

ARBORICULTURAL REPORT

BS5837: 2012 'Trees in relation to design, demolition and construction - recommendations'

SITE OF SURVEY

Skewen Former Snooker Club

CLIENTS

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DATES SURVEYED

14th. February 2020

Report valid for 60 months*

*Tree health notes valid 12 Months

SUMMARY

- The Tree Survey, Arboricultural Impact Assessment and Method Statement and Tree Protection Plan has been completed
- In order to construct the proposed design, no trees will require removal. The trees implicated are detailed in this report. Protection of retained trees is dependent on the full implementation of the Arboricultural Impact Assessment and Arboricultural Method Statement and any further site specific method statements that may be required.
- A chronology of events for arboricultural issues has been detailed in section 5 of this report and an Arboriculturalist will need to be appointed to act as a watching brief before the commencement of any construction work.
- As the trees surveyed are outside of the site the safe upkeep and health of these trees will rest with the owners who should be made aware of any defects or decline in health.

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Appendices and Attachments	Appendix 1 -Tree Schedule Key Appendix 2 - Tree Schedule Appendix 3 - Tree Survey Plan Appendix 4 - Site Specific Method Statements <u>Attachments sent separately by email</u> Tree Survey and Tree Protection Plan (AutoCad)

1. INTRODUCTION

1.1 ASSIGNMENT

We have been instructed by Dorian Payne of Castell Group Construction to undertake an Arboricultural Impact Assessment and Method Statement and Tree Protection Plan for development purposes in accordance with BS5837:2012 'Trees in relation to design, demolition and construction - recommendations'. This report is being prepared in order to support a planning application.

1.2 THE DEVELOPMENT PROPOSALS

The planning application is for the demolition of the existing buildings and construction three blocks of flats with access roads and parking spaces as detailed in the proposed site plan received (Drawing No. 1428-SK-5-02 Skewen Former Snooker Club Proposed site plan) supplied by Ceri Griffiths Partner Kennedy James Griffiths

1.3 REPORT METHODOLOGY

The methodology for preparing this report is in accordance with BS5837:2012 'Trees in relation to design, demolition and construction - recommendations' is as follows:-

Tree Survey Plan

The purpose of the Tree Survey is to identify all trees on site that may be within influential distance of any proposed development. The plan will record the condition of the trees, their quality and benefits within the context of the development and their above and below ground constraints in relation to both the site and any proposed development.

Arboricultural Impact Assessment and Method Statement

The purpose of this part of the report is to identify, evaluate and possibly mitigate the extent of any direct and indirect impacts on the trees. It will also identify any potential impacts of the trees on the proposed development.

Tree Protection Plan

The Tree Protection Plan shows all necessary aspects of tree protection that is required during the development process.

1.4 DOCUMENTS AND INFORMATION PROVIDED

We were provided with electronic scale plans of the site by Ceri Griffiths Partner Kennedy James Griffiths

1.5 LIMITATIONS AND DISCLAIMER

Trees are living organisms whose health and condition can change rapidly. The conclusions and recommendations in this report are only valid for one year. Any changes carried out to the site as it stands at present, prior to planning approval, eg building of extensions, excavation works, importing of soils, extreme weather events etc will invalidate this report.

Visual tree assessment has been undertaken from ground level utilising aids such as binoculars, sounding hammer and probes where necessary.

We have no connection with any of the parties involved in this situation that could influence the opinions expressed in this report.

2. THE SITE

2.1 SITE VISIT

We carried out a site visit on 10th February 2020 there are no significant changes in the trees.

2.2 SITE DESCRIPTION

The site is currently occupied by a derelict snooker hall and is within a residential area. There are four main trees all located just outside of the boundary of the site highlighted in red on the image below.



2.3 LEGAL CONSTRAINTS

It is not known if the trees are located in a Conservation area or are designated with a Tree Preservation Order.

Conservation Area

In Conservation Areas, trees of a diameter greater than 75mm, measured at 1.5m from ground level are automatically protected (except in certain circumstances) under the Town and Country Planning Act 1990. Notice of intent is required to be given to the Local Planning Authority (LPA) before work is carried out. An application form can be downloaded from the LPA website. The LPA has six weeks to decide whether the tree should be made subject to a Tree Preservation Order. If the LPA do not respond within the six week period, then the tree work that has been applied for may proceed.

If an application for work is refused and a Tree Preservation Order is designated to the trees, the applicant has a right of appeal to the Secretary of State under the provisions of section 78 of the Town and Country Planning Act 1990 (as amended).

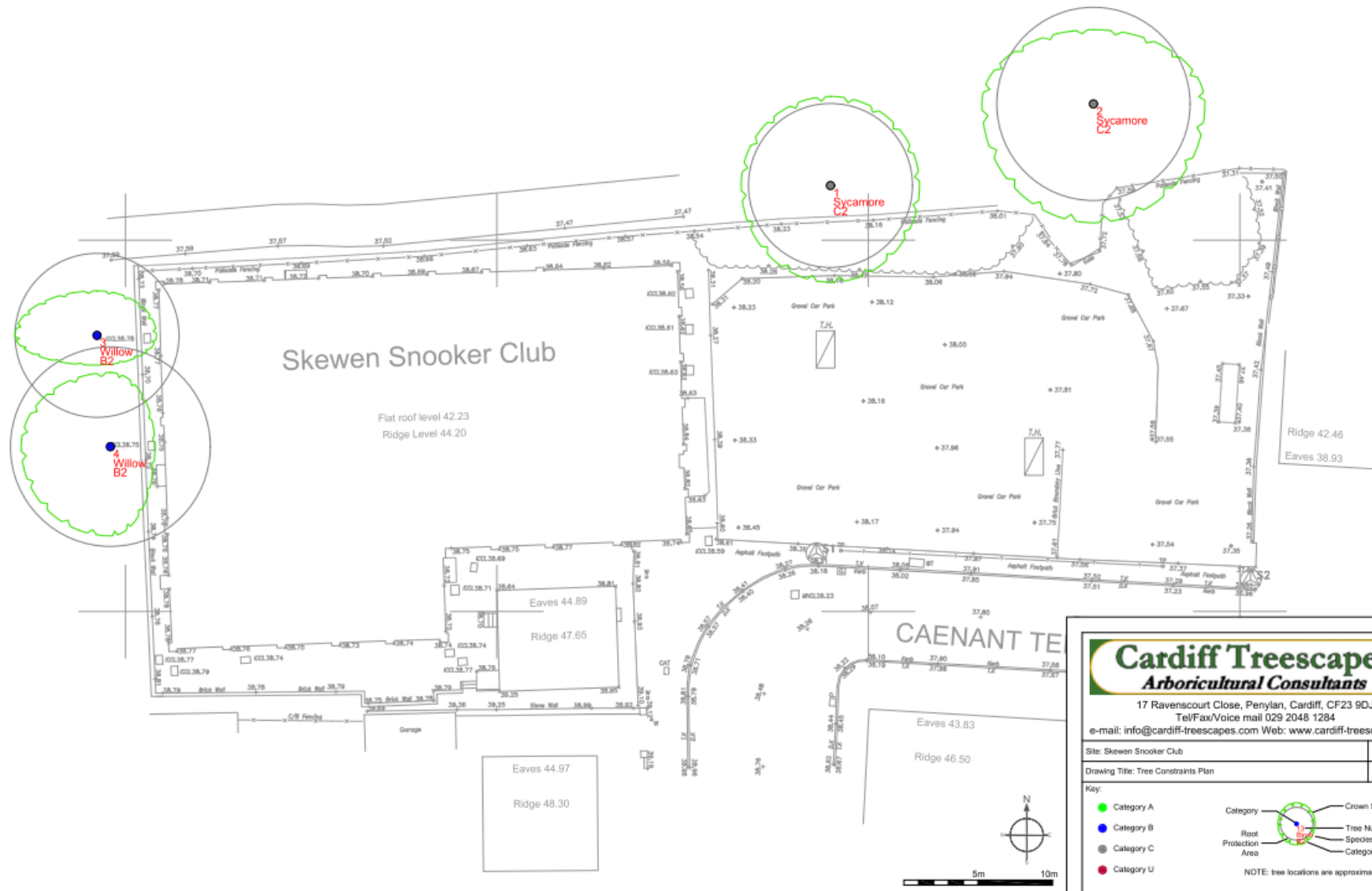
Tree Preservation Order (TPO)

A Tree Preservation Order is made by the Local Planning Authority which in general makes it an offence under the Town & Country Planning Act 1990, to cut down, top, lop, uproot, willfully damage or willfully destroy a tree without the planning authority's permission.

It will be necessary to apply to the Local Planning Authority (LPA) for permission to carry out any work on these trees. The LPA has eight weeks to respond to the application to either refuse or permit the work applied for. The LPA can also make alternative work recommendations.

If an application for work is refused, or allowed subject to conditions, or if the council fails to decide the application within 8 weeks, the applicant has a right of appeal to the Secretary of State under the provisions of section 78 of the Town and Country Planning Act 1990 (as amended)

Carrying out work on protected trees without permission from the LPA can result in fines of up to £20,000 per tree, if convicted in a magistrate's court and you have destroyed the tree or up to £2,500 for other offences.



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Site: Skewen Snooker Club	1-250@A3
Drawing Title: Tree Constraints Plan	Feb 2020

Key:

- Category A
- Category B
- Category C
- Category U

Category

Root Protection Area

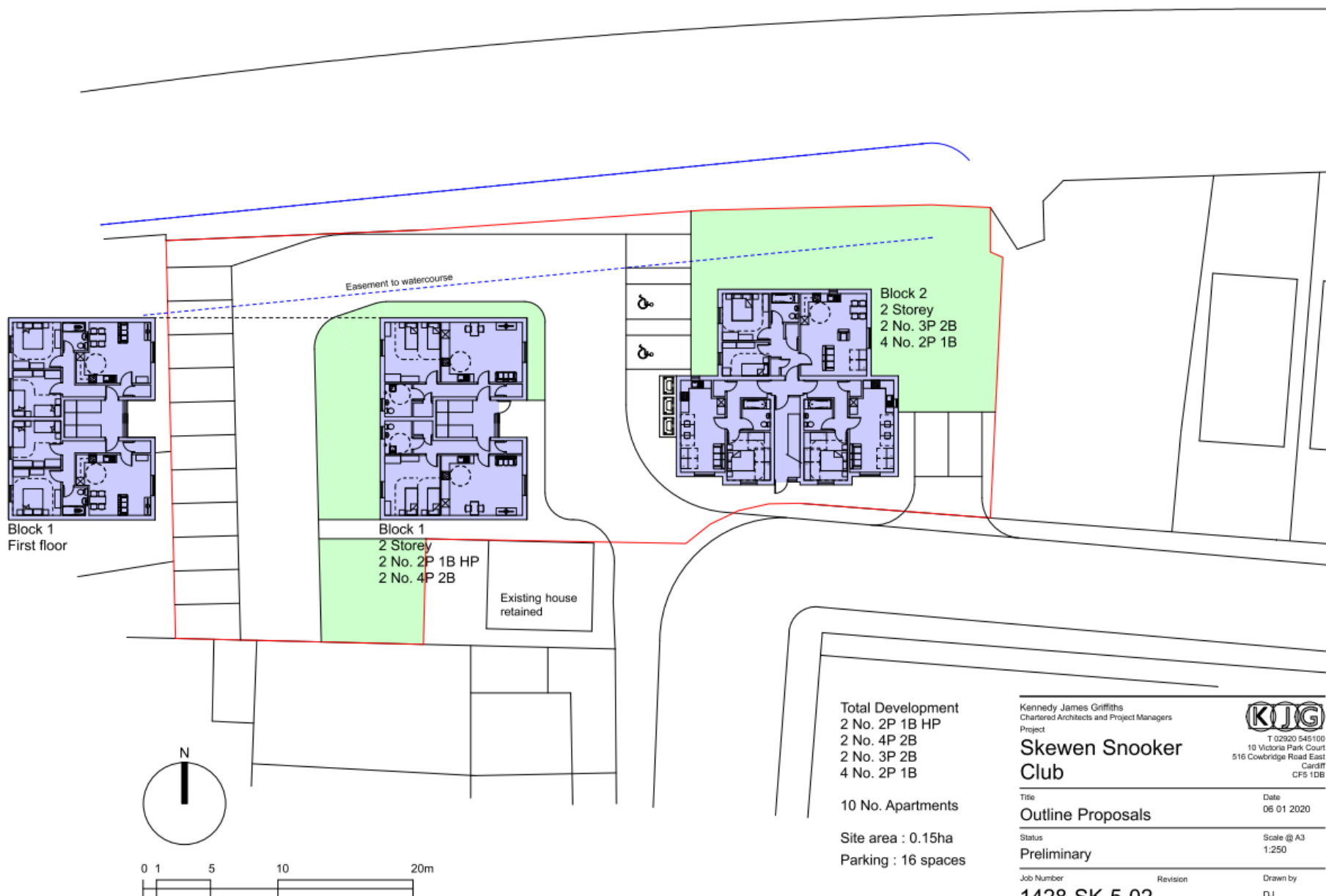
Crown Spread

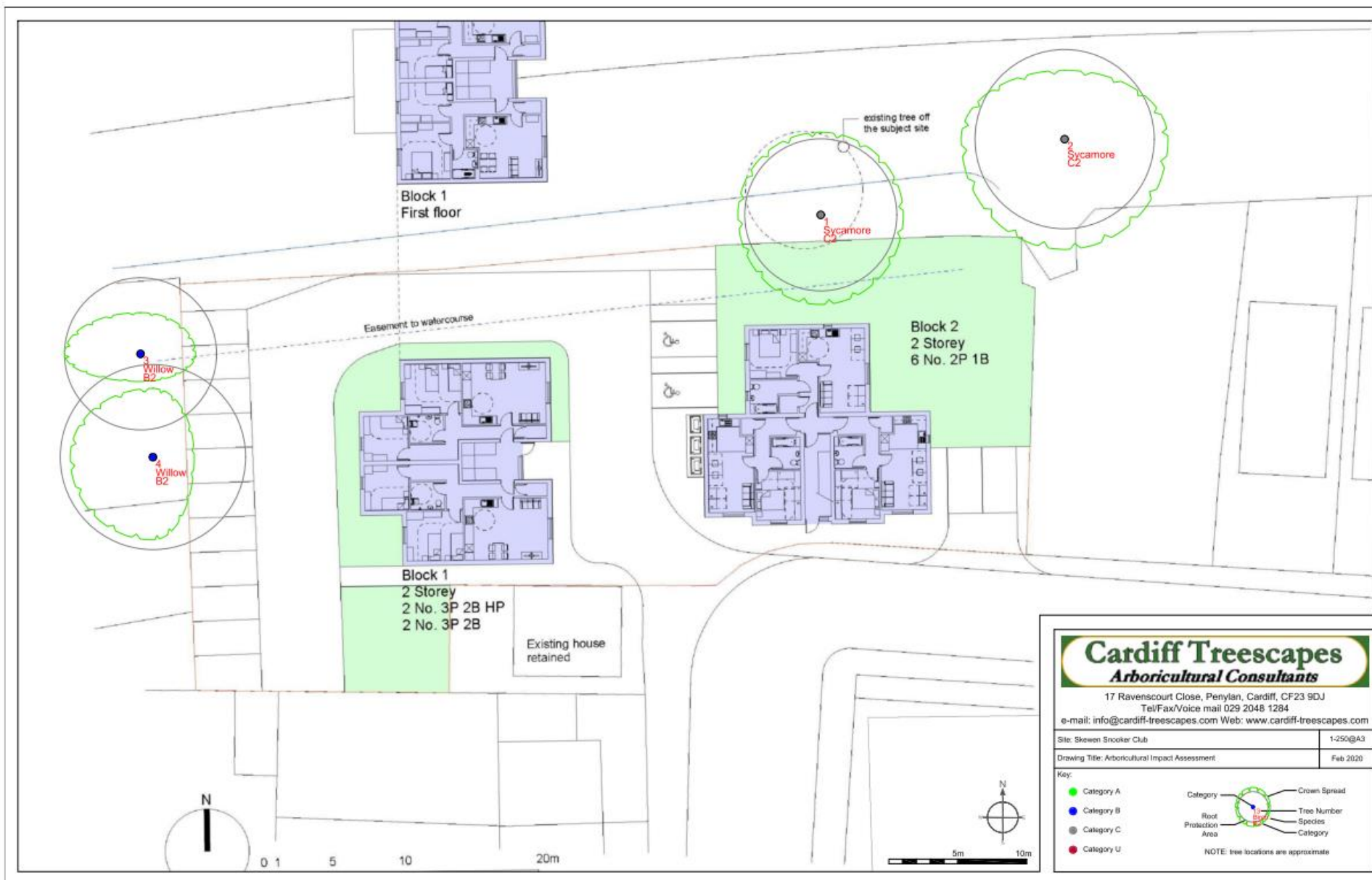
Tree Number

Species

Category

NOTE: tree locations are approximate





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Category

Crown Spread

Tree Number

Species

Category

NOTE: tree locations are approximate

3. ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

The trees, their crown spreads and root protection areas have been overlaid on the development proposal supplied. An impact assessment has been undertaken with reference to these plans

3.1 DIRECT LOSS OF TREES

The proposed site layout plan (see above) indicates that none of the trees will be lost as a consequence of this development.

3.2 CONSTRUCTION AND DEMOLITION WITHIN ROOT PROTECTION AREA OR CROWN SPREAD

It appears from the plans supplied that there will be no significant disturbance to trees on site above or below ground. The root protection area of Tree 1 Sycamore that extends on to the site appears only to be used for recreational green space. Currently this area is surfaced with tarmac and if this is to be removed some care will be required to avoid root damage. A method statement for the removal of tarmac within a tree root protection area has been included within the appendices and should be used as a guide for site contractors undertaking this work.

It also appears that the root protection areas of Trees 3 and 4 (Willow), located in a private, garden which extend on to site will be occupied with car parking. At present these areas are covered in hard surfacing and the existing building. If this surface is to be removed and replaced this will need to be undertaken with care and in accordance with the method statement within the appendices.

The use of machinery and plant on site during the construction phase seem unlikely to affect any of the trees but guidance notes for the protection of trees outside of the site has been included (3.9).

Similarly the demolition of the existing building will need to be undertaken with care to avoid damage to tree surveyed (3.9)

3.3 TREWORK AND ECOLOGY

Bats, nesting birds and some mammals are protected under the Conservation of Habitats and Species Regulations 2010, Wildlife and Countryside Act 1981 and (as amended) Wildlife and Countryside Act 2000. A risk assessment will be required prior to commencement of any tree work or felling to assess the likelihood of disturbing or endangering any protected wildlife or habitat. If any protected species are present in any of the trees, or if the tree has a known bird or bat roost, then consultation with the Statutory Nature Conservation Organisation (SNCO) must be undertaken prior to commencement of work.

3.4 TREE PROTECTIVE BARRIERS

The four trees close to the development site are currently located behind either metal pallisade fencing or a concrete garden wall and no further protection measures are required other than exercising caution if and when working within the root protection areas as detailed in the method statements supplied.

3.5 ON SITE STORAGE OF SPOIL, BUILDING AND TOXIC MATERIALS

Prior to and during construction works on site, no spoil or construction materials will be stored within the root protection area of any tree on site or within the adjacent land.

Any facilities for the storage of oils, fuels or chemicals will have to be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound will have to be at least equivalent to the capacity of the tank plus 10%. In case of accidental leakage, the compound will have to be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks plus 10%. All filling points, vents, gauges and sight glasses will have to be located within the bund. The drainage system of the bund will have to be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work will have to be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets will have to be detailed to discharge downwards into the bund.

3.6 CHANGES IN GROUND LEVEL

Ground level changes must be avoided within the root protection area of Hedgerow 4 .

3.7 INSTALLATION OF SERVICES

Service runs have not been indicated on the proposed plans although it is not expected that there will be the need for any service runs within the root protection areas of any retained trees on site.

3.8 LANDSCAPING

The landscape schedule should include for the planting of trees and shrubs to enhance the development.

3.9 GENERAL CONSTRUCTION OUTSIDE RPA

- a) Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times.
- b) Material which will contaminate the soil, eg concrete mixings, diesel oil and vehicle washings should not be discharged within 10m of the tree root protection area..
- c) Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and wind direction.
- d) Notice boards, telephone cables or other services should not be attached to any part of the tree.
- e) It is essential that allowances should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards the trees.

4. SITE MONITORING

Once planning permission has been granted it is important that an open line of communication is maintained between the Contractors, the appointed Arboriculturalist and the Local Planning Authority.

The Arboriculturalist should be called upon to give advice and act as a watching brief where the trees are likely to be impacted by construction operations.

During the period of intensive construction, it is advisable that the Arboriculturalist is contacted should any issues related to retained trees arise. Site visit inspection sheets should be completed and made available to the developer, tree officer and contractors.

5. CHRONOLOGY OF EVENTS FOR ARBORICULTURAL WORK

PLANNING STAGE

- 1 Tree Survey – completed.
- 2 Arboricultural Impact Assessment, Method Statements and Tree Protection Plan – completed.

Preparation of further site specific method statements, if required.

PRE-CONSTRUCTION PHASE

Supply all main contractors with a copy of the Tree Survey report including the Arboricultural Impact Assessment, Arboricultural Method Statement and the Tree protection Plan.

Inform all site staff and contractors of tree protection implications and restrictions, within the site induction system.

Carry out tree work once planning permission has been granted.

Initial meeting between Construction Contractors, Developers and the appointed Arboriculturalist to clarify tree issues.

Site inspection by the Arboriculturalist before construction begins.

CONSTRUCTION PERIOD

Site inspection by appointed the Arboriculturalist as required.

On completion of the main construction period inspect trees for any damage

Carry out landscaping, replanting and light construction work and ameliorate any soil root area compaction.

POST CONSTRUCTION

Regularly inspect the trees every 2.5 years to monitor condition and assess for hazard risk.* (Owners responsibility)

APPENDIX 1

TREE SCHEDULE KEY

The trees and groups of trees at the site have been assessed as per the recommendations set out in BS 5837 2012.

Type	Represents the type of vegetation being assessed. These are Tree (T), Group (G), Stump (S), Woodland (W)
Tag No	Each tree has been marked by a numbered tag for on site identification. Where possible this number is related to, or similar to the given tree number. There may be occasions when the tag number bears no relationship to the tree number, but is still useful for on site identification
Common Name Botanical Name	The tree species have been identified and both common and botanical names are given.
Age	Young – (Shown as Y in the schedule) juvenile tree with dominant leading shoot growth and short side branches. Vigorous growth and often of conical form. Semi-mature – (Shown as SM in the schedule) young adult tree, leading shoot growth may not always be dominant but side branches are usually ascending. Vigorous growth, flower and seed production. Minimal deadwood. Early maturity – (Shown as EM in the schedule) adult tree with the main framework of the crown formed. Not yet at full dimensions. Vigorous growth and some shedding of inner branches and deadwood. Horizontal side branches. Mature – (Shown as M in the schedule) adult tree at full crown volume and dimensions. Maximum flower and seed production. Dead wood likely within the crown and reiteration growth in the lower canopy. Over mature – (Shown as OM in the schedule) loss of overall vigor and reduction of full dimensions due to limb loss and branch tip die back. Major dead wood within the crown and possible hollowing and cavities. Retrenchment of the crown through increased reiteration growth on the lower branches. Veteran / Ancient – (Shown as V in the schedule) a tree that has passed beyond maturity and is old in comparison with other trees of the same species. They often have decayed or hollow stems and branches and abundant deadwood. They are important for heritage, landscape and ecological value.

Height (m)	Where site lines allow, tree height has been calculated by means of a laser clinometer and recorded in metres. If the use of a laser clinometer is restricted due to confined space or obscuring vegetation, the height of the tree may be estimated based on the surveyor's experience. Adjacent trees or buildings with a clear view may be measured and used as a height scale. Where several trees are located in close proximity, one tree may be measured and the other trees estimated using the measured tree as a reference.
Diameter (mm)	The stem diameter is measured in millimetres in accordance with Annex C of BS5837 2012.
Stems	The number of stems are recorded, eg 1, 2, 3 etc.
Crown Height (m)	Is the distance from the lowest point of the crown from ground level.
FSB Height (m) /Direction	The height of the First Significant Branch (FSB) is recorded in metres and the direction of growth is in relation to the cardinal points of the compass.
North (m) South (m) East (m) West (m) (Crown Spread)	As it is rare that a tree's crown is asymmetric, the crown spread is measured at the four cardinal points of the compass to give an estimated representation of the crown spread which is then recorded on the tree survey plan.

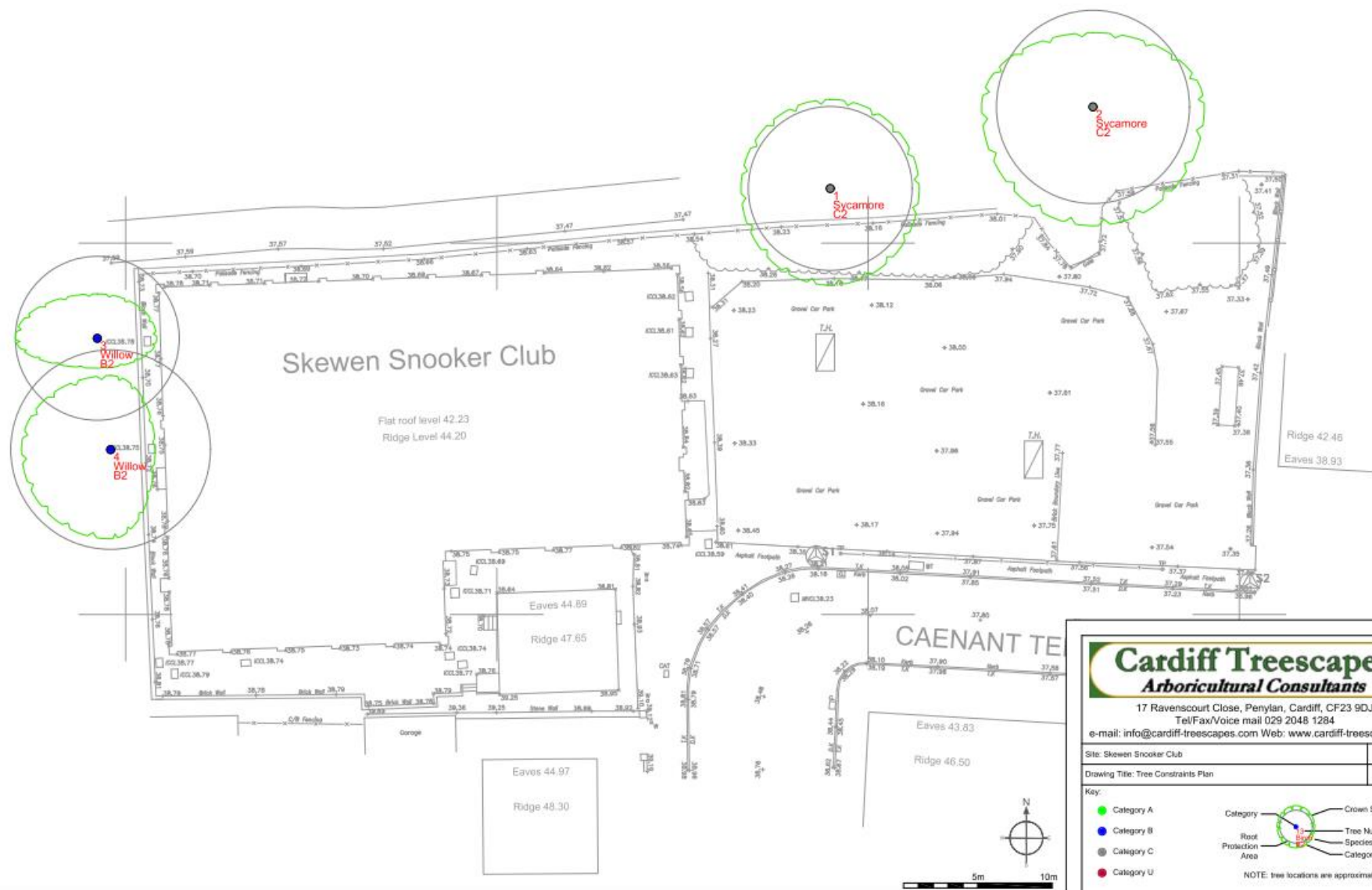
Condition	<u>Physiological Condition</u> Each tree has undergone a brief preliminary visual inspection from ground level. This information is only relevant at the time of inspection because circumstances influencing a tree's condition can change rapidly. This section is divided into two separate sections: G = Good – fully foliated/twigged canopy for the tree's situation with an indication of natural vigor from shoot extension growth and signs of good vitality throughout the tree's system. F = Fair – signs of adequate vigour and vitality up to 70% canopy coverage. May show signs of slight stress such as branch tip die back, slightly sparse foliage, yellow or small foliage. Stress may be alleviated by prescribed maintenance. P = Poor – obvious signs of advance stress including less than 70% canopy coverage, crown die back, significant deadwood. Sparse and discoloured foliage. D = Dead – moribund or dead trees
Comments	<u>Structural Condition</u> Any structural defects are noted such as splits, cracks, tight forks, rubbing branches, cavities, decay and the presence of pests or diseases. These may compromise the mechanical integrity of the tree's structure. (Veteran trees may pose many physiological and structural faults yet still be considered in good condition for their age.)
Recommendations	Following visual inspection preliminary recommended action, further detailed inspection, or maintenance may be prescribed.
RPR (m) Root Protection Radius	This is calculated from Annex D of BS 5837 2012 'Trees in relation to construction - Recommendations'.
RPA (m) Root Protection Area	This measurement is the total area of root protection. This can be modified if necessary by the Arboriculturalist.

Category	The tree's overall value is categorised in accordance to the cascade chart (table 1) of BS 5837 2005, see Appendix 2 of this report. In brief, the purpose of the tree categorisation is to identify and quantify the value of the existing tree stock. This will allow informed decisions to be made concerning which trees should be removed or retained should the development occur.
<u>Category A</u>	Trees of high quality and value that make a substantial contribution. Marked in light green on the tree survey plan.
<u>Category B</u>	Trees of moderate quality and value that make a significant contribution. Marked in mid blue on the tree survey plan.
<u>Category C</u>	Trees of low quality and value that provide only an adequate contribution. Marked in grey on the tree survey plan.
<u>Category U</u>	Trees in such a condition that any existing value would be lost within ten years. This includes trees that should be removed for good arboricultural reasons. Marked in dark red on the tree survey plan.

APPENDIX 2

TREE SCHEDULE

Tree Number	Tree tag number	Age	Type	Tree Name (species)	Botanical name	Condition	Crown height	Height	Trunk Dia. (mm)	Single stem (1) or multi-stem (m) *	North (m)	South (m)	East (m)	West (m)	BS Cat.	RPA radius (m)	RPA Area (m2)	Comments	Action	
1		EM	T	Sycamore	<i>Acer pseudoplatanus</i>	Good	2.5S	9	460	1	6	6.5	6	6	C2	5.52	95.7	Growing outside of boundary line 1.0m from fence on bank of water course. Stem forks at 0.3m and divides in to 4 main stems at 2.0m. Some damage at base of tree with possible early localised stem decay. Fork between stems is tight with some inclusion of bark. Crown contains normal amount of dead and crossing limbs for tree of this type and age	None	
2		EM	T	Sycamore	<i>Acer pseudoplatanus</i>	Good	2.0S	13	650	m	5	8	7.5	7.5	C2	6.50	132.7	Multi stemmed tree with heavy ivy growth obscuring stems and growing into lower crown. Growing on made up ground of railway embankment approximately 6.0m from boundary outside of site. Normal amount of dead and crossing limbs in crown for tree of this age with some tightly forked stem unions present	None	
3		EM	T	Willow	<i>Salix (alba ?)</i>	Good	3.0 E	10	460	1	3	2	4	5.5	B2	5.52	95.7	Growing in private garden adjacent to existing boundary wall and existing building. Recently reduced and re-shaped crown.	None	
4		EM	T	Willow	<i>Salix (alba ?)</i>	Good	2.5S	10	560	1	5	6	3	6	B2	6.72	141.9	Growing in private garden adjacent to existing boundary wall and existing building. Recently reduced and re-shaped crown.	None	



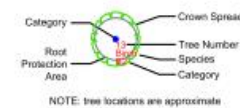
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Site: Skewen Snooker Club	1-250@A3
Drawing Title: Tree Constraints Plan	Feb 2020

Key:

- Category A
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SITE SPECIFIC ARBORICULTURAL METHOD STATEMENT

REMOVAL OF TARMAC SURFACING AND TREATMENT OF UNDERLYING GROUND BY SOIL AMELIORATION WITHIN THE ROOT PROTECTION

1. INTRODUCTION

- 1.1 This method statement describes the procedure to remove tarmac surfacing whilst exerting no adverse affects on underlying tree roots. It also includes a method of amelioration and de-compaction of the underlying soil.
- 1.2 This method statement must be read in conjunction with an appropriate site specific risk assessment.

2. METHODOLOGY

- 2.1 All vehicles, machinery or plant will remain outside the root protection area. The tarmac roadway adjacent to the tree may be used as access for light plant such as dumpers and compressors.
- 2.2 Materials which will contaminate the soil, eg diesel oil and petrol, will not be discharged within 10m of the tree stem or stored within the root protection area.
- 2.3 The existing tarmac surface will be broken up with extreme care using light machinery such as a hand held breaker. The chisel end of the breaker must not enter the underlying base material or soil
- 2.4 The broken tarmac surface may be carefully loosened with hand tools such as a mattock. The loosened sections can then be lifted by hand and disposed of accordingly to an area outside of the root protection area.
- 2.5 The sub surface base material will be broken up with the use of a specialised soil pick. This is designed to use high pressure air to loosen and remove soil and granular sub base material from around tree roots whilst avoiding physical damage to these roots. This will be carried out by an arboriculturalist experienced in below ground tree practices.
- 2.6 An experienced arboriculturalist will then remove as much of the sub base material as possible using small light weight hand tools.
- 2.7 Any small damaged roots below 10mm in diameter will be pruned using appropriate sharp secateurs by an experienced arboriculturalist.
- 2.8 The excavated sub base material will be disposed of accordingly outside the root protection area.

- 2.9 Any exposed fine surface roots will be covered immediately with damp Hessian to avoid drying out.
- 2.10 Any surface roots will be covered to a depth of no more than 10mm with a good quality graded top soil. This will be to recommendations in BS 3882 'specifications for top soil' 1994 such as NL10 Norfolk Sandy Loam or similar with the same specifications.
- 2.11 This soil will be spread by hand without tramping on exposed roots.
- 2.12 The area will then be aerated by an experienced arboriculturalist using a high air pressure soil pick designed for the purpose. These air injections will be at a distance of 1m apart on a grid pattern and to a depth of 40-60cms
- 2.13 Prior to carrying out the soil aeration, the client will inform the operator of any underground services located in the treatment area. Service plans will be made available to the operator by the client.
- 2.14 The operator will plan the works so as to avoid re-entering the previously treated area and establish an exit point prior to completion.
- 2.15 When aeration is completed, the area may be treated with a slow release nitrogen fertiliser to the Landscape Architect's specifications. A mulch may also be used such as well composted woodchips to a depth of no more than 3cms.
- 2.16 Further soil compaction of the prepared area from foot traffic, vehicles or machinery shall be avoided.

3. MATERIALS

3.1 Topsoil Backfill