Arboricultural Constraints Appraisal

in Relation to School Re-Development



Gorton Primary School, Mount Road, Manchester, M18 7GR

Prepared by:

Bowland Tree Consultancy Ltd

February 2018

CONTENTS

1. TREE SURVEY SCHEDULE & BS5837: 2012 TABLE 1
2. TEMPORARY PROTECTIVE FENCING SPECIFICATION
3. TREE CONSTRAINTS PLAN

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ARBORICULTURAL CONSTRAINTS APPRAISAL
GORTON PRIMARY SCHOOL

Control sheet

Project No.:	BTC1508
Site:	Gorton Primary School, Mount Road, Manchester
Client:	Conlon Construction
Council:	Manchester City Council
Survey Date:	20 February 2018
Surveyed by:	Ryan Gledhill FdSc MArborA
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TREE SURVEY SCHEDULE FOR ARBORICULTURAL CONSTRAINTS APPRAISAL			
Site:	Gorton Primary School, Mount Road, Manchester, M18 7GR	**Surveyor:**	Ryan Gledhill FdSc MArborA
Client:	Conlon Construction	**Survey Date:**	20 February 2018
		Job Ref:	BTC1508

No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Silver Birch	6	210	N E S W	1 2 2 2	1.5-N 2	Y	G	▪ Stem bifurcates at a height of 1.5m. ▪ Frequent bark damage to a height of 2m. ▪ Frequent instances of pruning wounds to a diameter of 30mm from crown lift management to a height of 3m.	▪	10+	C1	20	2.52
T2	Silver Birch	16	350	N E S W	3 3 3 3	1-E 3	EM	G	▪ Frequent instances of pruning cuts to branch tips to reduce lateral spread towards lamppost. ▪ Stem bifurcates at a height of approximately 4.5m. ▪ Small instances of deadwood to a diameter of 50mm.	▪	10+	C1	55	4.2
T3	Wild Cherry	5.5	510	N E S W	5 5 5 5	2-N 2.5	M	G	▪ Located approximately 400mm from street side, lifted roots spreading east to west evidently from conflict with public footpath. ▪ Frequent instances of partially occluded cavities and pruning pegs to a diameter of approximately 150mm.	▪	10+	C2	118	6.12
T4	Laburnum	6	450	N E S W	2.5 2.5 2.5 2.5	2-N 3	M	G	▪ Multi-stemmed from a height of 2m.	▪	10+	C2	92	5.4
T5	Hawthorn	4	270	N E S W	2 2 2 2	2-N 2	EM	G	▪ Multi-stemmed from a height of 2m. ▪ Numerous pruning pegs to a diameter of 50mm, up to a height of 2.5m from crown lift management over adjacent public road.	▪	10+	C2	33	3.24
T6	Sycamore	11	490	N E S W	5 5 5 5	2.5-E 3	EM	G	▪ Light stem lean north. ▪ Frequent instances of partially occluded cavities and pruning pegs to a diameter of approximately120mm from crown lift management to a height of 4m.	▪	10+	C2	109	5.88

Headings and Abbreviations:

No. Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species: Common name
Height: In metres, to nearest half metre – where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.: Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread: Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances: Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point – to inform on crown to height ratio, potential for shading, etc.
Life Stage: Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC: Physiological Condition - a measure of the tree'(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments: Comments relating to the tree'(s)' overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations: Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take exiting site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC: Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade: Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²: Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
 # (Estimated Dimensions): Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a "#" symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL CONSTRAINTS APPRAISAL			
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Client:	Conlon Construction		

Surveyor:	Ryan Gledhill FdSc MArborA
Survey Date:	20 February 2018

No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T7	Ash	13	400	N E S W	3 4 4 5	2-N 3	SM	M	▪ Stem trifurcates at a height of 2m. ▪ Frequent partially occluded cavities to a height of 150mm from crown thin management, subsequent dense epicormic canopy shoots from excessive pruning. ▪ Evidently in a mid-stage of progressive decline.	▪	10+	C2	72	4.8
T8	Ash	13	420	N E S W	3 3.5 3 3	4-E 3	SM	M	▪ Frequent instances of partially occluded cavities to a diameter of 150mm from previous crown lift and thin management.	▪	10+	C2	80	5.04
T9	Sycamore	5	150	N E S W	2.5 2.5 2.5 2.5	2-S 2	Y	G	▪ Minor canopy confliction with school fence.	▪	10+	C2	10	1.8
T10	Laburnum	6	410	N E S W	3 3 3 3	2-W 3	M	G	▪ Stem growing into adjacent road side iron railing fence, evidently severely enveloped. ▪ Stem bifurcates at a height of 2m.	▪	<10	U	76	4.92
T11	Hawthorn	5	300	N E S W	3 3 3 3	2-E 3	M	G	▪ Multi-stemmed from a height of 2m.	▪	10+	C2	41	3.6
T12	Hawthorn	4.5	290	N E S W	2 2 2 2	2-N 2	EM	G	▪ Stem bifurcates at a height of 1.75m. ▪ Frequent instances of pruning cuts to a diameter of approximately 70mm.	▪	10+	C2	38	3.48
T13	Ash	15	640	N E S W	5 5 5 5	4-N 4	M	G	▪ Slight stem lean east. ▪ Stem trifurcates at a height of approximately 4m. ▪ Moderate instances of partially occluded cavities to a height of 4.5m, to a diameter of approximately 100mm, from crown lift management.	▪	20+	B2	185	7.68
T14	Wild Cherry	5	350	N E S W	3.5 3.5 3.5 3.5	2-S 2	SM	M	▪ Multi-stemmed from a height of 2m. ▪ Frequent instances of partially occluded cavities and pruning pegs to a diameter of approximately 150mm.	▪	10+	C2	55	4.2

TREE SURVEY SCHEDULE FOR ARBORICULTURAL CONSTRAINTS APPRAISAL		Surveyor:	Ryan Gledhill FdSc MArborA	Page: 3 of 4
Site:	Gorton Primary School, Mount Road, Manchester, M18 7GR	Survey Date:	20 February 2018	
Client:	Conlon Construction	Job Ref:	BTC1508	

No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T15	Swedish Whitebeam	7	500	N E S W	3 3 3 3	2-N 2	M	G	▪ Previously reduced to a height of 5m, subsequent dense crown of epicormics shoots. ▪ Canopy conflicting with adjacent telegraph pole.	▪	10+	C2	113	6
T16	Common Holly	3	80	N E S W	1.5 0.5 1.5 1.5	1-S 1.75	Y	G	▪ Slight canopy conflictions with school fence.	▪	10+	C2	3	0.96
T17	Silver Birch	7	120	N E S W	2 2 2 1	4-S 2.5	Y	G	▪ Stem enveloping adjacent fence at a height of approximately 1.5m.	▪	<10	U	7	1.44
T18	Laburnum	4	1x100 2x80 (ms)	N E S W	1 1 1 1	1-S 2	Y	G	▪ Stem trifurcates at a height of 1m.	▪	10+	C2	10	1.81
T19	Common Holly	8	1x260 1x240 (ts)	N E S W	2 2 2 2	2-N 2	EM	G	▪ Located on small soft surface area within the hard surfaced children's recreational area. ▪ Stem bifurcates at base. ▪ Crown lifted to a height of 2m.	▪	10+	C1	57	4.25
G1	2no. Rowan	≤ 4.5	≤ 9x80 (ms)#	N E S W	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5	N/A ≥ 2	Y	M	▪ Multi-stemmed from base. ▪ Loose spaced group.	▪	10+	C2	≤ 26	≤ 2.88
G2	7no. Lombardy Poplar	≤ 18	≤ 450#	N E S W	≤ 4 ≤ 4 ≤ 4 ≤ 4	2.5-S ≥ 2	SM- EM	G	▪ Located on neighbouring land. ▪ Close spaced group. ▪ Frequent partially occluded pruning wounds, to a diameter of approximately 100mm, to upper crowns from reduction management.	▪	10+	C2	≤ 92	≤ 5.4
G3	Hawthorn	≤ 4	≤ 80	N E S W	≤ 1.5 ≤ 1.5 ≤ 1 ≤ 1	N/A ≥ 0	Y	G	▪ Outgrown hedge now heavily conflicting with school boundary mesh fence.	▪	<10	U	≤ 3	≤ 0.96
G4	3no. Silver Birch	≤ 12	≤ 260	N E S W	≤ 4 ≤ 4 ≤ 4 ≤ 4	1-N ≥ 2	Y-EM	G	▪ Close spaced group. ▪ Stem bases all in close proximity to iron railing fence, subsequently limiting the projected life span.	▪	<10	U	≤ 12	≤ 1.92

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Survey Date:	20 February 2018
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No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
G5	14no. Wild Cherry	≤ 4	≤ 260#	N E S W	≤ 1.5 ≤ 2 ≤ 2.5 ≤ 2	2-S ≥ 2	SM	M-G	▪ Located on neighbouring land. ▪ Moderate spaced linear boundary group. ▪ Frequent instances of partially occluded pruning wounds north, to a diameter of approximately 150mm, to reduce canopy encroachment into school grounds.	▪	10+	C2	≤ 31	≤ 3.12
G6	4no. Silver Birch	≤ 15	≤ 290	N E S W	≤ 3 ≤ 3 ≤ 3 ≤ 3	3-N ≥ 2	EM	G	▪ Moderate to loose spaced linear group. ▪ Located on narrow soft surface strip.	▪	10+	C2	≤ 38	≤ 3.48

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

Construction Exclusion Zones (CEZs), shall be enclosed by **Temporary Protective Fencing** and/or, where necessary, **Temporary Ground Protection Measures**. The fencing/ground protection Type(s), locations, and extents shall be agreed, in writing, with the Local Planning Authority (LPA). In turn, the **Temporary Protective Fencing** and/or **Temporary Ground Protection Measures** shall:

1. be constructed as in accordance with the Type 1, Type 2 or Type 3 'Temporary Protective Fencing Construction' sections and, where applicable the 'Temporary Ground Protection Measures' section, as detailed herein and agreed, in advance with the LPA;
1. be retained in place throughout the development process until completion of the project, and only removed following receipt of written permission from the LPA;
2. be sited in the area(s) defined by the Root Protection Areas on the associated Tree Impact Plan, or as the CEZs on the Tree Protection Plan;
3. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
4. preclude any delivery of site accommodation and/or materials and/or plant machinery;
5. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties;
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance; and
7. be affixed with a 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below), at every 10.0 metre length of protective fencing.

Important: Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Figure 1: CEZ Warning Sign

– TREE PROTECTION AREA –
KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONNEL:

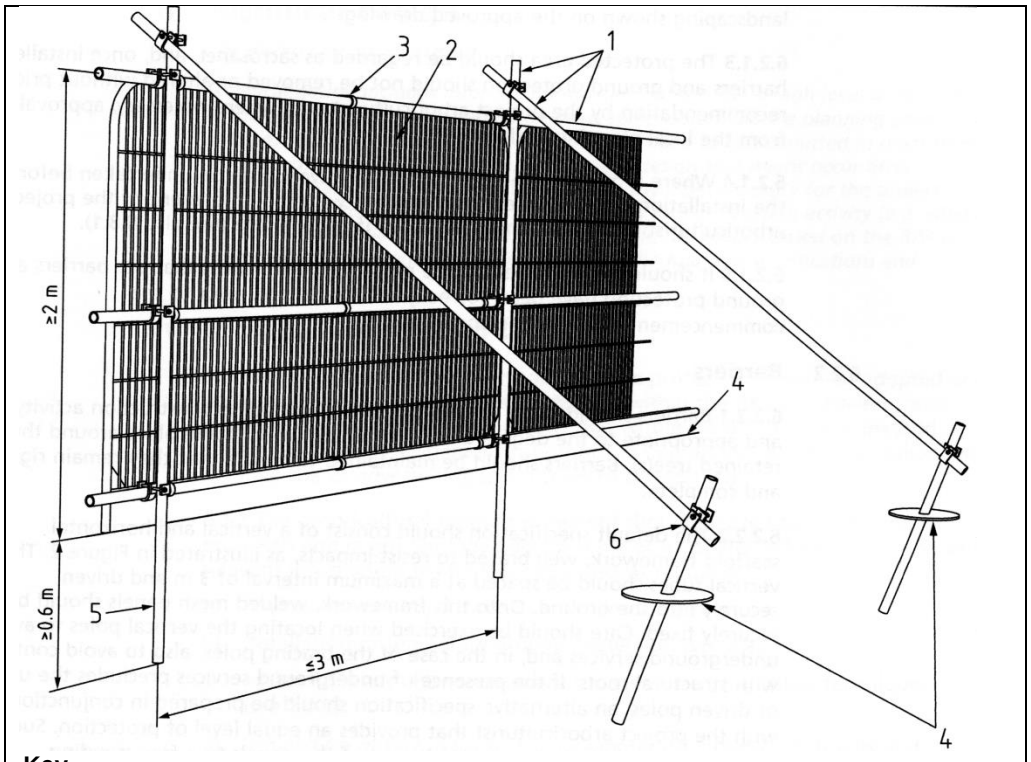
- THE PROTECTIVE FENCING MUST NOT BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE
- NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE

ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Type 1 (i.e. 'Default') Temporary Protective Fencing Construction (see Figure 2, below)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per points 3 to 5 of Figure 2, overleaf.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per points 4 to 5.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45º angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

Figure 2: BS5837:2012 Default specification for protective barrier



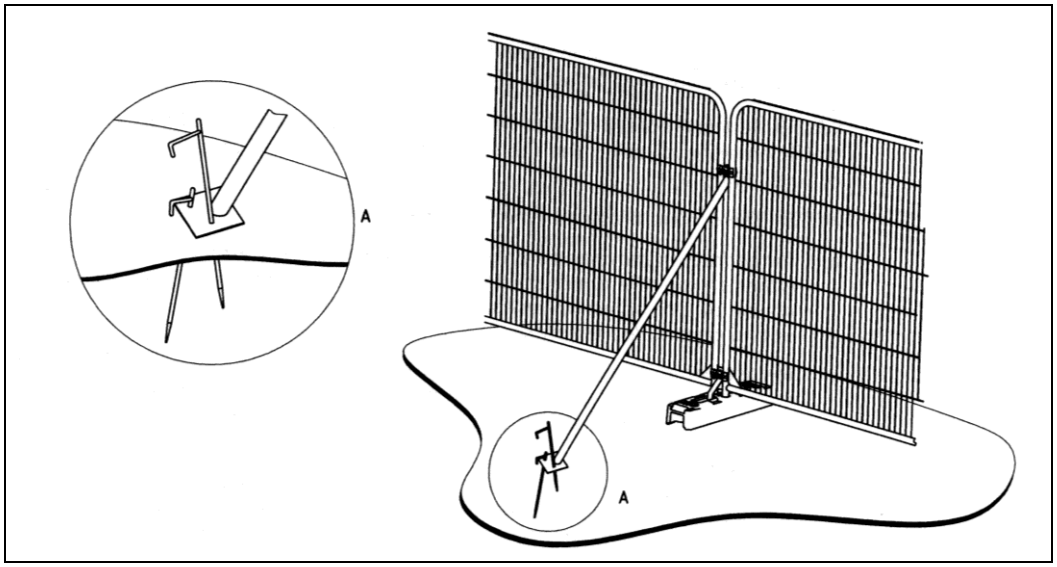
Key

1. Standard scaffold poles.
2. Heavy gauge 2 metre tall galvanised tube and welded mesh infill panels
3. Panels secured to uprights and cross members with wires ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6 metres)
6. Standard scaffold clamps

Type 2 Temporary Protective Fencing Construction (see Figure 3(a), below)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a base plate, which shall be secured to the ground with pins (Figure 3a).
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

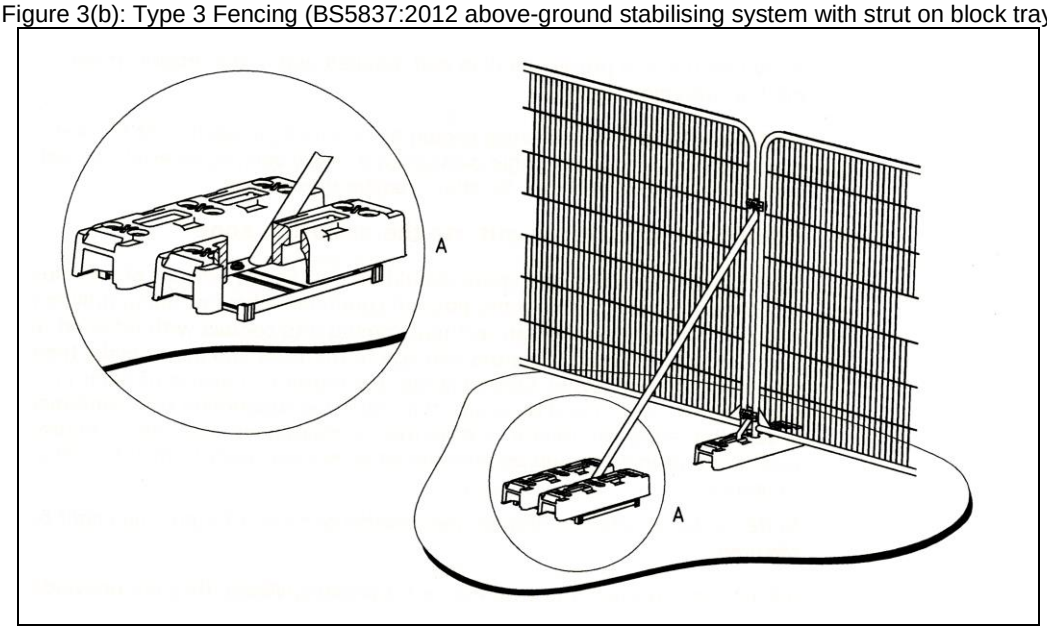
Figure 3(a): Type 2 Fencing (BS5837:2012 above-ground strut stabilising system with ground pins)



Type 3 Temporary Protective Fencing Construction (see Figure 3(b), overleaf)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a block tray base (Figure 3b).
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

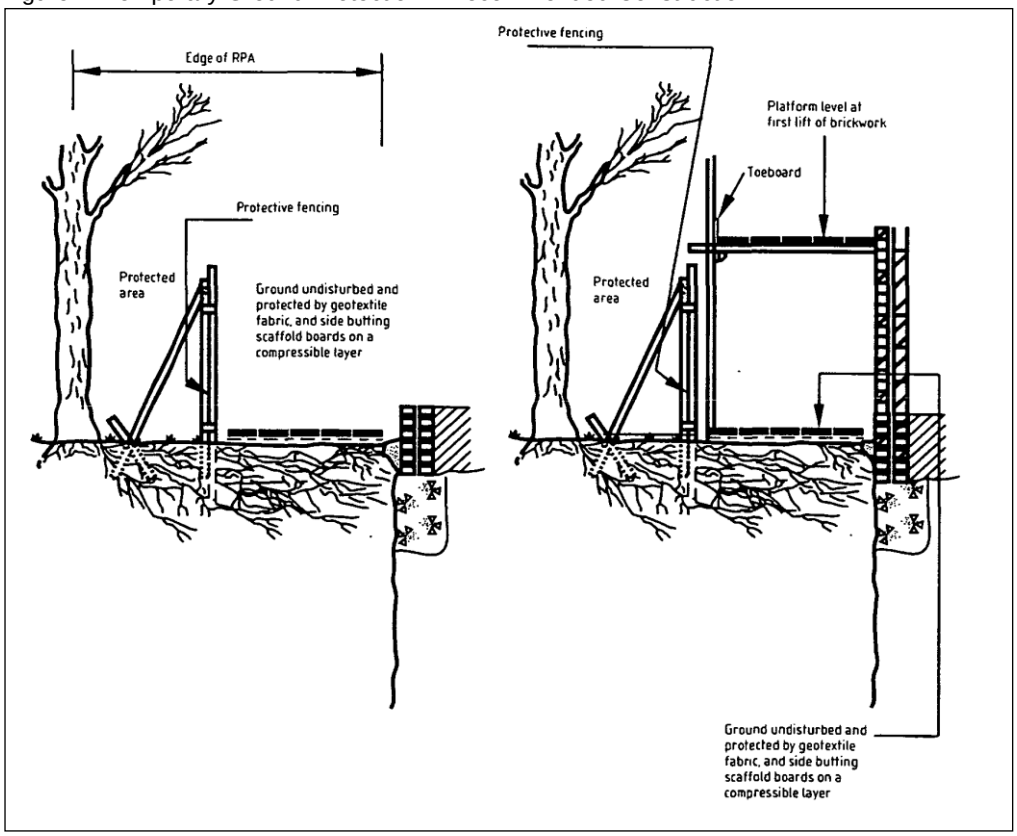
Figure 3(b): Type 3 Fencing (BS5837:2012 above-ground stabilising system with strut on block tray)

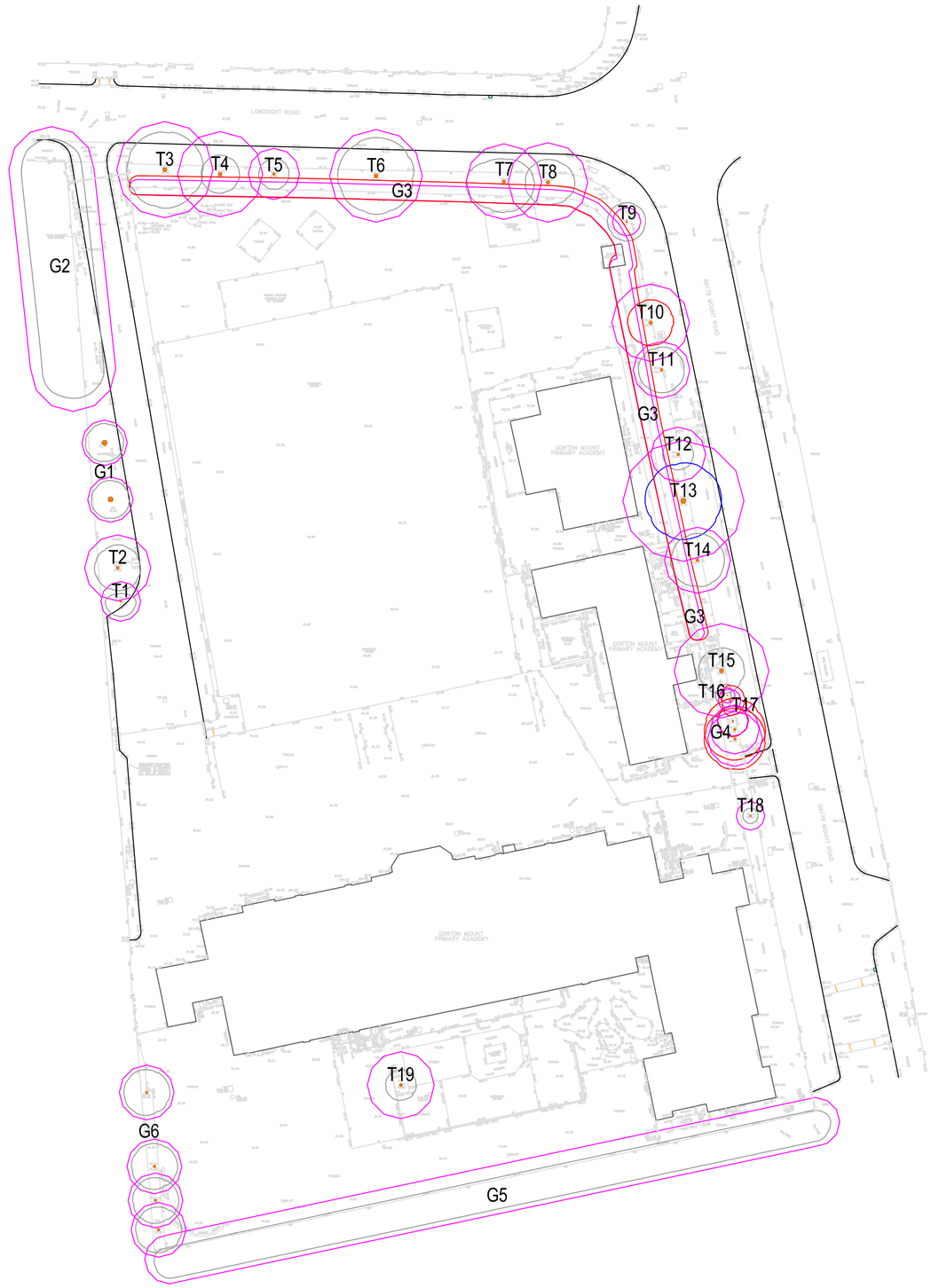


Temporary Ground Protection

1. Any necessary Temporary Ground Protection areas shall conform to Figure 4, below, unless otherwise agreed with the LPA.
2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
4. On completion of installation, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Ground Protection.
5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

Figure 4: Temporary Ground Protection – Recommended Construction





Important: The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

KEY

T = Individual Tree
G = Group of Trees

Please refer to associated Tree Survey Schedule for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

Category 'A' Tree/Group
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Note: Stem locations of T16, G1, G2, G3 & G5 were not included on the topographical survey plan provided and were subsequently plotted by the arboricultural surveyor at the time of the survey using GPS siting and, where possible, measurement from existing site features. As such, the locations of these trees cannot therefore be considered to be wholly accurate

Root Protection Areas (RPAs):

RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone - see Temporary Protective Fencing Specification Appended

Project:
GORTON PRIMARY SCHOOL
MOUNT ROAD
MANCHESTER
M18 7GR

Client:
CONLON CONSTRUCTION

Title:
TREE CONSTRAINTS PLAN
in Relation to Proposed School Re-Development

Scale:	1:500@A2
Date:	February 2018
Drawn by:	RG
Checked by:	JK

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Ref: BTC1508-TCP Rev: