NBTREEMANAGEMENT
Arboricultural Consultancy

Arboricultural Impact Assessment

For Mampitts Community Hub in Shaftesbury

On behalf of Shaftesbury Town Council
The Town Hall
High Street
Shaftesbury
Dorset
SP7 8LY

Inspected and Prepared by Nick Baxter BSc(Hons) MArborA

9th November 2023

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Summary

	The proposed development will have no major arboricultural impact for the site
A new community building is proposed	The trees considered in this report are located at Mampitts Green in Shaftesbury. This report identifies the arboricultural impact for a plan to create a new community building with associated parking and landscaping at the site.
No tree works will be required	On this occasion, no trees will need to be removed and none will require pruning to facilitate the proposed development.
21 new trees will be planted	21 new trees will be planted to complement the new site layout. The locations of new trees have been carefully selected to ensure that they will have the chance to mature and make a long-term contribution to the local landscape.
Trees will be suitably protected during the construction process	Tree protection fencing will be installed in the locations identified on the tree protection plan and a specification for this fencing is provided in Appendix 3. It is crucial that fencing is installed before construction works begin and remains in place for the duration of the project.
Arboricultural supervision may be required during construction activities	Arboricultural supervision will be required if unforeseen construction activity is to take place within the root protection area of any of the trees on or near the site. The project arboriculturist should be informed of unforeseen works near trees as soon as they become apparent.
This report should be made available to all construction staff	The site manager must be made aware of the tree protection requirements at the site and provided with a copy of this report; this information must be passed on to all construction staff.

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Contents

Appendices

1 Introduction

1.1 Background information

Shaftesbury Town Council proposes a new development on land at Mampitts Green on Mampitts Lane in Shaftesbury; this land is hereafter referred to as the 'site'. The proposal involves constructing a new community hall with associated parking and landscaping at the site; these proposals are hereafter referred to as the 'proposed development'.

The following documents have informed this report:

Document Title	Originator	Document Number
Topographical Survey	Cole & Cole	23-0407
Landscaping Layout	PWCR	5166 P11
Landscape Design Layout	Aileen Shackell	7th November 2023
Tree Preservation Order	Dorset Council	TPO 573-2017

Email correspondence with Dorset Council informs me that a Tree Preservation Order (TPO) is associated with the site and that the site is not situated within a conservation area.

1.2 Instructions

I have been instructed by Shaftesbury Town Council to visit the site and survey the trees in accordance with BS 5837:2012[1] to provide the following information:

An arboricultural impact assessment	An assessment of the impact on trees from the proposed development and recommended mitigation.
Requirements for tree protection	A tree protection plan and specification for suitable tree protection measures for the duration of construction activity.
An arboricultural method statement	Suitable method statements for construction works near retained trees.

1.3 Limitations

The assessment and works recommendations relate to conditions found at the time of inspection. Any significant alteration to the site that may affect the trees that are present or have a bearing on the planning implications (including level changes, hydrological changes, storms, extreme climatic events or site works) will necessitate a re-assessment of the trees.

It should be noted that this survey is not a tree safety inspection; it has been carried out in order to inform the planning process. Where clear and obvious hazards have been observed, these have

[1] British Standards Institution (2012). BS5837 Trees in relation to design, demolition and construction – Recommendations. BSI, London.

been addressed in the works recommendations. A full assessment of the levels of risk posed by trees would be informed by considering site use together with hazards present within a tree. Changes in site use are likely to occur during, and result from, the proposed development. In light of these factors, regular tree risk assessments are advised.

This report does not consider any aspect of tree-related building subsidence. If shrinkable clay soils are present on site the guidance given in the National House Building Council (NHBC) chapter 4.2[2] should be used to avert the risk of future subsidence of new buildings.

No detailed assessment of the potential conflict between future site use and the shade cast by trees has been undertaken within this report.

2 Tree Survey Information

2.1 Site description

The site is currently an area of community land with a mature field boundary hedge along the southern perimeter. A group of mature ash and field maple are also located along an old ditch near the western boundary of the site.

2.2 The tree survey

I visited the site on 10th March 2023 to carry out the tree survey and weather conditions did not present any constraints to the assessments.

The survey considered all the trees on and around the site. Inspections took place from ground level using the Visual Tree Assessment method[3]. In accordance with the system described in Table 1 of BS 5837 each tree has been classified into four retention categories, A, B, C or U. The stem diameter has been used to calculate the root protection area (RPA[4]) required by each tree during construction.

2.3 Existing tree stock

Information on each tree, tree-group and hedgerow is listed in the schedule provided in Appendix 1 and a summary of their retentive worth is shown in Table 1.

Table 1: *The site largely consists of B-grade trees.*

BS 5837 Category	Quality	Trees	Groups	Hedges
A	High	-	-	-
B	Moderate	5	1	-
C	Low	2	1	3
U	Very Poor	1	-	-
	Total	**8**	**2**	**3**

2 National House Building Council (2008). NHBC Standards Chapter 4.2 - Building near trees.

3 Mattheck, C. and Breloer, H. (1995). The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees 4. HMSO, London.

4 The root protection area (RPA) is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is treated as a priority.

2.4 Tree plans

Two A3 tree plans are presented at the rear of this report. The trees have been plotted using the supplied topographical survey. The supplied tree plans are listed below.

Tree Constraints Plan (STC TCP-3)	A plan which shows the trees on the existing site layout. The root protection areas are also shown as pink circles around each tree
Tree Protection Plan (STC TPP-1)	A plan which shows the trees on the proposed site layout and where protective measures will be installed during construction activities.

3 Arboricultural Impact Assessment & Proposed Mitigation

3.1 Tree removals

The design process has successfully utilised the tree constraints assessment to preserve trees. As a result, no trees will need to be removed to construct the proposed development.

3.2 New tree planting

A total of 21 new trees will be planted to complement the new site layout. The proposed locations for these trees are shown on the Landscaping Plan which accompanies this submission. They are also shown on the tree protection plan (STC-TPP-1) at the rear of this report.

A list of native tree species that will be planted are listed in the Landscape Design Statement produced by Aileen Shackell. Overall, the proposed new tree planting will greatly improve the tree cover for the site as well as the aesthetic value of the area.

3.3 Facilitative tree pruning

On this occasion, no trees will require any pruning to facilitate the proposed development.

3.4 RPA encroachments

The original tree constraints plan has been utilised in the design process to ensure that there are no RPA incursions from the proposed development.

3.5 New service runs

Installation of underground services by typical 'open trench' methods near trees is likely to sever roots; this will harm the physiological condition of the trees, provide an opportunity for fungal infection, and could leave them prone to windthrow. Therefore, the locations for new underground services will be designed to avoid the root protection areas required by the retained trees.

If any additional underground services are required, I recommend that suitable members of the project team, including an arboricultural consultant, should design their routes. An appropriate specification and method statement for their installation would need to be produced, and guidance provided in NJUG4[5] must be followed.

5 NJUG (2007): Guidelines for the Planning, Installation, and Maintenance of Utility apparatus in the Proximity to Trees. National Joint Utilities Group Volume 4.

3.6 Level changes and retaining walls

Any changes in levels or slopes need to comply with the constraints attached to the construction exclusion zones. This means that any soil grading must take place outside of the fenced areas identified on the tree protection plan.

3.7 Final landscaping works near retained trees

Once the construction process has been completed it will be necessary to remove the tree protection measures and landscape the areas near the retained trees. Care must be taken at this point to ensure that root damage does not occur and so vehicles must stick to designated transit routes and any digging near trees should be carried out with the use of hand tools only. The ground may be levelled by adding topsoil rather than skimming the surface.

3.8 Arboricultural method statement

A method statement for effective tree protection is included in Appendix 2. This method statement provides details of how trees can often be damaged from construction activity and the restrictions of the fenced off areas (construction exclusions zones). The information provided in Appendix 2 must be passed on to all construction staff.

3.9 Tree protection fencing

Temporary fencing and/or barriers must be used during construction to protect retained trees situated near works areas. The location of necessary tree protection is indicated on the tree protection plan at the rear of the report (STC-TPP-1). For effective tree protection it is crucial that the protective fencing is installed before any heavy plant machinery is used on the site. The tree protection fencing must remain in place until the construction works have been completed (unless under arboricultural supervision). The fenced off areas will be construction exclusion zones.

A specification for suitable tree protection fencing is provided in Appendix 3.

4 Recommendations

4.1 Legal restrictions

No tree works have been recommended in this report, but it is important for contractors to understand that one tree (T1) and one group of trees (G1) are protected by a TPO. The Town and Country Planning (Tree Preservation) (England) Regulations 2012[6] and the accompanying Guide to tree preservation procedures make clear that it is an offence to deliberately destroy a tree subject to a tree preservation order (TPO), or to damage it in a manner that is likely to destroy it, without the permission of the local planning authority. To do so is punishable by an unlimited fine.

4.2 Arboricultural supervision

Arboricultural supervision will be required if any unforeseen construction activity is to take place within the root protection area of any of the retained trees on or near the site. This supervision must be carried out by a suitably qualified arboriculturist. It is advised that the project arboriculturist and the local authority's tree officer are informed of necessary works near trees as soon as they become apparent.

[6] Town and Country Planning, England. *The town and country planning (tree preservation) (England) regulations 2012*. Town and Country Planning, England: London. Available at: *https://www.legislation.gov.uk/uksi/2012/605/pdfs/uksi_20120605_en.pdf.*

Appendix 1: Tree Schedule

Surveyor: Nick Baxter

Project: Mampitts Community Hub, Shaftesbury

Date of Survey: 10th March 2023

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Tree Number	Tree Species	Height (m)	Number of Stems	Stem Ø (cm)	N - Radius (m)	S - Radius (m)	E - Radius (m)	W - Radius (m)	Age Class	Overall Health	ULE (Years)	Tree Structural Condition & Site Notes	Recommended Management	Category
T1	Field maple Protected by a TPO.	9	1	77	6	4	5	6	FM	G	40+	An old hedgerow tree. Past crown lift over the road. Arboreal ivy. No obvious significant defects.	No action required at present.	**B2**
T2	Field maple	4	1	**23**	3	4	2	3	EM	G	20+	A small hedgerow tree. Suppressed crown. Situated near the top of the bank.	No action required at present.	**C2**
T3	Ash	14	2	61	3	7	7	7.5	M	P	<10	Two stems extend from base. Both stems lean south away from the larger ash. Advanced symptoms of Chalara ash dieback, esspecially on the eastern side of the crown. Little long-term future. Situated at the bottom of the bank.	No action required at present.	**U**
T4	Ash	14	MS	61	5	5.5	9	8	M	F	10+	Multi-stemmed from base. Trunk wound at 1m. Past crown lift. Early symptoms of Chalara ash dieback. Situated on the edge of the bank. Compacted footpath beneath the crown.	No action required at present.	**C2**
T5	Field maple	9	1	37	4	2	6.5	4	M	G	40+	An old hedgerow tree. Arboreal ivy. Suppressed crown. Situated at the bottom of the bank.	No action required at present.	**B2**
T6	Field maple	10	2	40	5	0	6	6	M	G	40+	An old hedgerow tree. Arboreal ivy. Suppressed crown. Situated on the edge of the bank.	No action required at present.	**B2**
T7	Field maple	8	1	54	1	3.5	3	3	FM	G	40+	An old hedgerow tree. Arboreal ivy. Past pruning away from the adjacent property. Situated at the bottom of the bank.	No action required at present.	**B2**
T8	Field maple	7	1	50	5	4	2	5	FM	G	40+	An old hedgerow tree. Arboreal ivy. Past pruning away from the adjacent property. Situated at the bottom of the bank.	No action required at present.	**B2**

A key explaining each category is provided at the rear of the schedule

Appendix 1: Group Schedule

Surveyor: Nick Baxter

Project: Mampitts Community Hub, Shaftesbury

Date of Survey: 10th March 2023

NBTREEMANAGEMENT

Group Number	Tree Species	Number in Group	Height (m)	Number of stems	Stem Ø (mm)	Estimated Ø	N - Radius (m)	S - Radius (m)	E - Radius (m)	1st Branch	Age Class	Overall Health	ULE (Years)	Tree Structural Condition & Site Notes	Recommended Management	Category
G1	Field maple, hazel and blackthorn Protected by a TPO.	25+	7	MS	250	*	3	3	3	2	M	G	40+	An old field boundary hedge with mature field maple throughout. Smaller hazel and blackthorn are beneath the field maple. Situated on a raised bank. The southern side has been regularly trimmed back from the lane.	No action required at present.	**B2**
G2	Hazel and blackthorn	12	4	MS	150	*	2	2	2	2	EM	G	20+	Predominately an area of hazel, the stools beside the lane have once been laid but now left unmanaged.	No action required at present.	**C2**

A key explaining each category is provided at the rear of the schedule

Appendix 1: Hedge Schedule

Surveyor: Nick Baxter

Project: Mampitts Community Hub, Shaftesbury

Date of Survey: 10th March 2023

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Hedge Number	Tree Species	Height (m)	No. of Stems	Stem Ø (cm)	Width (m)	Length (m)	Age Class	Overall Health	ULE (Years)	Condition & Site Notes	Recommended Management	Category
H1	Hazel, field maple and dogwood	3	MS	80	2	10	EM	G	20+	Small trees which are remnants of an old boundary hedge. No sign of past management. Situated at the top of the bank.	No action required at present.	**C2**
H2	Blackthorn and hazel	4	MS	100	4	12	EM	G	20+	Small trees which are remnants of an old boundary hedge. No sign of past management. Situated at the top of the bank.	No action required at present.	**C2**
H3	Blackthorn and hazel	4	MS	100	4	25	EM	G	20+	Small trees which are remnants of an old boundary hedge. No sign of past management.	No action required at present.	**C2**

A key explaining each category is provided at the rear of the schedule

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Key Headings	Definition	Key Headings	Definition
Tree, Group or Hedge Number	Reference number for tree as illustrated on the accompanying plan.	**1st Branch**	This is a record of the height of the lowest branch. This is useful when planning access routes or considering if pruning will be required to site new features under a tree crown.
Species	Common name of the tree.	**Tree Structural Condition & Site Notes**	Observations of the trees structural integrity and notes of site features or property within falling distance.
Number in Group	Number of trees within a tree-group. The group may include more than one species of tree.	**DBH**	Diameter of the main trunk measured at 1.5m using diameter tape.
Height	Estimated tree height (m) from ground level.	**Age Class**	**Y** = Young, **SM** = Semi-Mature, **EM** = Early Mature, **M**= Mature, **FM** = Fully Mature, & **V** = Veteran
Stem/ Combined Stem Diameter	Single stem diameters are measured at 1.5m with a diameter tape. The combined stem diameters for trees with up to five stems and trees with more than five stems (MS) trees are calculated in accordance with the guidance. The stem diameters are measured in accordance with Figure C.1 of BS5837:2012.	**Crown Spread Radius**	The crown radius from tree trunk to crown limit identified at the four cardinal points (N, S, E and W) in order to allow presentation of the above ground constraints on the Tree Constraints Plan and Tree Protection Plan. Measurements are approximate and recorded to the nearest half metre.
Number of Stems	The number of stems is either 1, 2, 3, 4, 5 or MS (multi-stemmed). This influences how the root protection area is calculated.	**ULE (Years)**	Useful Life Expectancy. Anticipated future contribution to amenity, in years.
Overall health	A measure of physiological condition. **G** = Good, **F** = Fair, **P** = Poor and **D** = Dead.	**Category**	Tree category as defined within BS5837:2012. Categories A (high quality), B (moderate quality), C (low quality) & U (very low quality).
Management Recommendations	Recommended works to be carried our prior to construction.		

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General Method Statement for Effective Tree Protection

Retained trees are an important factor on construction sites, whether on or near the working areas. Guidance for the protection of trees during development projects is provided in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations.

Trees are vulnerable to root damage caused by ground disturbance, direct injury of the trunk or branches, environmental change, pests, and diseases. Construction work often exerts pressures on existing trees, and a tree that has taken many decades to reach maturity can be damaged irreparably in a few minutes by unwitting or negligent actions.

For this project temporary fencing will be used during construction to protect the retained trees at the site (see Appendix 3 for further guidance). The fenced off areas will be construction exclusion zones.

Soil compaction quickly occurs if vehicles pass over an area of soil. Compaction may cause reduced infiltration rates of water, poor drainage, reduced availability of water, and reduced air and oxygen supply to roots. This leads to reduced root growth and as a result the health of the tree is impacted. Therefore, to ensure that soil compaction is avoided, it is very important that no vehicles enter the fenced-off areas during construction operations.

All construction staff should be made aware of the following restrictions that apply to the construction exclusion zones:

No excavations	No excavations (including utility trenches) or raising of soil levels is permitted within the construction exclusion zones without written permission from the project arboriculturist.
No storage or mixing of materials	No materials of any kind are to be stored dumped or discharged within the construction exclusion zones. Contaminants such as diesel oil, cement and bitumen must be stored at least 10m from any trees, with provision made for any spillage or run off to be contained away from the protected area. Mixing of cement and concrete must also take place at least 10m from any trees, and over a suitable hard surface, to prevent soil contamination from spillage or washing out.
No offices or welfare facilities	Site offices and staff welfare facilities must be located outside of the construction exclusion zones unless agreed with the local authority's arboricultural officer.
Avoid fires	Fires should be avoided, however if permitted by the site manager, they must not be lit in a position where heat could affect foliage or branches, (At least 15m from the base of a tree would normally be sufficient).
Tie branches back to prevent damage	Care must be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Branches may be tied back so that they are out of the way if necessary.

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Specification for Tree Protection Fencing

There are increased chances of damage to retained trees from construction activity, as a result, fencing will be required in order to protect the retained trees. The information below specifies suitable fencing requirements for this project.

Location

The location of necessary tree protection fencing is shown by the blue lines on the tree protection plan. The fenced off areas will be construction exclusion zones and should be regarded as sacrosanct.

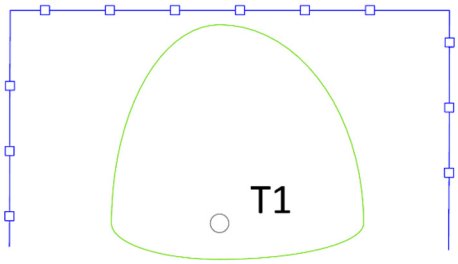


Figure A: *An example of how tree protective fencing is shown on the tree protection plan.*

Specification

Tree protection fencing must be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. In most cases fencing should consist of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m.

A specification for fencing suitable for most construction sites is illustrated in Figure B but in some situations more light-weight stabilising systems for fencing may be sufficient, this is detailed in Figure C. Alternative methods of barrier could be appropriate for tree protection if they are sufficient to exclude construction activity; but any such methods must first be agreed by the Local Authority's arboricultural officer.

Installation

The tree protection fencing must be installed before any heavy plant machinery is used on the site and remain in place until the construction works have been completed.

The fencing should not be removed or altered without prior consultation with the project arboriculturist and, where necessary, approval from the local planning authority.

All-weather notices should be attached to the fencing with words such as: 'Construction Exclusion Zone - No Access'. Throughout the construction period attention should be paid to ensure that barriers remain rigid and complete.

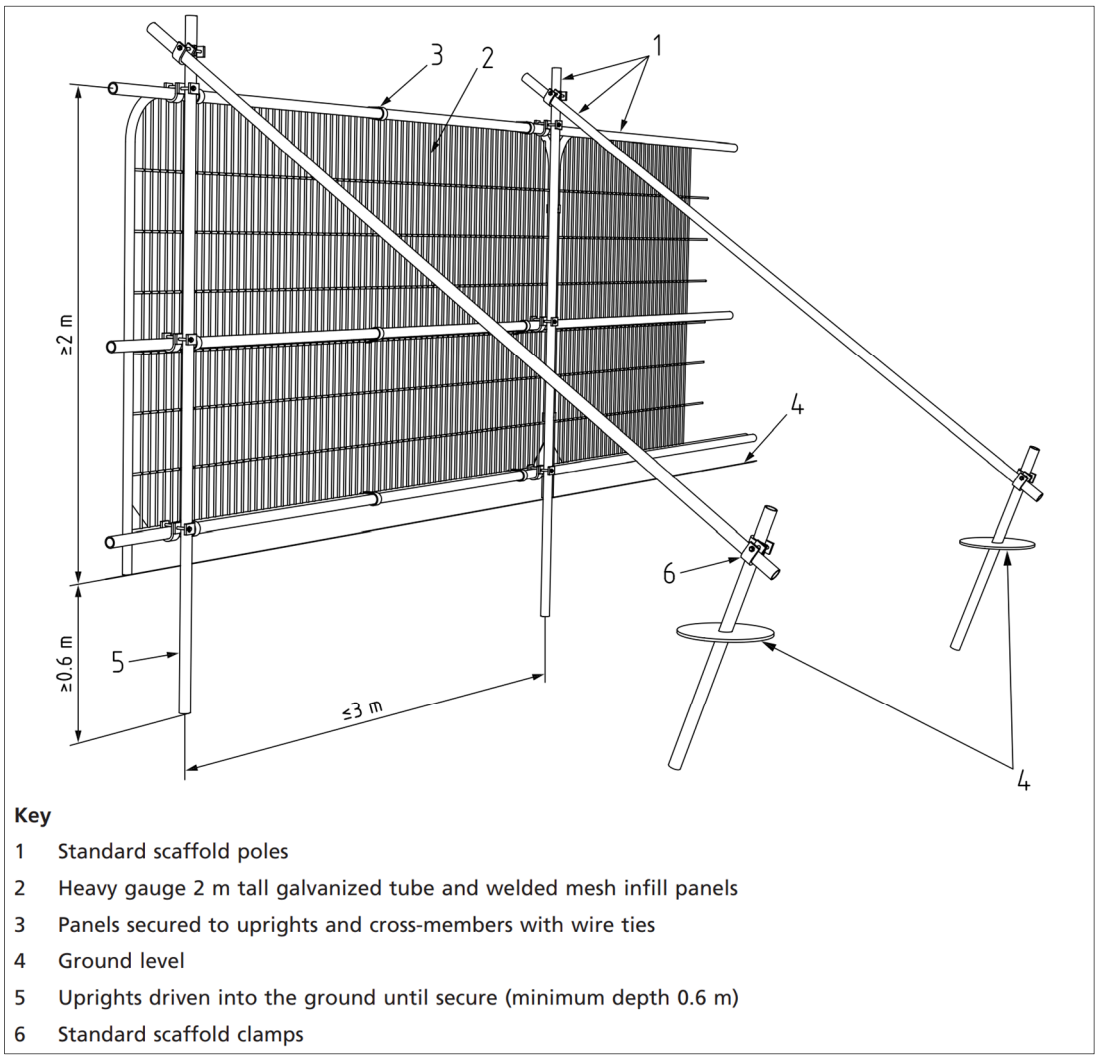
Removal

The tree protection fencing may only be removed once construction activity is completed.

Some landscaping works may be necessary at this stage but it is crucial that root damage does not occur so vehicles must stick to designated transit routes and any digging near trees should be carried out with the use of hand tools only.

Works inside a construction exclusion zone

Arboricultural supervision will be required whenever construction and development activity is to take place within a construction exclusion zone. This supervision must be carried out by a suitably qualified arboriculturist.



Key

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

Figure B: *Default specification for a tree protection fencing.*

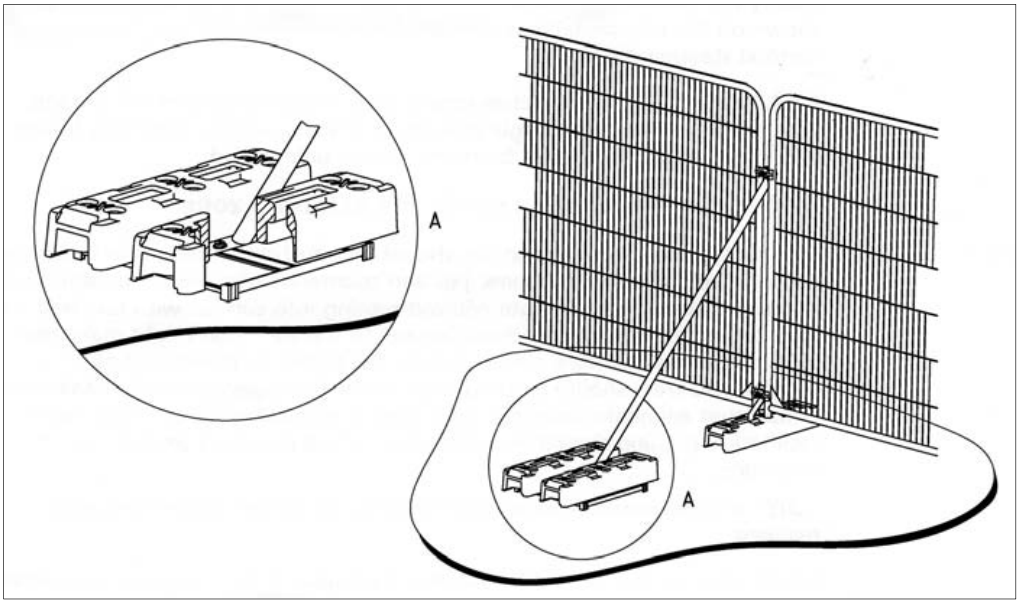
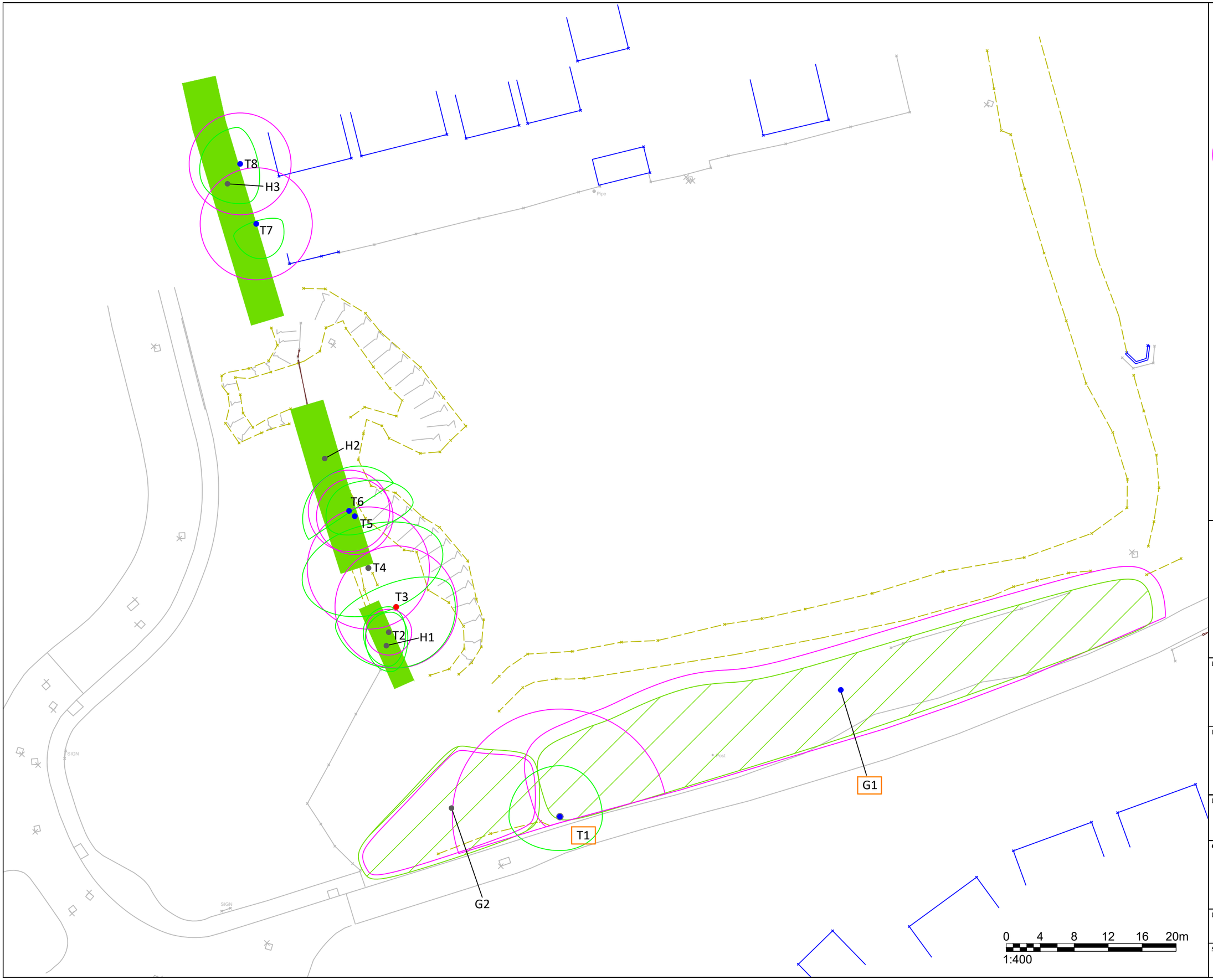


Figure C: *Light-weight system using a stabiliser strut mounted on block tray.*



N

Key

Root Protection Area
Canopy spread
Trunk position
T1
Tree number

Tree group canopy outline

Hedge line

T1 Tree Preservation Order

BS5837:2012 - Tree Category

Category A Trees
High quality and value
At least 40 years life-expectancy

Category B Trees
Moderate quality and value
At least 20 years life-expectancy

Category C Trees
Moderate quality and value
At least 10 years life-expectancy

Category U Trees
Poor quality and value
Less than 10 years life expectancy

NBTREEMANAGEMENT
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Project Name:
Mampitts Community Hub
Shaftesbury

Drawing Title:
Tree Constraints Plan

Drawing Number: STC-TCP-3

Revision:

Client:
Shaftesbury Town Council

Date:
9-11-2023

Scale:
1:400 @ A3

MAPLE ROAD

SNOWD

T8
H3
7.0m
T7
5.0m
H2
8.5m
T6
T5
6.5m
T4
8.5m
T3
7.5m
6.5m
T2
H1
9.0m
T1
G1
G2

0 4 8 12 16 20m
1:400

N

Key

Root Protection Area
Canopy spread
Trunk position
T1
Tree number

Tree group canopy outline

Hedge line

T1 Tree Preservation Order

Tree protection fencing

1.0m Measurement from trunk to fence

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Tel: 07415 890038

Project Name:
Mampitts Community Hub
Shaftesbury

Drawing Title:
Tree Protection Plan

Drawing Number:
STC-TPP-1

Revision

Client:
Shaftesbury Town Council

Date:
9-11-2023

Scale:
1:400 @ A3