

BS: 5837/2012. Tree Impact Assessment. Land at Maes Mona, Amlwch. Phase 1.



Report Prepared By: L O'Connor BSc (Hons), MSc.

17/08/2022

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TREE IMPACT ASESMENT. (T.I.A.). Land at Maes Mona, Amlwch.

Client: Anglesey County Council.

Site Grid Ref: SH 43915 92958

Date: 17/08/2022

1. Introduction:

I have been instructed by Mr Rhys Jones, Housing Development Officer to conduct a BS:5837/2012 Tree Impact Assessment, to accompany a planning proposal at the above location. The proposal is outline and this report Phase 1 is set out to inform the design of the proposal around existing tree constraints. The trees have been inspected from a ground level only (Ground based Visual Tree Assessment, (VTA), trees in relation to construction) – recommendations.

1.1

Proposal.

To assess the quality of trees on site that may be affected by the development. To identify which stock will need mitigated under the standard and to facilitate an appropriate footprint for the prosed development.

1.2 Location.

The site is located at Grid Reference: SH 43881 92965 – Mid Point.

Location map of the site. FIG. TLM.



2. The trees.

T1, T2, T3, T4, T5, T8, T9: - should be retained and protected in accordance with BS5837/2012 during the development.

T6, T7, and T10: - can either be retained or removed. Retained trees are to be protected in accordance with BS5837/2012 during the development.

G1, G2, G3, G4, G6, G7, and G9: - should be retained and protected in accordance with BS5837/2012 during the development.

G5 and G8: - can either be retained or removed. Retained trees are to be protected in accordance with BS5837/2012 during the development.

Photographic plates of identified trees, FIG.PHOTO. APP.11. – See file share.

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G1	1046	Sycamore, Hawthorn, Elm. <i>Ap, Cm, Ul</i>	10	30	N: E: S: W:	M	<p>Overall Condition: GOOD.</p> <p>Buds and twigs: Good.</p> <p>Scaffold: Fair, minor deadwood throughout group.</p> <p>Stem: Good, Ivy covered.</p> <p>Roots: Good, Sycamore affecting boundary wall by footpath.</p>	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	60-80	40.72 3.6	A2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T1	1047	Hawthorn <i>Cm</i>	6	30	N: 3 E: 3 S: 2 W: 1	M	<p>Overall Condition: FAIR</p> <p>Buds and twigs: Fair, minor crown dieback.</p> <p>Scaffold: Fair, Ivy throughout.</p> <p>Stem: Fair.</p> <p>Roots: Fair.</p>	<p>Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.</p> <p>Sever Ivy.</p>	HIGH	20-40	40.72 3.6	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T2	1048	Sycamore <i>Ap</i>	8	34	N:4 E:4 S:3 W:1	M	<p>Overall Condition: FAIR</p> <p>Buds and twigs: Fair.</p> <p>Scaffold: Fair.</p> <p>Stem: Snapped lateral E @2m.</p> <p>Roots: Fair.</p>	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	40-60	52.30 4.08	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T3	1004	Hawthorn <i>Cm</i>	4	20	N:2 E:2 S:2 W:1	M	<p>Overall Condition: POOR</p> <p>Buds and twigs: Poor, major crown dieback.</p> <p>Scaffold: Fair, minor deadwood throughout.</p> <p>Stem: Fair.</p> <p>Roots: Fair.</p>	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	5-10	18.10 2.4	C1

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T4	1021	Elm <i>UI</i>	10	80	N: 6 E: 6 S: 4 W: 5		<p>Overall Condition: GOOD</p> <p>Buds and twigs: Good</p> <p>Scaffold: Good</p> <p>Stem: Good, Ivy covered</p> <p>Roots: Good, offset by existing stone wall.</p>	<p>Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.</p> <p>Exemplar of rare tree, outside planning boundary. Roots need to be protected.</p>	HIGH	60-80	289.50 9.6	A1

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T5	1020	Elm <i>UI</i>	12	88	N: 6 E: 6 S: 6 W: 7		<p>Overall Condition: GOOD</p> <p>Buds and twigs: Good</p> <p>Scaffold: Good, hanger W @4m</p> <p>Stem: Good, Ivy covered</p> <p>Roots: Good, RZ offset by existing wall.</p>	<p>Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.</p> <p>Exemplar of rare tree, outside planning boundary. Roots need to be protected.</p>	HIGH	80-100	350.33 10.56	A1

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G2	0942	Hawthorn, Elder, Buddleia. <i>Cm, Sn, B</i>	8	12	N: E: S: W:	M	Overall Condition: FAIR Buds and twigs: Fair. Scaffold: Fair. Stem: Fair, Ivy covered, multi stemmed. Roots: Good.	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM. Self-set, scrubby group, good habitat, important screening, to be side pruned and tidied up.	HIGH	80-100	6.51 1.44	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T6	0938	Holly <i>la</i>	6	20msx3	N: 2 E: 2 S: 2 W: 2	S M	Overall Condition: FAIR Buds and twigs: Fair. Scaffold: Fair. Stem: Fair. Roots: Fair.	If retained protective fence in accordance with BS:5837/2012. See FIG.TCM. To be retained or removed.	HIGH	20-30	18.10 2.4	B2

2. Tree Schedule

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G3	1051	<i>Sycamore, Hawthorn, Holly, Yew.</i> <i>Ap, Cm, Ia, Tb</i>	8	30	N: 2 E: 8 S: 2 W: 8	SM	Overall Condition: FAIR Buds and twigs: Fair. Scaffold: Fair. Stem: Fair. Roots: Fair.	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	60-80	40.72 3.6	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T7	1008	Hawthorn <i>Cm</i>	6	20	N: 2 E: 2 S:2 W:1		<p>Overall Condition: FAIR</p> <p>Buds and twigs: Fair.</p> <p>Scaffold: Fair.</p> <p>Stem: Fair.</p> <p>Roots: Poor, root plate unstable. Evidence of past heave.</p>	<p>If retained protective fence in accordance with BS:5837/2012. See FIG.TCM.</p> <p>To be retained or removed.</p>	HIGH	5-10	18.10 2.4	C2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G4	1006	<i>Hawthorn, Holly, Cypress, Elder</i> <i>Cm, Ia, Cp, Sn</i>	6	16	N: E: S: W:	M	Overall Condition: FAIR Buds and twigs: Fair. Scaffold: Fair. Stem: Fair. Roots: Fair.	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	40-60	11.58 1.92	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T8	1054	Whitebeam <i>Sa</i>	6	35	N: 3 E: 3 S:3 W: 3		<p>Overall Condition: GOOD</p> <p>Buds and twigs: Good.</p> <p>Scaffold: Good.</p> <p>Stem: Good.</p> <p>Roots: Good.</p>	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	40-60	55.42 4.2	A2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T9	0933	Sycamore x2 <i>Ap</i>	10	50	N: 5 E: 5 S: 5 W: 5	M	Overall Condition: GOOD Buds and twigs: Good Scaffold: Good Stem: Good Roots: Good	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM.	HIGH	60-80	113.09 4.2	A2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G5	0934	Sycamore, Hawthorn, Holly, Gorse. <i>Ap, Cm, Ia, U</i>	8	20	N: E: S: W:	SM	Overall Condition: FAIR Buds and twigs: Fair Scaffold: Fair Stem: Fair Roots: Fair	If retained protective fence in accordance with BS:5837/2012. See FIG.TCM. To be retained or removed.	HIGH	40-60	18.10 2.4	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G6	0911	Sycamore Ash Hawthorn <i>Ap, Fe, Cm</i>	8	30	N: E: S: W:	SM	Overall Condition: FAIR Buds and twigs: Good Scaffold: Good Stem: Good Roots: Good	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM. Retain, good screening.	HIGH	60-80	40.72 3.6	A2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G7	0905	Hawthorn Elder Sycamore <i>Cm, Sn, Ap</i>	8	20	N: E: S: W:	M	Overall Condition: FAIR Buds and twigs: Fair Scaffold: Fair Stem: Fair, Ivy covered Roots: Fair	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM. Retain for screening	HIGH	20-40	18.10 2.4	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G8	0935	Hawthorn Blackthorn <i>Cm, Ps</i>	6	20	N: E: S: W:	M	Overall Condition: FAIR Buds and twigs: Fair Scaffold: Fair Stem: Fair Roots: Fair	If retained protective fence in accordance with BS:5837/2012. See FIG.TCM. To be retained or removed.	HIGH	40-60	18.10 2.4	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
G9	1041	<i>Elder, Sycamore, Pine, Spruce, Beech, Hawthorn</i> <i>Sn, P. Ps, Fs, Cm</i>	15	30	N: E: S: W:	M	Overall Condition: GOOD Buds and twigs: Good Scaffold: Good, resilient edge, Spruce in adjacent compartment stable. Stem: Fair. Roots: Good.	Retain and protective fence in accordance with BS:5837/2012. See FIG.TCM. Retain, due regard for rooting zone of adjacent woodland. Retain 2x Sycamore in E corner Remove Elder .1x stem collapsed.	HIGH	60-80	40.72 3.6	B2

2. Tree Schedule

Table 1: Tree Schedule BS:5837/2012.

Client: IACC Tagged: Yes Site: Maes Mona, Amlwch Weather: Dry Date: 17/08/2022 Surveyor: Luke O'Connor, BSc (hons) MSc

Tree No	Tag No	Species	Height (M)	DBH (CM)	Crown Spread	Age Class	Condition	Recommendations	Work Priority	SULE Yrs	BS5837 m2 and r.	BS 5837 Retention category.
T10	1044	Elder <i>Sn</i>	8	24	N:2 E:3 S:3 W:2	M	<p>Overall Condition: FAIR</p> <p>Buds and twigs: Fair</p> <p>Scaffold: Fair</p> <p>Stem: Fair, minor lean E</p> <p>Roots: Fair</p>	<p>If retained protective fence in accordance with BS:5837/2012. See FIG.TCM.</p> <p>To be retained or removed.</p>	HIGH	10	26.10 2.88	C 1

2.2 Arboricultural Impact Assessment.

Most tree roots occur in the top 60cm of the soil. Most damage to the future stability and vigour of a tree can therefore occur during the construction phase. Mature trees can survive serious damage for up to five years before they may suddenly decline resulting in usually wind-throw or death. Simple wounding to the bark or branches by insensitive construction operators can result in sources of infection and later decline. Dead or dying trees may also reduce the amenity of the site.

Careful construction techniques must be adhered to in order to lessen future impacts that may result in higher maintenance costs at a later date.

2.3 GENERAL CONSTRAINTS DATA

The constraints arising from retention of trees is classified as the Construction Exclusion Zone (CEZ) and (Root Protection Area - RPA) as illustrated on the Tree Constraints Map

Construction Exclusion Zone (CEZ) & Root Protection Area (RPA).

The Root Protection Area is calculated in m² and must be protected during and preserved intact after construction, in order to facilitate the healthy retention of the tree(s) concerned by retaining adequately functioning tree roots. This area is based on a radial measure from the centre of the stem of the tree, which is found by multiplying the stem diameter of the tree concerned, by a factor of twelve (or by a factor of ten when measuring basal diameter immediately above the root flare for multi-stemmed trees).

The CEZ includes all area up to and including the RPA (Root Protection Area) from the protective fencing.

During this Arboricultural Impact Assessment, the derived radial measure has been converted into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the trees, particularly in relation to factors affecting their likely rooting disposition. The means of protecting the RPA will include the installation of tree protection fencing prior to the start of work on site, including all demolition. Various activities within the RPA are prohibited (e.g. mechanical excavation, soil stripping, fire lighting, materials storage, lowering levels and creating excessive sealed surfacing), and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA. This is the area above ground occupied by the crown of the tree, along with allowances for working space and if appropriate, for future growth.

Protective fencing and designation of Construction Exclusion Zones will be used to protect during the development phase.

2.4 Tree Constraints Map.

Any tree work that is non-emergency will require the consent of the Local Planning Authority. Any discrepancy in features or scale should be referred to the original maps supplied.

The Tree Root Protection Area (RPA) for each tree is shown behind the tree protective fencing, (red dashed line). The construction Exclusion Zones lies anywhere behind the protective fencing. The crown spread is shown as either red, green blue or grey according to their quality categorization.

For clarity, the grading system is summarised as follows: Table 2.

U grade – trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40years

B grade – trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

2.5. Tree Protection Plan. (FIG.TPP.APP.9). – To be confirmed.

2.6. Tree Mitigation/Planting map. (FIG. TPM. APP.10). – To be confirmed.

3. Arboricultural Method Statement.

After a site consultation between the developer, the architects, the planning department and the arborist (after approval), the following may be carried out: -

- a) Carry out any necessary tree surgery and felling, pre-construction works, removal of hard surfaces and demolition of existing structures.
- b) Erect protective fencing, root barriers and ground protection as per BS: 5837/2012.
- c) Carry out any development in accordance with the Tree Impact Assessment. Any amendments must be agreed in accordance supervising Arboricultural officer and local planning tree officer.
- d) Removal fencing and ground protection.
- e) Final landscaping and any remedial tree surgery that may be required.

3.1 Schedule of works, Arboricultural monitoring and supervision.

The schedule below may be subject to change and determined by operational constraints, any amendments must be agreed the LPA tree officer and the supervisory arborist.

3.2 Pre-Development Stage

1. Carry out an on-site meeting including the Arboricultural consultant, LPA Tree Officer, client and Project manager.
2. Agree on all access to the site.
3. Discuss and agree on site compound burning and mixing areas.
4. Carry out any pruning works needed for access and agree.
5. Carry out and demolition work on site
6. Carry out any works to trees that are directly affected by the development.
7. Carry out any trees works on trees that are indirectly affected by the development.
8. Install all identified tree protection measures.
9. Carry out a site inspection by the Arboricultural project consultant.

3.3 The Development Stage

1. Ensure that the site is accessible for all construction traffic
2. All construction staff to be briefed (tool box talk) by the Arboricultural consultant, as per method statement.
3. Any ground works within the RPA to be supervised by the Arboricultural consultant.
4. To carry out site monitoring every week during this stage. Timing to be discussed in with contractor and LPA Tree Officer.

3.4 Completion.

Arboricultural consultant to carry out a site inspection.

3.5 Post Development Stage

1. To remove all protective fencing
2. All landscaping staff to be briefed by the Arboricultural consultant and appointed landscaping officer.
3. To carry out all Landscaping

Site monitoring is in place to make sure that tree protection measures stipulated within the report are adhered to, and any amendments or issues are carried out with the correct process and ensuring notification to the LPA and the client.

Supervision within the RPA and CEZ is to ensure there is no undue damage caused to affected trees.

The LPA Tree Officer must have free access to the site to make any further recommendations and to help/advise in relation to the planning conditions.

All tree works, and clearance of scrub must be carried out in advance of the erection of the protective fencing.

All tree protection fencing must remain in situ throughout the duration of the construction work up until completion. The fencing can only be removed after agreement with LPA and after a final site inspection.

3.6 Arboriculturist.

All tree contractors working near to trees must have access on site always to all relevant sections referred to in this report.

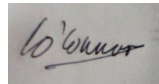
4. References and disclaimer.

- BS 5837/2012 'Trees in Relation to Construction - Recommendations' British Standards Institute, London.
- BS 3998/2010 'Recommendations for Tree Work' British Standards Institute, London.
- 'Visual Amenity Valuation of Trees & Woodlands' 2003. The Helliwell System (Arboricultural Association publication)

- 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' 1995 National Joint Utilities Group (NJUG) Publication No. 10.
- 'Availability of Sunshine' BRE - CP 75/75
- Tree Roots in the Built Environment 2006 - Dept. for Communities & Local Government (DCLG)

Mr Luke O'Connor BSc (Hons), MSc.

Sign

A small, square image showing a handwritten signature in black ink on a light-colored background. The signature appears to be 'L O'Connor'.

Disclaimer

The tree(s) referred to in this report are living entities and are therefore subject to natural processes. They will also be subject to changes to their environment caused by human's activities and to exceptional weather conditions. The inspection undertaken by our qualified staff relies on visual attributes of tree health and structure which can be assessed from a ground-based inspection. Hidden defects which are not readily visible may not be detected. I therefore cannot wholly guarantee the condition and safety of the trees inspected beyond what can be reasonably assessed from the procedure used. I would recommend that the trees are regularly inspected and will advise on the suitable frequency of these inspections if requested.

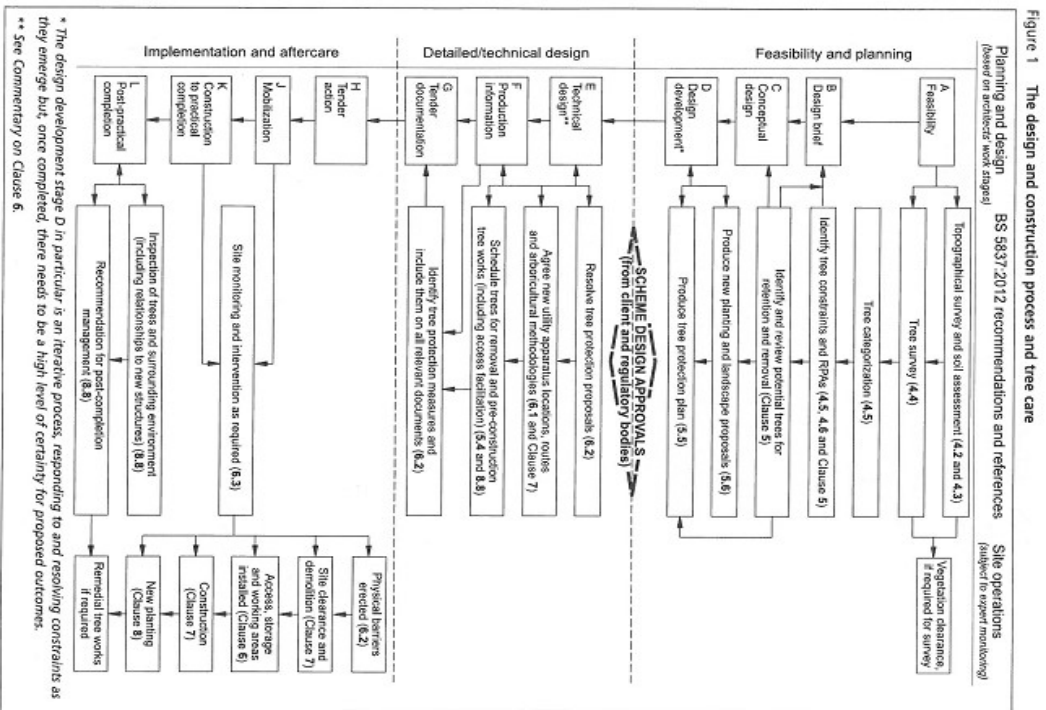
5.Appendix.

1 – Planning Flow Chart

Bought by Miss Sarah Smith, West Coast Network Services, on 14/11/2012 09:36 Latest version. Not to be distributed/networked. For multi-user access www.bsigroup.com/license © BSI

BS 5837:2012

BRITISH STANDARD



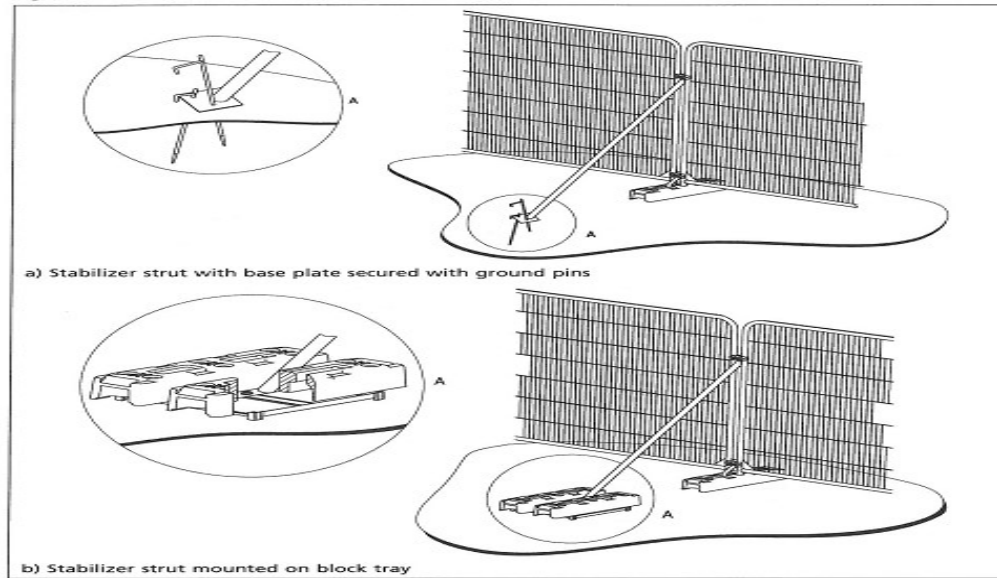
2. Protective fencing (BS.5837.2012)

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BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

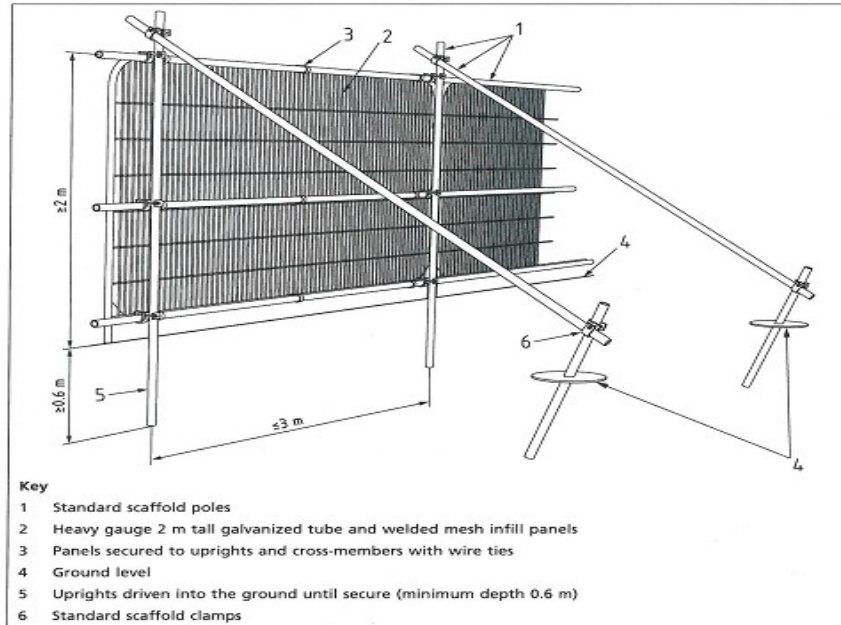
on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in BS 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

6.2.2.4 All-weather notices should be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

Figure 2 Default specification for protective barrier



3. Cascade chart for tree quality assessment.

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Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category U 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	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>	See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities
		3 Mainly cultural values, including conservation
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees with no material conservation or other cultural value
		See Table 2

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Shropshire Council Natural Environment Development Guidance Note 7

Appendix 3: Arboricultural Site Inspection Form

Arboricultural Site Inspection			
Site:	_____		
Application Ref:	_____		
Developer:	_____		
Site agent:	_____		
Arboricultural consultant:	_____		
Date of inspection:	_____	LPA Tree Officer:	_____, Shirehall, Shrewsbury
Accompanied by:	_____		
Fencing / Ground Protection			
In place / intact?	<input type="checkbox"/>	Information signs present?	<input type="checkbox"/>
Erected according to approved details?	<input type="checkbox"/>	Any evidence of breach?	<input type="checkbox"/>
Details, including action taken / required: _____			

Construction Exclusion Zone			
CEZ to approved dimensions?	<input type="checkbox"/>	Any evidence of tree damage?	<input type="checkbox"/>
Any evidence within the CEZ of:			
Excavations?	<input type="checkbox"/>	Changed soil levels?	<input type="checkbox"/>
Ground contamination?	<input type="checkbox"/>	Vehicle movements?	<input type="checkbox"/>
Storage of materials / equipment / waste?	<input type="checkbox"/>	Fires?	<input type="checkbox"/>
Details, including action taken / required: _____			

Any special works potentially damaging to trees proposed for coming building period? <input type="checkbox"/>			
Any amendments to proposed plans? <input type="checkbox"/>			
Details: _____			

Copied to:	Site Manager <input type="checkbox"/>	LPA tree officer <input type="checkbox"/>	Site Agent <input type="checkbox"/> Site owner / Client <input type="checkbox"/>

4. Arboricultural site inspection form.

5. Keys.

HEADINGS & ABBREVIATIONS

TREE NO. REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE

AGE RANGE: Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, FM = FULLY MATURE, PM = POST MATURE

DBH: STEM DIAMETER – MEASURED AT 1.5 METRES

CROWN SPREAD: MEASURED DIAMETER OF CROWN AT 4 CARDINAL COMPASS POINTS

VITALITY: A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, F = FAIR, P = POOR, M = MODERATE, G = GOOD

BS 5837 RETENTION CATEGORY: RETENTION VALUE BASED ON TABLE 1 BS 5837 (2012)

BS 5837 RPA RADIUS: RADIUS FROM STEM TO THE LINE OF THE TREE PROTECTION AS SET OUT IN TABLE 2 OF THE STANDARD

SULE: SUITABLE LIFE EXPECTANCY IN YEARS (a subjective assessment of how long the tree may live).

7. Specifications for Terram Geotextile and Terram Geocell products to implement, Specification, Design and Installation Guide.

8. FIG.TCP.

9. FIG.TPP.

10. FIG.TMP.

11. (FIG. PHOTO, APP.11).

Keys in relation to condition.

Condition	
Excellent	Tree in excellent condition with good vitality and no defects present
Good	Tree in displaying good vigour, vitality, only very minor defects
Fair	Tree showing some signs of stress, minor defects present
Poor	Tree showing signs of major die back, major defects – intervention needed
Dead	Tree no longer alive
Work urgency (Priority)	
Very High	Urgent – Works required within 24 hours
High	Works required within 3 month
Moderate	Work required within 6 months
Low	Works required within 12 months
Very low	Low priority – within 1-3 years
No Work Required	No target

Tree Species abbreviations for this report.

Common name	Abbreviation in report	Latin Name
Sessile Oak	<i>Qp</i>	<i>Quercus patrea</i>
Ash	<i>Fe</i>	<i>Fraxinus exelsior</i>
Hawthorn	<i>Cm</i>	<i>Crataegus monogyna</i>
Blackthorn	<i>Ps</i>	<i>Prunus spinosa</i>
Alder	<i>Ag</i>	<i>Alnus glutinosa</i>
Goat willow	<i>Sc</i>	<i>Salix caprea</i>
Elder	<i>Sm</i>	<i>Sambucus nigra</i>
Sycamore	<i>Ap</i>	<i>Acer pseudoplatanus</i>
Cherry	<i>Pa</i>	<i>Prunus avium</i>
Field maple	<i>Ac</i>	<i>Acer campestre</i>
Beech	<i>Ns</i>	<i>Northofagus sylvatica</i>
Dog rose	<i>Ra</i>	<i>Rosa canina</i>
Holly	<i>Ia</i>	<i>Ilex aquifolium</i>
Hazel	<i>Ca</i>	<i>Corylus avellana</i>
Norway maple	<i>Apf</i>	<i>Acer platanoides</i>
Field maple	<i>Ac</i>	<i>Acer campestre</i>
Privet	<i>Lo</i>	<i>Ligustrum ovalifolium</i>
Eucalyptus	<i>E</i>	<i>Eucalypteae</i>
Hornbeam	<i>B</i>	<i>Betulaceae</i>
Elm	<i>U</i>	<i>Ulmus</i>
Scots Pine	<i>Ps</i>	<i>Pinus sylvatica</i>
Monterey Pine	<i>Pr</i>	<i>Pinus radiata</i>
Corsica pine	<i>Pn</i>	<i>Pinus Nigra</i>
Alder	<i>Ag</i>	<i>Alnus glutinosa</i>
Elm	<i>U</i>	<i>Ulmus</i>
Birch	<i>Bp</i>	<i>Betula spp's</i>
Willow spp's	<i>S</i>	<i>Salix</i>
Yew	<i>Tb</i>	<i>Taxus bacata</i>
Momkwy puzzle	<i>Aa</i>	<i>Araucaria araucanaAa</i>
Lawsons Cypress	<i>Cl</i>	<i>Chamaecyparis lawsoniana</i>

Red oak	Qr	<i>Quercus rubra</i>
Weeping willow	Sb	<i>Salix babylonica</i>
Weeping silver pear	Psp	<i>Pyrus salicifolia</i> 'Pendula'
Black Poplar	Pn	<i>Populus nigra</i>
Holm oak	Qi	<i>Quercus ilex</i>
Apsen	Pt	<i>Populus tremula</i>
Privet	L	<i>Ligustrum</i>

6. Glossary.

Tree Number

Refers to the tree as numerically tagged on site. Tags are to be placed in visual position at eye level on surveyed trees.

Species

Common and vernacular name of the tree – Vernacular- Latin names displayed in small italics.

Age

The appearance of at what stage of life the tree may be in (mature, young, etc.)

DBH

Diameter at Breast Height in centimetres.

Height

Approximate height of the tree from base to the tips of the crown.

Deadwood to be Removed

This survey has been based on removing any deadwood of 50mm diameter and above from the trees surveyed to make them safe by the footpath, and property.

Vitality

The general vitality of the tree (poor, Fair, good, excellent), including disease and pests that may prove of detriment to the health, and longevity of the tree.

General Condition

Consider structural condition in relation to vitality, including pest and diseases.

Comments and Recommendations

Recommend tree work to reduce risks to an acceptable level during a pre-determined inspection period. Such recommendations will be made to procure a trees vitality and longevity as well as future safety.

Priority.

Trees given a priority should have the recommendations carried out within the time-scales assigned. Denoted by the attached key.

av

Average (Diameter in breast height in cm or height in meters).

RPA

Root Protection Area.