

Park Avenue, Mossley Hill

AMS1 - Overview and Operation Sign-off

(Sheet 1 of 4)

This Arboricultural Method Statement (AMS) outlines the parameters within which construction must be undertaken in order to maximise the protection afforded to retained trees. This document gives a definitive account of the treatment of trees during the construction process. The detail and requirements of this method statement comprise commitments to complete the construction phase of the development in a specific manner and must inform the production of all relevant tender documents. This AMS is one of 4 drawings: AMS1 - AMS4

Failure to adhere to the correct sequence, manner and timing of operations detailed below may result in irremediable damage to trees, and thereby breach of planning consent.

Soil assessment and engineering calculations relating to the structural performance of new structures lie outwith the professional remit of the Arboricultural Consultant. The final specification of all permanent structures must comply with the parameters set by this document and also be approved by the project engineer.

GENERAL TERMS

- A. A copy of this Method Statement will be made available for inspection on site and read by all relevant contractors.
- B. Works will proceed in a careful and logical manner, such that accidental damage to trees by booms, cranes etc. is avoided.
- C. All areas protected by Tree Protection Fencing and those highlighted as areas of specialised construction measures within this AMS will be collectively defined as a **Construction Exclusion Zone (CEZ)**.
- D. Storage of materials and access of any kind will be prohibited within the CEZ.
- E. No change in ground level within the CEZ will be permitted.
- F. No excavation, trenching or other piercing of the ground will be permitted within the CEZ other than as described by this Method Statement.
- G. If unexpected large roots (>25mm diameter) are encountered during any excavation works or if additional pruning of branches is required (other than that detailed on AMS2), the advice of the appointed Arboricultural Consultant will be sought.
- H. Tree protection measures will not be removed or realigned other than as directed by an appointed Arboricultural Consultant (see below).
- I. *Increases in soil bulk density can significantly harm existing roots and impede new root growth.* No such compaction, smearing or rutting of soils will be allowed to occur by whatever means within protected areas.
- J. Operations within the CEZ will be undertaken during dry weather. Works will cease during rainfall and recommence following a minimum drying period of 24 hours.

Appointment of a project Arboricultural Consultant

- An Arboricultural Consultant will be appointed prior to commencement to oversee and sign off elements of the work. This role may be performed by the local planning authority Tree Officer or by a third party consultant as appropriate.
- The construction Site Manager will be responsible for contacting the appointed Arboricultural Consultant in advance of any operations detailed in this Method Statement, within the CEZ or where they could reasonably be foreseen to have an impact on retained trees.
- Each element within this AMS will be signed-off by the appointed Arboricultural Consultant in the Operations Sign-off below.
- It will also be the responsibility of the appointed Arboricultural Consultant to undertake monthly *ad hoc* inspections to ensure compliance with the approved protection scheme. Any deviation from the approved scheme will be recorded below and reported to the Site Manager and local planning authority Tree Officer.

Pre-start meeting and setting out

- To reinforce the required tree protection measures and avoid the requirement for on-going arboricultural supervision a pre-start meeting will be arranged between the site contractor, the appointed Arboricultural Consultant and the council's Arboricultural Officer at the earliest opportunity
- During the meeting, trees shown for removal will be marked with orange spray-paint, the proposed housing layout will be set out with marker posts and the alignment of protective fencing will be marked using spray-paint. The scope of this method statement will be discussed including any technical or logistical issues.

Tree Health Monitoring

- All trees will be inspected biannually during the construction phase by a qualified arboricultural consultant.
- All trees will be inspected prior to the first occupancy of completed units to ensure safety.
- Any works or remedial actions that are recommended will be discussed with the LPA to determine whether a formal application is required.

Should any construction detail change from the methods shown in this AMS, the drawings will be updated and approved by the LPA before any revised works commence

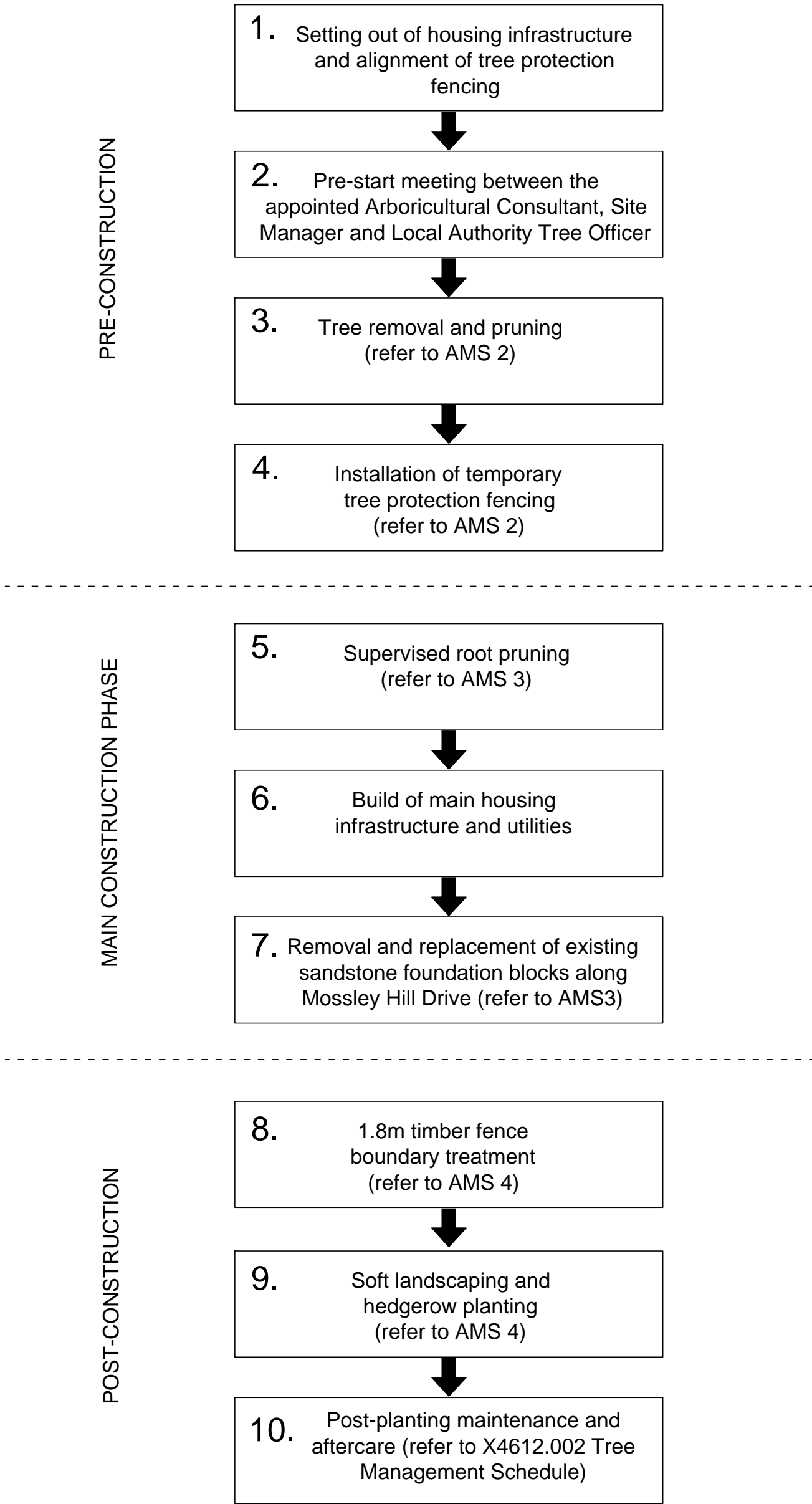
OPERATIONS SIGN-OFF

Name of Appointed Arboricultural Consultant:			
Telephone Number of Appointed Arboricultural Consultant:			
Pre-start meeting	Date:	Initials:	Comments:
Tree Pruning and Removal	Date:	Initials:	Comments:
Tree Protection Fencing Removal and Replacement of Existing Sandstone Foundation Blocks	Date:	Initials:	Comments:
Supervised Root Pruning	Date:	Initials:	Comments:
New Surfacing: Roads	Date:	Initials:	Comments:
Driveways	Date:	Initials:	Comments:
Boundary treatment: 1.8m timber fencing	Date:	Initials:	Comments:
Metal railings	Date:	Initials:	Comments:
Soft Landscaping: Tree Planting	Date:	Initials:	Comments:
Hedgerow Planting	Date:	Initials:	Comments:

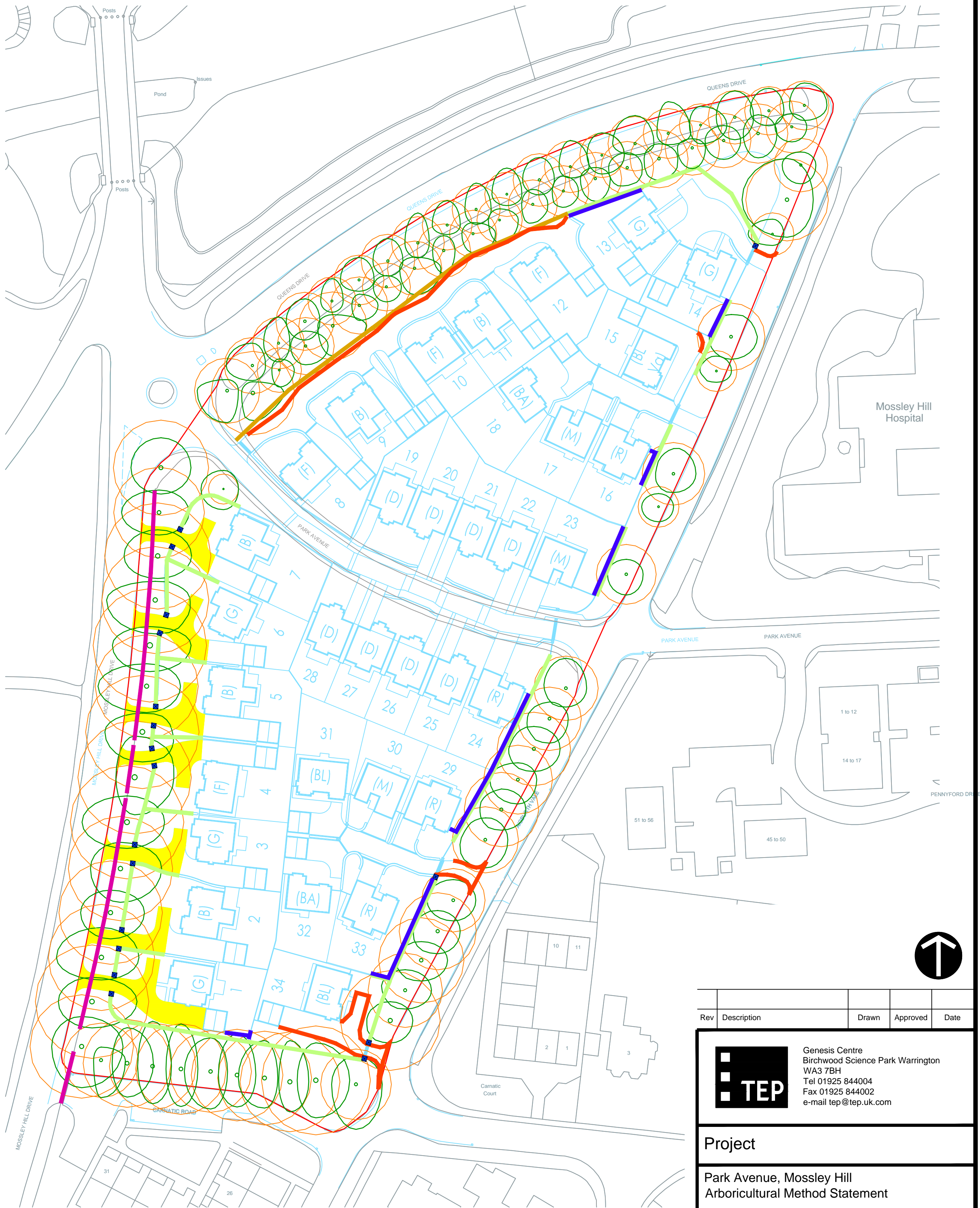
The above Method Statement elements have been discharged in full to the best of my knowledge and professional assessment. Where there has been any deviation from the specification, I am satisfied that this has not been injurious to retained trees and that all such deviations have complied with the spirit of the instruction insofar as was reasonably practicable or were approved in advance by the proper authority.

Signed: \_\_\_\_\_

SEQUENCE OF EVENTS



OVERVIEW OF OPERATIONS WITH THE POTENTIAL TO IMPACT UPON RETAINED TREES



KEY

[This drawing must be reproduced in colour]

- |  |       |                                       |       |
|--|-------|---------------------------------------|-------|
| Individual trees to be retained          | AMS 2 | Hedgerow planting - Rootball          | AMS 4 |
| Existing Sandstone Foundation Blocks     | AMS 3 | New Construction - Entrance gateposts | AMS 3 |
| Supervised root pruning                  | AMS 3 | New surfacing - Driveways (ArborRaft) | AMS 3 |
| Boundary Treatment - 1.8m timber fencing | AMS 4 |                                       |       |
| Boundary Treatment - Metal Railing       | AMS 4 |                                       |       |

Rev	Description	Drawn	Approved	Date
<div><div>TEP</div><div>Genesis Centre Birchwood Science Park Warrington WA3 7BH Tel 01925 844004 Fax 01925 844002 e-mail tep@tep.uk.com</div></div>				
Project				
Park Avenue, Mossley Hill Arboricultural Method Statement				
Title				
AMS 1 - Overview and Operation Sign-off (Sheet 1 of 4)				
Drwg No D4612.012				
Scale 1:750 @ A1				Date 05/12/14
Drawn RMG		Checked TDP		Approved JGS



Park Avenue, Mossley Hill  
AMS2 - Tree works and  
protection fencing installation  
(Sheet 2 of 4)

The detail and requirements of this method statement comprise commitments to complete the construction phase of the development in a specific manner. This AMS is one of 4 drawings which must be read in conjunction with AMS 1- Overview and Operation Sign-off.

Failure to adhere to the correct sequence, manner and timing of operations detailed below may result in irremediable damage to trees, and thereby breach of planning consent.

TREE WORKS - SEQUENCE OF EVENTS

Nesting Bird Check

1. Trees identified for removal and pruning will be checked by a suitably qualified ecologist for nesting birds 24hrs prior to any tree works (if works are scheduled in period March to August inclusive).
2. Should any nesting birds be found, trees identified for removal will be left until the nest has become inactive. Ongoing advice for an ecologist will be required.

Tree Removal

3. Trees shown with an angled **red hatch** will be removed. The trees have been surveyed by a qualified arboricultural consultant and identified by marking with bright orange spray paint.
4. Arisings will not be stored within the CEZ and removed from site.
5. All stumps will be ground out (i.e. not excavated or pulled). The stumps of removed trees located within the CEZ will be accessed via existing areas of hard-standing or by using temporary boards over the rooting areas of retained trees.
6. No tree works will be undertaken until written approval of this Method Statement is issued by the Local Planning Authority.

All tree works will be undertaken according to British Standard 3998:2010 by a suitably qualified, experienced and insured arboricultural contractor.

Tree Pruning

7. Individual trees will be crown lifted to the specifications shown in **Inset 1** and on the plan opposite to allow for the installation of tree protection fencing and to create a final structural stand-off.
  - 7.1. The dimensions (opposite) show how individual trees will be crown lifted to create the clearance required;
  - 7.2. Trees with a **solid orange hatch** will be re-shaped away from the proposed development by the dimensions shown;
8. All pruning points will be selected according to the principles of natural target pruning.
9. Pruning will be undertaken so as to leave all trees with a natural and aesthetically balanced appearance.
10. No pruning work will be undertaken beyond that which is strictly required to achieve the specified clearance according to this AMS.
11. The pruning works will not significantly diminish the function of the boundary trees as a visual screen.
12. Where possible, pruning points will be selected that will encourage apical dominance and vertical extension growth. This is likely to include the removal or reduction of down-hanging or horizontal limbs by preference.

Formative pruning and additional tree removals

13. Following completion of felling works, an inspection will be undertaken by an arboricultural consultant to assess the finished edge of retained trees. Minor additional pruning works may be specified. This would typically include reshaping of trees that appear to be vulnerable to windthrow or are otherwise aesthetically unsuitable.
14. Any additional tree works will be completed and will be subject to the same methods and restrictions as above.

TREE PROTECTION FENCING INSTALLATION - SEQUENCE OF EVENTS

15. Tree Protection Fencing will be installed at the alignment shown opposite (as marked on site during the pre-start meeting).
16. Tree Protection Fencing will follow the specification in **Inset 2**. Where this cannot be installed due to utilities or other constraints, the arboricultural consultant will be contacted and an alternative specification will be agreed.
17. Signs will be affixed to the boundary fences indicating the protected status of all trees and the restrictions on construction and excavation within the protected area.
18. Tree protection fencing will remain in situ for the duration of the construction or until its removal or re-alignment is permitted by the appointed Arboricultural Consultant.
19. The correct installation of tree protection fencing will be verified in writing by the appointed arboricultural consultant.
20. Inspection of the fencing will be undertaken not less than monthly for the duration of the main construction phase by the appointed Arboricultural Consultant. Inspection frequency may also be regulated by specific activities proposed close to the CEZ or by observations made during a routine visit.
21. A record of observations and recommendations made during each visit will be recorded and made available to the site manager and council's Arboricultural Officer for inspection.



Tree Protection Notice to be attached to fencing 1.5m from the ground, facing out of the Construction Exclusion Zone and located at regular intervals along the fence line.

The notice must be at least A4 in size

Inset 1. Specifications for crown lifting of individual trees

Figure 1.

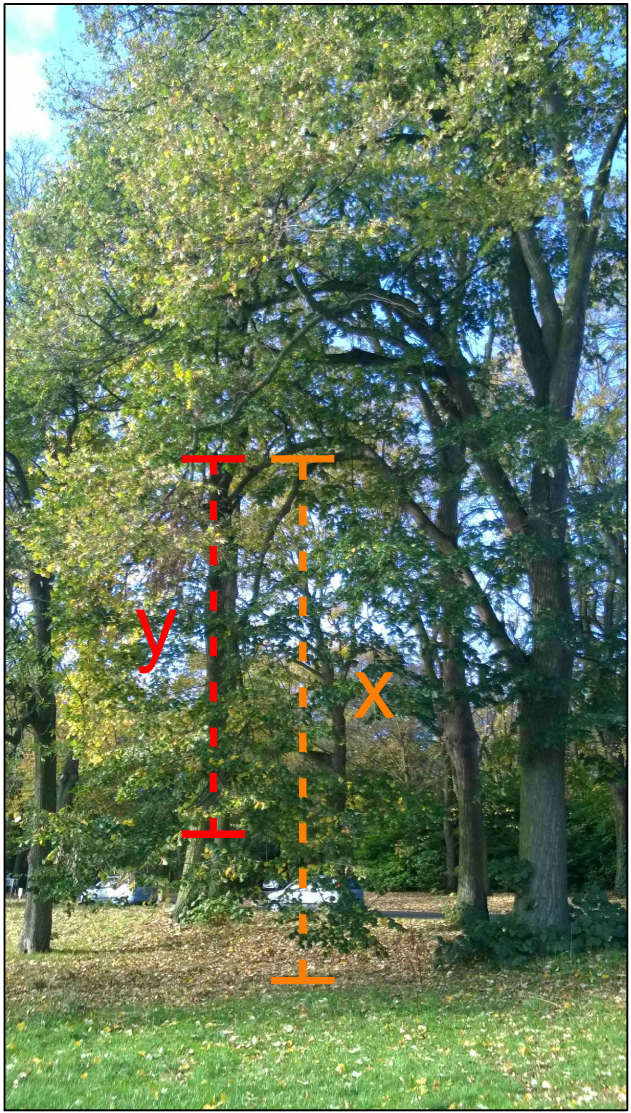
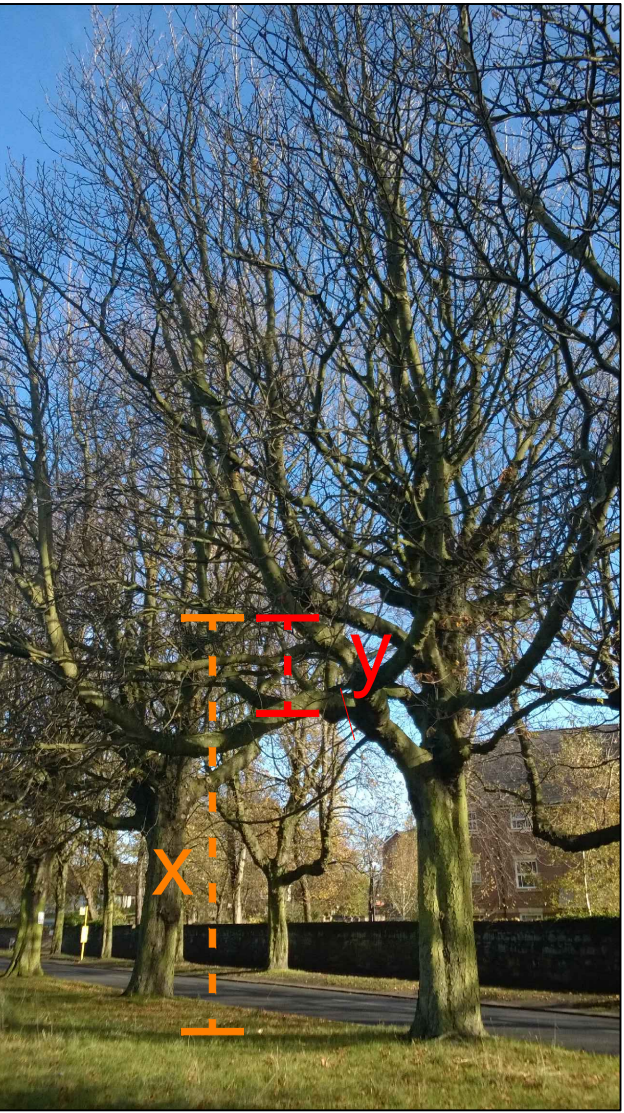


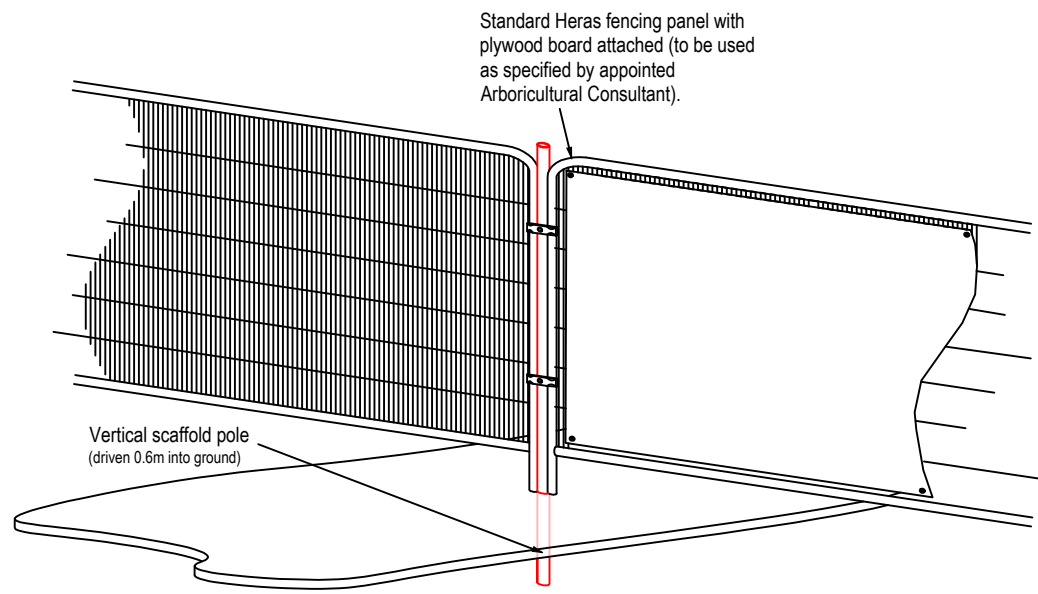
Figure 2.



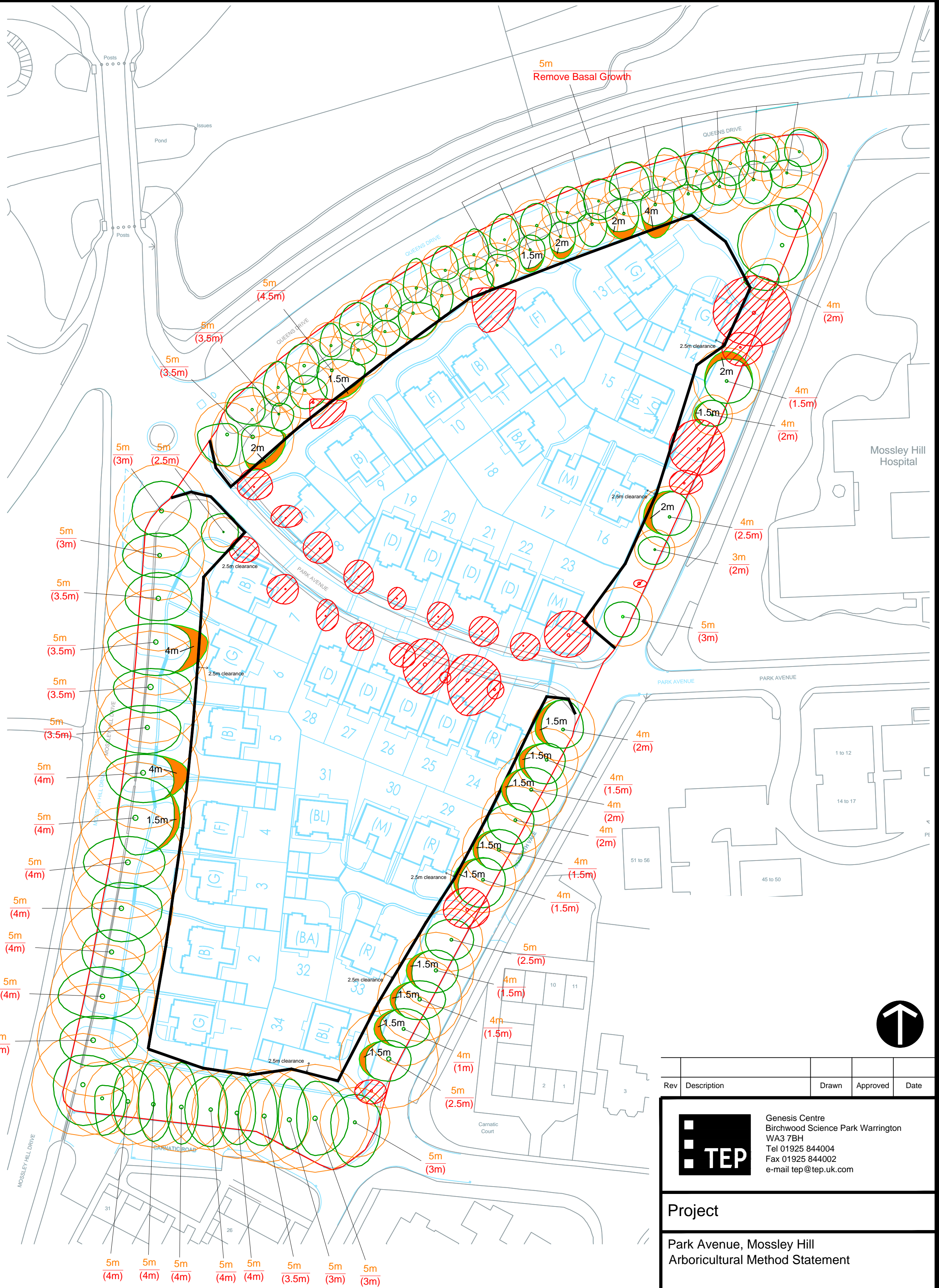
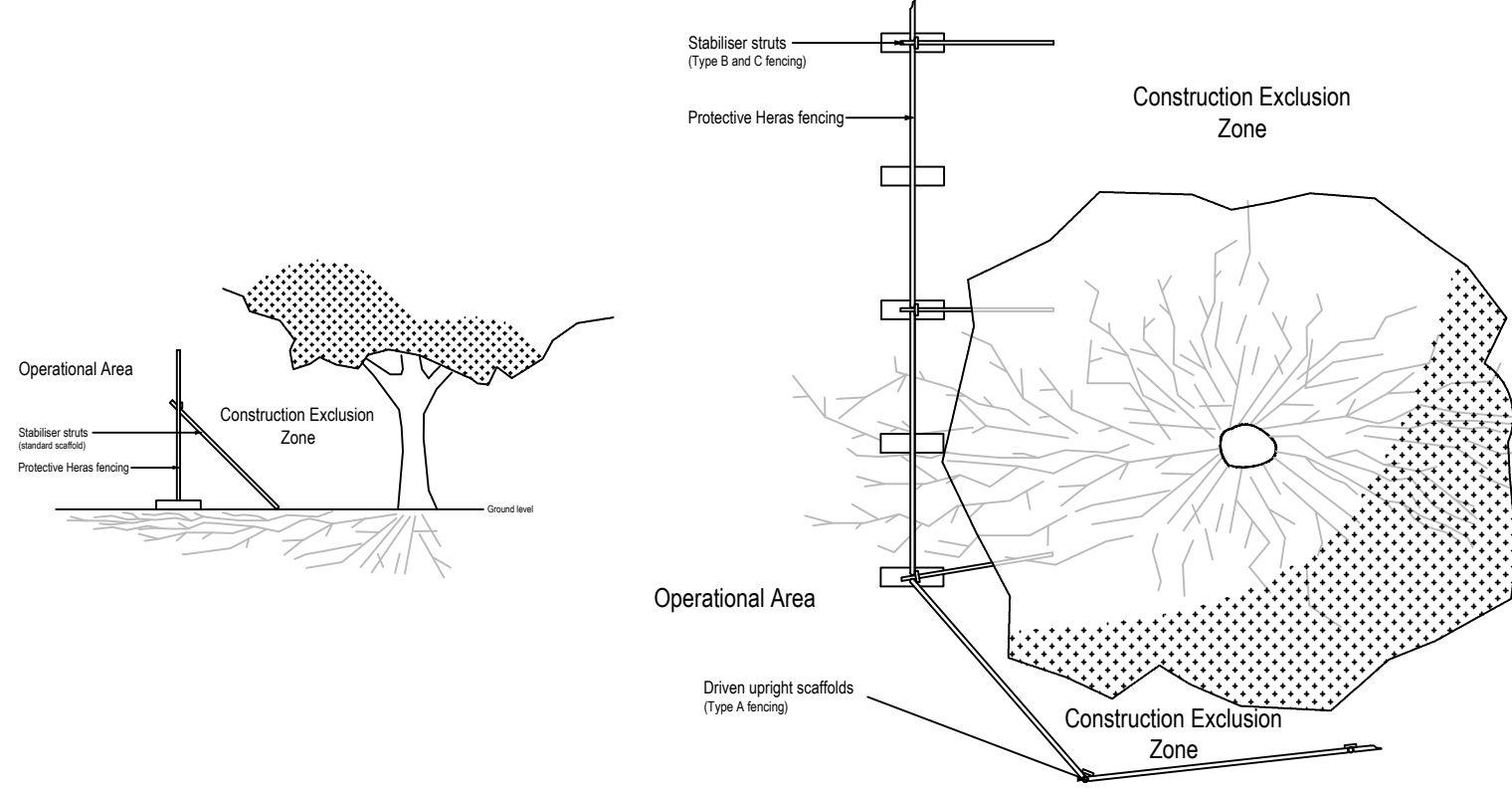
Figures 1 and 2 show the amount of crown raising (y) needed to attain the required final height clearance (x). In some instances (shown in Figure2) the height clearance required can be attained by the removal of the lowest limb.

Inset 2. Temporary Tree Protection Fencing

(1:50 @ A1)



(1:100 @ A1)



KEY

[This drawing must be reproduced in colour]

- Individual trees to be retained
- Individual trees to be re-shaped (by individual dimensions shown)
- Individual trees to be removed
- X Crown lift dimensions (see Inset 1)
- (Y)
- Temporary tree protection fencing (c. 653m)

Rev	Description	Drawn	Approved	Date
<div><div><div></div><div>TEP</div></div><div>Genesis Centre Birchwood Science Park Warrington WA3 7BH Tel 01925 844004 Fax 01925 844002 e-mail tep@tep.uk.com</div></div>				
Project				
Park Avenue, Mossley Hill Arboricultural Method Statement				
Title				
AMS2 - Tree works and protection fencing installation (Sheet 2 of 4)				
Drwg No		D4612.013		
Scale		1:750 @ A1	Date	
			05/12/14	
Drawn		RMG	Checked	TDP
			Approved	JGS



Park Avenue, Mossley Hill  
AMS3 - Access Creation  
(Sheet 3 of 4)

The detail and requirements of this method statement comprise commitments to complete the construction phase of the development in a specific manner. This AMS is one of 4 drawings which must be read in conjunction with AMS 1- Overview and Operation Sign-off.

Failure to adhere to the correct sequence, manner and timing of operations detailed below may result in irremediable damage to trees, and thereby breach of planning consent.

Realignment of Protective Fencing

- Tree Protection Fencing may be realigned at the direction of the appointed Arboricultural Consultant to allow for localised pedestrian access into the Construction Exclusion Zone (CEZ).
- All plant and materials will remain outside the CEZ until root pruning or surface construction has been completed.
- All subsequent work within the protected areas will be conducted in a sensitive manner and be supervised by the appointed Arboricultural Consultant.

Road access off Aigburth Vale and Park Avenue (using conventional construction)

- Root pruning to allow for the construction of new access points will be undertaken along the alignment shown opposite (red line).
- Excavation will be completed using hand-dig techniques (hand tools or a compressed air lance) to foundation formation level or until, in the opinion of the appointed Arboricultural Consultant, no deeper roots are anticipated. There is no restriction in the width of the trench.
- All plant and materials (including excavated soil) will be located within the footprint of the new road (i.e. away from the retained tree).
- All roots that are encountered will be neatly severed at the trench face using a pruning saw or bypass secateurs.
- Severed roots will be left exposed for as short a period as possible.

Driveway access off Mossley Hill Drive

- Existing sandstone foundation blocks along Mossley Hill Drive (dark purple line) will be removed to create entrances for new driveways; some blocks have been also been displaced by tree roots and will be re-set.
- The removal of blocks will be undertaken by excavating into the footpath on the outer edge (i.e. furthest from the tree) and pulling the structure into the created hole, thereby leaving soil volumes that are adjacent to the tree relatively undisturbed.
- Underlying tree roots will be inspected by the appointed Arboricultural Consultant.
- Where displaced blocks are to be reset, the suitability of root removal will be assessed and severance undertaken where appropriate. Where root removal is unviable, alternative options will be explored (to include the reshaping of blocks).
- Soil excavation to permit the removal and/or replacement of stone blocks will be done by hand. Movement of the actual blocks will be done using mechanical plant positioned outside the protected area or on existing hard-standing (Mossley Hill Drive).

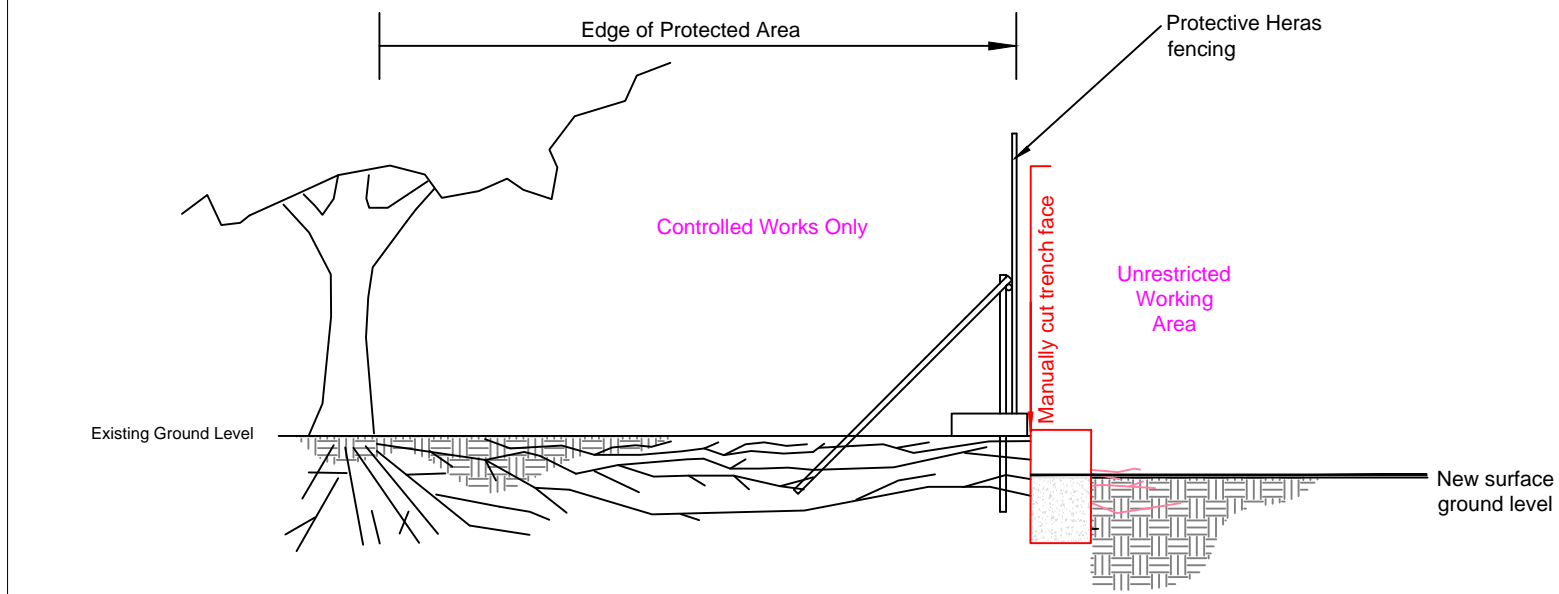
Driveway Construction

- All new surfaces within the CEZ (yellow hatch) will be constructed using a specialised above-ground, no-dig method.
- Across the entire footprint of the new surfacing a manual surface scrape may be undertaken to remove surface vegetation. The depth of soil removed will not exceed 50mm.
- Large stones or sharp obstacles will be removed from the soil surface by hand and a leveling layer of up to 50mm sharp sand applied as appropriate.
- The ArborRaft tree root protection system (or similar) will be used to minimise compaction on underlying soils (a typical specification is provided at **Inset 2**).
- A permatex 300 separation geotextile membrane layer will be placed across the working area;
- An 85mm deep ArborRaft tree root protection system will be placed on top of the geotextile area and secured with proprietary ground pins.
- A further permatex 300 separation geotextile membrane layer will be placed on the ArborRaft system.
- The pervious surface will be applied (a combination of porous tarmacadam, granite sets and pea gravel).
- Where gravel is proposed a bedding layer of 30mm single sized gravel will be laid on top of the separation geotextile and retained within a Slimblock gravel reinforcement system or similar.
- Strict adherence to all manufacturers' instructions will be observed for the ArborRaft system and pervious products.
- A non-invasive edging may be applied to the surfacing (pin kerb cast in situ or treated timber stake and board).
- The application of soil layer to a depth not exceeding 150mm may be applied to the ground surrounding the surfacing to tie-in the levels.

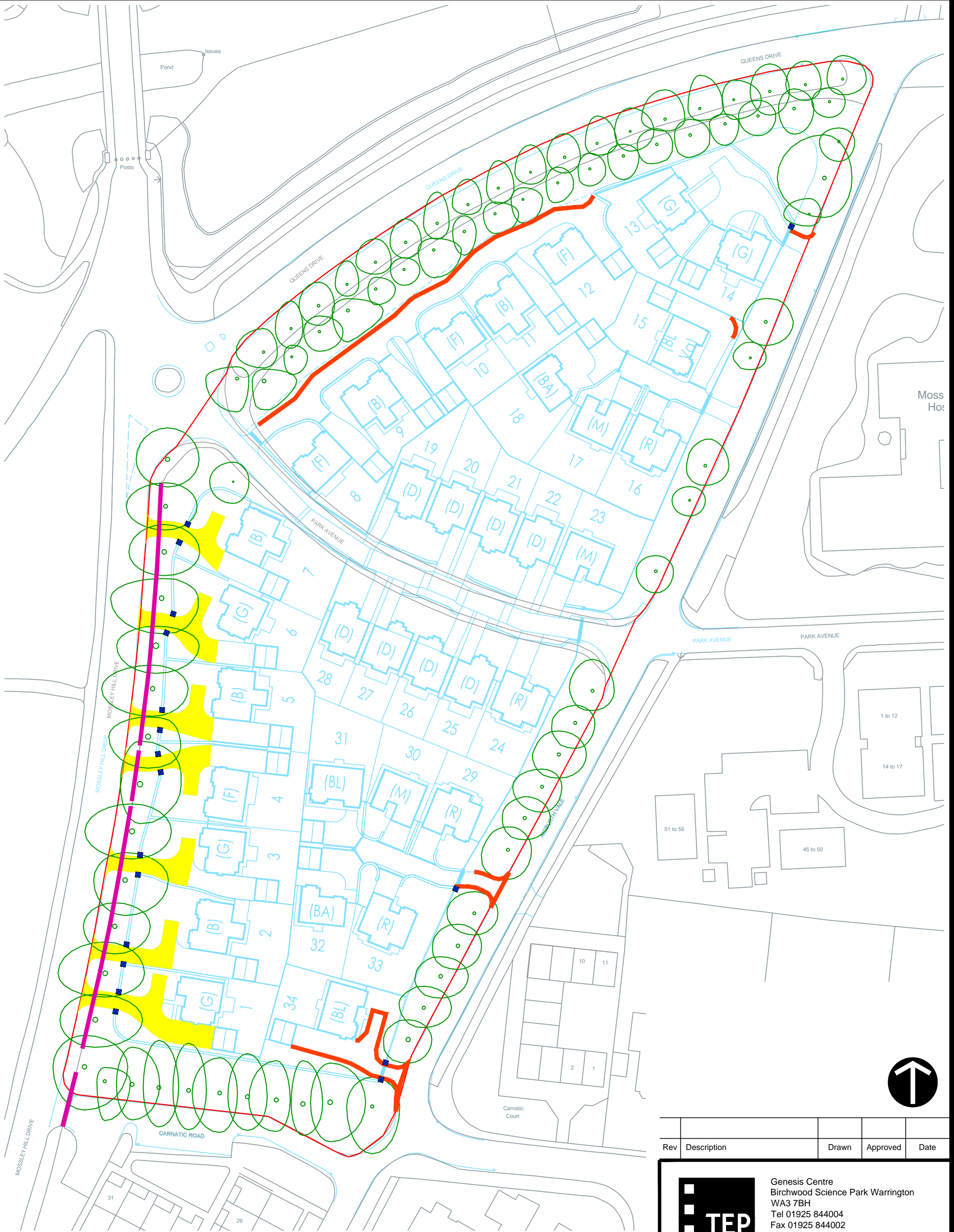
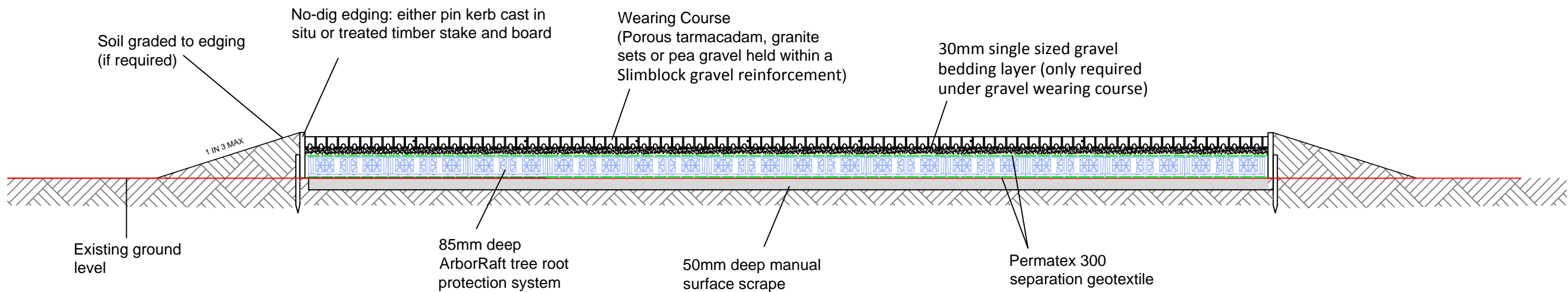
New Entrance Gateposts

- Sandstone gate posts will be installed at the location shown opposite (blue crossed box).
- Wooden boards will be laid to prevent pedestrian compaction during excavation and material handling.
- Excavation for the concrete foundations cap will be undertaken using hand tools to the minimum dimensions shown on Drawing *D4612.009 Entrance Gateposts* (typically 750mm x 750mm and 600mm depth).
- All roots that are encountered will be neatly severed at the trench face using a pruning saw or bypass secateurs.
- Holes will be lined to prevent contact between wet concrete and the soil.
- The space around installed gate posts will be backfilled with excavated material to former ground level. This will be loose tipped and manually tamped (not mechanically compacted).

Inset 1. Supervised root excavation and pruning (1:50 @ A1)



Inset 2. ArborRaft tree root protection system detail (1:20 @ A1)



KEY

[This drawing must be reproduced in colour]

- Individual trees to be retained
- Existing Sandstone Foundation Blocks
- Supervised root pruning
- New surfacing - Main roads
- New surfacing - Driveways (ArborRaft)
- New Construction (Entrance gateposts)

Rev	Description	Drawn	Approved	Date
<div><div><div></div><div>TEP</div></div><div>Genesis Centre Birchwood Science Park Warrington WA3 7BH Tel 01925 844004 Fax 01925 844002 e-mail tep@tep.uk.com</div></div>				
Project				
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Title				
AMS3 - Access Creation (Sheet 3 of 4)				
Drwg No		D4612.014		
Scale		1:750 @ A1	Date	
			05/12/14	
Drawn		RMG	Checked	TDP
			Approved	JGS



Park Avenue, Mossley Hill  
AMS4 - Boundary Treatment  
and Soft Landscaping  
(Sheet 4 of 4)

The detail and requirements of this method statement comprise commitments to complete the construction phase of the development in a specific manner. This AMS is one of 4 drawings which must be read in conjunction with AMS 1- Overview and Operation Sign-off.

Failure to adhere to the correct sequence, manner and timing of operations detailed below may result in irremediable damage to trees, and thereby breach of planning consent.

Realignment of Protective Fencing

1. Tree Protection Fencing may be realigned at the direction of the appointed Arboricultural Consultant to allow for localised pedestrian access into the Construction Exclusion Zone (CEZ).
2. All subsequent work within the protected areas will be conducted in a sensitive manner and be supervised by the appointed Arboricultural Consultant.

New boundary fences

3. Single sections of protective fencing may be removed to allow for installation of boundary treatments.
4. Party fences will be installed at the alignment shown opposite( **purple and brown lines**) within the following parameters (**Inset 1**):
  - No strip footings will be permitted within the CEZ; gravel boards will be laid above-ground and not cut in.
  - Fence posts will be installed into hand-dug holes.
  - The precise location of individual holes will be subject to modification, such that major roots are avoided.
  - No fence post will be located within 2m of any retained tree.
  - The maximum diameter of holes will be 300mm.
  - Holes will be lined with a geotextile membrane to prevent contact between concrete and the soil.
  - Wooden boards will be laid to prevent pedestrian compaction during operations.
5. Protective fencing will be replaced following works.

Soft landscaping

6. Landscaping works within the CEZ will be undertaken within the following parameters:
  - No mechanical excavation or rotavation of soils will be permitted;
  - All new planting will be done manually;
  - Care will be taken to minimise trampling and compaction of soils;
  - Temporary boards will be laid to prevent compaction of soils by repeated pedestrian access as required;
7. Gardens along Mossley Hill Road will be graded to tie in with the raised driveways utilising clean topsoil to a maximum depth 150mm (including any new turf).
5. During the application of turf underneath trees, a manual soil scrape to remove existing surface vegetation will be permitted to a maximum depth of 50mm.
6. Minor ground levelling will be achieved by the addition of a sharp sand layer. Any sand will be manually tamped and not mechanically compacted.

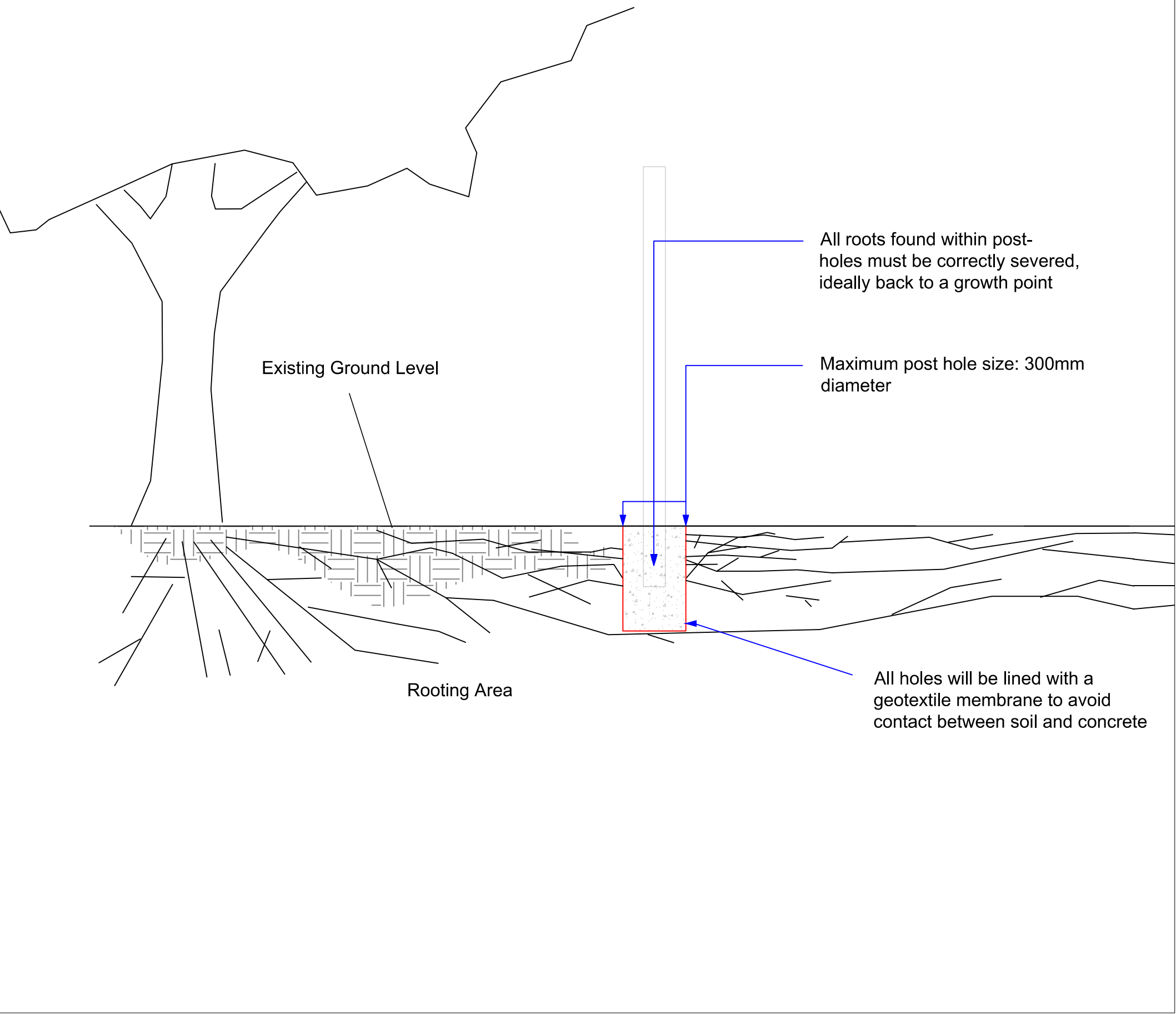
Hedgerow Planting

7. Hedgerows will be planted along the alignment shown opposite (combination of **dark light green line**).
8. Plants will have a maximum root ball depth of 300mm and will be planted using a combination of excavation and a 200mm soil build-up using clean topsoil (see **Inset 2**).
9. Excavation will be undertaken using hand tools to a maximum depth of 100mm below existing ground levels (including existing turf layer).
10. Plants will be spaced at a minimum width of 500mm apart.
11. Where space is limited, bare-root whips are specified ( **dark green line**) and will be planted into a 200mm high soil mound;

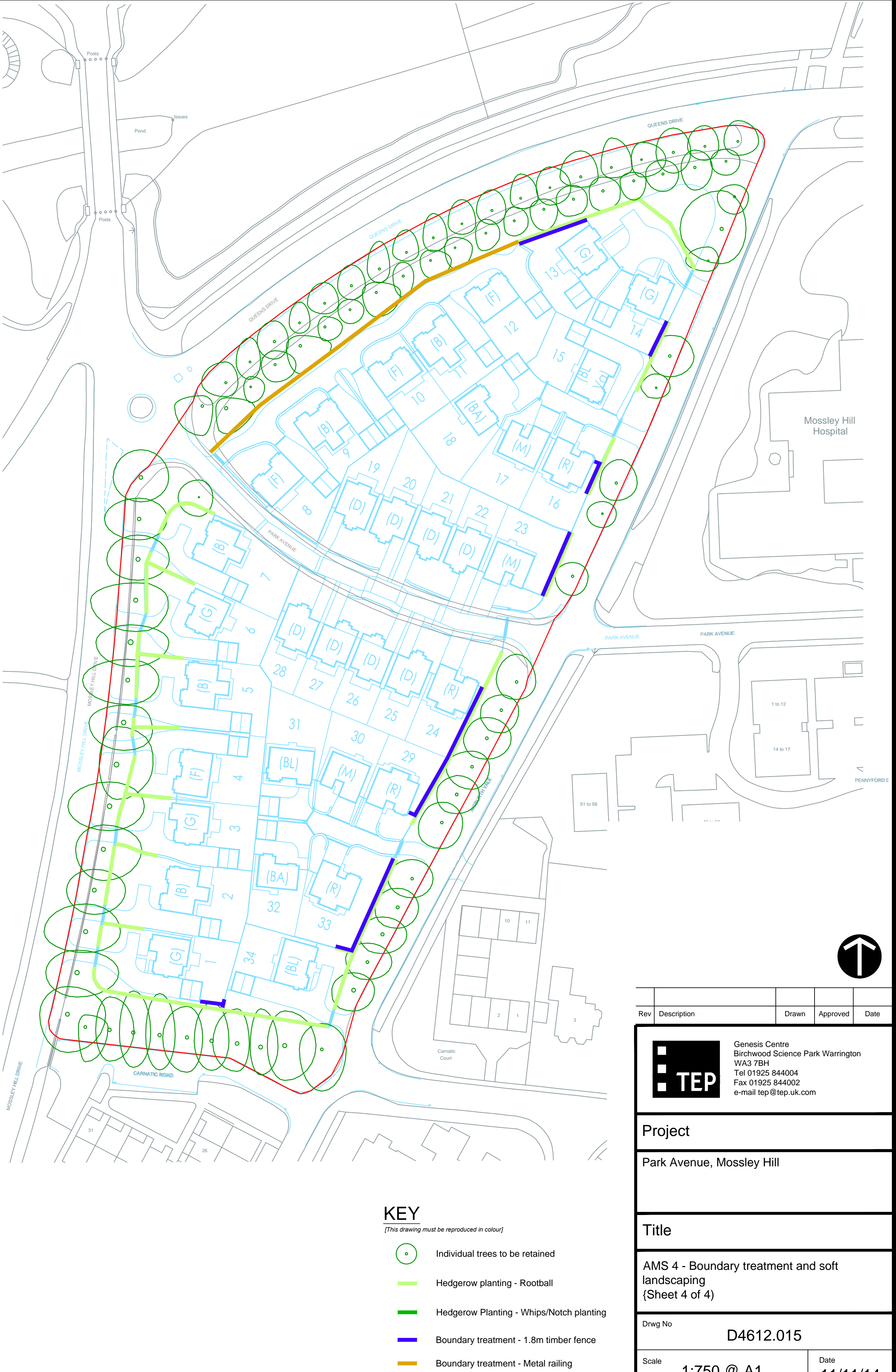
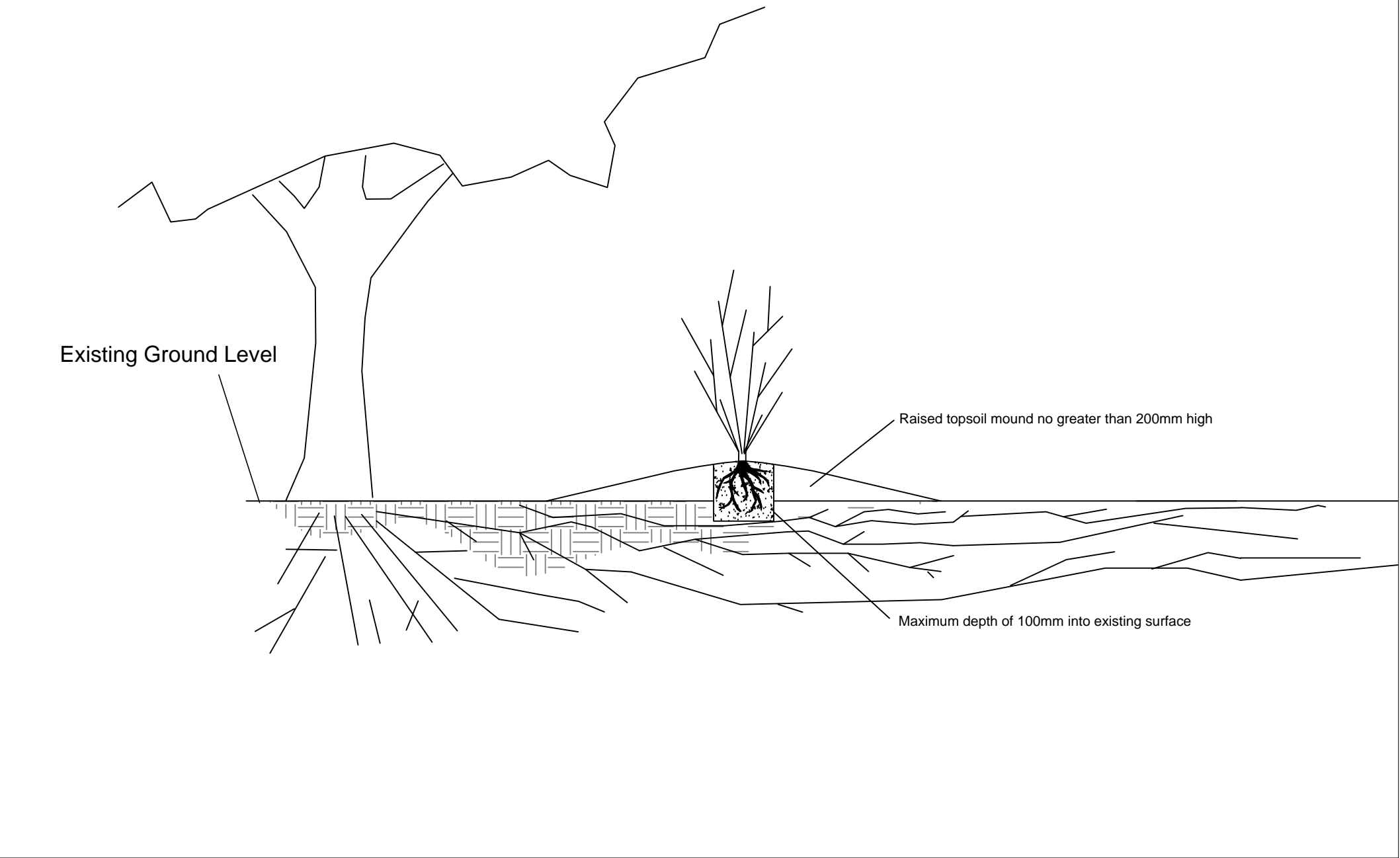
Post-Planting Maintenance and Aftercare

12. Aftercare (excluding watering) will be undertaken annually for a minimum of three years (three visits).
13. Each visit will include the following:
  - 14. Check health and condition of new planting and report of failures, vandalism or decline.
  - 15. Check stake support and make good if unstable.
  - 16. Check ties and loosen or change if rubbing or constricting stem or defective;
  - 17. Formative pruning to remove dead wood, rubbing branches, epicormics or otherwise defective material (typically minor pruning only and using bypass secateurs);
  - 18. Top up mulch if required to meet specification above.
  - 19. Watering will be undertaken between March and September. 30 litres of water will be applied per visit to the mulched area. Watering visits will be undertaken fortnightly. During periods of no rainfall, visits will be undertaken weekly.
  - 20. Plants that die, enter terminal decline or otherwise suffer major loss of amenity within a five-year period will be replaced as detailed above (planting dates notwithstanding). All maintenance and aftercare will

Inset 1. Fence post excavation (1:20 @ A1)



Inset 2. Planting mound for new Hedgerows within CEZ (1:25 @ A1)



Rev	Description	Drawn	Approved	Date
<div><div><div><div></div><div></div><div></div></div><div>TEP</div></div><div>Genesis Centre Birchwood Science Park Warrington WA3 7BH Tel 01925 844004 Fax 01925 844002 e-mail tep@tep.uk.com</div></div>				
Project				
Park Avenue, Mossley Hill				
Title				
AMS 4 - Boundary treatment and soft landscaping {Sheet 4 of 4}				
Drwg No		D4612.015		
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			11/11/14	
Drawn	Checked	Approved		
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