Barton Hyett
Arboricultural Consultants

ARBORICULTURAL SURVEY REPORT AND METHOD STATEMENT

ON BEHALF OF

NICHOLAS MORLEY ARCHITECTS

FOR

A MULTI USE GAMES AREA

AT

NORMAN SCOTT PARK, CONISTON ROAD, PATCHWAY

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APPEDICES

REVISIONS:

Date	Rev	Description of revision	Initials
6/11/18	-	First issue	IM

1. INTRODUCTION

1.1 I am instructed by Nicholas Morley Architects, to inspect the trees that could affect or be affected by the development proposal on land at Norman Scott Park, Coniston Road, Patchway; hereafter referred to as 'the site'. This report, in compliance with BS5837:2012 '*Trees in relation to design, demolition and construction - recommendations'* and is required to inform the planning decision.

1.2 The scope of my instruction was to visit the site and to survey relevant trees, hedges and shrub masses in accordance with BS5837:2012 *'Trees in relation to design, demolition and construction – recommendations'* and to prepare the following information:

- Tree survey summary
- Schedule of tree survey data
- Tree survey plan
- Arboricultural Method Statement
- Tree Protection Plan

2. REPORT LIMITATIONS

2.1 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.

2.2 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.

2.3 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 re-assessment of the trees and the site.

2.4 This report is prepared for planning application purposes only and does not evaluate the degree of risk posed by trees.

2.5 Trees are living organisms as well as self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. It is therefore not possible to categorically state that any tree is 'safe'.

2.6 It is beyond the scope of this report to comment in relation to structural damage – direct or indirect, existing or potential – that might be associated with vegetation growth, or vegetation-related soil subsidence or heave.

2.7 Any management recommendations set out within this report are of an advisory and preliminary nature only and relate to trees within the context of current site use. Any physical alterations to site conditions subsequent to the date of the site survey will have the potential to change/invalidate the findings and recommendations of this report.

3. ARBORICULTURAL SURVEY, FINDINGS AND ASSESSMENT

Site visit

3.1 I visited the site on 31ST October 2018. The weather at the time of the visit was overcast; these conditions in no way hindered my ability to view the trees. All observations were made from ground level (aided by the Visual Tree Assessment method – Mattheck and Breloer, 1994) and all dimensions were measured unless otherwise stated as estimated in the survey schedules.

Findings and Assessment

3.2 This report, tree survey schedule and accompanying Tree Protection Plan (BHA_458_01) at APPENDIX 1, has been produced to support a planning application for the replacement and extension of an existing multi-use games area (MUGA) at Norman Scott Park, Coniston Road, Patchway.

3.3 There are a number of planted boundary trees which could be impacted by the development.

Photo view 1: Picture of site looking south, with White Poplar T6 in centre.

3.4 A full tree survey compliant with the requirements of BS5837:2012 '*Trees in relation to design, demolition and* construction – *recommendations*' has been undertaken by a competent and qualified arboriculturist. The tree survey schedule is included with this brief report, and the results are shown on the Tree Protection Plan (APPENDIX 1).

3.5 The site is a recreation ground and public park. It is laid to sports and amenity lawn, with trees mainly close to the fenced boundaries. There are pedestrian and vehicular access points. The site is level. The existing MUGA is tarmac and fenced.

3.6 The proposal for the extended new MUGA sits largely within the existing footprint but shifts its southernmost point slightly away from the trees to the south and extends the footprint further to the northeast and northwest.

3.7 Twelve individual trees and three hedges were surveyed. These are Norway Maple, Lime spp., Sycamore (an interesting cut-leaved variety), White Poplar, Silver Birch and Downy Birch. All trees have been planted on the immediate inside of the fenced park boundary and are all B1 quality category trees. All trees will be retained. Three hawthorn and privet hedges grow around and immediately outside of the MUGA fence. These hedges would be removed, but they are C quality category and their removal would have no negative amenity impact.

3.8 The RPA of White Poplar T6 extends into the existing MUGA footprint. It is presumed that the existing MUGA has a compacted sub-base. Poplar species trees have highly vigorous and adaptable root systems which can cope with minor disturbance. The removal of the existing surface within the tree's RPA will have no impact on tree health or longevity. The proposed new footprint is outside of the tree's RPA.

3.9 The protection of tree RPAs during construction will be a simple matter of installing protective barrier fencing in the positions shown and specified on the Tree Protection Plan. For simplicity and continuation of footpath access 'out of hours', the fencing would be installed on the outside edge of the existing tarmac footpath. The footpath is one of the most popular public uses of the site and would allow this use to be maintained when construction work is not taking place. This would mean a small part of the RPA of Lime spp. Tree T9 remains unprotected, but this would have no negative impact on tree health or longevity of this early-mature tree.

3.10 A Grounds-man indicated that construction access for the new MUGA would be via the gated vehicular access from the lane to the rear of Windermere and Pretoria Roads, in the southernmost corner of the site. This access would be required to be the only construction access used, as access elsewhere could incur impacts on other trees at the site. Temporary ground protection will be required to protect parts of the RPAs of Poplar T6 and Birches T11 and T12, as shown and specified on the Tree Protection Plan.

3.11 There is ample space on site and outside of the RPAs of retained trees for site compound, storage of spoil, deliveries and other construction activities. Electricity supply will use existing within the MUGA footprint and outside of the RPAs of retained trees.

4. ARBORICULTURAL METHOD STATEMENT

Team attitude towards trees

4.1 The trees close to the new multi-use games area (MUGA) at Norman Scott Park should easily outlive us all but could be seriously damaged during the construction of this project, and so special measures will be taken to ensure this does not happen. The health and long life of the trees is important to the client, neighbours and the wider community. Planning permission for this development is conditional upon the physical protection of the trees from knocks and scuffs, breakages and root damage, and the protection of the soil in which they live needs to be protected from compaction and pollution.

4.2 Poor planning and site management can cause serious damage to a tree or its soil in a few minutes. Wounds will harm a tree's health and shorten its life by letting in disease-causing organisms. Soil damage through compaction, excavation or pollution will harm a tree's roots and cause it stress in its living environment. For often a few hundred years a tree cannot move out of the way of danger. It's up to us to keep danger away from it.

4.3 Damage to a tree can happen when corners are cut, work is rushed, or people are tired or distracted. Accidents can also happen when all eyes are focused on a task in hand, such as a delivery, and a tree is temporarily forgotten. Instead, we need to plan and work carefully around the trees and treat them with the respect they deserve. It all comes down to our attitude towards trees.

4.4 Your team should be encouraged from the outset to take pride in protecting the trees when working close to them. Making sure trees are not harmed and that they can outlive us all is one of the most rewarding parts of a 'job well done'.

4.5 The Arboricultural Consultant is on hand to help with questions or issues that might arise during planning or construction phases, either from client, contractors or staff. He can adjust this Method Statement in an approved way if necessary and help to find alternative ways of working around the tree to help the job get done and help ensure the planning consent is complied with.

General site management

4.6 It is the Project/Groundwork/Build Managers' responsibility to ensure that the detail of the arboricultural method statement and any agreed amendments are known and understood by all site personnel. A copy of this AMS and the accompanying Tree Protection Plan BHA_458_01 will be available for reference on site by the Project and Site Managers and will form the basis of the management of all works relating to the trees on the site following commencement of the project. The Site Manager shall induct all personnel who could have

an impact on trees on the content of this document. The Arboricultural Consultant is on hand to explain any aspect which is not understood by Managers.

4.7 It is the responsibility of the Project/Groundwork/Build Managers' and all site staff to ensure that any planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regard to tree protection is adopted on site.

4.8 The Lead Contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fencing and temporary ground protection will remain in position until completion of ALL construction works on the site.

4.9 It is the Project/Groundwork/Build Managers' responsibility to ensure that the Arboricultural Consultant is called upon: in good time to attend meetings; to advise on forthcoming operations; to agree dates/times for site meetings that coincide with the operations concerned, and immediately if a problem arises.

Order and phasing of works

4.10 The order and timing of work needs to be carefully managed to ensure adequate protection of trees. The final details will be agreed before any preparatory site work begins and will be reviewed if necessary, with the Arboricultural Consultant during the development. In the interests of protection of the trees the development should follow the phasing below:

1. Construction Exclusion Zone protective barriers and temporary ground protection installed and approved.
2. Main demolition.
3. Protective fencing and temporary ground protection checked daily by supervisor as being fit for use, not allowed to drift and ground protection maintained to specification as necessary.
4. All construction work including snagging completed.
5. Construction Exclusion Zone barriers and temporary ground protection removed.
6. Project completion.

Access for Construction Works – Plant and Machinery

4.11 The Groundwork (if separate) and Main Build Contractors will assess whole-project access requirements when preparing the Health and Safety Plan and Construction Method Statement and must inform the Arboricultural Consultant of any potential conflicts with trees or the tree protection barrier. This will allow conflicts to be resolved with the approval of the Local Planning Authority Tree Officer.

4.12 Construction access for plant, deliveries and spoil removal for the development will be only via the gated vehicular access from the lane to the rear of Windermere and Pretoria Roads, in the southernmost corner of the site. Any other access except pedestrian is prohibited because of the potential for damage to trees.

Construction Exclusion Zones

4.13 The Construction Exclusion Zone (CEZ) is formed with protective fencing and temporary ground protection. These measures have been approved by the Local Planning Authority. Planning consent is conditional upon them. They protect the trees during construction work by preventing damage to the tree roots and compaction of the soil.

4.14 The CEZ is to be afforded protection at all times and will be protected by fencing as detailed below. THERE SHALL BE NO:

- works
- activities
- excavation
- storage of materials
- storage of spoil
- dumping of waste
- washing of equipment
- mixing of cement or chemicals
- fires
- vehicle movements or
- deliveries

within the CEZ unless otherwise specified within this method statement or expressly agreed with the project arboriculturist or Local Planning Authority Tree Officer.

4.15 All staff on site must be briefed on the purpose of the CEZ and potential repercussions for the Client and contractors if one is breached.

4.16 If it is deemed necessary to carry out any activities within a CEZ, the prior approval of the Arboricultural Consultant or Local Authority Tree Officer must first be obtained.

4.17 The CEZs will be maintained until all excavation, building and construction activity including snagging and the installation of the new driveway has been completed.

General precautions

4.18 No materials that are likely to have an adverse effect on tree health will be stored or discharged within 10 meters of the trunk of a tree that is to be retained. Stored material may include oil, diesel/petrol, bitumen and cement.

4.19 No fires will be lit within 20 meters of the trunk of any tree that is to be retained.

4.20 Concrete mixing will not take place within 10 meters of the trunk of any tree.

4.21 Nothing will be attached or fixed to any part of any tree.

Installation of tree protection barrier and temporary ground protection to create the CEZ

4.22 Before any construction activity begins on site, and following removal of hedges H1, H2 and H3, temporary protective barrier and ground protection must be installed in the position and to the specification shown on Tree Protection Plan BHA_458_01.

4.23 The temporary ground protection will consist of wooden or proprietary inter-linked ground protection boards laid over 150mm well-rotted woodchip over permeable geotextile membrane.

4.24 The Arboricultural Consultant will be contacted to approve the protective barriers and ground protection before and ground or construction work commences.

4.25 The barrier and temporary ground protection must not be moved, altered or allowed to drift during construction activity. They will be checked at the beginning and end of each working day to ensure they remain fit for purpose of excluding any site activity and protecting the ground. They will remain in situ until all construction work on site has been completed.

Installation of services

4.26 New electrical connection to the new MUGA must run outside of the RPAs of any retained trees.

4.27 The installation of underground utilities must be installed outside of the RPA of any retained tree. Installation will comply with NJUG Volume 4 - Guidelines for the Planning, Installation

and Maintenance of Utility Apparatus in Proximity to Trees, available at http://www.njug.org.uk/publications/

Supervision and Monitoring

4.28 Subject to the barriers being installed to the correct specification and in the correct positions, and approved by the Arboricultural Consultant, there should be no need for further arboricultural supervision of the site. However, the Consultant will remain on hand in an advisory role to all parties.

Contingency Plans

4.29 In the event of unforeseen incidents occurring that may adversely affect or threaten the welfare or security of the trees, the resident Site Manager shall inform the Arboricultural Consultant at the earliest opportunity and not more than one working day following the incident.

4.30 The Arboricultural Consultant will visit the site to inspect and assess the circumstances and make appropriate recommendations. The Local Planning Authority Tree Officer will be informed by the Arboricultural Consultant of such incidents, and recommendations will be submitted for approval by the Local Planning Authority; initially verbally, and then in writing. A record of any emergency incidents and works shall be maintained by the Arboricultural Consultant.

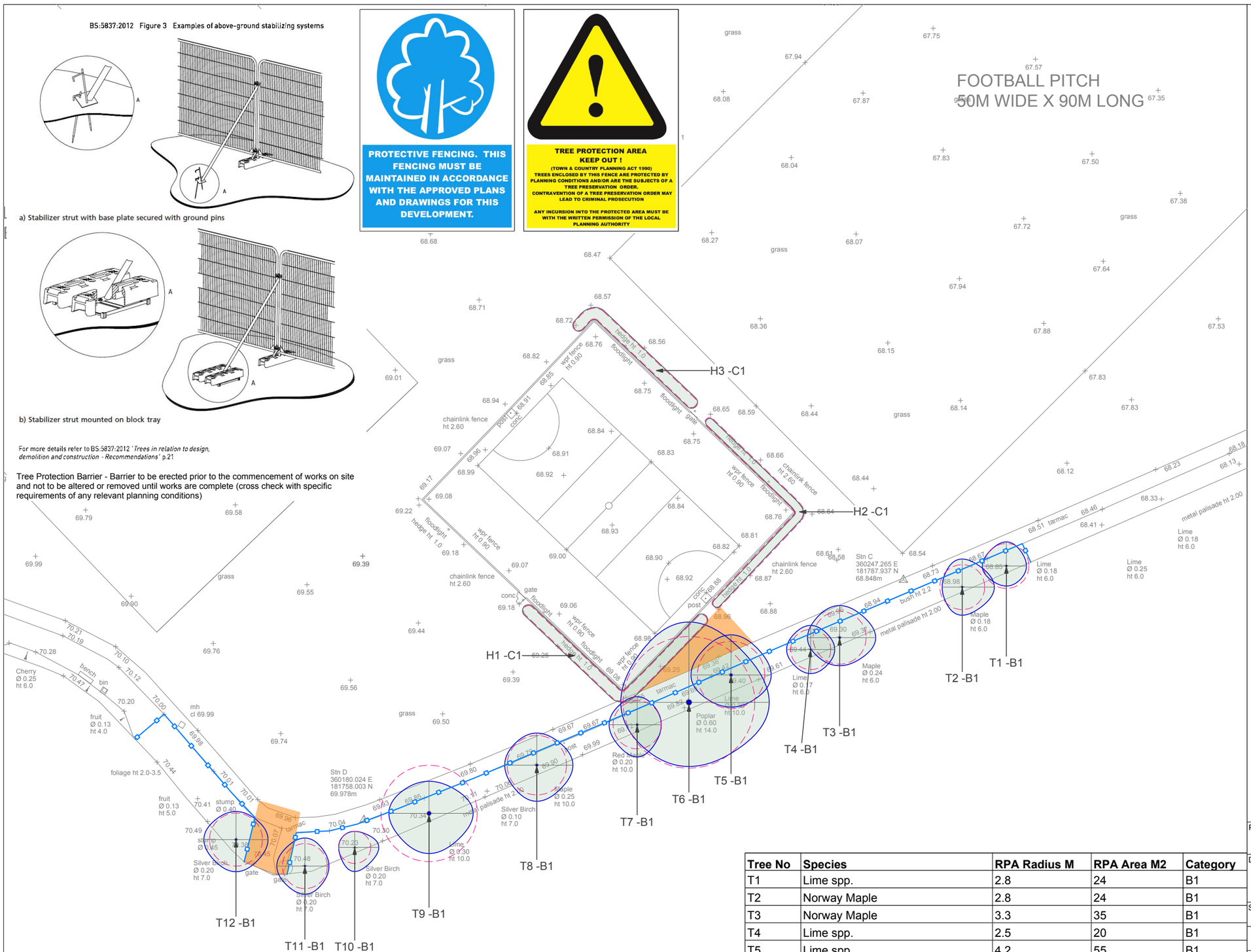
4.31 Incidents which may merit such contingency plans include:

- Accidental/unauthorised damage to the branches, roots or trunk of trees
- The spillage of chemicals within or adjacent to a Root Protection Area
- The discharge of toxins/waste within or adjacent to a Root Protection Area
- The unscheduled breaching of a tree protective barrier or Construction Exclusion

APPENDIX 1
Tree Protection Plan

For more details refer to BS:5837:2012 *'Trees in relation to design, demolition and construction - Recommendations'* p.21

Tree Protection Barrier - Barrier to be erected prior to the commencement of works on site and not to be altered or removed until works are complete (cross check with specific requirements of any relevant planning conditions)



Tree No	Species	RPA Radius M	RPA Area M2	Category
T1	Lime spp.	2.8	24	B1
T2	Norway Maple	2.8	24	B1
T3	Norway Maple	3.3	35	B1
T4	Lime spp.	2.5	20	B1
T5	Lime spp.	4.2	55	B1
T6	White Poplar	8.2	209	B1
T7	Purple Norway Maple	3	28	B1
T8	Cut-leaved Sycamore	3.7	43	B1
T9	Lime spp.	6	113	B1
T10	Silver Birch	2	13	B1
T11	Silver Birch	2.8	24	B1
T12	Downy Birch	3.3	35	B1
H1	Japanese Privet, Hawthorn	0.6	n/a	C1
H2	Japanese Privet, Hawthorn	0.6	n/a	C1
H3	Japanese Privet, Hawthorn	0.6	n/a	C1

KEY BS 5837 : 2012 Categories

- Tree Category A - High Quality
- A Category - Hedgerow, Group, Woodland
- Tree Category B - Moderate Quality
- B Category - Hedgerow, Group, Woodland
- Tree Category C - Low Quality
- C Category - Hedgerow, Group, Woodland
- Tree Category U - Unsuitable for Retention
- U Category - Hedgerow, Group, Woodland
- Root Protection Area to BS 5837:2012
- Shrub Mass / Offsite Tree / OOS (Out of scope)
- Tree Protection Barrier to BS 5837:2012
- Temporary Ground Protection to BS 5837:2012
  Consisting of wooden or proprietary inter-linked ground protection boards laid over 150mm well-rotted woodchip over permeable geotextile membrane.

The barrier and temporary ground protection must not be moved, altered or allowed to drift during construction activity. The protective measures will remain in situ until all construction activity has been completed. The Site Manager will monitor them throughout the day and check them at the beginning and end of each working day to maintain them as fit for its purpose.

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

N
GRID NORTH

0 5 10 15 20 25
Meters

PROJECT TITLE
Norman Scott Park, Coniston Rd, Patchway (N.2864)

DRAWING TITLE
Tree Protection Plan

SCALE		DRAWING NUMBER			
1:500 @ A3		BHA_458_01			
DRAWN BY	APPROVED BY	REVISION	SHEET	DATE	
SD	IM	-	-	29/10/2018	

CLIENT
Nicholas Morley Architects

COORDINATE SYSTEM / DATUM
British National Grid / Newlyn Datum (AOD)

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