



Arboricultural Survey Schedule

Recommendations - Priority Code

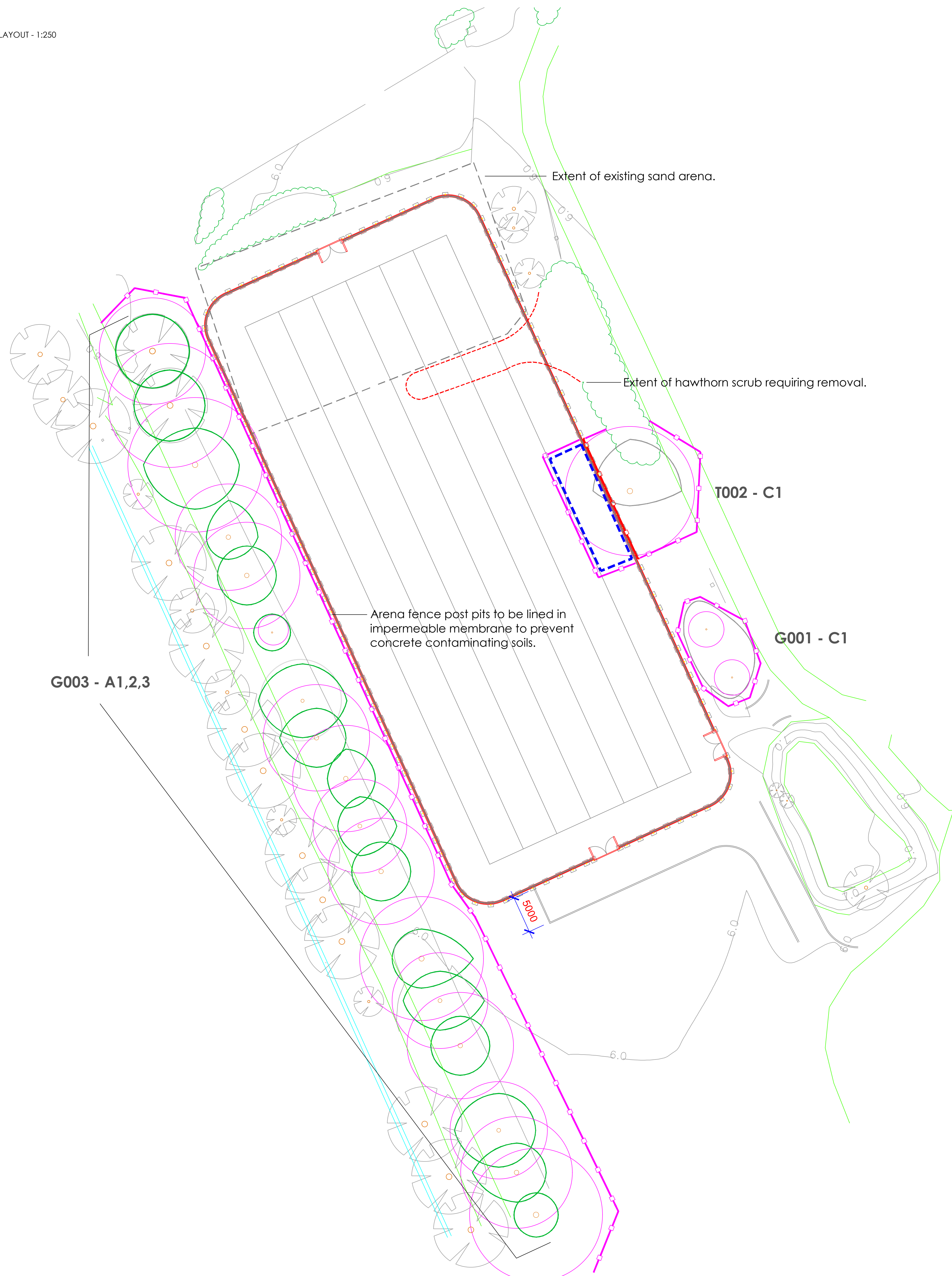
(1) Works to be completed immediately due to significant risk of failure in a high risk area.

(2) Works to be completed prior to the commencement of development or at the earliest opportunity to address moderate safety risk.

(3) Works to be completed prior to the completion of development or in the interests of good arboricultural or silvicultural management.

= Measurement estimated

Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ref. Category	Rem. Contrib.	RPA
G001	Sycamore (<i>Acer pseudoplatanus</i>) Common Hawthorn (<i>Crataegus monogyna</i>) Lime (<i>Tilia</i> sp.)	S/M	200	1	8	1				Good	Fair	Unremarkable small scrubby group with one dominant sycamore and one lime.	None at this time.	C1	20+ Years	Area: 71 sq m.
T002	Horse Chestnut (<i>Aesculus hippocastanum</i>)	M	730	2	13	7	7	2	5	Fair	Poor	Frequent stem exudations on lower stem. Large tear wound c. 600mm diameter at crown break, 4m south, due to loss of codominant leader - significant entry point for disease and decay. Further moderate tear wound at 6m south. Pronounced asymmetry due to these previous failures.	Crown reduce north and east canopy by 2m, pruning back to suitable natural growth point (2).	C1	10+ Years	Radius: 8.8m. Area: 243 sq m.
G003	European Lime (16no) (<i>Tilia x europaea</i>) Sycamore (1no) (<i>Acer pseudoplatanus</i>)	M	600 avg	4	20 avg	Refer to plan.				Good	Good	Prominent lime avenue, formal arboricultural feature with direct relationship with designated heritage asset. Significant amenity and cultural value. Trees all appear in good physiological condition. Basal inspection frequently inhibited due to dense basal and epicormic growth. Accurate canopy inspection inhibited due to foliage. Canopy form typical for continuous avenue trees. Tree tags present from third party surveys. Trees in third party ownership.	None at this time.	A1,2,3	40+ Years	Refer to plan.



NO-DIG CONSTRUCTION METHOD STATEMENT

Works may not commence on the no-dig surface until the protection zone has been established through the installation of the approved tree protection measures. The surrounding protective fence may be dismantled once installation of the no-dig surface commences. The protection fence shall be reinstated immediately following completion of works and re-instated temporarily if works are delayed and cease for longer than 1 day.

Ground shall first be prepared ready to receive the approved cellular confinement product (Geocell). The alignment of the surface will be set out. Existing surface vegetation shall be treated with a translocated herbicide such as glyphosate. Any stumps within the driveway alignment shall be ground to sufficient depth using a pedestrian operated stump grinder.

Surface vegetation removal and grading may be carried out by hand or an excavator positioned outside of the RPA and using an untoothed bucket under the supervision of the project arboriculturalist. Up to 200mm of topsoil may be removed owing to the site's regular cultivation and ploughing under previous arable use - this also reflects the proposed cell depth required for the surface subbase. Any undulations that need filling or leveling may be made up using horticultural sand.

Following ground preparation, a permeable geotextile membrane shall be laid along the entirety of the no-dig area and be temporarily retained with stakes or weights. Any joins in the membrane shall be overlapped by 250mm.

The timber edging shall then be staked and installed along the edges of the surface, using timber stakes (max width, 50mm) at 2m centres. If ground resistance is met when fixing stakes, they should be marginally relocated to an area of lower resistance (resistance may indicate the presence of major roots).

Terram Geocell 22 / 20 (dims. 220mm cell diam. x 200mm cell depth) is the recommended cellular confinement system for roads, appropriate for heavy vehicle use and Terram 25 / 15 (dims. 250mm cell diam. x 150mm cell depth) for footpaths - this is to be reviewed and confirmed by the project engineer prior to installation.

The approved Geocell shall be laid onto the membrane and spread by pedestrian operatives. Each panel shall be retained with 12mm diameter steel pins. The pins shall be orientated such that each panel of the product remains in an expanded state and lightly adjoins the adjacent panel. Pins will generally be positioned at 1 - 2m centres. Pins should be driven so that they touch the top of the cells but do not compress the fabric. Adjoining panels shall be connected using a minimum of four staples at each overlap. Where necessary, surplus Geocell panel can be removed using a sharp knife.

The expanded Geocell shall be filled with open graded granular aggregate; particle size range of 5 - 45mm. The use of MOT, crushed concrete of DOT Type 1 is not acceptable. Cells shall be overfilled by 50mm to create a surcharge over the product which protects the leading edges of the cells. The cells shall be handfilled by wheelbarrow. The excavator may track over areas of filled cell panels only - it must not be operated, driven or stored within the protection zone aside from on the filled cells. Cells must not become contaminated with debris or soil.

The aggregate in the Geocells shall be compacted using a pedestrian operated whacker plate or a light roller ($+1.5t$) that shall track on the filled cell panels only. Following compaction a further permeable geotextile membrane shall be laid over the consolidated cells. The final surface dressing will then be installed together with a suitable retaining edging.

Following completion of works the site shall be left tidy and the protective fencing and ground protection re-instated until wider site works are complete.

TREE PROTECTION MEASURES & PROTECTION ZONE

All tree works and felling are to be carried out in accordance with the Arboricultural Survey and approved by the Planning Authority prior to the erection of the protective fence. All works are to be carried out by skilled operatives in accordance with BS 3998: 2010 'Tree Works - Recommendations' and all relevant Health & Safety standards. Prior to commencement of works the Contractor must submit written proof of the appropriate and valid public liability insurance, along with a full working method statement and risk assessment.

Tree & landscape protection is to be constructed in accordance with the approved detail. Alignment of fencing and ground protection is to be approved by the Planning Authority and erected prior to commencement of construction works on site to establish the protection zone. At no time will the alignment of the fencing or ground protection be altered and no section of fencing taken down, unless otherwise detailed to facilitate works set out on this drawing. Any other alterations or removals must be agreed with the Planning Authority prior to being carried out.




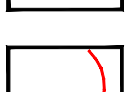

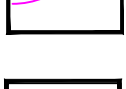


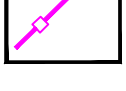




Signage will be attached to the fencing stating 'Tree & Landscape Protection Fencing - DO NOT move or dismantle for any reason'. All fencing and signage will be checked on a daily basis by the Site Manager and any breach of the protection zone or damage to the retained trees must be photographed, reported and rectified that day.

The protection zone is not to be used as a working area, no materials are to be mixed or partially constructed in this area. No materials, equipment or plant machinery will be stored or used within the protection zone. No fires are to be lit within the protection zone, or within 25m of existing trees. Ground levels within the protection zone are not to be altered.

All works within or around the protection zone will be carried out in accordance with BS 5837: 2012 'Trees in relation to design, demolition and construction - Recommendations', a copy of which is to be included within the site information pack to be handed to the Site Manager. Where construction/service installation has been approved in the protection zone, a suitable method statement must be agreed with the Planning Authority, in line with the recommendations and details set out in BS5837:2012.

To allow access to the protection zone for approved works, panels will be removed from the fence under the supervision of the project arboriculturalist. Areas of the RPA not affected by the approved construction will be covered with ground protection until works are completed or the protective fence is reinstated. All materials will be transported into the protection zone by hand or wheelbarrow, in accordance with all relevant Health & Safety policies and CDM Regulations. At no time will vehicles or heavy machinery be allowed access into the protection zone. Once works are complete the protection fence will be reinstated under the supervision of the project arboriculturalist. The protection fence/ground protection may only be removed once all works on site, including the removal of site cabins, machinery etc, are complete and construction ceased.

KEY

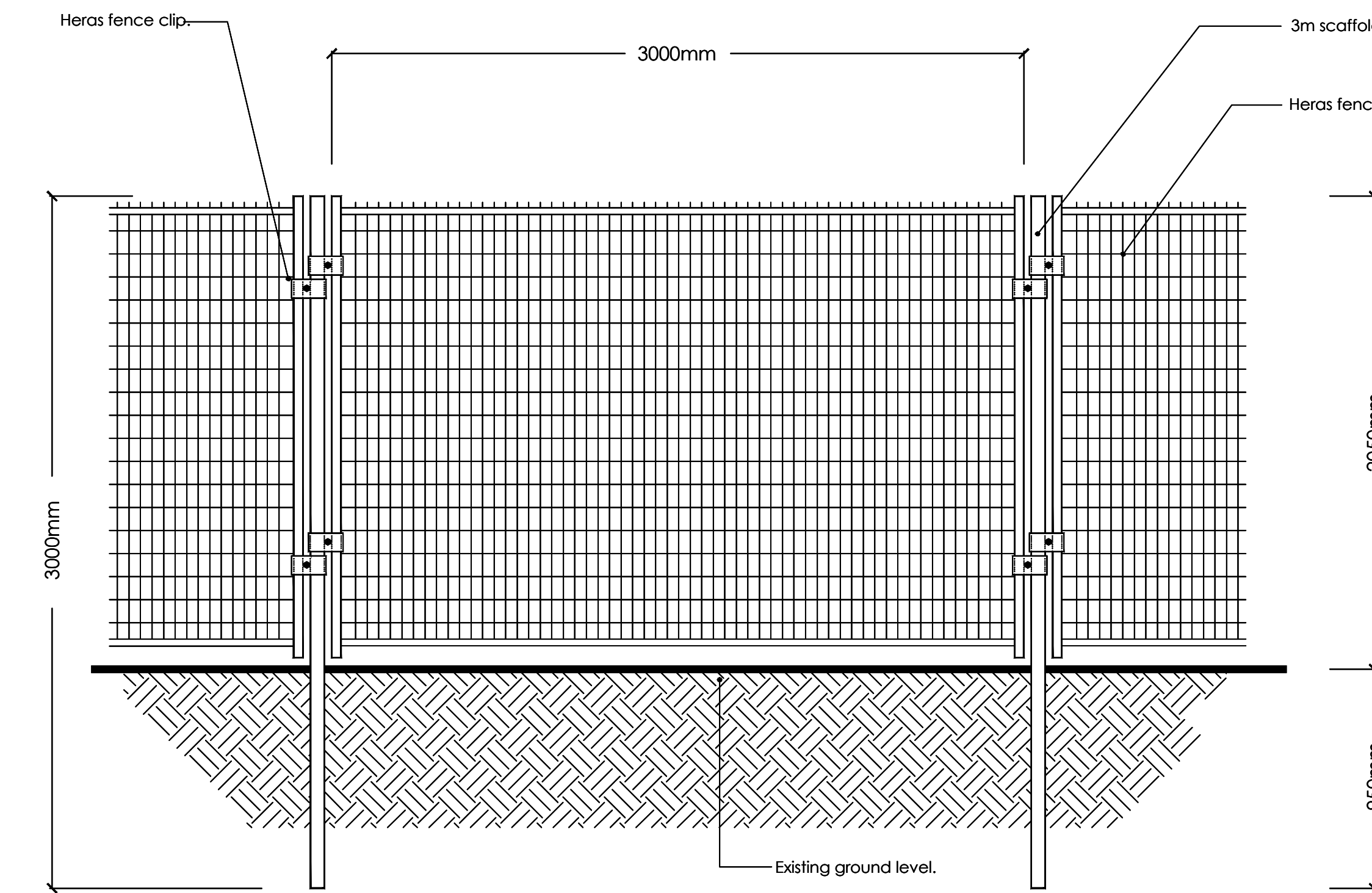
-  Category A
-  Category B
-  Category C
-  Category U
-  Root protection area
-  Reference number & BS5837:2012 category
-  T - Individual tree, G - Group, W - Woodland H - Hedgerow Refer to survey schedule for full BS category details.
-  Tree & hedge protection fencing
-  Proposed alignment of tree protection fencing - All works to be carried out within or around the tree protection zone are to be carried out in accordance with BS5837:2012 'Trees in relation to design, demolition & construction - Recommendations'. Tree Protective fencing to be erected along the agreed alignment in accordance with the approved detail, as shown on the drawing, prior to the commencement of works.
-  Fencing must be checked daily by the site manager. Any breach will be reinstated immediately.
-  The removal of fencing must be agreed with the project landscape architect/arboriculturalist and Planning Authority.
-  Area of no-dig construction Refer to method statement.
-  Secondary alignment of tree protection fencing - to be used during no dig installation.



TREE PROTECTION SIGNAGE
To be erected on protective fencing at 2m height and 5m intervals

NOTES

- If it is proposed that static heras fencing is used to protect trees within the development area in accordance with BS 5837: 2012 'Trees in relation to construction',
- 3000 x 2000mm galvanised steel heras fence panels to be used.
- All panels to be secured to 3000mm long steel scaffolding tubes using 4no. heras clips per unit. All clips to be secured lightly to avoid movement and reduce potential for vandalism or theft.
- 3000mm scaffolding tubes are to be driven into the ground to a recommended depth of 950mm. Where present tarmac must be removed by hand dig ONLY.
- No heavy plant machinery will be used during the erection of the tree protection fencing to ensure the safety of the trees and associated root zones.
- Once erected these zones must not be violated, except when carrying out hand dig works specified as part of a project method statement.



TREE PROTECTION FENCE DETAIL (1:20)