

ARBORICULTURAL METHOD STATEMENT
&
TREE SURVEY

28 LODGE ROAD, BEDHAMPTON, HAVANT
PO9 3LL

Prepared by Partridge Associates
on behalf of
WARWICK CONSTRUCTION LTD.

DATE APPROVED BY COUNCIL:.....
(This report is not to be used on site until it has been approved by the Council. The date of the approval letter must be inserted above.)

TO BE READ IN CONJUNCTION WITH DRAWING: 1845/1

11 February 2013
Project Reference No.: 1845

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1.0 INTRODUCTION

This Report has been prepared to support the planning application submitted by Owen Davies Architects in respect of the redevelopment of 28 Lodge Road, Bedhampton, Havant.

The application seeks to demolish the existing 2 storey residential building and replace it with a 2no. semi-detached houses and 1no. bungalow with associated access, bin store, parking & garage.

The study was requested by the Planning Authority to address any impacts that might arise from this application on existing trees on or near to the property and is based upon the requirements set out in BS 5837: 2012 'Trees in Relation to Design, Demolition & Construction' and the National Joint Utilities Group (NJUG) Publication No. 10, Issue 2 – Guidelines for the Planning, Installation & Maintenance of Utility Apparatus in Proximity to Trees.

A visit to the site was made in February 2013 and an assessment was then made as to the trees that may be affected by the proposals. Details of these trees are given in Appendix 1 at the rear of this Report and it should be noted that no trees on or near to the site are protected by Tree Preservation Order and the site does not lie within a Conservation Area.

Root Protection Areas for the trees and the alignment of protective fencing are shown on Tree Protection Plan 1845/1, also in the Appendix.

The potential impacts of the proposed development are discussed in Section 3.0, along with the means whereby these impacts may be minimised. A Method Statement has been included in Section 4.0 to address the ways in which the potential impacts may be minimised, on site, and is to be displayed in the site offices whilst the works proceed.

Our discussion and conclusions are presented in Sections 5.0 & 6.0.

It should be noted that the tree report reflects the health and condition of the tree at the time at which it was surveyed. Periodic inspections should be carried out to ensure that any changes are noted and appropriate action taken.

2.0 PHASING SUMMARY

In this section we have summarised the key stages in the construction programme where tree protection measures are required and have listed the phasing in which key activities are to take place.

	PRE-COMMENCEMENT ACTIVITIES (to be carried out in order below)	COUNCIL OFFICER TO SIGN WHEN COMPLETED
1	Set out alignment of protective fencing	
2	MEETING 1. Site Agent/Manager & Tree Officer to meet on site to agree Item 1 and agree tree works, if necessary.	
3	Carry out agreed tree works	
4	Install protective fencing (to BS5837:2012, Figure 2 & 3, p20 & 21)	
5	MEETING 2. Site Agent/Manager & Tree Officer to meet on site to agree Item 4.	
	DURING CONSTRUCTION OF THE MAIN BUILDING WORKS	
6	Seek agreement from Tree Officer prior to any excavation within the root protection area of trees.	
	AFTER CONSTRUCTION OF MAIN BUILDING WORKS	
7	MEETING 3 Site Agent/Manager & Tree Officer to meet on site to agree that works sufficiently progressed that protective fencing may be removed to allow external works to proceed.	

3.0 IMPACT ASSESSMENT & MITIGATION

The proposed development involves the demolition of the existing building, removal of existing hard surfaces and outbuildings and the construction of new buildings, roadways and paths. Site accommodation may be provided in temporary ‘portakabin’ type buildings, with storage areas in a secure, fenced compound area. New services will also be provided to the new buildings.

The table below sets out the potential impacts of these proposals and the methods by which these may be minimised.

	IMPACT	MITIGATION
3.1	Demolitions & Site Clearance	
	During the course of the demolitions of the existing building, trees on or adjacent to the site and their roots, may be affected by machinery, either through direct contact or compaction of the root zone.	Root zones and trees to be protected by protective fencing, installed where possible to the distances set out in BS5837. Where it is not possible to protect the root zones with fencing, a temporary surface protection to be laid to minimise compaction.
	Trees may also be damaged by material falling from the building as it is demolished.	To minimise this all demolitions to be carried out inwardly and away from nearby trees.
	The burning of material generated during demolitions may damage nearby trees.	No burning to be carried out on site – all arisings to be removed to licensed tip.
	The removal of hard surfaces within the root protection area may lead to harmful effects if roots are severed or left exposed for any length of time, particularly during hot spells.	n/a
3.2	Construction	
	The use of machinery during construction, or of construction	Root zones and trees to be protected by protective fencing, installed where

	traffic generally, may lead to damage to trees, either through direct contact or compaction of the root zone.	possible to the distances set out in BS5837. Extend if necessary to protect tree canopies or provide alternative measures (pruning, aerial protection) No heavy vehicles to be allowed into protection zones.
	Contamination resulting from spillage of materials and temporary storage of construction materials can also have harmful effects.	Materials only to be stored and mixed, divided or separated in designated storage/compound area, as shown on the drawing. This area to be outside the RPA of trees and far enough from them to ensure that there will be no impacts should spillage occur. Mixing only to be carried out on impermeable sheet. All spillage to be cleared up immediately.
	The provision of underground services can lead to severance of roots which may harm the tree and could lead to instability.	New services to be routed outside the root protection area (RPA) as shown on the drawing.
	For unforeseen circumstances, excavations may be required within the root protection areas of trees.	Approval of Planning Authority to be obtained before excavations made. All excavations within the RPA to be carried out by hand and in accordance with the N.J.U Group Guidelines (Publication 10, April 1995).
3.3	Tree Work & Removals	
	Existing trees may require Arboricultural works during the course of the works in accordance with good practice to maintain the health of the tree.	All work to tree to be carried out by qualified Arboriculturalist, holding minimum £500,000.00 third party liability insurance, during an appropriate time of year and outside of the nesting period of birds.

4.0 METHOD STATEMENT

This Method Statement has been prepared to address the impacts identified in the Section above. The Method Statement should be read along with Tree Protection Plan 1845/1.

A copy of this Method Statement is to be kept in a prominent position in the site hut and is to be adhered to in all issues related to trees and tree protection. It is the Developers and Contractors responsibility to ensure that the details of this report are known and understood by all site personnel. The Site Manager must brief all personnel and visitors (e.g. delivery vehicles) on specific tree protection requirements. This must be written in to the Site Induction Procedure and any other relevant site management documents.

Appropriate traffic control and protection to pedestrians will be implemented to ensure that there are no Health & Safety issues. Appropriate signage/cones/highway control/health and safety considerations for pedestrians to be provided in such an event.

Where inspections are required by the Local Authority these are detailed in Section 2.0 above and a check box is provided for the Inspecting Officer of the Council to sign and date. These boxes must be signed before proceeding to the next stage of the works.

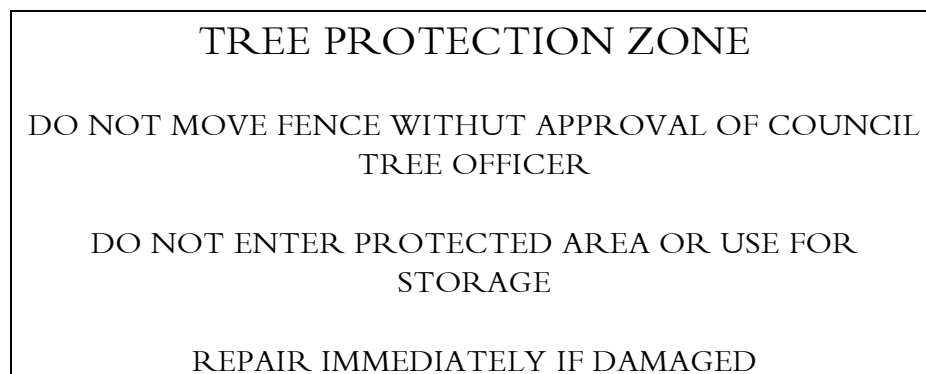
4.1 PRIOR TO COMMENCEMENT OF DEMOLITION & SITE CLEARANCE WORKS

Prior to any other works on the site the alignment of protective fencing to be marked out on the ground and a Tree Officer from the Local Authority is then to be invited to site to approve, prior any other work.

All Arboricultural works are then to be carried out (i.e. pruning etc.) by a qualified Arboriculturalist in accordance with BS3998, prior to erecting the protective fencing. Care will be taken not to damage surrounding vegetation.

Protective fencing to be a scaffold framework with weldmesh fence attached by wire, in accordance with BS5837: 2012, Fig 2 & 3. Alternatively, subject to LPA approval, 8' x 4' Sterling board or Heras style fencing may be fixed to the scaffold framework, which is to be erected along the alignment shown on Tree Protection Plan. Protective fencing to be trimmed as necessary around retained trees/branches/walls etc. All works to retained trees, as identified on drawing, will be carried out to all appropriate standards and by a fully qualified Arboriculturalist holding minimum £500,000.00 third party liability insurance.

The fence is not to be moved from the agreed position without approval of LPA. Any damage to the fence to be repaired immediately. Affix weather-proof signs every 5.0m along the length of the fence, with text as below:



Prior to site clearance or any further works and once protective fencing has been installed, a meeting is to be held on site in order that the LPA may approve.

Fencing is not to be moved from the agreed position unless agreed with LPA. Any damage to the protective fence is to be repaired immediately.

If stacked huts to be used, these to be located in a position where they do not effect the branches of trees. Huts, placed on concrete slab pads, may be placed within protection zones as they help to provide protection to the trees by preventing use for storage or other building activities. No branches to be cut to allow placement of huts.

4.2 DURING DEMOLITION & SITE CLEARANCE WORKS

Once the alignment of the protective fence has been approved, the next phase of work will be site clearance and the demolition of the existing building. All hard surfaces are also to be removed.

No hard surfaces lie within the RPA of retained trees so no special measures will be required during this work.

No fires will be permitted on the site at any time to reduce damage and the possibility of vegetation catching fire.

At no time during the course of the demolitions will any part of any machine oversail the line of the protective fence, in order that damage to trees may be avoided.

In the event that any trees are damaged during the course of the works then the Arboriculturalist will to be consulted on procedures to follow and the LPA informed.

Care to be taken not to damage branches of trees above the working areas but where there may be damage the limbs are to be pruned back by an Arboriculturalist. In the event that any trees are damaged during the course of the works then the Arboriculturalist will to be consulted on procedures to follow and the LPA informed.

4.3 DURING CONSTRUCTION OF THE MAIN BUILDING

No digging is to be carried out within the protective fencing area and at no time during the course of the construction will any part of any machine oversail the line of the protective fence, in order that damage to trees may be avoided.

Maintain protective fencing in good order during course of construction works – do not move from position unless agreed with LPA. Any damage to be repaired immediately.

Temporary Offices, Toilets and Material Storage Compounds to be sited outside of the protective fencing and tree RPA's and remain in only those agreed locations throughout the construction phase. All storage and mixing of materials will be carried out in a compound area which is to be located outside the RPA of trees as annotated on the drawing. All materials to be stored and mixed on an impermeable surface. All spillages of any potential contaminants (including petrol/diesel etc.) to be immediately cleaned up. Any other areas required for storage/mixing to be outside of the protection zones of trees and to be covered first with a non-permeable sheet as a precaution against any spillage.

In the event that significant tree roots are encountered (>25mm dia) then Arboriculturalist to be consulted on procedures to follow. Should any trees be accidentally damaged during the course of the works then the Arboriculturalist will again be consulted on procedures to follow and the LPA to be informed.

The arrangements and details of the new utility service connections is not presently known, but the following procedure should be adopted: The location of service routes must be outside of the tree protection zones of the trees to be retained on site to avoid disturbance of the tree roots.

Where this is not possible, or when due to unforeseen circumstances it is necessary to make an excavation within the root protection areas of trees for any reason, the Contractor **must** first obtain approval from the Local Authority for the work.

Once approved, EITHER holes for services to be bored below 600mm using an underground boring device, OR excavations to be carried out by hand and in accordance with the N.J.U Group Guidelines, Publication 10, with trenches to be hand dug down to a depth of 600mm, retaining all roots > 25mm diameter and clusters of smaller roots avoiding damage to bark, with new services subsequently threaded between/beneath retained roots. This stage of the works to be supervised by Arboriculturalist and only when absolutely necessary are roots to be cut. In these instances sharp tools will be used, leaving the smallest wound. Where it is necessary to sever roots greater than 25mm in diameter, arboricultural advice should be sought. Where smaller roots must be severed, they should be cut back cleanly using secateurs or a sharp pruning saw. Where possible, services laid through the protected areas need to be installed at a greater depth than 600mm in order to preserve the maximum number of roots and avoid conflicts between the tree roots and utility service run.

Backfill to trenches to include inert granular material mixed with topsoil or sharp sand (not builders sand) around the retained roots, to allow soil to be compacted for re-surfacing without damage to roots. Where trenches are to be left open overnight, exposed roots to be wrapped in dry sacking to help prevent desiccation of fine roots.

Care shall 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. Such contact could result in serious injury to a tree and might make its safe retention impossible.

4.4 AFTER CONSTRUCTION OF MAIN BUILDING WORKS

Protective Fencing Removal

Once the main building works are completed a representative of the Local Planning Authority will be invited to site to confirm that works are sufficiently advanced that

the protective fencing may be removed, to allow landscape works to proceed (planting/turfing etc.).

The Contractor will be responsible to provide sufficient notice of this meeting in order that there will be no delays in progress on site.

4.5 ARBORICULTURALLY SENSITIVE OPERATIONS

The following operations are considered to be potentially sensitive to trees:

- Alignment and installation of protective fencing
- Trees works
- Any excavations within the RPA of trees (after these have been approved by LPA) and any unexpected work required to trees
- Removal of protective fencing prior to general landscape works

5.0 CONCLUSION

No trees require removal as a result of the proposals to demolish the existing buildings and to construct new buildings, driveway and parking areas. No special construction measures are required either to the proposed new buildings or to hard surfaced areas, as a result of nearby trees that are to be retained. The implementation of the measures set out above and as shown on Tree Protection Plan 1845/1 will therefore minimise the impact of the proposed development on trees to be retained on or near to the site. The viability of the retained trees can therefore be assured in both the short and the long term, with the benefit that their contribution to visual amenity will not be affected.

There are therefore no reasons, based on tree issues, that should prevent this development from being supported by the Council and being granted planning permission.

Appendix 1 TREE SURVEY

NO.	SPECIES	TRUNK φ/mm	RPA Radius/m	HT/m	CANOPY φ/m (* estimated)				CANOPY HEIGHT	AGE	VISUAL FORM	COMMENTS & ACTIONS	GRADE
					N	E	S	W					
1	Holly	100,200	2.2	5	2	3	2	2	1	2	3	Offsite tree	C
2	Cherry	500	6	6	4	4	4	4	2	3	3	Offsite tree	C
3	Hazel	50–80	2.5	5	2	2	2	2	0	2	2	Offsite tree	C
4	Hazel	50–100	2.9	8	3	3	3	3	0	2	2	Offsite tree	C
5	Silver Birch	200	2.4	9	4	3	4	3	2	2	2	81	C
6	Silver birch	330	3.96	8	1	4	4	4	4	2	3	81	C

KEY TO TABLE

AGE		CONDITION OF ROOTS		29	Weak fork	48	Apical dieback	66	Fell
1	Young (<1/3)	11	No visual defect	30	Jagged wound	49	Weak fork	67	Remove minor deadwood
2	Middle age (1/3 to 2/3)	12	Fungus or decay	31	Fire damage	50	Cavities	68	Remove major deadwood
3	Mature	13	Bark wounds	32	Lightning strike	51	Cable/rod brace present	69	Thin out crown
VISUAL FORM		14	Soil heave	33	Ivy covered	52	Witch's broom	70	Reduce crown
1	Good	15	Soil compaction	34	Stress mark slime flux	53	Low hanging branches	71	Raise crown
2	Average	16	Soil erosion	35	Sucker growth	54	Sparse	72	Reduce crown spread
3	Poor	17	Increase in soil level	36	Multi-stemmed	55	Lopsided	73	Cable brace
4	Group	18	Waterlogged	37	Witch's broom	56	Supressed	74	Rod brace
COMMENTS & ACTIONS		19	Test boring	38	Crooked	CONDITION OF LEAF/BUD		75	Remove jagged tissue
NEARBY FEATURES		20	Damage to surface or buttressed roots	39	Forked	57	Normal	76	Remove suckers
6	Near building structures	21	Roots uplifed	40	Crown missing	58	All dead absent	77	Re-pollard1
5	Adjacent or in area of hard surfacing	CONDITION OF STEM		41	Pollarded	59	50% dead absent	78	Repair bark wound
6	Free standing	22	No visual defect	42	Coppiced	60	25% dead absent	79	Fertilise, aerate and cultivate
7	On slope	23	Fungus or decay	CONDITION OF BRANCHES		61	Small sparse	80	Pest disease control
8	Near ditch	24	Cracked	43	No visual defects	62	Discoloration	81	Remove ivy
VIGOUR		25	Leaning	44	Minor deadwood	63	Epicormics	82	Re-coppice
9	Low	26	Bark wounds	45	Major deadwood	64	Insect caterpillar attack	83	Remove limb
10	Normal	27	Old pruning wounds	46	Hanging branches	ACTION			
		28	Cavities	47	Fractured branches	65	None		

Appendix 2 Tree Protection Plan