



Arboricultural Report

Tree report for planning purposes

Havant Lorry Park
Southmoor Lane, Havant
Hampshire
PO9 1JW

December 2020

200637-PD-11

Project	200637-PD-11 – Langstone, Hampshire
Report Type	Arboriculture
Author	Edward Cleverdon
Checked by	Tim Moya
Date Checked	04/12/2020

The contents of this report are copyright of Tim Moya Associates (TMA) and may not be altered or amended without TMA's permission. Tim Moya Associates Standard Limitations of Service apply to this report, and all associated work relating to this site.

CONTENTS PAGE

1	SUMMARY	4
	CONCLUSIONS	4
	FINDINGS	4
	INSTRUCTIONS	5
2	INTRODUCTION	6
	SCOPE AND LIMITATIONS	6
	BACKGROUND AND DOCUMENTS PROVIDED	6
	OTHER SUBMITTED INFORMATION	6
3	OBSERVATIONS AND CONTEXT	7
	APPLICATION SITE VISIT	7
	DESCRIPTION OF THE APPLICATION SITE	7
	VIEWS OF TREES ON THE APPLICATION SITE	8
	LEGAL STATUS OF TREES	12
	SOIL CONDITIONS	13
	NATIONAL PLANNING POLICY	13
	LOCAL PLANNING POLICY	14
4	TECHNICAL INFORMATION	15
5	ANALYSIS OF THE PROPOSED DEVELOPMENT IN RESPECT OF TREES	16
	LOSS OF TREES	16
	PRUNING TO FACILITATE DEVELOPMENT	18
	DEMOLITION AND CONSTRUCTION OPERATIONS	18
	INSTALLATION OF DRAINAGE AND UTILITY RUNS	18
	BOUNDARY TREATMENTS	18
6	DISCUSSION	19
	GENERAL CHANGE	19
	NEW LANDSCAPING	19
	ARBORICULTURAL IMPLICATIONS AND MITIGATION	19
7	CONCLUSIONS	20
	ARBORICULTURAL SUSTAINABILITY	20
	PLANNING POLICY	20
	ARBORICULTURAL IMPACTS AND MITIGATION	20
8	RECOMMENDATIONS	21
	PLANNING CONDITIONS	21
	TREE WORKS	21
	TREE PROTECTION	21

1 SUMMARY

Conclusions

- 1.1 The proposals will require the loss of 7 C category trees. The trees are located internally to the site amongst the existing containers and hard standing. Many of the trees are showing signs of physiological stress and / or have stem defects resulting from impacts and constrained growing environments against structures.
- 1.2 The trees located offsite within a landscape strip which forms part of a continuous stretch of woodland that divides the eastern and western halves of the industrial area will now be retained.
- 1.3 The indicative landscape plan includes native tree and hedgerow planting that bolster the woodland strip and mitigate for tree losses within the site. There is particular a need for new planting towards the northern section of the woodland group, which contains several dead or dying elder trees.
- 1.4 There is space for new tree planting that can establish alongside the development and provide an improved quality of tree stock which will enhance the visual and ecological value of the site, having a positive impact on the character of the local area in the future.
- 1.5 The conclusions of this report are that while the proposed development will require the removal of 7 trees within the site, the main arboricultural feature of the site, the offsite woodland group, may be retained and there is scope for replanting within the northern half of the landscape strip to mitigate for tree losses. This may be secured within consent, in order to comply with the requirements of planning policy as they relate to trees.
- 1.6 Further details of tree impacts and mitigation are discussed in section 5 below. See Appendix B for a full schedule of tree works.

Findings

- 1.7 This report includes:
 - an assessment of the character of the local area in relation to trees and other vegetation;
 - a description of the Application Site and the landscape significance of the trees and other vegetation;
 - observations on the trees relevant to the proposed development;

- the planning policies relevant to the consideration of the trees on the site;
- the impact of the proposed development upon the tree population in and around the site;
- methods of reducing impacts on trees;
- measures to be taken to protect trees during the proposed works; and
- proposed new tree planting and landscaping.

Instructions

- 1.8 This arboricultural report has been instructed by Conrad Energy, to provide information to assist all parties involved in the planning process, so that they may make balanced judgements with regard to arboricultural features in relation to the proposed development at Havant Lorry Park, Southmoor Lane, Havant, Hampshire, PO9 1JW (the 'Application Site').
- 1.9 The proposed development is for the erection of a flexible power generation facility with associated ancillary infrastructure, access and boundary treatment.

2 INTRODUCTION

- 2.1 This report has been prepared by Edward Cleverdon. Edward is a senior arboricultural consultant dealing with trees in relation to all forms of human activity including the built environment. Edward is a professional member of the Arboricultural Association, an associate member of the Institute of Chartered Foresters, graduated with a BSc (hons) degree in Arboriculture from The University of Central Lancashire, is a LANTRA qualified professional tree inspector; and a registered user of Quantified Tree Risk Assessment.

Scope and limitations

- 2.2 This report has been provided to assist all parties involved in the planning process and has been prepared following a survey of the trees and other vegetation in accordance with *British Standard 5837 - Trees in relation to design demolition and construction - Recommendations (2012)*¹, hereafter referred to as BS5837.
- 2.3 The survey is an assessment in accordance with BS5837 and is not an assessment of the health and safety of trees and no recommendations for tree works have been provided unless required for development reasons. However, any trees identified as a current risk to health and safety have been highlighted in the tree works schedule at Appendix B, where appropriate.

Background and documents provided

- 2.4 This report has been prepared with reference to the following supplied information:
- proposed site layout and indicative landscape plan.

Other submitted information

- 2.5 This report should be read in conjunction with the application documents and drawings, including:
- the planning statement;
 - other submitted drawings and documents.

1 - BSI. (2012) British Standard 5837: Trees in relation to design, demolition and construction - Recommendations. UK: British Standards Institution.

3 OBSERVATIONS AND CONTEXT

Application Site visit

- 3.1 Trees on the Application Site were surveyed on 23rd July 2020 and subsequently on the 1st December 2020 the author, to identify key trees and to inform the client team of the main tree constraints. Trees on and around the Application Site were inspected from ground level only. The survey methodology has followed the recommendations of BS5837.

Description of the Application Site

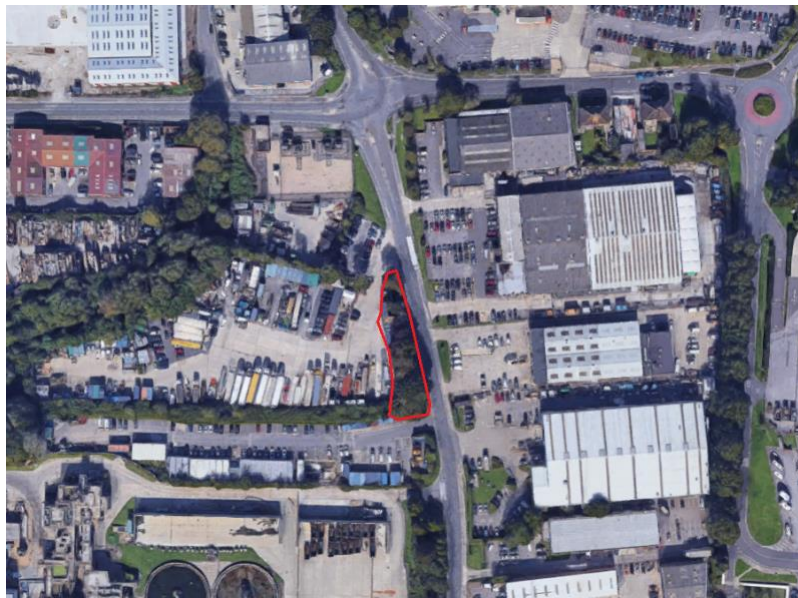


Image 1: Aerial photograph of the site, Google images not to scale.

- 3.2 The site falls to the east of Southmoor Lane within the existing Broadmarsh Business and Employment area and north of the Budds Farm Sewage Works. It lies within the built-up area and forms part of the Havant Lorry Park.
- 3.3 The site will be accessed from the existing access off South moor Lane, through the site. Internal access tracks will be used to enable both construction and maintenance vehicles to manoeuvre throughout the site.
- 3.4 The site falls entirely within Flood Zone 1 and Budds Farm Sewage Works to the south of the site benefits from flood defences.
- 3.5 The site contains several trees located in and amongst shipping containers, areas of material storage or within a roadside small woodland group.

- 3.6 Several trees within the site are showing symptoms of soil compaction and drought stress due to the restricted rooting environment they are growing in.
- 3.7 The trees within the highway verge form a collective landscape feature and provide a small area of continuous greenery within a harsh industrial landscape.
- 3.8 This belt of trees continues south along Southmoor Lane to create a single woodland group that forms a landscape barrier between industrial sites to the east and west.



Image 2: Aerial view of the site within the wider context.

Views of trees on the Application Site



Photo 1: View of the rear of the site with the sycamore group G16.



Photo 2: View of the south of the site including trees T13-T15.



Photo 3: Several trees are located between and amongst containers.



Photo 4: Various materials have been stored around tree stems contributing to physical decline in some specimens.



Photo 5: Further views of material storage amongst trees on site.



Photo 6: Evidence of crown die back within trees on site.



Photo 7: View of the lime tree T27 at the site entrance which forms a prominent landscape feature.



Photo 8: View of the oak tree T35 which forms a landscape feature within the roadside group.



Photo 9: View of trees within the roadside group.

Legal status of trees

- 3.9 At this stage, legal constraints to tree works have not been investigated. However, statutory protection may be applicable to trees on the site preventing works without notice or by making an application for works. Possible legal constraints include tree preservation orders, trees in conservation areas, trees covered by the Forestry Act or

other legal constraints. It is recommended that these constraints are investigated before any tree works are undertaken.

Soil conditions

- 3.10 The British Geological Survey suggests that the soils on site will be Lewes Nodular Chalk Formation And Seaford Chalk Formation. Composed of hard to very hard nodular chalks and hardgrounds (which resist scratching by finger-nail) with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks. The softer chalks become more abundant towards the top. Nodular chalks are typically lumpy and iron-stained (usually marking sponges). Brash is rough and flaggy or rubbly, and tends to be dirty. First regular seams of nodular flint, some large, commence near the base and continue throughout.

National planning policy

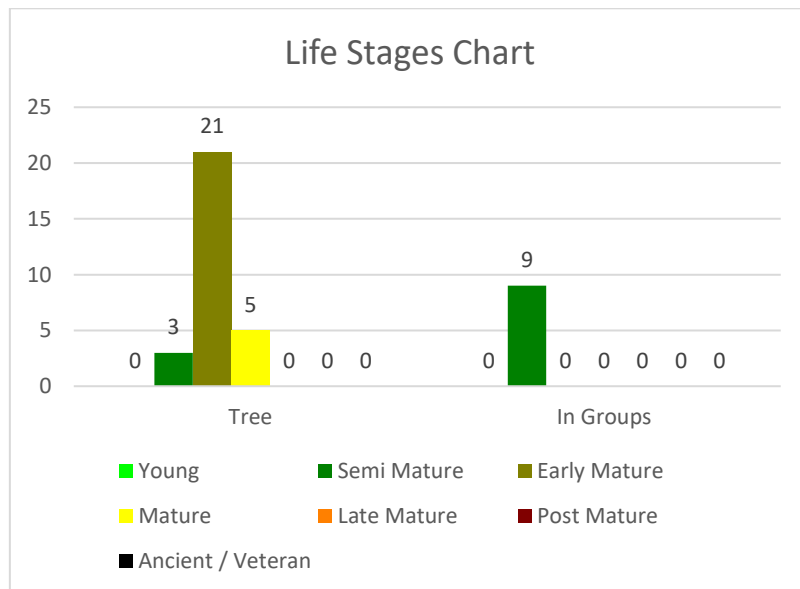
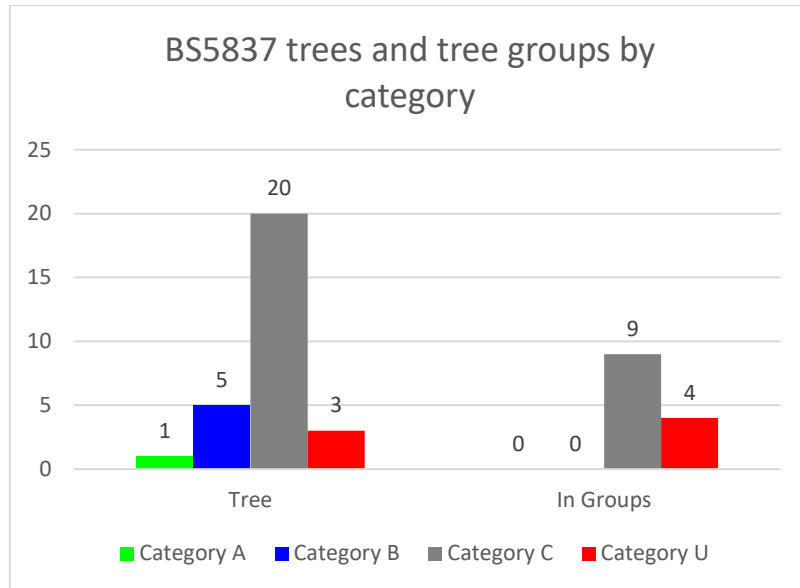
- 3.11 Planning policy at national level is set out in the governments *National Planning Policy Framework* (NPPF)², which was revised in February 2019. The NPPF sets out overarching planning policy, and at its core is a presumption in favour of sustainable development. Sustainable development is defined in the NPPF as having economic, social, and environmental strands that are interdependent, and in these areas planning should meet the needs of the present without compromising the ability of future generations to meet their own needs.
- 3.12 The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development. To achieve sustainable development, the planning system has three overarching objectives (economic, social, and environmental), which are interdependent, and need to be pursued in mutually supportive ways.
- 3.13 Paragraph 170 of the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by "*protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*" and "*recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.*"
- 3.14 Paragraph 175 of the NPPF states that, in order to protect and enhance biodiversity and geodiversity, Local Planning Authorities should apply the following principle, when determining planning applications that may affect ancient or veteran trees:

"development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists."

Local planning policy

- 3.15 The Core Strategy for Havant Borough Council, adopted in 2011, provides local guidance that helps direct development proposals in a direction that meets the needs of the local area. In relation to this planning application, there are policies that are relevant, with respect to the trees surveyed (see Appendix A). These policies are listed below, and relevant parts of individual policies are included.
- 3.16 DM8 Conservation, Protection and Enhancement of Existing Natural Features: Development will only be permitted where it protects and enhances local habitats and landscape distinctiveness and which addresses all of the relevant criteria as set out below:
- Protects natural features of nature conservation and/or amenity importance on the site, for example trees, woodlands, hedgerows, soils, streams, stream corridors, springs, ditches or ponds from damage, destruction and a deterioration in quality.
- 3.17 Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough: Planning permission will be granted for development that:
- Protects and where possible enhances the boroughs statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.

4 TECHNICAL INFORMATION



5 ANALYSIS OF THE PROPOSED DEVELOPMENT IN RESPECT OF TREES

Loss of trees

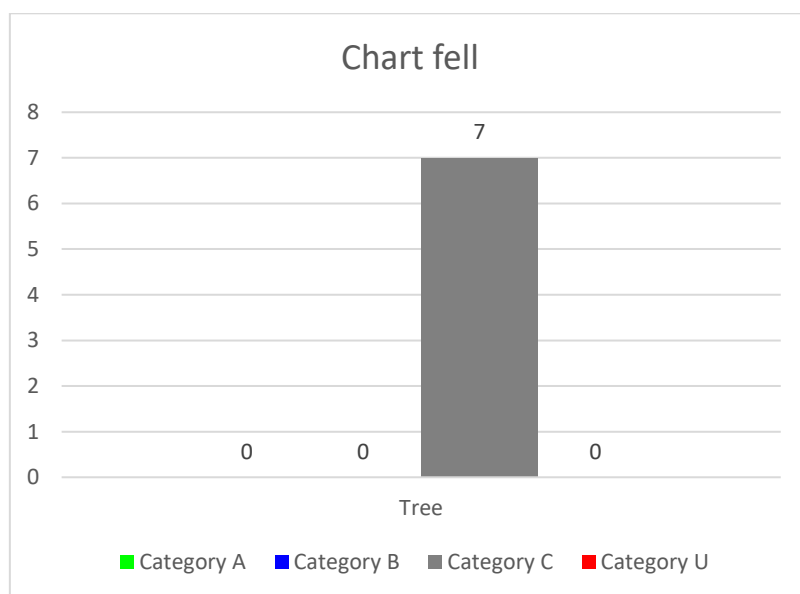


Fig 3: Chart showing the proposed tree removals broken down by BS5837 category

- 5.1 In order to facilitate development and provide sufficient access routes / working room, 7 low value trees of site clearance. As the site has been left unmanaged for some time the trees have grown in and amongst containers and other industrial materials which has left them with physiological and structural issues.
- 5.2 The majority of removals are replaceable however, and there is an opportunity to replant within the adjacent landscape buffer to bolster tree cover to the north of the group.
- 5.3 The indicative landscape masterplan includes new native trees and hedgerows that will mitigate for the loss of amenity and provide filtered views in and out of the site, the detail of which may be secured within consent.

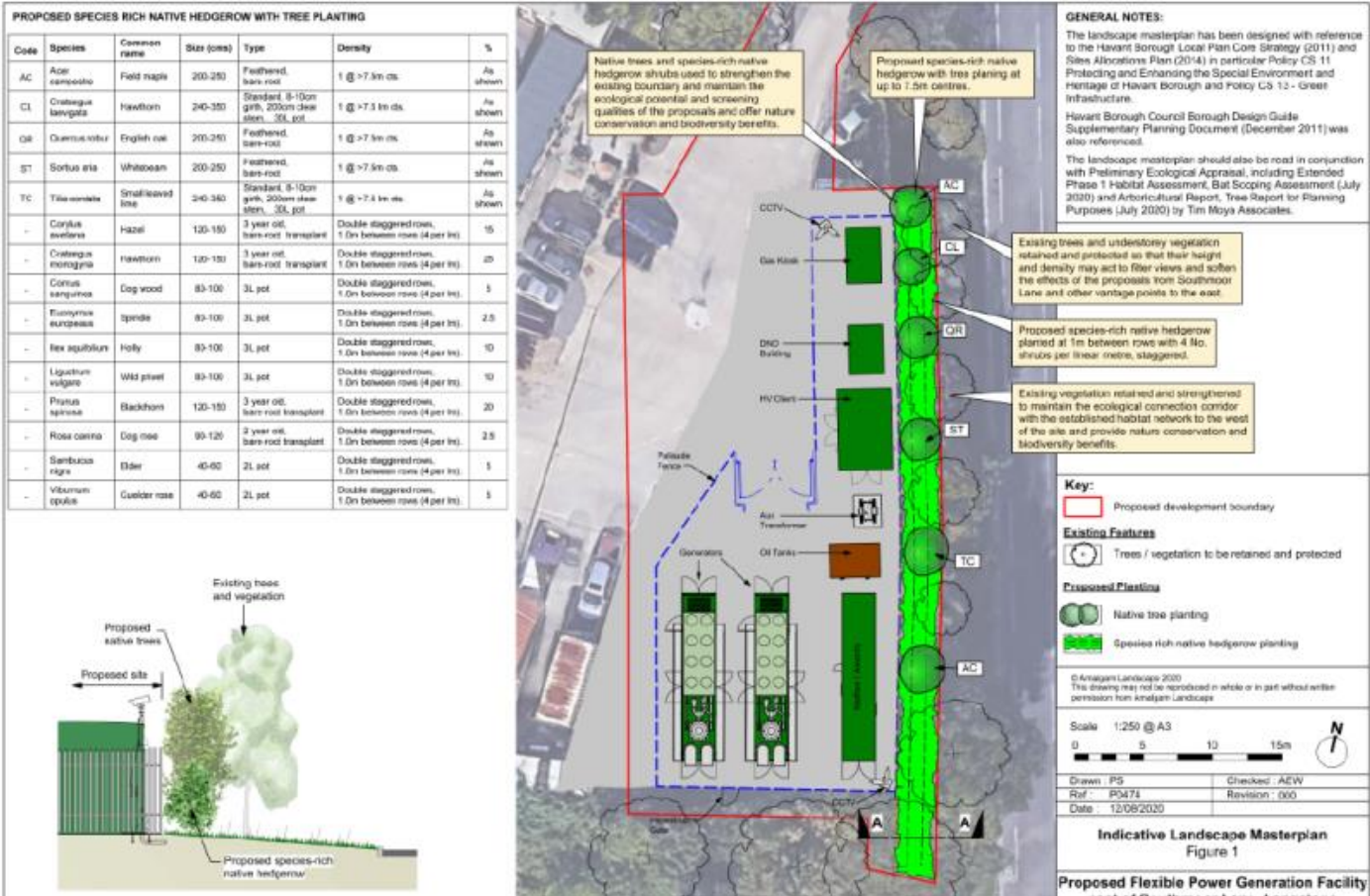


Image 3: extract from the landscape masterplan.

Pruning to facilitate development

- 5.4 It will not be necessary to prune trees in order to construct the proposed development.

Demolition and construction operations

- 5.5 The existing hard surfacing will be broken, crushed and laid to form the gravel surfacing required across the site. Excavations will be limited to the depth of the existing subbase and will not impact upon the undisturbed ground below.
- 5.6 The welfare units and oil tank to the south of the site may be placed on above-ground supporting structures, negating the requirement for excavations to provide foundations; while the HV Client, DNO building and Gas kiosk will require excavations to install.
- 5.7 The installation of the HV client is likely to impact on the roots T11, the excavation and working methodology of which will need to adhere to a strict root pruning method statement including arboricultural supervision.
- 5.8 It is recommended that an arboricultural method statement be conditioned for the site so that detail of unit installation, tree protection during the works and arboricultural supervision may be approved and enforced.

Installation of drainage and utility runs

- 5.9 We do not currently have details of the condition of existing drainage / utility runs or any information which suggests that there will be a requirement to install new drains. However, if new drainage / utilities runs are required, they should be located outside the RPAs of retained trees. If it is found to be necessary to locate new drainage runs within the RPAs of retained trees it is recommended that these works are carried out under arboricultural supervision. Methods of work should follow the recommendations in the National Joint Utilities Group (NJUG) guidance. BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances.³

Boundary treatments

- 5.10 The construction of boundary fencing will frequently require the excavation of pits for fence posts and the use of dry or liquid cement products which can be phytotoxic. We do not currently have details of the proposed boundary treatment but where these operations are to take place within the RPA of retained trees it will be necessary to seek arboricultural advice to avoid physical damage to roots and the phytotoxic effects of liquid cement products.

3 - NJUG. (2007) Volume 4: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees - Issue 2. UK: National Joint Utilities Group.

6 DISCUSSION

General change

- 6.1 The proposed development will have a minor impact upon trees and landscaping which may be suitably mitigated with new planting to bolster the landscape and amenities benefits of the woodland group. Proposed new planting has the opportunity to increase the quality of canopy cover within the woodland area, providing increased benefits within a relatively short amount of time.

New landscaping

- 6.2 Detailed landscape proposals have not yet been formulated but there is space within the landscape buffer adjacent to the site to plant new trees which can contribute significantly to the amenities of the local area.

Arboricultural implications and mitigation

- 6.3 The inclusion of arboricultural input into the design of the proposals has minimised the impacts on existing trees and provided opportunities for new planting which will mitigate for these impacts over time and, in the long term, have the potential to provide an improved quality of tree cover on the site.

7 CONCLUSIONS

Arboricultural sustainability

- 7.1 Best practice guidance has been followed to identify the key trees for arboricultural and landscape value; the all of the trees to be removed are of low or poor quality, and of limited public value. Landscape design and implementation are matters that can be satisfied within the detailed design element of the project.

Planning policy

- 7.2 The proposed development will require a planting strategy to comply with local planning policies, in relation to trees. New tree planting is proposed as part of the development proposals and these trees can be located in positions where they can make a contribution to public amenity.

Arboricultural impacts and mitigation

- 7.3 The site has been left unmanaged for some time. At present the site is of restricted public benefit, lacking management with the majority of trees having limited useful life expectancy. The development presents an opportunity to regenerate the visual amenity value of the site through structured tree planting and appropriate landscape enhancements. Consideration can therefore be put towards sustainable species choices that both satisfy the need for public amenity and tolerate projected climate changes within the urban environment.
- 7.4 The protection of retained trees adjacent to the site during the proposed development works can be achieved by continuing to follow the recommendations in BS5837:2012 and by compliance with suitably drafted planning conditions, which can require an arboricultural method statement including on site supervision of key activities and tree protection during demolition and construction works.

8 RECOMMENDATIONS

Planning conditions

- 8.1 The Town and Country Planning Act 1990 places a duty on the Local Planning Authority to ensure that planning permissions are granted making adequate provision for the preservation and planting of trees by the imposition of conditions.
- 8.2 Appropriately worded planning conditions can ensure that trees are adequately protected during construction work which can include arboricultural supervision during key stages of the development process.

Tree works

- 8.3 It will be necessary to carry out some tree removal works in order to facilitate the proposed development. These works are listed in the tree work schedule at Appendix B.
- 8.4 Where tree works are necessary it is strongly recommended that a reputable and experienced tree surgery company is employed to carry out these works. Some local authorities will provide approved lists of tree surgeons and the Arboricultural Association publishes a list of Approved Contractors which can be searched by location. All tree works should be carried out in accordance with the guidance in BS3998⁴.
- 8.5 Before authorising or undertaking tree removals or any works which may involve the severing of tree roots or branches it will be necessary to ensure that the affected trees are not legally protected. Legal protection may consist of Tree Preservation Orders, trees in Conservation Areas or trees protected by the Forestry Act or other legislation.
- 8.6 Where tree removals or pruning works have been specified within the submitted planning application documents, and where planning permission has been granted for these works, this permission overrides the statutory protection and the planning permission includes permission to carry out the approved tree works. However, these conditions only apply where the approved development is being implemented. Carrying out works to protected trees without permission, or where the planning consent is not being implemented may constitute an offence⁵.

Tree protection

- 8.7 Protective fencing which is fit for purpose⁶ will be required in order to prevent damage to trees, and the soil environment in which they grow, during development works. The

4 - BSI. (2010) British Standard 3998: Tree works - Recommendations. UK: British Standards Institution.

5 - DCLG. (2014) Tree preservation orders and trees in conservation areas [Online]. Available at: <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>.

6 - British Standards Institute, 2012. BS 5837: Trees in relation to design, demolition and construction. Section 6.2.2

specification for the construction and positioning of protective fencing is shown on the plans at Appendix A. Protective fence will need to be erected prior to the arrival of plant and materials on the site. The specification and positioning of protective fencing for this project will remain the same for both demolition and construction activities.

Figure 3 Examples of above-ground stabilizing systems

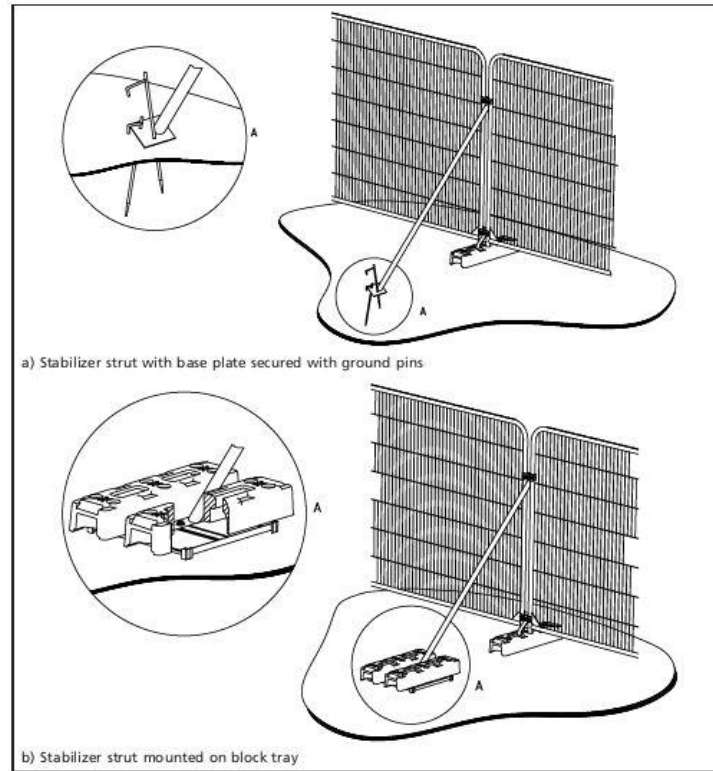
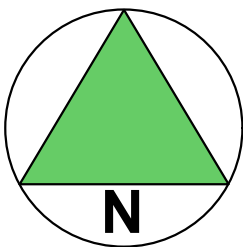
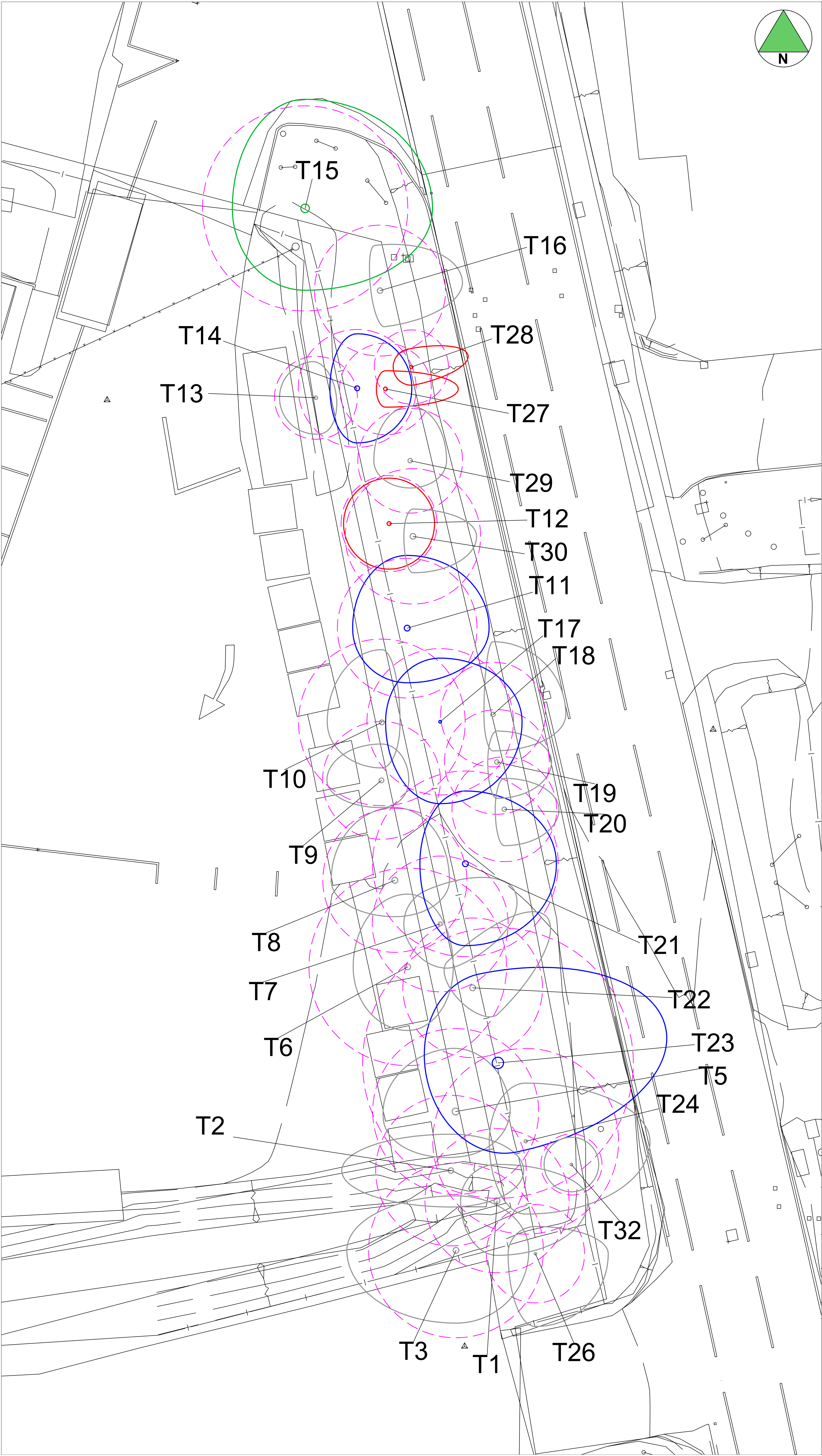


Image 3 - Protective fencing, ground stabilizing image: Image sourced from BS5837: Trees in relation to design, demolition and construction - Recommendations

APPENDIX A - Plans

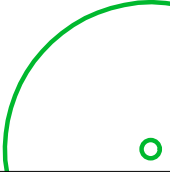
- 200637-P-10a Tree Survey
- 200637-P-11b Proposed Removals
- 200637-P-12b Tree Protection



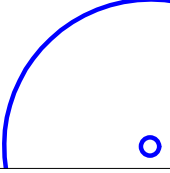


The original of this drawing was produced in colour -a monochrome copy should not be relied upon.

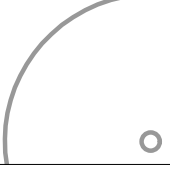
BS 5837:2012 TREE RETENTION CATEGORIES



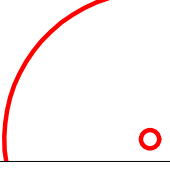
Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.



Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.



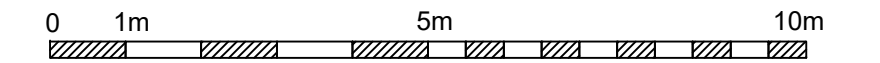
Category C
Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.



Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.



BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work

a	03.12.20	Updated with TOPO	HR
REV	DATE	DESCRIPTION	DRAWN
Base Drawing			
OSMAP			
			

Title
Tree Survey

Client
Conrad Energy

Project
Havant Lorry Park, Southmoor Lane,
Havant, Hampshire, P09 1JW

Date July 2020	Drawn by HR	Checked by -
Drawing No 200637-P-10	Rev a	Scale 1:100@A1

DO NOT SCALE Use only figured dimensions



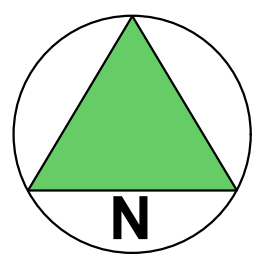
TIM MOYA ASSOCIATES

The Barn, FelthamesPark, Chalk Lane, Harlow, Essex CM17 0PF

0845 094 3268 | info@tma-consultants.co.uk

www.timmoayaassociates.co.uk

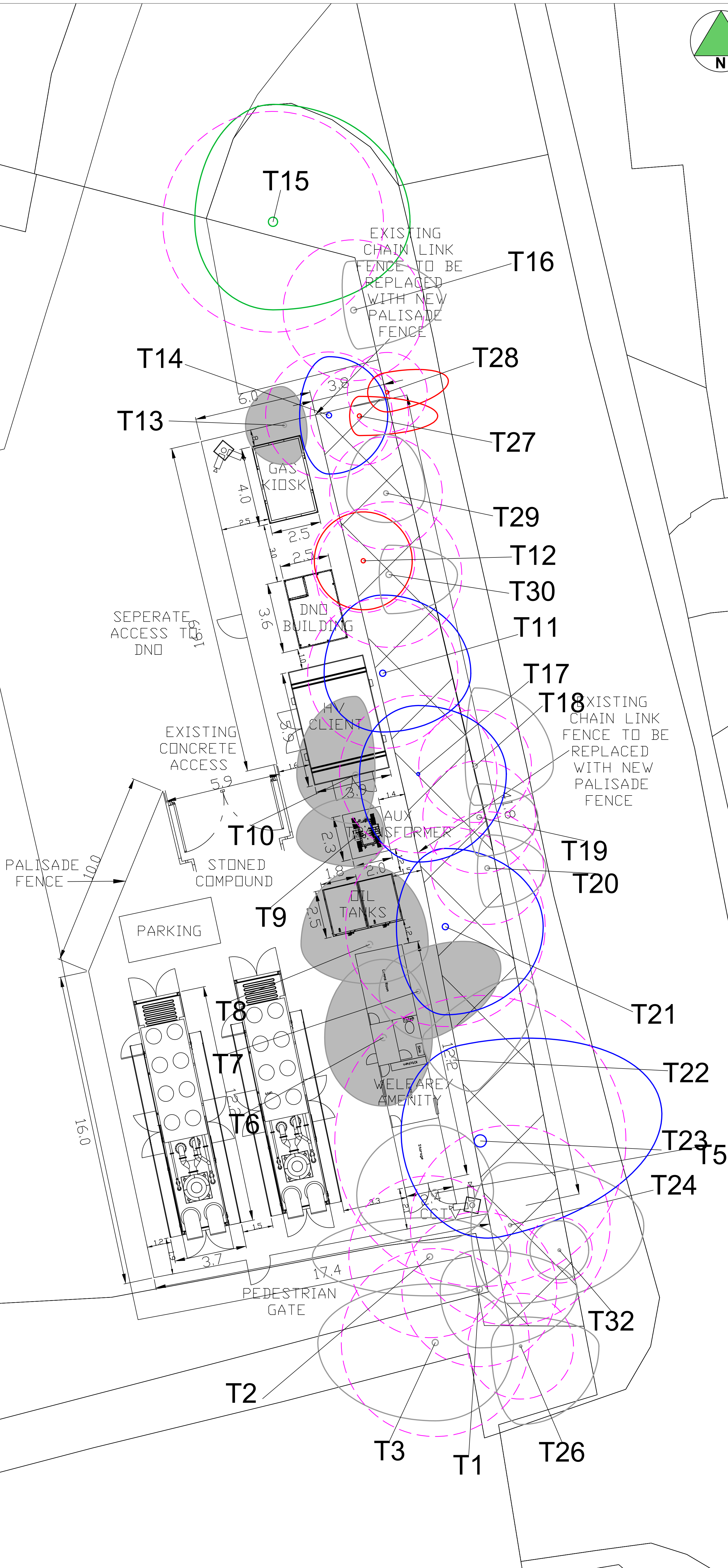
arboriculture ecology landscape innovation



The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

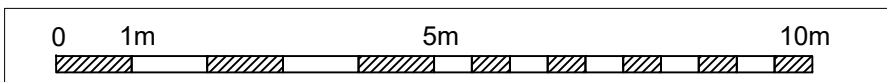
BS 5837:2012 TREE RETENTION CATEGORIES

- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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 150mm.
- Category U**
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS5837 Root Protection Areas**
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.
- Trees to be removed shown shaded grey



b	03.12.20	Trees updated with TOPO locations	HR
a	19.11.20	Proposed layout updated	HR
REV	DATE	DESCRIPTION	DRAWN

Base Drawing			
-	-	LGN-PSP-01_21.08.19	



Title		
Proposed Layout and Tree Works		
Client		
Conrad Energy		
Project		
Havant Lorry Park, Southmoor Lane, Havant, Hampshire, P09 1JW		
Date	Drawn by	Checked by
July 2020	HR	-
Drawing No	Rev	Scale
200637-P-11	b	1:200@A1
DO NOT SCALE Use only figured dimensions		



The Barn, FelthamesPark, Chalk Lane, Harlow, Essex CM17 0PF
0845 094 3268 | info@tma-consultants.co.uk
www.timmoayaassociates.co.uk

arboriculture ecology landscape innovation

ARBORICULTURAL METHOD STATEMENT

TREE WORKS

Only the tree works specified within this report may be undertaken, after the appropriate planning consents have been acquired and in order to implement the consent. In the event of any uncertainty regarding tree works, the retained arboricultural consultant will be consulted and where appropriate the Local Planning Authority.

All tree works will be undertaken, in accordance with the best-practice recommendations provided in BS 3998:2010. The statutory responsibilities as outlined in the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010 will also be complied with.

TREE PROTECTION FENCING

The tree protection fencing and (where appropriate) ground protection, will be installed as specified within this plan, prior to the commencement of any demolition and construction works. No plant or materials will be delivered to site prior to the construction of the tree protective fencing other than those required to install the tree protection fencing. On every third panel, a sign will be fixed that states "Tree Protection Zone (TPZ). Keep out. Any incursion into this area must be agreed in advance with the retained arboricultural consultant and Local Planning Authority." An example of this sign is provided within this plan.

The position of the tree protection fencing must not be amended and no individual panels will be uncoupled, without the agreement of the retained arboricultural consultant and/or Local Planning Authority.

SERVICES AND DRAINAGE

The installation of drainage runs, manholes, storage tanks, and utilities will be positioned outside the root protection areas of retained trees. If the installation of new services and drainage runs are required within the root protection areas (RPAs) of retained trees, all methods of working will follow the guidance within Table 3 of BS 5837 or the National Joint Utilities Group's (NUJG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (volume 4, issue 2).

Excavation works within the RPAs of retained trees will be undertaken manually with the use of hand tools only (under the supervision of the retained arboricultural consultant), unless otherwise agreed in advance by the retained arboricultural consultant. It is recommended that an air lance - and if required a soil vacuum - is used, to excavate service trenches within RPAs. If soil conditions are not suitable for this method of excavation, alternative hand tools can be used once agreed in advance by the retained arboricultural consultant.

All roots greater than 25mm in diameter will be retained and will immediately be wrapped in hessian or another appropriate material, to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed, where this is practical and without causing root damage.

No machinery will be permitted within the TPZ, at any time, unless agreed in advance with the retained arboricultural consultant.

NO-DIG CONSTRUCTION AREAS

Areas that will require no-dig methods of construction are shown within this plan. Working methods within these areas will comply with the details outlined in the main report and in advance of works being undertaken will be agreed with the retained arboricultural consultant.

SITE SUPERVISION

The necessary activities that will affect the retained trees and other vegetation will require arboricultural supervision (i.e. clerk of works). These activities are specified within the main report. It will be the responsibility of the main contractor or project manager to confirm the date and time of the supervision elements, at least 5 working days in advance of the works being undertaken, to ensure the works are supervised.

Supervision visits will also occur, at the following points:

- Inspection of tree protection measures and tree works, prior to commencement of any demolition and construction activities;
- Supervision of works to install service runs (e.g. utilities and drainage) within the RPA of retained trees; and
- At specified intervals during the site activities and upon completion of works.

GENERAL PROTECTION METHODS

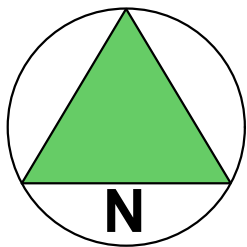
No fires will be permitted, within 20m of the crown of any tree or other area of vegetation that includes hedgerows and groups of trees.

No changes in soil level will occur, within the TPZs and RPAs, without agreement in advance with the retained arboricultural consultant.

The TPZs will at all times remain free of liquids, materials, vehicles, plant, and personnel, without agreement in advance with the retained arboricultural consultant.

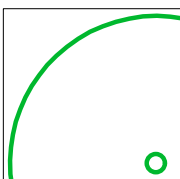
Any liquid materials spilled on site will immediately be cleared up. If liquids are spilled within 2m of any TPZ or RPA, the incident will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.

All damage to trees and other vegetation will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.

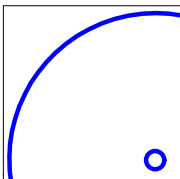


The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

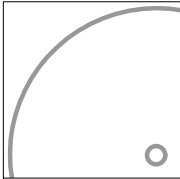
BS 5837:2012 TREE RETENTION CATEGORIES



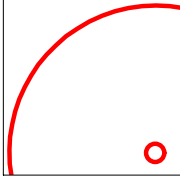
Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.



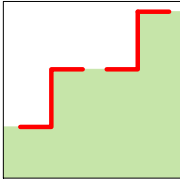
Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.



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 150mm.



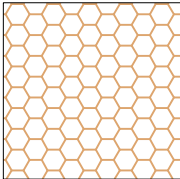
Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.



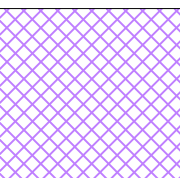
Position of protective fencing and tree protection zones.



Above ground construction.



Existing concrete surfacing to be broken and crushed to form ground protection and new surfacing.



Excavation and installation of foundation under arboricultural supervision in adherence of root pruning methodology.



TREE PROTECTION AREA
KEEP OUT!

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL CONSULTANT



0845 094 3268

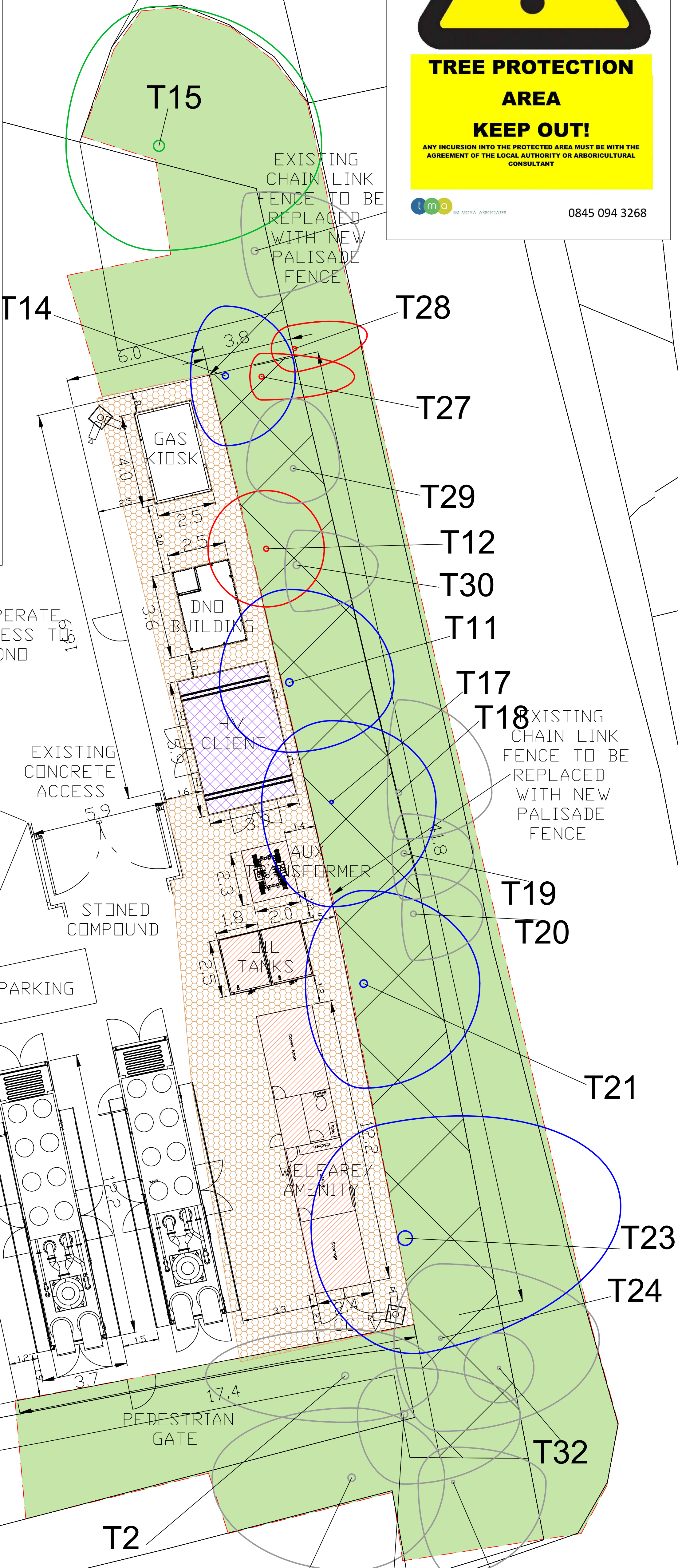
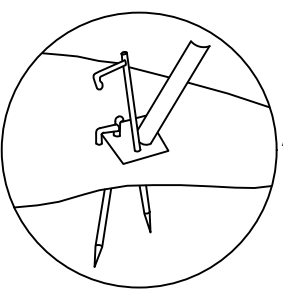
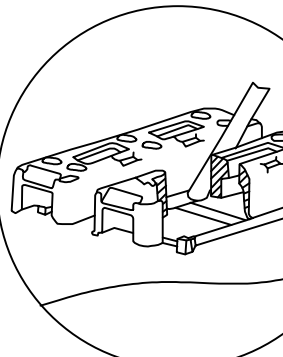


Figure 3 Examples of above-grounds stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

b	03.12.20	Trees updated with TOPO locations	HR
a	19.11.20	Proposed layout updated	HR
REV	DATE	DESCRIPTION	DRAWN
Base Drawing			
-	-	LGN-PSP-01_21.08.19	

0	1m	5m	10m
---	----	----	-----

Title
Tree Protection Plan

Client
Conrad Energy

Project
Havant Lorry Park, Southmoor Lane,
Havant, Hampshire, P09 1JW

Date July 2020	Drawn by HR	Checked by -
Drawing No 200637-P-12	Rev A	Scale 1:200@A1

DO NOT SCALE Use only figured dimensions



The Barn, Feltham Park, Chalk Lane, Harlow, Essex CM17 0PF

0845 094 3268 | info@tma-consultants.co.uk

www.timmojaassociates.co.uk

arboriculture ecology landscape innovation

APPENDIX B - Schedules

- 200637-P-12A Tree Work Schedule
- 200637-PD-10 Tree Schedule

200637-PD-12 - Planning Tree Works Schedule

Trees

ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
T5	1 <i>Quercus robur</i> English Oak	C1/C2	To facilitate development Fell - Ground level. null Other ecological recommendation. If felling or major pruning required, tree should be fully inspected from all angles by a suitably qualified ecologist for potential bat roost features.	Proposed Proposed
T6	1 <i>Tilia cordata</i> Small Leaved Lime	C2/C3	To facilitate development Fell - Ground level.	Proposed
T7	1 <i>Tilia cordata</i> Small Leaved Lime	C2/C3	To facilitate development Fell - Ground level.	Proposed
T8	1 <i>Tilia cordata</i> Small Leaved Lime	C2/C3	To facilitate development Fell - Ground level.	Proposed
T9	1 <i>Tilia cordata</i> Small Leaved Lime	C1/C2	To facilitate development Fell - Ground level. null Other ecological recommendation. If felling or major pruning required, tree should be fully inspected from all angles by a suitably qualified ecologist for potential bat roost features.	Proposed Proposed
T10	1 <i>Acer platanoides</i> 'Crimson King' Red Norway Maple	C2	To facilitate development Fell - Ground level. null Precautionary soft-fell if felling required.	Proposed Proposed
T13	1 <i>Betula pubescens</i> Downy Birch	C1/C2	To facilitate development Fell - Ground level.	Proposed

Tree work analysis (trees and trees in groups)

	To facilitate development	null	Total
Fell - Ground level	7	0	7
Other ecological recommendatio	0	2	2
Precautionary soft-fell if felling required	0	1	1
Total	7	3	10

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T1	1 Fraxinus excelsior (Ash)	12.0	33	1	2.0		5.0		3.0		2.0		4.0		Early Mature	Structural condition Fair. Physiological condition Poor. Decline - Evident / observed. Root environment - Compacted. Root environment - Restricted.	23/07/2020	49.3	4.0	10-20	C3
Tree T2	1 Acer pseudoplatanus (Sycamore)	12.0	34 COM	2	2.0		4.0		2.0		6.0		4.0		Early Mature	Structural condition Fair. Physiological condition Poor. Decline - Evident / observed. Root environment - Compacted. Root environment - Restricted.	23/07/2020	53.8	4.1	10-20	C3
Tree T3	1 Acer pseudoplatanus (Sycamore)	12.0	40 COM	3	3.0		4.0		4.0		6.0		4.0		Early Mature	Structural condition Fair. Physiological condition Fair. Root environment - Compacted. Root environment - Restricted. Suppressed crown - Minor. High grade C category tree. Canker on stems	23/07/2020	72.5	4.8	10-20	C1/C2
Group G4	5 Acer pseudoplatanus (Sycamore)	7.0	8 AVE	1									0.0		Semi Mature	Structural condition Fair. Physiological condition Poor. Dimensions - Height, spread and stem diameter estimated average for group. Scrub vegetation.	23/07/2020	2.9	1.0	10-20	C3
Tree T5	1 Quercus robur (English Oak)	16.0	38	1	3.48		3.0		2.5		4.0		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Die-back - Mid crown. Decay / structural defect - Base. Decay / structural defect - Open cavity / cavities. Suppressed crown - Minor. High grade C category tree.	04/12/2020	65.3	4.6	10-20	C1/C2

Stem **green** Estimated valueStem **AVE** Average stem diameter for tree groupsStem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T6	1 Tilia cordata (Small Leaved Lime)	14.0	45 COM	2	4.0		2.5		3.5		3.0		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Decay / structural defect - Extensive. Decay / structural defect - Major. Decay / structural defect - Principal stems. Fork - Suspected structurally sound. Reaction wood / Adaptive growth - Stem / stems. Stems - Co-dominant. Chlorotic leaves but more dominant specimen on site.	04/12/2020	92.6	5.4	20-40	C2/C3
Tree T7	1 Tilia cordata (Small Leaved Lime)	13.0	31 COM	2		4.47		2.5		2.0		2.0	3.0		Early Mature	Structural condition Poor. Physiological condition Poor. Die-back - Lower crown. Fork - Weak with included bark. Root environment - Compacted. Root environment - Restricted. Stems - Co-dominant. Suppressed form and thinning crown.	04/12/2020	43.8	3.7	10-20	C2/C3
Tree T8	1 Tilia cordata (Small Leaved Lime)	14.0	33	1	4.0		3.0		2.0		3.5		3.0		Early Mature	Structural condition Poor. Physiological condition Poor. Access to inspect base - Not possible. Die-back - Upper crown. Decline - Evident / observed. Root environment - Compacted. Root environment - Restricted. Suppressed form and thinning crown.	04/12/2020	49.3	4.0	10-20	C2/C3
Tree T9	1 Tilia cordata (Small Leaved Lime)	12.0	27	1	2.0		1.5		1.5		3.0		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Unable to inspect tree(s) closely due to inaccessibility. Located Between containers.	04/12/2020	33.0	3.2	20-40	C1/C2
Tree T10	1 Acer platanoides 'Crimson King' (Red Norway Maple)	12.0	38 COM	2	4.0		1.0		2.5		3.0		3.0		Early Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Fork - Suspected structurally sound. Ivy or climbing plant. Stems - Co-dominant. Suppressed crown - Major. Unbalanced crown - Minor.	04/12/2020	66.0	4.6	10-20	C2
Tree T11	1 Acer platanoides 'Crimson King' (Red Norway Maple)	9.0	32	1	4.0		4.5		3.0		3.0		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Form - Spreading crown. Unable to inspect tree(s) closely due to inaccessibility. Lower grade category B tree, has potential.	23/07/2020	46.3	3.8	10-20	B2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Page 2 of 9

Generated By

MyTREES
tree management software

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T12	1 Acer platanoides 'Crimson King' (Red Norway Maple)	7.0	22	1	2.5		2.5		2.5		2.5		2.0		Early Mature	Structural condition Poor. Physiological condition Poor. Die-back - Throughout crown. Decline - Evident / observed. Ivy or climbing plant.	01/12/2020	21.9	2.6	0-10	U
Tree T13	1 Betula pubescens (Downy Birch)	3.0	19	1	2.0		1.12		2.0		2.0		2.0		Early Mature	Structural condition Good. Physiological condition Good. Suppressed crown - Minor. High grade C category tree.	04/12/2020	16.3	2.3	20-40	C1/C2
Tree T14	1 Betula pubescens (Downy Birch)	9.0	27	1	3.0		3.0		3.0		1.5		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Suppressed crown - Minor. Located on fence line. Lower grade category B tree, has potential.	01/12/2020	33.0	3.2	20-40	B2
Tree T15	1 Tilia cordata (Small Leaved Lime)	16.0	47	1	6.0		7.0		4.5		4.0		2.0		Mature	Structural condition Fair. Physiological condition Good. No significant faults observed. Prominent landscape feature. Pruned back from power cable south.	23/07/2020	99.9	5.6	20-40	A1/A2
Tree T16	1 Chamaecyparis lawsoniana (Lawson Cypress)	8.0	30	1	2.5		4.55		2.0		0.5		2.0		Early Mature	Structural condition Poor. Physiological condition Poor. Die-back - Lower crown. Ivy or climbing plant. Suppressed crown - Major.	23/07/2020	40.7	3.6	10-20	C2
Tree T17	1 Tilia cordata (Small Leaved Lime)	14.0	33 COM	5	3.5		4.5		4.5		3.0		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Coppice stool - Coppice origin / Mature stems. - DBH estimated average of stems.	23/07/2020	50.9	4.0	20-40	B2
Tree T18	1 Quercus robur (English Oak)	7.0	24	1	4.0		4.0		2.0		0.5		1.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Competition - Adjacent trees. Suppressed crown - Major. Unbalanced crown - Minor.	23/07/2020	26.1	2.9	10-20	C1/C2
Tree T19	1 Cupressocyparis leylandii (Leyland Cypress)	7.0	24	1	1.7		3.0		2.0		0.5		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Suppressed crown - Major. Unbalanced crown - Minor.	23/07/2020	26.1	2.9	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Page 3 of 9

Generated By

MyTREES
tree management software

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T20	1 Cupressocyparis leylandii (Leyland Cypress)	7.0	24	1	1.7		3.0		2.0		0.5		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Suppressed crown - Major. Unbalanced crown - Minor.	23/07/2020	26.1	2.9	10-20	C2
Tree T21	1 Tilia cordata (Small Leaved Lime)	16.0	42 COM	2	4.0		5.0		4.5		2.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Fork - Suspected structurally sound. Reaction wood / Adaptive growth - Base. Stems - Sub-dominant. Suppressed crown - Minor. Prominent landscape feature.	23/07/2020	81.8	5.1	20-40	B2
Tree T22	1 Quercus robur (English Oak)	8.0	32	1		5.63		2.0		1.0		2.0	3.0		Early Mature	Structural condition Poor. Physiological condition Poor. Decay / structural defect - Extensive. Decay / structural defect - Bole. Suppressed crown - Major. Unbalanced crown - Major.	01/12/2020	46.3	3.8	10-20	C3
Tree T23	1 Quercus robur (English Oak)	16.0	62	1	5.0		9.41		5.0		4.0		1.5		Mature	Structural condition Fair. Physiological condition Fair. Pollard - Lapsed / Mature stems. Prominent landscape feature. Suppressed form and thinning crown - minor High grade Category B tree. Significant lower branch development East.	23/07/2020	173.9	7.4	20-40	B2/B3
Tree T24	1 Fraxinus excelsior (Ash)	16.0	42 COM	2	3.2		6.83		4.0		2.0		2.0		Mature	Structural condition Poor. Physiological condition Poor. Die-back - Throughout crown. Decline - Evident / observed. High grade C category tree. Reduced life expectancy but significant habit potential.	01/12/2020	81.9	5.1	10-20	C1/C3

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Page 4 of 9

Generated By

MyTREES
tree management software

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Group G25	1 Acer pseudoplatanus (Sycamore)	5.0	11 AVE	1									0.0		Semi Mature	Structural condition Poor. Physiological condition Poor. Dimensions - Height, spread and stem diameter estimated average for group. Species mix as seen,tree numbers indicative of species ratio Scrub vegetation.	23/07/2020	5.5	1.3	10-20	C2
	1 Crataegus monogyna (Common Hawthorn/Quick/May)																				
	1 Hedera helix (Common Ivy)																				
	1 Sambucus nigra (Elder)																				
Tree T26	1 Fraxinus excelsior (Ash)	7.0	22 COM	3	1.5		4.0		4.0		1.5		3.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Off site multi stemmed tree. Suppressed form and condition.	01/12/2020	22.9	2.7	10-20	C2
Tree T27	1 Sambucus nigra (Elder)	5.0	21	1	1.0		4.0		1.0		0.5		0.0		Early Mature	Structural condition Poor. Physiological condition Dead. Tree has failed and fallen east.	01/12/2020	20.0	2.5	0-10	U
Tree T28	1 Sambucus nigra (Elder)	4.0	17	1	1.0		3.17		1.0		1.0		0.0		Early Mature	Structural condition Poor. Physiological condition Dead. Dead tree, ivy clad.	01/12/2020	13.1	2.0	0-10	U
Tree T29	1 Sambucus nigra (Elder)	6.0	24	1	3.0		2.0		1.5		2.0		2.0		Mature	Structural condition Poor. Physiological condition Poor. Ivy clad. Suppressed form and condition.	01/12/2020	26.1	2.9	0-10	C3
Tree T30	1 Thuja plicata (Western Red Cedar)	6.0	31	1	1.5		3.5		2.0		0.5		0.0		Early Mature	Structural condition Fair. Physiological condition Poor. Suppressed form, heavy lean.	01/12/2020	43.5	3.7	10-20	C2
Group G31	4 Sambucus nigra (Elder)	3.5	17 AVE	1									0.0			Structural condition Poor. Physiological condition Poor. Decayed and ivy clad group of failed stems.	01/12/2020	13.1	2.0	0-10	U

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Page 5 of 9

Generated By

MyTREES
tree management software

200637 - Langstone, Hampshire

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T32	1 Acer pseudoplatanus (Sycamore)	71.5	14	1	1.5		1.5		1.5		1.5		1.0		Semi Mature	Structural condition Poor. Physiological condition Fair. Suppressed form and condition.	01/12/2020	8.9	1.7	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Summary table with retention category

	Group	Tree	Total
A1/A2	0	1	1
B2	0	4	4
B2/B3	0	1	1
C1/C2	0	5	5
C1/C3	0	1	1
C2	1	7	8
C2/C3	0	3	3
C3	1	4	5
U	1	3	4
Total	3	29	32

Summary table with life stage

	Group	Tree	Total
Early Mature	0	21	21
Mature	0	5	5
Semi Mature	2	3	5
No value	0	0	0
Total	2	29	31

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	* 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 health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7				RED
	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	Tree 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.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	GREEN	
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.	Trees with material conservation or other cultural value.	BLUE	
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 present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	GREY	



TIM MOYA ASSOCIATES

arboriculture ecology landscape innovation

The Barn, Feltimores Park, Chalk Lane, Harlow, Essex CM17 0PF

0845 094 3268 | info@tma-consultants.co.uk | www.timmoyaassociates.co.uk

Tim Moya Associates is a trading name of Tim Moya Tree Services Ltd. Company Reg No. 3028475