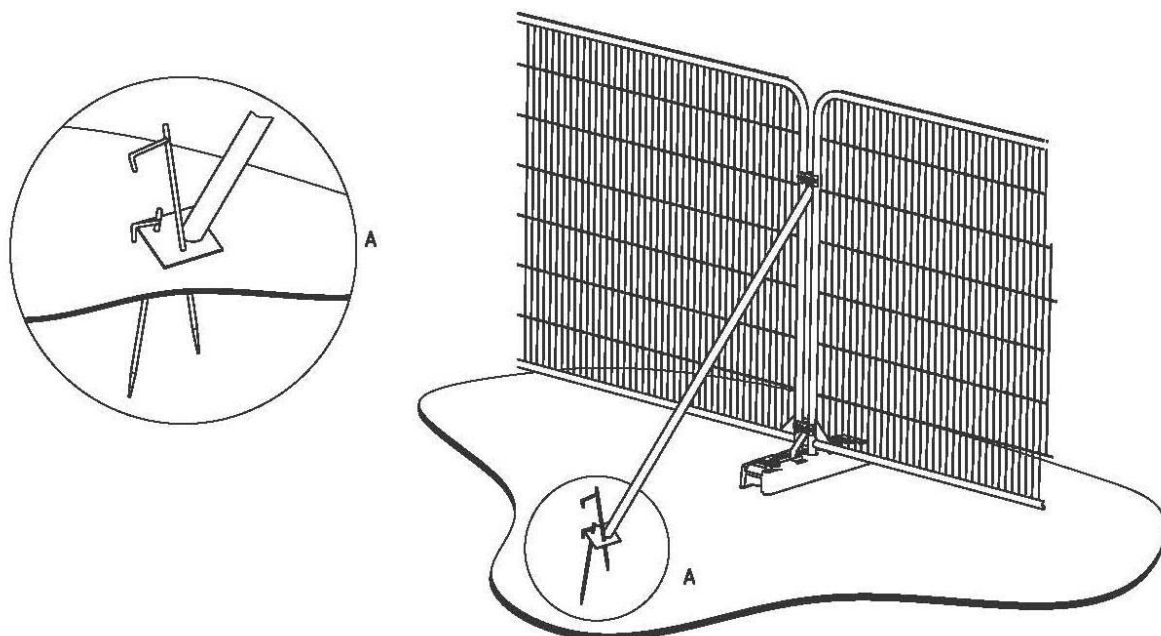


Figure 1 Protective fencing
(Based on Figure 3, BS 5837:2012)

4.5. No activity will take place within the Construction Exclusion Zones ("CEZs") behind the fencing: no equipment or materials will be stored, and no vehicles, plant or personnel shall enter these areas. Ground levels will not be changed within them, and existing vegetation and topsoil will be left undisturbed.

4.6. Areas for the storage of materials shall be outside the CEZs. Oil, bitumen, diesel, and cement shall not be stored, mixed or discharged onto the ground within 10m of the trunks of any trees. Areas for the storage or mixing of such materials shall be agreed at the pre-commencement meeting.

4.7. No notice boards, or power or telephone cables, shall be attached to any of the trees. No fires shall be lit where their flames could extend to within 5m of any parts of trees.

4.8. In the event that the protective fencing accidentally damaged or knocked over, those sections will immediately be cordoned off with high visibility plastic mesh fencing. The damaged sections then will be repaired or replaced within 48 hours (2 working days). All instances of damage and re-instatement shall be recorded and immediately reported to the arboricultural consultant.

4.9. Once the protective fencing has been erected, the arboricultural consultant will visit the site and inspect it. He will record the position of the fencing and the condition of the retained trees. If it complies with this statement, the arboricultural consultant will 'sign off' the fencing to the contractor and copy this (in writing) to the developer. (See also 'Supervision and Monitoring' below.)

4.10. The protective fencing will not be moved or re-located without the prior approval of the arboricultural consultant. It will only be removed once all construction works are completed: the arboricultural consultant will be informed in advance of when it is intended to remove the fencing.

5. Demolition and site preparation

5.1. Existing areas of hard surfacing to be removed overlay the RPAs of four off-site trees to be retained. These are listed at **Table 3** below.

Tree no.	Species	Description
4	Swedish whitebeam	Removal of existing private car park hard surfacing and boundary wall
5	Flowering cherry	
6	Swedish whitebeam	
7	Common lime	

Table 3: Demolition works that are within RPAs

5.2. The existing boundary wall and car park hard surfacing to be demolished/removed that are within the RPAs of the four trees listed at **Table 3** shall be excavated and removed with care, under the control and supervision of the arboricultural consultant.

5.3. Those parts of the existing hard surfacing and boundary wall that are within the RPAs of adjacent trees nos. 3, 4, 5 and 6 shall be removed either by hand (wall foundations shall be broken up using a hand-held breaker, and be lifted by hand or excavated using hand tools), or by an excavator fitted with a toothless bucket standing either on the existing surface or outside the RPAs in order not to disturb tree roots that may be present beneath it. This exercise will be undertaken under the control of the arboricultural consultant to ensure that the soil beneath the hard surface is not disturbed in any way.

5.4. If any roots of less than 25mm diameter are encountered they shall be cut cleanly by the arboricultural consultant. If roots of 25mm diameter and above are found, they shall be covered with clean dry Hessian sacking to prevent desiccation. This will be removed only directly prior to backfilling, and this will be done by surrounding roots with a minimum depth of 50mm of topsoil and sharp sand (builders' sand will not be used as it has a high salt content which is toxic to tree roots).

5.5. Where underground structures that are or will become redundant are present within RPAs, these will be sealed off where possible so that the need for excavation is avoided.

6. Installation of underground services

6.1. All underground service and drainage routes shall be located so that no excavation is required within RPAs.

7. Construction of permanent hard surfaces

7.1. In order to prevent unacceptable root damage, proposed areas of hard standing located within the RPAs of tree nos. 4 & 7 shall be constructed to the specification given below, in accordance with the recommendations of Section 7.4 of British Standard BS 5837. An illustration of these principles can be found at **Figure 2** below.

7.2. Within RPAs there shall be no lowering of existing soil level and no digging will be undertaken: all parts of proposed hard surfaces shall be constructed above existing ground level or within the sub-base of the existing surfacing. This is to ensure that roots are not severed, soil is not compacted, and oxygen can continue to reach roots beneath the engineered surface. No stripping of turf or topsoil shall be undertaken: herbaceous (non-woody) vegetation should be cut as close to ground level as possible and be raked off by hand; shrubs will be grubbed out using hand tools, and tree stumps will be ground out rather than dug or grubbed out.

7.3. Any hollows shall be filled with sharp sand; and to prevent compaction of the soil structure, a biaxial geotextile grid (**‘geogrid’**, such as ‘Tensar’) or a permeable **geotextile membrane** (such as ‘Treetex’ or ‘Terram’) of an appropriate specification for the particular characteristics of the soil and for anticipated loads shall be laid on the ground beneath the footprint of the proposed hard surface, and be secured with pegs or pins driven through it into the ground.

7.4. Edge supports of an appropriate size and strength should be laid above ground level, on top of the geogrid, either on a concrete haunching, or flat on the geogrid itself, secured with pegs or pins driven into the ground. If concrete haunching is used, a strip of heavy-duty polythene will be laid beneath it, on top of the geogrid, to prevent the leaching of wet cement into the soil. The outer side of the edge supports should be banked up with topsoil, graded down to existing ground level.

7.5. A perforated cellular confinement system ('**geoweb**') shall then be laid above this. The grade and type of this web shall be selected by a structural engineer to ensure that anticipated loads can be supported without causing any additional compaction of the soil structure beneath.

7.6. The geoweb shall be filled with an angular aggregate with a particle size of between 15mm and 40mm, with no fines (in order to permit vertical gaseous diffusion). Care will be taken that trucks do not drive onto the area to deposit the aggregate; it should be tipped at the edge of the area and then pushed into position and compacted so that machinery moves only on the sub-base and not on the ground either side of it.

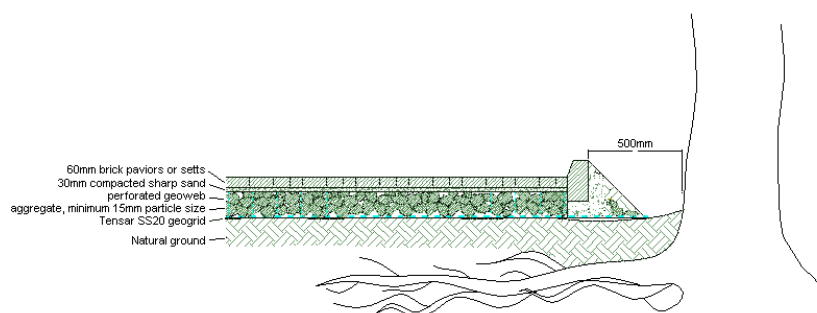


Figure 1 Illustration of a typical above-soil hard surface next to trees.

7.7. The section of existing boundary wall south of trees nos. 4-7 shall be carefully demolished and the foundations removed (if desirable). In order to minimise negative impacts or damage to the retained trees existing foundations shall be dug out by hand, using spades, shovels, forks or picks. Any roots of less than 25mm diameter that are encountered will be cut cleanly by the arboricultural consultant. Any roots of 25mm diameter and above shall be excavated and exposed using a compressed air soil pick, in order to prevent bark wounding by spades or shovels etc. The arboricultural consultant supervising this exercise will then decide whether it is necessary and/or feasible to retain these roots and cut them cleanly if not. If such roots can be retained, they shall be protected as described in "Installation of Underground Services" above.

8. Landscaping and reinstatement

8.1. Care will be taken to ensure that landscaping and reinstatement do not cause any damage to the existing trees. Prior to the commencement of any landscaping works within RPAs the developer will convene a site meeting to be attended by the site manager or agent, the landscape contractor, the fencing contractor and the arboricultural consultant. The methods of tree protection outlined in this section of the arboricultural method statement shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement shall be recorded and circulated to all parties in writing.

8.2. Within RPAs the following points shall be observed:

- Ground levels will not be changed.
- Only lightweight plant or vehicles shall enter the RPAs.
- No fuels or chemicals shall be brought into or stored within these areas.
- Digging (for fence posts etc.) shall be done by hand. Any roots of 25mm diameter and above that are encountered shall not be cut: if such sized roots are found the position of the proposed post will be re-located. Any smaller roots shall be cut cleanly. All roots exposed should be backfilled with sharp sand on the same day they are uncovered.
- No parts of any fencing shall be nailed or otherwise attached to any parts of the retained trees.
- Unwanted vegetation shall be removed manually or by using chemicals that cannot damage the roots of the trees.
- No irrigation or drainage pipes shall be installed within RPAs.

9. Supervision and monitoring

9.1. Once the protective fencing has been erected and the trunk wrapping has been fitted, the arboricultural consultant will visit the site and inspect these tree protection measures. In the event that the specification or location of these items does not comply with this method statement, the arboricultural consultant will inform the fencing

contractor, and adjustments will be made. Once compliance is achieved, the arboricultural consultant will 'sign off' the tree protection measures to the contractor and copy this (in writing) to the client.

9.2. Throughout the construction process the arboricultural consultant will monitor the condition of the trees, and the integrity and effectiveness of the protective fencing and trunk wrapping. He will visit the site at appropriate intervals as agreed with the LPA Tree Officer at the pre-commencement meeting, to ensure that the protection measures outlined in this document are adhered to; and will contact the site manager or agent on a regular basis whilst ground works are being undertaken to ascertain what works are planned for the coming week and whether any of these require arboricultural input or supervision. Records of all monitoring and supervisory visits will be made and will be forwarded to the client and copied to the LPA.

9.3. The arboricultural consultant shall directly supervise all works that have to be undertaken within RPAs. These include:

- location of protective fencing
- fitting of protective trunk wrapping
- demolition of existing boundary wall and removal of existing hard surfacing
- excavation for foundations
- construction of new hard surfacing

9.4. The project or site manager will give the arboricultural consultant at least 48 hours written notice of the date of intended construction of any proposed buildings or structures, underground service runs, or areas of hard surfacing that are within the RPAs of any of the trees, so that he/she can attend.

9.5. All drawings or revised drawings issued to the site agent or to sub-contractors, that show details of any works within or abutting RPAs or beneath the crowns of trees are to be referred in advance to the arboricultural consultant to enable him to advise on any changes to the impact on trees that these drawings may cause, and to be able to provide solutions to avoid or minimise any further tree damage. All such drawings will be approved in writing by the arboricultural consultant before works within or abutting RPAs are proceeded with.

9.6. The arboricultural consultant will issue variation orders to the client in the case of any agreed changes to this method statement, and non-compliance notices in any

cases of substantial deviation from the statement. These will be recorded in a final completion statement suitable for submission to the LPA if required.

SJAtrees

December 2020

APPENDIX 1

Tree Survey Schedule



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Tree Survey Schedule

Avon Road, Littlehampton

November 2020

Ref: SJA tss 20578-01

Tree Survey Schedule: Explanatory Notes

Avon Road, Littlehampton

This schedule is based on a tree inspection undertaken by James Bradford of SJATrees (the trading name of Simon Jones Associates Ltd.), on Friday the 20th November 2020. Weather conditions at the time were overcast, but dry. Deciduous trees were in partial leaf.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

1. Tree no.

Given in sequential order, commencing at "1".

2. Species.

'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

3. Height.

Estimated with the aid of a hypsometer, given in metres.

4. Trunk diameter.

Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

5. Radial crown spread.

The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

6. Crown break.

Height above ground and direction of growth of first significant live branch.

7. Crown clearance.

Distance from adjacent ground level to lowest part of lowest branch, in metres.

8. Age class.

Young: Age less than 1/3 life expectancy

Semi-mature: 1/3 to 2/3 life expectancy

Mature: Over 2/3 life expectancy

Over-mature: Mature, and in a state of decline

Veteran: Mature, with a large trunk diameter for the species; but showing signs of ancientness, irrespective of actual age, with decay or hollowing, and a crown that has undergone some retrenchment and has a structure characteristic of the latter stages of life.

Ancient: Beyond the typical age range and with a very large trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.

9. Physiology.

Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

10. Structure.

Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.

Very good: No significant physiological or structural defects, an upright and reasonably symmetrical structure; a particularly good example of its species.

Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.

Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of collapse.

Hazardous: Significant and irremediable physiological or pathological defects, with a risk of imminent collapse.

11. Comments.

Where appropriate comments have been made relating to:

-Health and condition

-Safety, particularly close to areas of public access

-Structure and form

-Estimated life expectancy or potential

-Visibility and impact in the local landscape

12. Category.

Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

Category U: Trees 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, including those that will become unviable after removal of other category 'U' trees (e.g. where, for whatever 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.

Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.

- (1) Trees that are particularly good examples of their species, especially if rare or unusual.
- (2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- (3) 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 at least 20 years.

- (1) 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 minor 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.
- (2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
- (3) 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 150mm.

- (1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
- (2) 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.
- (3) Trees with no material limited conservation or other cultural value.

TREE SURVEY SCHEDULE

Avon Road, Littlehampton

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
1	Flowering cherry	8.5m	530mm	N 8.1m E 4m S 1.2m W 4.2m	2m	N 2m	Mature	Average	Indifferent	Off-site tree; slightly leaning trunk to N; wounding on trunk at 1.5m W; S canopy cut back from adjacent building; readily visible from Franciscan Way.	C (2)
2	Pin oak	8.5m	340mm	N 5.5m E 5m S 1.5m W 2m	3m	5m	Semi-mature	Average	Indifferent	Off-site tree; single trunk; multiple fully-occluded wounds on trunk from historic branch removal; asymmetrical crown as suppressed by adjacent specimens; readily visible from Franciscan Way.	C (2)
3	Rowan	7m	175mm	N 3.4m E 1.5m S 1.8m W 2.6m	2.5m	W 2.5m	Semi-mature	Average	Indifferent	Off-site tree; root girdling at base; slightly leaning trunk to SW; asymmetrical crown as suppressed by adjacent specimens; readily visible from Franciscan Way.	C (2)
4	Swedish whitebeam	8.5m	325mm	N 4.3m E 0.5m S 1.7m W 3.5m	2m N	N 2.5m	Semi-mature	Average	Moderate	Off-site tree; semi-occluded wounding at base E; S canopy has been historically cut back from adjacent building; one-sided crown as suppressed by adjacent specimens; readily visible from Franciscan Way.	C (2)
5	Flowering cherry	9m	620mm	N 8.2m E 3.9m S 5.1m W 3.6m	2m	N 2.5m S 4m	Mature	Average	Moderate	Off-site tree; many surface roots, damaged on upper sides, probably by mowers; tensile main crown break union at 2m where trunk divides into two co-dominant stems; established epicormic growth contributes to lower canopy; deadwood scattered throughout canopy, typical of age and species; N canopy overhangs pedestrian walkway adjacent to Franciscan Way, S canopy overhangs site boundary; readily visible from Franciscan Way; significant component of the group in which it stands.	B (2)
6	Swedish whitebeam	8m	320mm	N 4m E 1.7m S 4m W 0.6m	2.5m	S 3.5m	Semi-mature	Average	Moderate	Off-site tree; single trunk; S canopy overhangs site boundary; minor deadwood scattered throughout canopy, typical of age and species; readily visible from Franciscan Way.	C (12)
7	Common lime	9.5m	470mm	N 6.6m E 5.5m SE 5.3m S 4.2m W 3.4m	2m	SE 4m	Semi-mature	Average	Good	Off-site tree; single trunk; tensile main branch unions; minor deadwood scattered throughout canopy, typical of age and species; readily visible from Franciscan Way; S canopy overhangs site boundary; significant component of the group in which it stands; of long term potential.	B (2)
8	Cider gum	11m	500mm est.	N 8m E 8m S 6.4m W 5.1m	1.5m	W 2.5m	Semi-mature	Average	Indifferent	Off-site tree; unable to access tree to carry out thorough inspection; multi-stemmed from approx. 1.5m; stand alone specimen; readily visible from Franciscan Way and private car park.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio -logy	Structure	Comments	Category
G1	Leyland cypress	8m	Avg 200mm est.	N 2.5m E 2.5m S 2.5m W 2.5m	1m	2m	Semi-mature	Average	Indifferent	Off-site group of trees; unable to access trees to carry out thorough inspection; readily visible from Franciscan Way; 4 individuals in group.	C (2)
G2	Leyland cypress	9m	Avg 220mm est.	N 2.5m E 3m S 3m W 2.5m	1m	S 4m	Semi-mature	Average	Indifferent	Off-site group of trees; unable to access trees to carry out thorough inspection; S canopies overhang private car park; readily visible from Franciscan Way and private car park.	C (2)

Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

<i>Tree No.</i>	<i>Species</i>	<i>RPA</i>	<i>RPA Radius</i>
1	Flowering cherry	127.1m ²	6.4m
2	Pin oak	52.3m ²	4.1m
3	Rowan	13.9m ²	2.1m
4	Swedish whitebeam	47.8m ²	3.9m
5	Flowering cherry	173.9m ²	7.4m
6	Swedish whitebeam	46.3m ²	3.8m
7	Common lime	99.9m ²	5.6m
8	Cider gum	113.1m ²	6.0m
G1	Leyland cypress	18.1m ²	2.4m
G2	Leyland cypress	21.9m ²	2.6m

APPENDIX 2

Tree Protection Plan

Arboricultural Impacts: Summary	
(For details, see below)	
Impact	No. of Trees
Trees to be removed	0
Groups of trees to be removed	0
TPO trees to be removed	0
Trees to be pruned	0
Trees where manual excavation needed within RPAs	0
Trees where above soil surfacing needed within RPAs	2
Trees with proposed underground services within RPAs	0

Above Soil Surfacing

Proposed hard surfacing within RPAs of retained trees to be constructed in accordance with section 7.4 of BS 5837:2012. Trees in relation to design, demolition and construction - Recommendations. Other than the careful removal, using hand tools, of the existing surfacing, the new footway and cycle store will be installed above existing soil level, no deeper than the base of the existing surfacing it is replacing, so that the soil is not disturbed and no roots are severed; and an appropriate ground covering, possibly using a geoweb, a geoweb, or a combination of the two will be placed beneath the sub-base to minimise compaction of the soil in which tree roots are growing. Edge supports will also be installed above existing soil level.

Trees that require above soil surfacing within RPAs		
No.	Species	Type of structure
4	Swedish whitebeam	Replacement hard surfacing
7	Common lime	

Protective trunk wrapping

Protective wrappings shall be fitted to the trunks of off-site trees nos. 4, 5, 6 & 7, to prevent accidental damage by impacts from materials or machinery during demolition/construction. The trunk wrappings (shown by **blue circles**) shall consist of not less than three thicknesses of hessian around each trunk, surmounted by an outer layer of either two rounds of chestnut paling fencing, or 50mm X 25mm sawn battens arranged vertically around the trunk at intervals of no greater than 100mm, and held in place with galvanised staples and tightened 5mm multi-strand fencing wire. The trunk wrappings shall extend from as close as possible to ground level, up to a minimum height of 2m above ground on each tree. They shall be retained in place for the duration of demolition and construction operations, and shall not be removed until all works are completed, and all equipment and materials are removed from site.

Protective Fencing

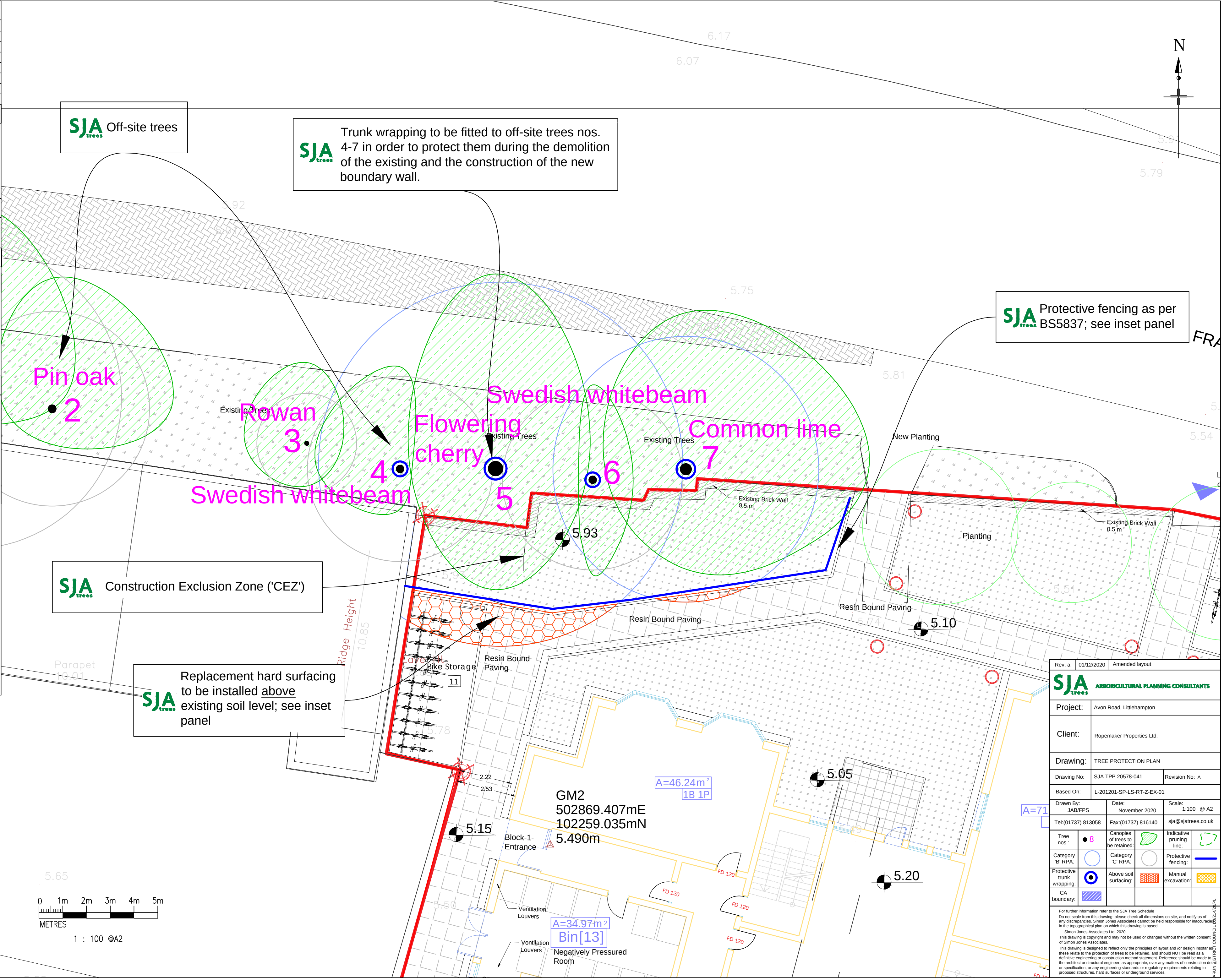
To be erected prior to the commencement of all works on site, and retained in place throughout construction. To comprise 2m tall 'Heras' welded mesh panels on rubber or concrete feet. The panels shall be joined together with two anti-tamper couplers, installed so that they can only be removed from inside the fence. Distance between the couplers should be at least 1m and should be uniform throughout the fence. Panels should be supported (where possible) on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 3a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts shall be mounted on a block tray (Figure 3b). "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached to every fifth panel.

Figure 3: Examples of above-ground stabilizing systems

Figure 3a: Stabilizer strut with base plate secured with ground pins

Figure 3b: Stabilizer strut mounted on block tray

TREE PROTECTIVE FENCING as shown in BS 5837: 2012, Section 6.2.2 & Figure 3.



Rev. a

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Amended layout

SJA

ARBORICULTURAL PLANNING CONSULTANTS

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Avon Road, Littlehampton

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Ropemaker Properties Ltd.

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TREE PROTECTION PLAN

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November 2020

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Tree nos.:

● 8

Canopies of trees to be retained:

Indicative pruning line:

Category 'B' RPA:

Category 'C' RPA:

Protective fencing:

Protective trunk wrapping:

Above soil surfacing:

Manual excavation:

CA boundary:

For further information refer to the SJA Tree Schedule

Do not scale from this drawing; please check all dimensions on site, and notify us of any discrepancies. Simon Jones Associates cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based.

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