

Site: 10 Green Mount Drive, Heywood, OL10 2LZ

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Client: Stephanie Moss

Tree Protection Barriers

The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They should be appropriate to the nature and proximity of activity within the site. The barriers should be erected prior to the commencement of all activity including demolition, soil stripping and delivery of materials and demolition (except where existing structures require demolition to enable the barriers to be installed). Barrier systems are specified below and should be installed according to the legend on the Tree Protection Plan.

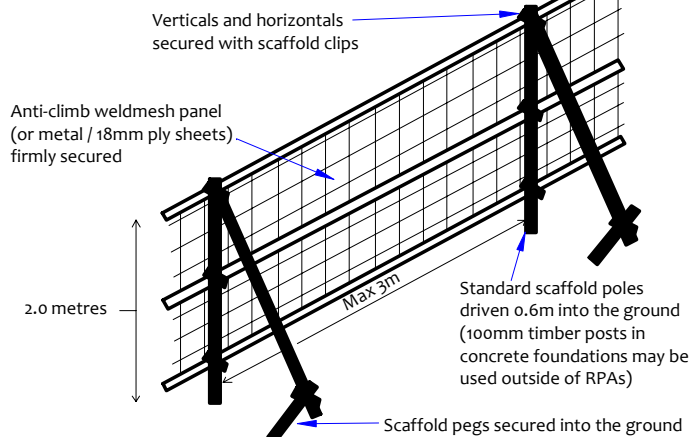
The In-Ground System

OR

This system may be installed where indicated by a solid purple line on the Tree Protection Plan. It should be robust enough to withstand occasional knocks by plant machinery and, once installed, shall remain in place throughout the entire construction phase.

Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles and diagonal bracing struts. Weldmesh panels (or similar – e.g. Heras type fencing panels, or 18mm+ plywood boards) are secured to this scaffold framework using sturdy clips e.g. standard scaffold clips. The system is illustrated in the diagram to the right and is based on BS 5837 guidelines.

The 'In-Ground' System



The Back-Stay System

OR

This system may be installed where indicated by a solid or dashed purple line on the Tree Protection Plan. It is more practical over existing hard surfaces or where the fencing needs to be moved to enable permitted activities within a Restricted Activity Zone. This system should be able to withstand occasional knocks by machinery and should not be relocated except with the consent of the site manager and the approval of the local authority.

Within this system, weldmesh fencing panels (minimum height 2m) are affixed into rubber or concrete feet and clipped together with anti-tamper couplers. Two couplers should be used, spaced at least 1m apart. Alternate panels should be attached to a diagonal back stay connected to an additional foot or baseplate secured with ground pins or additional ballast. Where ground pins are not used, the total weight of the foot/plate plus ballast should total not less than 32kg.

Where it is not possible to install diagonal struts (such as very close to a hedge) then the front feet shall be secured using ground pins or ballast.

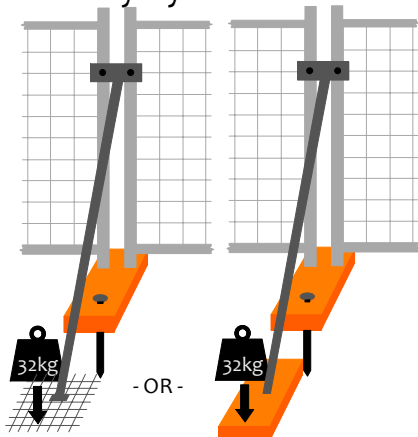
The 'Back Stay System'

2m X 3.5m weldmesh (or sheet metal) panels linked with anti-tamper couplings

Each panel attached to a back stay which is founded in an additional foot or mesh tray as illustrated

Minimum 32kg ballast to retain rear foot or tray (including the weight of the foot/tray)

Alternate front feet to be secured with ground pins or additional ballast



Notices

Suitable weather-proof notices should be displayed to identify tree protection zones. They should state the purpose of the fencing and that it should not be moved, or traversed, other than by authorised personnel.

Removal of Tree Protection Barriers

Removal of protective fencing or ground protection measures shall be done after all major construction work is complete and their removal has been approved by the appointed arborist.

Ground Protection Measures

Within Restricted Activity Zones, soils containing roots may be subject to compaction due to general construction activity (including pedestrian activity and use of plant machinery). In order to minimise compaction, it is proposed to ensure that a suitable load-spreading surface is in place at all times.

Any existing hard surfacing may be retained where engineers consider it adequate to spread the load of construction traffic. Otherwise it shall be reinforced or replaced with adequate ground protection measures.

Unless specified otherwise, ground protection shall consist of 24mm OSB boards laid at double thickness and screwed together to prevent slippage. The ground shall first be made even by raking, or by adding a few centimetres of sand or woodchip. Where only pedestrian traffic will occur boards or planks may be supported by a scaffold framework. The scaffold may be founded on poles driven into the ground and/or onto blocks (to raise the scaffold) with additional couplings to make the framework secure.

Where engineers consider OSB boards to be inadequate (e.g. for large plant machinery where the tracks may chew up the timber) sturdier ground protection measures will be installed such as road plates, or 100mm of 7-40mm angular gravel installed in 3D cellular confinement system (e.g. CellwebTM).

If a piling mat is required, engineer's specifications should be referred to.

The ground protection measures shall be installed and approved before commencement of demolition and construction activity and before the arrival of plant machinery or materials. They shall remain in place until all heavy construction activity is complete or until they are due to be replaced with a new hard surface.

Construction Exclusion Zones

Within Construction Exclusion Zones the following restrictions shall apply:

- Tree Protection Barriers shall be erected and maintained throughout the entire project as indicated on the Tree Protection Plan and under the header -Tree Protection Barriers.
- These shall remain in place at all times except when authorised landscaping works are being undertaken. At such times, adequate ground protection measures shall be installed, and excavation shall be limited to that required for new planting. Furthermore, the project arborist shall be consulted prior to any works being undertaken in these zones.
- No construction activity or excavation shall occur unless agreed otherwise by the project arborist and local authority.
- No vehicles or plant machinery shall be driven or parked.
- No tree works, other than those specified on this document shall be undertaken.
- No alterations of ground levels or conditions shall occur.
- No chemicals or cement washings permitted.
- No temporary structures shall be installed.
- No spoil shall be stored.
- No fires shall be permitted.
- All hazardous materials (including non-essential cement products) shall be forbidden.
- Removal of hard surfaces, structures or turf shall be done using hand operated tools only and supervised by the project arborist.

Tree Works Specification

The following table specifies the tree works which will be required prior to the commencement of construction activity:

Tree Reference	Action Required	Notes
T6, T7, T8 and T10	Remove.	Stumps of trees within the RPAs of retained trees shall be removed with a stump grinder NOT a mechanical excavator.

Restricted Activity Zone A

[illegible]

- ### Restricted Activity Zone B

- ## Timing of Operations

Order	Phase	Activity
1st.	Pre-Construction Phase	Planning conditions relating to trees to be identified and discussed with the Project arborist and site manager.
2nd.		All specified tree removal to be undertaken (see Header -Tree Works Schedule).
3rd.		Install the tree protection barriers (fencing and ground protection boards - see Headers -Tree Protection Barriers and Ground Protection Measures).
4th.		Pre-Commencement site meeting: Tree protection barriers inspected. Additional protection measures to be agreed. Variances to be agreed. Location of underground services to be agreed. Exact specification for foundations to be agreed. Exact specification for new surfaces to be agreed. Scope of future inspections/monitoring to be agreed.
5th.		Arboricultural Method Statement to be revised and approved (if necessary).
Protection measures confirmed acceptable by the local authority		
6th.	Construction Phase	Demolish existing structures and remove existing surfaces where applicable.
7th.		Install new buildings, hard surfaces and services taking into account restricted activities as specified in this Arboricultural Method Statement.
8th.	Post-Construction Phase	Site meeting with project arborist. Landscaping restrictions to be agreed. Condition of retained trees to be assessed and mitigation agreed. Ground conditions to be assessed and ground remediation to be agreed.
9th.		Remove protective barriers (fencing and ground protection measures as applicable).
10th.		Undertake restricted landscaping operations within Root Protection Areas, including (where applicable) boundary treatments, pedestrian surfaces, decking and any proposed tree planting.

Preparatory Works

Fires

Canopy Protection

- No machinery in excess of 2m shall pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged.
- If materials require installation or delivery beneath tree canopies, this shall be done without the use of overhead cranes.
- If materials are to be installed or delivered close to tree canopies (but not beneath them) and a crane is required, they shall be carefully marshalled in order to ensure that branches are not accidentally damaged.

Storage of Spoil and Materials

Hazardous Materials

Sturdy plastic sheeting
e.g. 1200 gauge DPM

Plywood board
over plastic sheet

Raised lip

Underground Services

Site Hoarding

- Ground levels shall be maintained as existing.
- Post holes shall not exceed 300mm x 300mm.
- No post hole shall be excavated within 1.5m of any tree stem.
- Post holes shall be excavated using hand tools or by a post-hole auger attached to plant machinery sited outside of Root Protection Areas.
- Roots in excess of 25mm shall be retained wherever possible.
- Roots in excess of 10mm shall be pruned with sharp secateurs.
- Pruning shall be minimal and only undertaken where absolutely necessary to facilitate the site hoarding. It shall be undertaken by a reputable tree surgeon working to BS 3998 (2010).

Siting of Cabins

- All services to and from site cabins shall be installed above ground through any Root Protection Areas.
- No excavation shall occur within Root Protection Areas to enable cabins to be installed.
- The cabins shall be founded on a suitable load spreading surface.

Fence Posts or Decking Posts

- All post holes shall be excavated by hand and kept as narrow as possible (maximum diameter 300mm).
- Exploratory post holes shall be dug before committing to post / panel positions. If any roots in excess of 25mm are encountered they are to remain intact and the post hole shall be relocated slightly. The fencing system must permit such flexibility (i.e. where fixed panel widths are used, all post holes must be excavated before committing to the final location).
- Any roots in excess of 10mm which are severed shall be neatly pruned back with secateurs. This will encourage healing and reduce the likelihood of infection.

Hedges may be planted within Root Protection Areas using hand tools to minimise excavation.

Personnel and Accountability

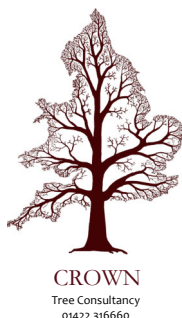
This table should be completed at the Pre-Start Meeting or earlier

Position	Name	Contact Phone & email	Roles
Project Manager	Insert Details	Insert Details	Liaising with site manager & project arborist regarding any potential issues relating to trees. Scheduling of meeting, excavations and inspections. Overseeing this monitoring schedule. Instructing the project arborist and arranging access. Liaising with local authority regarding discharge of planning conditions and variances to the Arboricultural Method Statement.
Site Manager	Insert Details	Insert Details	Day to day monitoring of tree protection measures. Fortnightly supply of site photographs showing all tree protection measures. Induction of all contractors. Reporting to the Appointed Arborist of any incidents or potential variations to the agreed tree protection measures.
Project Arborist	Crown Tree Consultancy	08000 14 13 30 0203 797 7449 S Info@crowntrees.co.uk	Liaising with LPA Tree Officer over all arboricultural matters. Initial inspection and signing off of tree protection barriers including ground protection measures. Monthly site visits and inspections. Reporting to the local authority following site inspections and any variation or incidents.
Local Authority	Rochdale Metropolitan Borough Council	Insert Details	Receipt of reports from the appointed arborist. Liaising with the appointed arborist to agree suitability of tree protection measures and any variations. Enforcement. Advice and assistance with the discharge of planning conditions relating to trees.
Additional Contact	Insert Details	Insert Details	Insert Details
Additional Contact	Insert Details	Insert Details	Insert Details

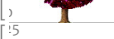
Site Monitoring Schedule

Inspection	Site Attendees	Comments
Pre- Start Desk-top To occur prior to any works taking place on the site.	N/A.	Project Manager and Site manager to study this Method Statement & contact the Project Arborist to agree all protection measures.
Pre-Start Meeting After tree works completed & tree protection barriers / ground protection measures installed. Prior to any other activity, inc. demolition & soil stripping.	Site manager, project arborist. Tree Officer invited.	Tree protection fencing locations & specification checked. Ground protection measures checked. Contractors to be inducted to all relevant aspects of the Arboricultural Method Statement. Responsibilities checked and acknowledged. Adherence to the Arboricultural Method Statement to be discussed and agreed. Report on findings to be sent to the local authority tree officer (see accompanying reporting template)
Post-Construction Meeting Post external construction activity but prior to removal of fencing & landscaping operations.	Site manager, project arborist. Tree Officer invited.	Retained trees inspected. Ground conditions assessed and mitigation measures agreed where appropriate. Further landscaping operations and restrictions to be agreed.

* Where agreed with the L.A. it may be acceptable to supply photographs of the fencing to avoid the necessity for a site visit.



Tree Data Schedule

Reference G = Group H = Height	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W S E	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour		Amenity Value	
								Priority	Inspect Freq (yrs)	Physiological Condition	Structural Condition	Life Expectancy (yrs)	Retention Category
G1	Early-Mature Apple Malus sp.	av 4.5	av 3	av 30	av 1.5 1.5 1.5 each		Position: Form: History: Defects: Other:	Situated on third party land. Two close growing specimens. Multiple pruning wounds due to crown reduction and crown lifting. No significant defects observed. Limited inspection, dimensions estimated.	No action required.	Moderate Good	Low 20-40		
									n/a	3	Good	C	
T2	Semi-Mature Apple Malus sp.	6.5	3.5	28	5 3 1		Position: Form: History: Defects: Other:	Situated on third party land. Multi-stemmed at 3m with an unbalanced crown. Multiple pruning wounds due to crown lifting. No significant defects observed. Limited inspection, dimensions estimated.	No action required.	Moderate Good	Low 20-40		
									n/a	3	Good	C	
T3	Semi-Mature Holly Ilex aquifolium.	9	1.5	17	3 1 2.5		Form: History: Defects:	Twin-stemmed at 3m with an unbalanced crown. Small stem removed at base. Minor included bark at stem junction. Sparse canopy.	No action required.	Moderate Fair Fair	Low 10-20		
									n/a	3	Fair	C	
T4	Semi-Mature Sycamore Acer pseudoplatanus.	10	4	19	2 1.5 6		Form: History: Defects: Other:	Twin-stemmed at 0.5m with an unbalanced crown. No evidence of significant pruning. Bark wounds to lower branches. Minor dead wood to upper crown. Growing through wire mesh fence. Recorded stem diameter is equivalent for two stems (15 & 12cm).	No action required.	Low Fair Fair	Low 10-20		
									n/a	3	Fair	C	
T5	Semi-Mature Horse Chestnut Aesculus hippocastanum.	5	1	18	1.5 2.5 4		Position: Form: History: Defects: Other:	Situated on third party land. Twin-stemmed at 1m with a slightly unbalanced crown. No evidence of significant pruning. Scattered dead twigs. Limited inspection, dimensions estimated.	No action required.	Moderate Fair Good	Low 40+		
									n/a	3	Good	C	
T6	Early-Mature Hawthorn Crataegus monogyna.	5	2	28	1.5 2 3		Form: History: Defects: Other:	Multi-stemmed at 2m with a slight lean. Previously topped at 4m above ground level. Significant decaying branch stub to main stem. Vegetation prevented detailed inspection of stem base.	No action required.	Moderate Good Fair	Low 10-20		
									n/a	3	Fair	C	
T7	Early-Mature Hawthorn Crataegus monogyna.	6	3	29	3 2 1.5 2		Form: History: Defects: Other:	Twin-stemmed at 2m with a slightly unbalanced crown. Previously topped at 4m. Section of stem and stem union cut with chainsaw. Potentially unstable.	Remove.	Moderate Fair Very Poor	Low <10		
									High	N/A	Very Poor	U	
T8	Semi-Mature Norway Maple Acer platanoides.	8	1	15	0.5 3 4		Form: History: Defects: Other:	Triple-stemmed at 1m with an unbalanced crown. No evidence of significant pruning. Small dead branches throughout. Bark wounds to lower branches. Growing through wire mesh fence.	No action required.	Moderate Fair Good	Low 10-20		
									n/a	3	Good	C	
T9	Early-Mature Pissards Plum Prunus cerasifera.	8	3	35	2 4 1.5 5		Form: History: Defects: Other:	Twin-stemmed at 1m with a slightly unbalanced crown. Occasional pruning wounds due to crown lifting. Scattered dead twigs to lower crown. Minor included bark. Recorded stem diameter is equivalent for two stems (24 & 26cm).	No action required.	Moderate Good Fair	Low 10-20		
									n/a	3	Fair	C	
T10	Early-Mature Pissards Plum Prunus cerasifera.	8	3	22	1.5 3 1.5		Form: History: Defects:	Twin-stemmed at 2m with a slightly unbalanced crown. Occasional pruning wounds due to crown lifting. Small dead branches to lower crown.	No action required.	Moderate Fair Good	Low 10-20		
									n/a	3	Good	C	
T11	Early-Mature Beech Fagus sylvatica.	16	3.5	53	4.5 5 5		Position: Form: History: Defects: Other:	Situated on third party land. Twin-stemmed at 1m with a well-formed crown. No evidence of significant pruning. Significant included bark at stem junction (acceptable condition at present, due to upright form). Small dead branches throughout. Limited inspection, dimensions estimated. Recorded stem diameter is equivalent for two stems (40 & 35cm).	No action required.	Moderate Good Fair	High 40+		
									n/a	1-5	Fair	A -	
T12	Early-Mature Pissards Plum Prunus cerasifera.	8	1.5	18	1.5 4 2		Form: History: Defects: Other:	Twin-stemmed at 2m with an unbalanced crown. Occasional pruning wounds due to crown lifting. Early decay at pruning wounds. Small dead branches to lower crown. Suppressed by adjacent beech trees.	No action required.	Moderate Fair Good	Low 10-20		
									n/a	3	Good	C	
T13	Early-Mature Beech Fagus sylvatica.	16	2	45	3 6 4		Position: Form: History: Defects: Other:	Situated on third party land. Twin-stemmed at 1.5m with a slight lean. No evidence of significant pruning. Included bark at stem junction. Upper stem is ivy smothered. Limited inspection, dimensions estimated.	Remove ivy.	Moderate Good Fair	Moderate 40+		
									Low	1-5	Fair	B +	
T14	Semi-Mature Pissards Plum Prunus cerasifera.	7	3	18	4 1 5.5 1.5		Form: History: Defects: Other:	Twin-stemmed at 2m with an unbalanced crown. Occasional pruning wounds due to crown lifting. Scattered dead wood throughout. Suppressed by adjacent beech trees.	No action required.	Moderate Fair Good	Low <10		
									n/a	3	Good	C -	
T15	Early-Mature Beech Fagus sylvatica.	14	2.5	48	6 7 6		Position: Form: History: Defects: Other:	Situated on third party land. Multi-stemmed at 6m with a well-formed crown. No evidence of significant pruning. Dead branch stubs to lower crown. One dead broken branch hung up in canopy at 3m above ground level to east. Limited inspection, dimensions estimated.	Remedial prune.	Moderate Good Fair	High 40+		
									Low	1-5	Fair	A	
T16	Semi-Mature Lawson Cypress Chamaecyparis lawsoniana.	12	3	25	3 1.5 2		Position: Form: History: Defects: Other:	Situated on third party land. Single stemmed and vertical with a slightly unbalanced crown. No evidence of significant pruning. No significant defects observed. Limited inspection, dimensions estimated.	No action required.	Moderate Good	Moderate 40+		
									n/a	3	Good	C	

Tree Protection Plan

	B5 5837 Root Protection Area (radius = 12xstem diameter)	
	Root Protection Area needing amendment due to site conditions, e.g. presence of existing road or building.	
	Root Protection Area having been amended to account for site conditions	
T1 = Tree No 1	G2 = Group No 2	H3 = Hedge No 3

Tree Retention Categories	
Stems & canopies shown	
	Category A tree
	Category B tree
	Category C tree
	Category U tree

	Trees of high quality with an estimated life expectancy of 50+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.
	Trees of moderate quality with a life expectancy of 30+ years. Usually maturing trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees.
	Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.
	Trees unsuitable for retention due to their very poor condition.

Drawing No:	CCL11133	TPP Rev: 1
Title:	Tree Protection Plan (Existing Layout with Proposals Overlaid)	
Site:	10 Green Mount Drive OL19 3LZ	
Scale:	0 5 10m	1:200
Paper Size:	A4	



Proposed Layout (Pale Green)

