



Temple Close, Sibford Gower - Tree Protection Plan and Arboricultural Method Statement in Accordance with BS 5837

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Job Description: To provide an Arboricultural Method Statement and Tree Protection Plan for the proposed extension works at Temple Close in order to protect the rooting environment of the adjacent American Black Walnut (T2)

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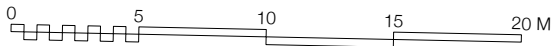
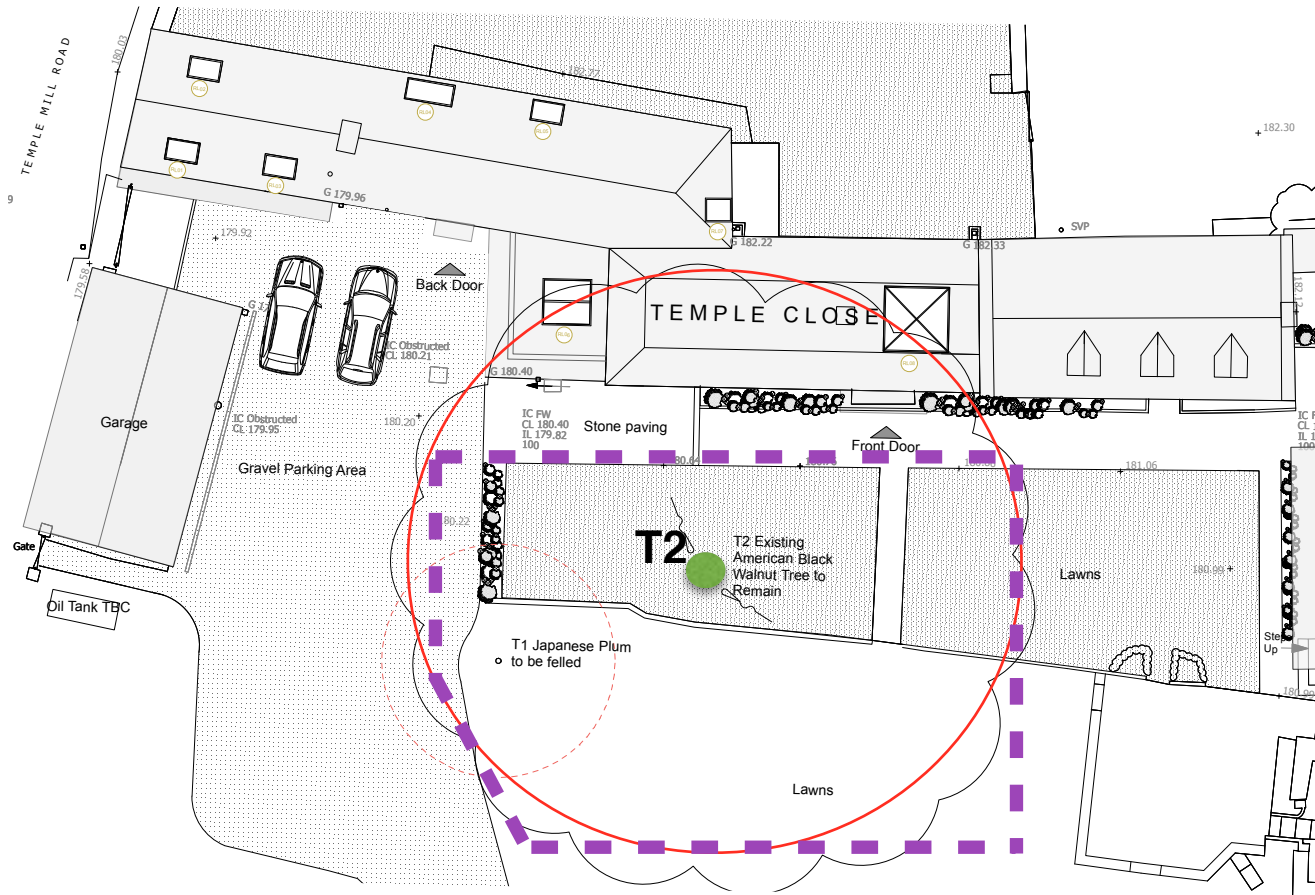
1.0 - Introduction:

Tree to be protected: American Black Walnut covered by Tree Preservation Order

The main objectives to this report are as follows:

- i. To show clearly the position of the root protection area (RPA) of the tree to be retained.
- ii. To clearly show the position of the Construction Exclusion Zone required during the proposed building works.
- iii. To advise on how the RPA should be protected during the construction process of the proposed building extension in order that the tree remain in good health.

Tree Protection Plan:



Key:

Root Protection Area (RPA)



Construction Exclusion Zone



Position of T2 - Walnut



2.1 Attention is drawn to the Tree Protection Plan above, which shows a plan of the site and depicts where protective barriers are to be erected in order to protect T2 from the proposed building works.

2.2 These barriers will form a Construction Exclusion Zone, where the area within will remain free from vehicular and pedestrian access for the entire period of building work. Therefore the ground within will remain free from potential compaction and avoid contamination from fuels or other materials typically associated with the type of building work proposed. The barriers erected must be erected prior to the start of construction and stay in place until all construction work has been completed.

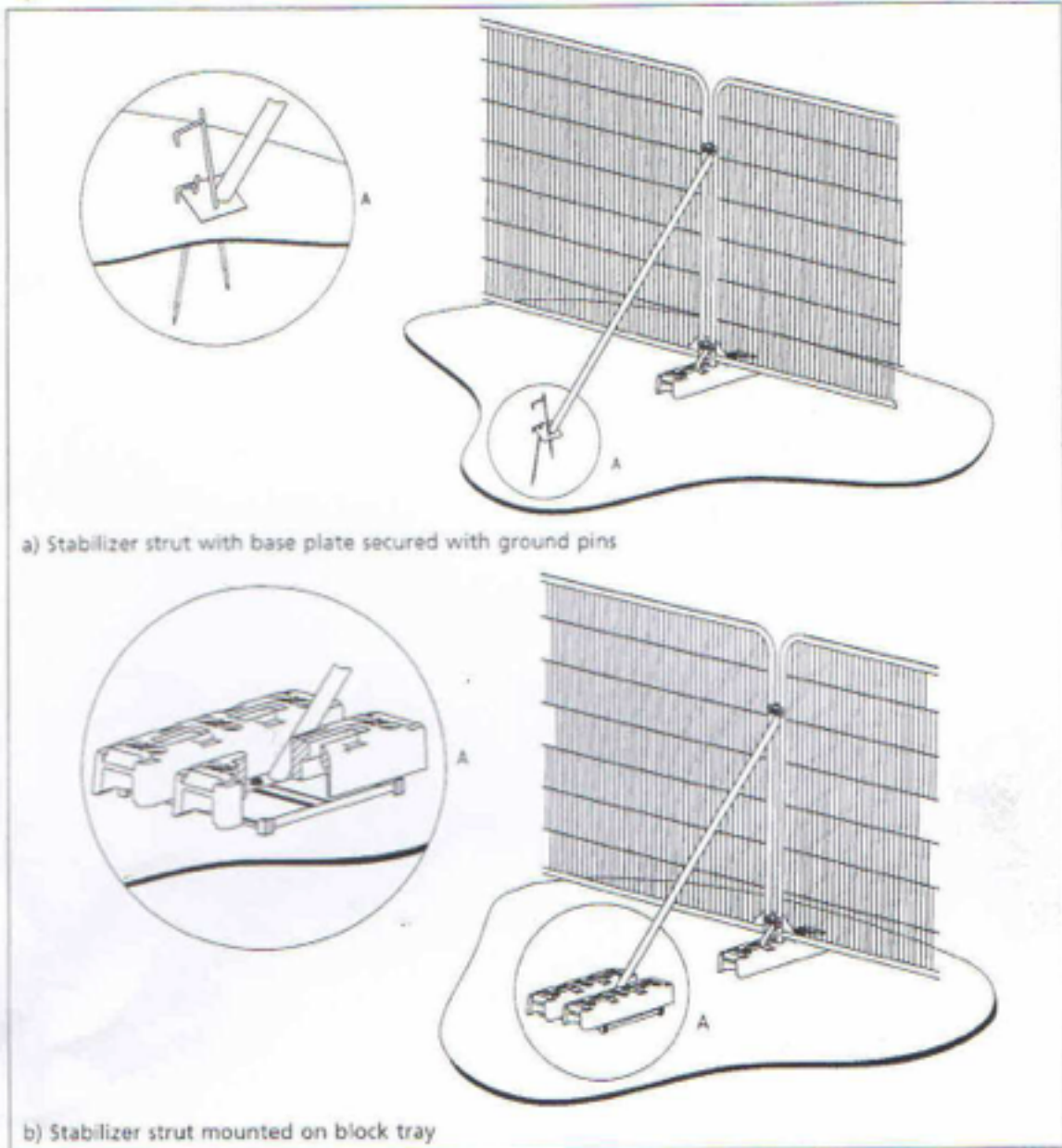
2.3 The existing driveway will be used for material deliveries throughout the development process. Building materials should be stored on hard ground away from the RPA

2.4 The plan above shows the exact position of where the protective barriers are to be erected. There should be no deviation from these plans by the contractor in charge of erecting these barriers, and once in place they should not be removed until the building work has been completed.

2.5 The barriers should be erected as illustrated in Fig 2.8 below, and maintained throughout the project to ensure they remain rigid and complete.

2.6 They should be formed from 2m tall welded mesh panels. These panels should sit in either rubber or concrete feet at a maximum interval of 3m. They should be made firm by the use of stabiliser struts attached to base plates, secured with ground pins as seen in Fig 2.8 below. The fence panels should be joined together using a minimum of two anti-tamper couplers, and installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1m and be uniform throughout the fence.

2.7 All-weather signs should be attached to the barrier with the words "Construction Exclusion Zone – No Access"



Arboricultural Method Statement:

Based on the tree survey data, root protection areas (RPA's) have been determined for the tree (T2) to be retained. The RPA is designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process.

It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

3.1 Where new foundations are required within the RPA the design should utilise 'raft' foundations installed on piles. This design will prevent excavation and possible disturbance/damage of tree roots which may be below the surface in this area. Any tasks in preparation or removal of existing hard structures, which are likely to disturb the environment beneath are to be undertaken sensitively and using hand tools only. No contaminants that are likely to leach into the soil are to be used.

3.2 Prior to the installation of the piles associated with the raft foundation and in order to assess location of potential tree roots, an exploratory investigation must be undertaken to assess optimum pile positioning. This will require marking out proposed pile locations, removing hard surface in those direct areas and removing soil to a depth of 600mm using hand tools or compressed air. Roots encountered with a diameter of less than 25mm can be pruned cleanly with secateurs flush with soil, any roots of greater diameter should be avoided when installing piles.

3.3 Where the stone paving is to be extended outside the kitchen window, the following method should be used to avoid root damage within RPA:

Removal of existing hard surface must be carried out with hand tools/compressed air only, and soil level must not be reduced.

The exposed area beneath must be back filled with a mixture of good quality top soil and sharp sand (not builders sand) straight away to reduce desiccation of fine root hairs when exposed to the air.

Stone paving should be laid dry-jointed on a sharp sand/top soil foundation to allow air and moisture to penetrate to the rooting area.

Removal of the hard surface should occur in 2m strips working from undisturbed surface. This will enable any roots exposed to be covered with a good quality top soil/sharp sand mix to avoid desiccation and the ground to be 'made good' as the operation progresses, avoiding the need for excessive travel on exposed ground.

3.4 Should the level of the new stretch of stone paving need to be raised to meet that of the existing paving the following technique should be used:

Removal of existing hard surface must be carried out with hand tools/compressed air only, and soil level must not be reduced.

The area to be paved must then be levelled straight away with sharp sand (not builders sand) and top soil mix and then a layer of Terram Geotextile Fabric be laid out. Care must be taken at this point not compact the area beneath the membrane.

A layer of Terram GeoCell should then be carefully pegged into place on top of the Geotextile membrane and filled using the filled Terram Geocell as a platform from which to work. The cells must be filled with clean, open graded angular aggregate, normally in the particle size range of 5mm - 45mm. Not single sized or rounded aggregate. The project engineer may determine alternative fill materials such as clean 4/20 or 4/40 stone or a reduced-fines DoT Type 1X sub-base. It is not acceptable to use a standard DoT Type 1 Sub-base within the cells for tree root protection. Do not roll the surface, a light vibratory compaction plate (whacker) may be permitted to settle the stone into the cells. It is important not to contaminate the filled cells with site debris, soil or mud. A further layer of Terram Geotextile should then be laid on top of the filled Geocells followed by a layer of sharp sand and then the dry-jointed Stone paving.

3.5 No underground services are to be installed within the RPA of T2

3.6 Scaffolding may be erected within the RPA but must have uprights placed on spreader boards and be on hard surfaces only, i.e. gravel area or stone paving.

4.0 - Table of Survey Data

Tree no.	Species	Height (m)	DBH (mm)	Spread	Age Class	Physiological Condition	Structural Condition	Comment	BS 5837 Category
T2	American Black Walnut	18	975	20	Mature	Good	Good	No evidence of fungal decay, TPO tree.	A1

RPR (m)	RPA (square m)	Remaining life contribution (yrs)
11.70	430	40 +