

Tree Surveys

BS5837 – Pre Planning – Mortgage – Risk Management

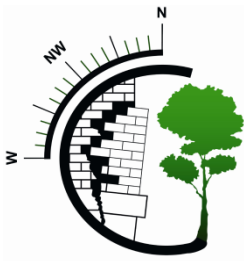
ARBORICULTURAL METHOD STATEMENT FOR WOODCROFT PRIMARY SCHOOL



**Prepared on instructions from:
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Ref: SPH/PS/AMS-01/20.07

27th July 2015



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Preliminary Arboricultural Method Statement (AMS)

1. General

- 1.1 The key protection issues associated with this scheme in relation to existing trees, in the short, medium and long term, are the need for:
- Specification, supervision and auditing of tree works.
 - The protection of trees to be retained from physical damage to their above and below ground structures.
 - The protection of tree habitat.
 - The protection of the soil structure and prevention of damage to tree root systems by chemicals and other noxious substances/materials.
 - Monitoring, supervisions and liaison.

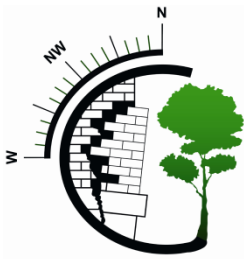
Tree Preservation Order Status

Legal status of the trees: The trees are not subject to tree preservation orders and the site is not within a Conservation Area.

This AMS is at a preliminary stage and provides generic guidance until such time as site and scheme specific information becomes available, therefore it may be subject to change.

2. Introduction

- 2.1 Terms of reference:
We are to review the BS 5837:2012 tree survey reference data in order to integrate the proposed development options and safeguard the long term preservation of the retained trees. This AMS provides general guidance on the typical range of processes that are involved during development and seeks to ensure that appropriate methods of implementation are carried out. It further aims to provide a holistic view of the development process and seeks to address any potential issues and conflicts that may arise and provide solutions to these, resolving them in line with current arboricultural and industry best practice guidance.
- 2.2 The AMS sets out the general management and protection details in support of the planning proposal that should be implemented to secure successful tree retention. This is based upon the assumption that the minimum general standards for development are those set out in BS 5837:2012 and the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*. We have used our extensive experience to interpret these references in the context of evolving good practice and site specific issues relating to the outline proposal at Woodcroft Primary School.
- 2.3 The root protection area (RPA) drawing SPH/PS/RPA-01/20.07 included at Appendix 1 is illustrative and based entirely on information provided by Ordnance Survey maps. The drawing can only be used for dealing with the tree issues and all scaled measurements must be checked against the original site drawings. The precise location of the tree protective measures must be confirmed at a pre-commencement meeting before any construction activity starts.



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2.4 Precautions when working in the RPA:

The following prohibitions apply within any tree RPA:

- No linear mechanical excavation whatsoever without prior agreement from the Local Planning Authority (LPA) and Arboricultural Consultant (AC), unless site specific mitigation is in place.
- No excavation by any other means unless a scheme of arboricultural site monitoring is implemented and documented.
- No lowering of levels unless agreed in writing with the LPA and AC, except for the removal of grass sward using hand tools in accordance with BS 5837:2012 (section 7.4.2.1).
- No construction of sealed hard surfacing unless site specific mitigation is in place.
- No storage of plant or materials.
- No storage or handling of any chemical including cement washings, unless site specific mitigation is approved by the AC.
- No vehicular access unless site specific mitigation is in place.
- No fire lighting.

2.5 In addition to the measures in 2.4, further precautions are necessary adjacent to trees:

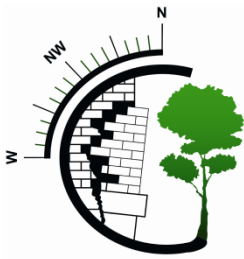
A 10 metre separation distance shall be observed between any tree during the cement mixing phases including storage and other substances injurious to tree health, this should include such things as fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals.

2.6 Avoiding damage to stems and branches:

Care shall be taken when planning site operations in proximity to trees to ensure that contact with the retained trees and overhanging branches is avoided. Such contact can result in serious injury to the tree and might make the safe retention impossible. Consequently, any tree protection in proximity to the trees shall be constructed and agreed by the AC, to ensure that adequate clearance from the trees is at all times maintained.

2.7 Access pruning:

Pruning operations are planned in relation to this scheme to allow access for construction purposes. Any changes to the work schedule or specification may only be conducted following consent and must be undertaken in accordance with BS 3998:2010 and current arboricultural practices. At no time must the trees be pruned by the construction contractors. All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors and may only be undertaken following a tool box talk by the AC.



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3. Tree protection general

3.1 Default fencing (BS 5837:2012):

It is considered that the minimum default type fencing must be that shown at Appendix 2. The default location for this type of fencing is shown as a red dashed line on drawing ref: SPH/PS/MIT-01/20.07 included at Appendix 3. If alternate tree protection barriers are to be considered a contingency plan must be submitted to the AC, it should identify the reasons why the default cannot be used, the location and duration required for the substitute fence and it must be inspected by the AC prior to work commencing on site. The AC must be given reasonable time to provide advice.

Various phased operations along with mitigating measures are considered and measures set out within the schedule of tree protection works at Appendix 4.

3.2 Ground protection measures:

Ground protection is required to protect at least a functional minimum mass of undisturbed ground during the construction process and is required to limit compaction or contamination of the RPA. The specific ground protection measures must be installed and maintained during all the construction phases, this should include a scheme of arboricultural site monitoring with the AC. The proposed works on this site have been assessed and on the basis of the drawings supplied the following site specific mitigation is required.

4. Site specific precautions and mitigation

- 4.1 Tree loss – the planned route for the new footway and sports field access does not result in the loss of any trees. We have included an optional route that results in the loss of three trees T45, T46 and T47. Trees T45 and T47 are in Category 'U' and tree T46 is in Category 'C'. The access footway and access into the sports field requires the removal of two sections of hedgerow. A gap of approximately 4.5 metres will need removing from the hedgerow T5 and a gap of 2.5 metres will require removing from the hedgerow T42.

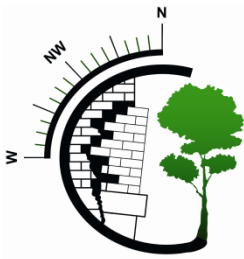
Mitigation:

- Hampshire County Council landscape team are providing full details of the replacement tree planting/landscaping scheme for the proposed development.
- Replacement tree and hedgerow locations are shown on drawing Ref. SPH/PS/MIT-01/20.07

- 4.2 Access Pruning – No pruning is required to the trees and hedgerows to allow clearance at this time.

Mitigation:

- If pruning is required it must be only be conducted following consent and must be undertaken in accordance with BS 3998:2010 and current arboricultural practices. At no time must the trees be pruned by the construction contractors. All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors and may only be undertaken following a tool box talk by the AC to ensure the scope of work is understood.



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4.3 Spoil movements, storage of materials, welfare facilities and contractor parking.

Mitigation:

- There is adequate space for the storage of materials on the site clear of tree RPAs. The main contractor must provide a contingency plan setting out a phased program of works and any storage requirements to ensure that the work phases can be completed without compromising retained tree RPA.
- The tree protection barrier must be installed prior to any construction activity and in the location as shown on drawing SPH/PS/MIT-01/20.07 and remain in situ until all construction activity is completed. This will also include any landscape operations. It is anticipated that some stages of the construction work will require temporary movement of the tree protection barrier. Any changes to the default location must be agreed by the AC before the changes are made.
- Contractor parking will be required on site and it is anticipated that this will be within the existing school parking areas. Where vehicle access is required within the RPA the main contractor must provide a contingency plan setting out the equipment and procedures for dealing with vehicle spillages, for example the use of spill kits or temporary ground protection.

4.4 Construction of the proposed sports court.

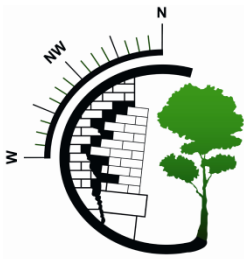
Mitigation:

- The tree protection barrier must be installed prior to any construction activity and in the location as shown on the mitigation drawing SPH/PS/MIT-01/20.07, and remain in situ until all construction activity is completed. Where the barrier has to be temporarily moved to allow construction access ground protection must be applied. An example of ground protection is set out at Appendix 5 and is considered generic to this scheme. Changes to this specification must be agreed by the AC before the changes are made. The AC must be given reasonable time to provide advice.
- The default requirement of section 7.4.2.1 of BS5837 2012 is that no excavations are to take place within the RPAs other than the removal of the loose vegetative layer which must be removed by hand tools. However mini diggers are likely to be used for grading operations therefore ground protection such as track mats must be used to support the machinery within the tree RPA and under the supervision of the AC.
- No materials are to be stored within the RPA of retained trees.

4.5 Excavation for the new pedestrian and vehicle gate support holes.

Mitigation:

- The post holes are to be dug by hand or by air vac excavation.
- If any roots less than 25 millimetres in diameter are encountered they must be cleanly cut with a handsaw and prevented from drying out by covering with damp hessian until the holes are backfilled. If any roots are encountered greater than 25 millimetres in diameter the holes will need to be backfilled and relocated with the roots left in place.
- The post holes must be lined with heavy duty polythene bags to contain the concrete mix and prevent liquid leaching into the surrounding soils.
- No materials are to be stored within the RPA of retained trees.



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4.6 Construction of new access footway and entrance to sports court.

The construction of the proposed access footway and the sports court access is within the RPAs of trees T31 and T32.

We have included an alternative footway route through the RPAs of trees T29 and T30. Both routes are shown on the drawing SPH/PS/MIT-01/20.07.

Mitigation:

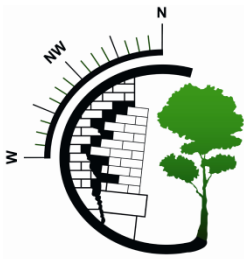
- The tree protection barrier must be installed prior to any construction activity and in the location as shown on the mitigation drawing SPH/PS/MIT-01/20.07, and remain in situ until all construction activity is completed. Where the barrier has to be temporarily moved to allow construction access ground protection must be applied. An example of ground protection is set out at Appendix 6 and is considered generic to this scheme. Changes to this specification must be agreed by the AC before the changes are made. The AC must be given reasonable time to provide advice.
- The default requirement of section 7.4.2.1 of BS 5837:2012 is that no excavations are to take place within the RPA other than the removal of the loose vegetative layer which must be removed by hand tools. However mini diggers are likely to be used for grading operations therefore ground protection such as track mats must be used to support the machinery within the tree RPA. The excavator should be sited either on the existing roadway or on the footway footprint.
- The design for the new access footway and driveway must incorporate a “no-dig” cellular confinement system such as G4 Geoweb® filled with a 4-20mm selected clean stone over a base geotextile membrane such as Tensar TX150.
- The Geoweb® specification must be suitable for the loading and frequency of use anticipated.
- No materials are to be stored within the RPA of retained trees.

4.7 Excavation for services within the RPA of retained trees.

We have not been supplied with any details regarding the location of any new services at this design stage and it is anticipated that the proposed extension will connect to existing services clear of any retained tree RPAs.

Mitigation:

- None required at this stage.



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5. Site Monitoring

5.1 Site supervision during work within or close to the RPAs must be undertaken at regular intervals and a written record of the meetings maintained. This scheme should include the following supervision visits at key stages including:

- Pre-commencement site meeting and tool box talk
- Tree protection barrier installation
- Footway construction within the tree RPAs
- Removal of the tree protection barriers

If supervision for the above key stages cannot be successfully achieved then the supervision must be undertaken at fortnightly intervals for the duration of the scheme. Upon completion a copy of the site monitoring notes must be forwarded to the LPA.

6. Contingency plans

A general contingency plan for this project should be prepared by the main contractor for controlling such things as storage of materials, chemical/fuel spillage, run off from cement washings, sewage or water leaks, site collisions and emergency access into or adjacent to tree RPAs. A copy should be forwarded to the AC.

7. Queries

Any queries regarding this AMS should be addressed, in the first instance, to Tree Surveys:

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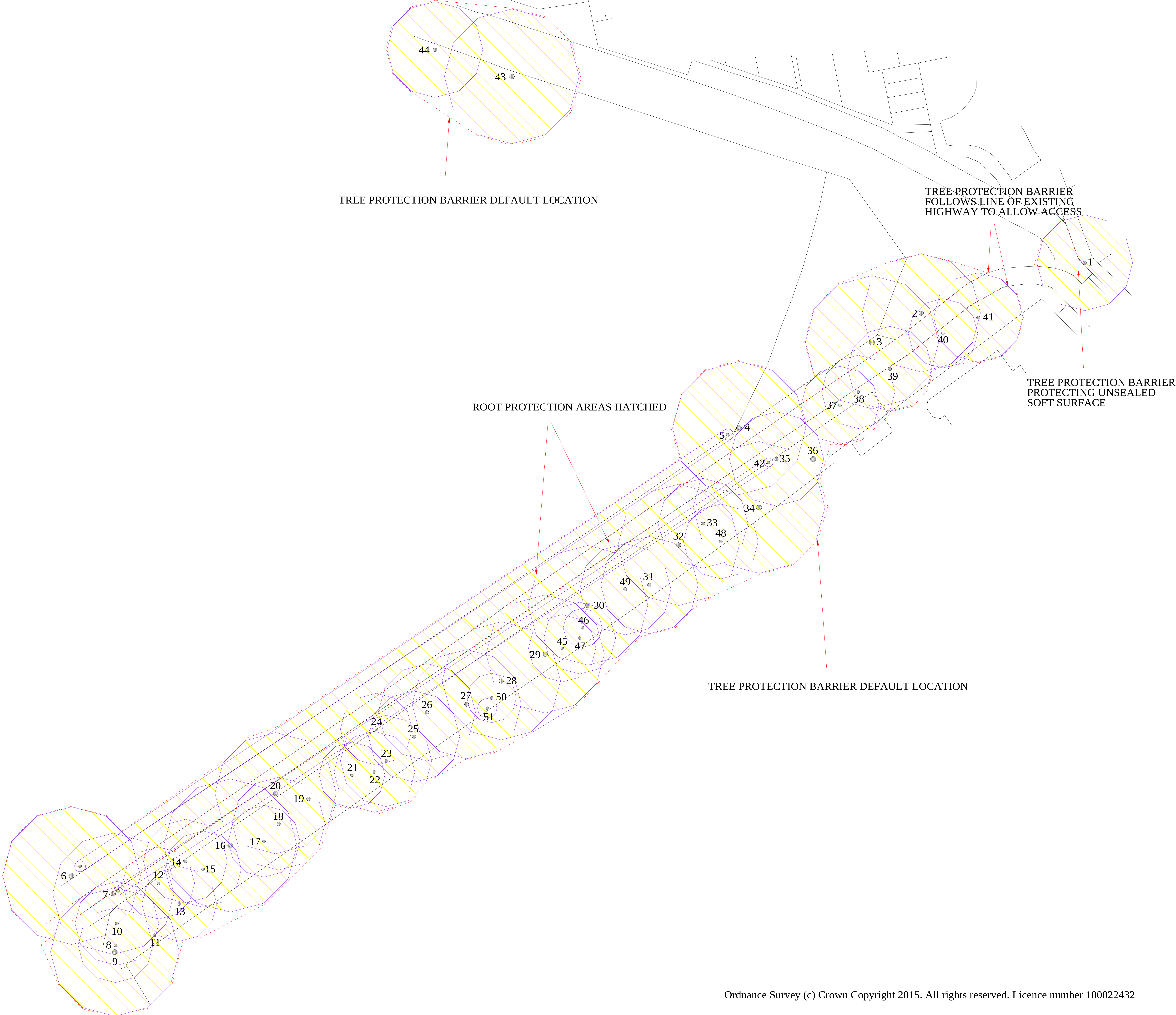
Simon Holmes MSc
Chartered Arboriculturist
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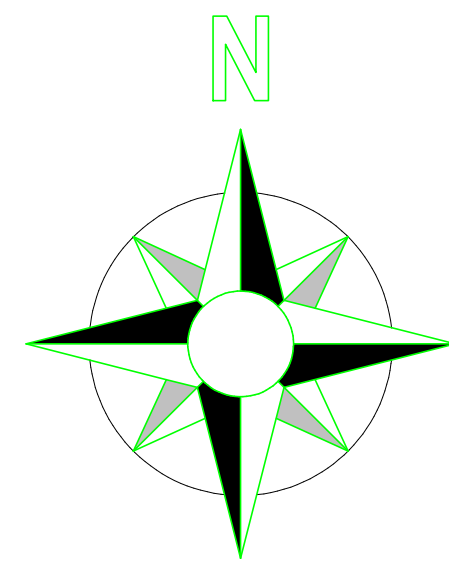
APPENDIX 1



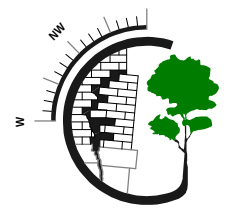
NOTES

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Client HAMPSHIRE COUNTY COUNCIL

Job Title WOODCROFT PRIMARY SCHOOL

Drawing Title

ROOT PROTECTION AREAS

Scale 1:200 @ A0		
Date 20.07.2015	Drawn by AS	
Dwg. No. SPH/PS/RPA-01/20.07	Rev.	



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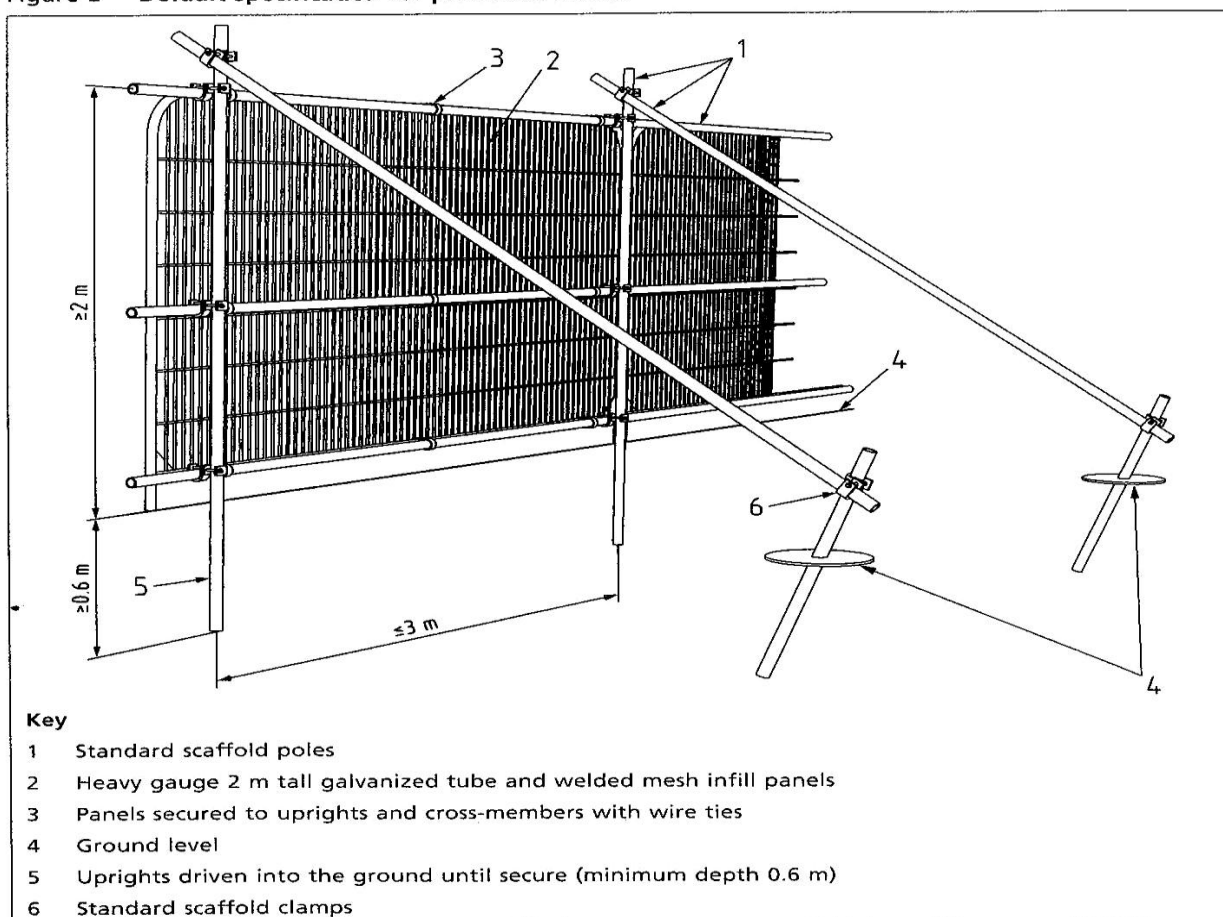
APPENDIX 2

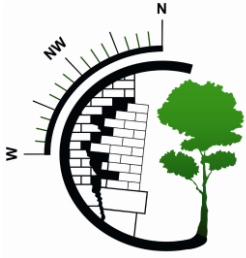
BS 5837 FIGURE 2 TREE PROTECTION

Root Protection Areas (RPAs), enclosed by Default Temporary Protective Fencing, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. Be protected throughout the development process, as specified and detailed in BS 5837:2012 Section 6.2, Fig 2
2. Be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project.
3. Preclude any delivery of site accommodation and or materials and or plant machinery.
4. Preclude all construction related activity, with the sole exception of specified arboricultural works and any other works carried out under supervision that has been agreed by all parties, and:
5. Preclude the storage of all development related material's and substances including fuel, oils, additives, cement and or any other deleterious substances.
6. Any incursions into RPA's must be by prior arrangement, following consultation with the LPA.

Figure 2 Default specification for protective barrier



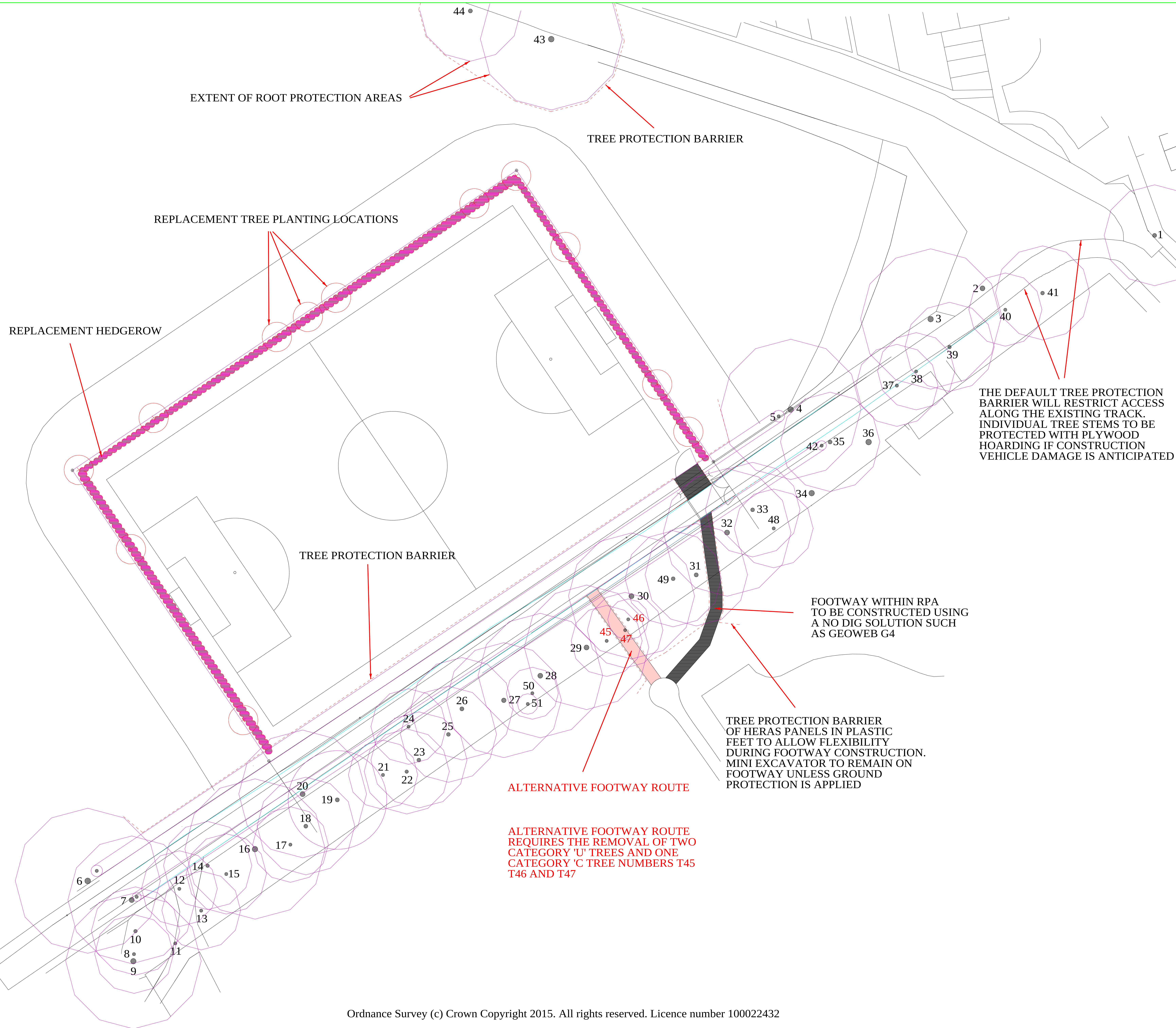
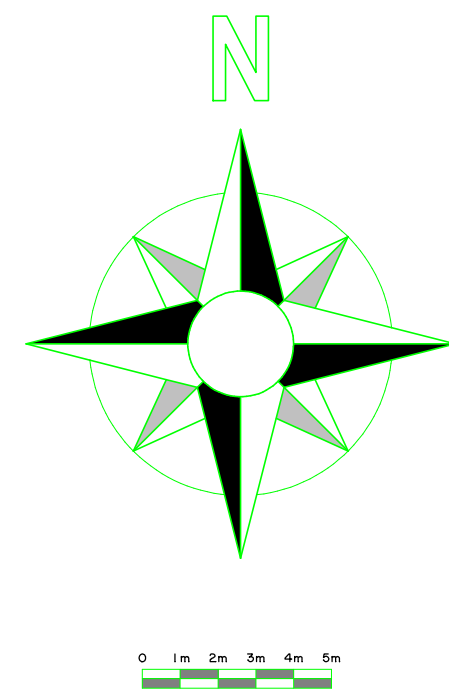


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APPENDIX 3

NOTES
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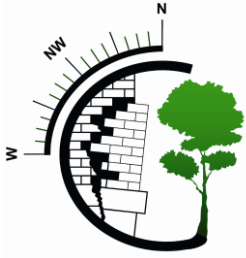


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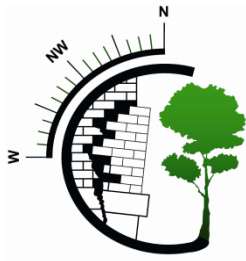
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Drawing Title	TREE AND GROUND PROTECTION		
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Date	06.08.2015	Drawn by	AS
Dwg. No.	SPH/PS/MIT-01/20.07	Rev.	



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APPENDIX 4

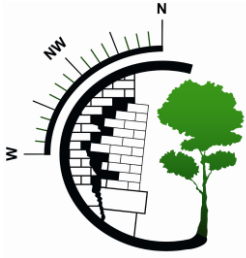


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Schedule of tree protection works

Item	Operation	Supervision and Purpose	Checked complete
1	Pre-start meeting	Arboriculturist to be at meeting to provide detailed information / guidance on the tree protection measures	
2	Enabling works to allow for tree removal works (if required) and pruning works and erection of Tree Protection Barriers in accordance with Section 3 and as shown on drawing AS/PS/MIT-01/20.01, included at Appendix 3	Arboriculturist to be on site to identify extent of pruning works and the removal of trees T45, T46 and T47 (if required) and ensure fence is correctly placed and secured. LPA to be advised of tree protection measures and records of site meetings maintained	
3	Excavations within retained tree RPAs and installation of the cellular confinement system for the new access path within tree RPAs.	Arboriculturist to be on site to provide "tool box talk" and supervise excavations within the RPAs of retained trees. LPA to be advised of tree protection measures and records of site meetings maintained	
4	Removal of all tree protection	To be agreed in writing with local planning authority to ensure tree protection is not removed until all construction works are complete and approved	



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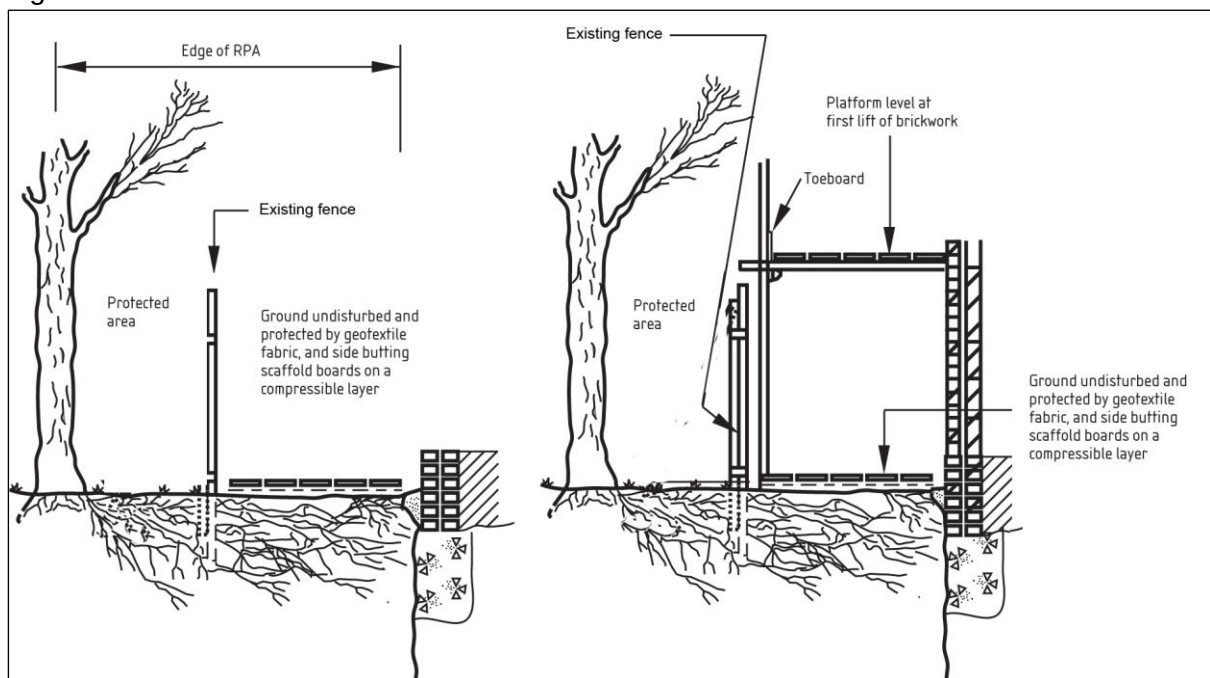
APPENDIX 5

GROUND PROTECTION

Temporary Ground Protection

Any temporary ground protection that may be required within an RPA shall conform to section 6.2.3. of BS 5837:2012, an example is shown in Figure 1 below.

Figure 1.



Option 1 – No vehicle access required.

1. Prior to installing ground protection the area beneath it must be lined with heavy duty polythene (1000/250 microns) to prevent contamination of the soil within the protected RPA.
2. Side butting scaffold boards shall be fitted to ensure adequate cover of the area to be protected.
3. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials the Arboricultural Consultant shall inspect the temporary ground protection.
4. The temporary ground protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

Option 2 - Vehicle access required

In place of the above items 1, 2 and 3 the use of a temporary metal track, such as DuraDeck® ground protection mats, MegaDeck™ or Rig Mats, they should be laid on a 150mm deep layer of woodchip or sharp sand to minimise compaction and prevent damage to surface roots.