



11 Salisbury House
Rodwell Close
Ruislip
Middx
HA4 9NE
Treesense.ac@gmail.com
www.treesense.co.uk

020 8737 0073

Site Details: Vine House, Hampstead Square, London, NW3 1 AB

Prepared for: Mrs. J. Gosman

Prepared by: Mr. C. J. Wallis *Tech Cert (ArborA), AHort II (Arb.)*

Title: GOS_VHHS_AIA_001_ADD

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Report Index

Section 1.0 – Summary of Instruction

Section 2.0 – Report Limitations

Section 2.1 – Time Limits

Section 2.2 – Severe Weather Limitations

Section 2.3 – Tree Safety Matters / Tree Risk Assessment

Section 2.4 - Visual Tree Assessment (VTA)

Section 3.0 – Background and Appraisal

Section 4.0 – East Side Garden – Tree Protection Plan

Section 5.0 – East Side Garden – Tree Protection Plan (Elevation Plan)

Section 6.0 – Project Phasing

Section 7.0 – Addendum Report Summary

Section 8.0 – Legal and Planning Consents

Section 9.0 – Publications

Appendix A – Tree Protection Plan (TPP) (Whole Site)

1.0 – Summary of Instruction

I have been instructed to provide an Addendum to the originally published Arboricultural Impact Assessment (AIA) Report *Ref: (GOS_VHHS_AIA_001)*, following the addition of a new basement element to the original development proposal.

The additional element to the development scheme is:

- Construction of a new basement level beneath and within the footprint of the dwelling;

This Addendum MUST be read in conjunction with the originally published AIA report *Ref: (GOS_VHHS_AIA_001) dated 21ST June 2019.*

Instructions were to:

- Evaluate the potential direct and indirect effects of the additional basement element of the proposal and the associated construction activity on nearby significant trees;
- Identify the above and below ground tree constraints to the additional basement element of the proposal;
- Highlight the arboricultural implications that the basement development process may have on the retained trees;
- Make recommendations for measures to be taken to protect the retained trees above and below ground level throughout the development process, to safeguard their short and long term health and condition;

This Addendum Report has been produced in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* for the sole use of our client (as detailed on the Title Page). All information provided by third parties including supplied plans/drawings used in the preparation of this report is assumed to be correct.

BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations is a nationally recognised standard typically used by Local Planning Authorities to assess planning applications. It is frequently referred to in planning conditions to enforce protection or control of works that may be harmful to trees both on and off the site.

2.0 – Report Limitations

- Assessments of all trees have been conducted using Stage 1 of the Visual Tree Assessment (VTA) method of inspection. (See Section 2.4).
- All observations of tree condition were undertaken from ground level, a visual assessment of external features only, assisted as required by the use of binoculars, a metal probe and a rubber mallet (used for audible resonance testing) where necessary. Below ground tree roots and buried parts were not inspected.
- The provided 'Topographical Survey with Proposed Extension' drawing from Hertford Planning Service (Drawing No. 13441-P006-B) was used to create the Tree Constraints Plan (TCP) and Tree Protection Plan (TPP) in the original AIA Report Ref: GOS_VHHS_AIA_001. (The original TPP has been re-produced in this Addendum as an informative in Appendix A).
- An East Side Garden Tree Protection Plan is provided to highlight the conveyor belt apparatus and site set up for the additional basement construction. An Elevation Plan is also provided. The Plans (001 and 002 respectively) were provided by St Albans Basement. (See Sections 4.0 and 5.0).
- Detailed background information is not known concerning the past history of the site, the soil type, geology or hydrology of the environs. No inspection material has been acquired by Tree Sense Arboricultural Consultants for assessment by a laboratory.
- Assessing the potential influence of trees upon load-bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not, therefore, considered in any detail in this report. Tree Sense Arboricultural Consultants cannot be held responsible for damage arising from soil shrinkage or heave issues related to the retention or removal of trees on site.
- The author of the AIA report does not have formal qualifications in the areas of structural engineering or law. However, making comment on such matters from an arboricultural perspective is both within the normal scope of our instructions and also within the range of the author's experience. Notwithstanding this, specialist professional advice should be sought to clarify/confirm any observations on engineering or legal matters that this report may contain.
- The recommendations made in this report relate to the assessment of the trees and their surroundings at the time of inspection.
- Treatment recommendations assume that the client understands that tree management is a continuing process, requiring regular attention and that as part of this process the condition of the trees should be thoroughly reassessed at regular, timely intervals, with hazard checks after periods of likely tree stress, e.g. after periods of severe weather.
- Where a tree is subject to a Tree Preservation Order (TPO) and/or stands within a designated Conservation Area, it will be necessary for the tree owner or his/her appointed agent to ensure appropriate compliance with planning requirements, before any recommended, non-urgent treatments can be undertaken. (See Section 8.0).
- The AIA Addendum report is provided to detail impartially the potential tree constraints posed to the additional basement element of the proposal and detail the tree protection measures and methodologies to be employed, in the interest of safeguarding the short and long term health of significant nearby trees.
- The AIA Addendum does not provide any guarantees that the associated Local Planning Authority (LPA) will agree with the opinion of the Consulting Arboriculturist, or grant planning consent based on the content and findings of the AIA Addendum report.
- This report is compiled into a single PDF file designed for electronic release. If printing this document, please note that the plan drawings may be a different size or orientation to the standard A4 / portrait of the rest of the report. Some PDF reader software may also automatically adjust the size of drawings included in this report.
- **This Addendum MUST be read in conjunction with the originally published AIA report Ref: (GOS_VHHS_AIA_001) dated 21ST June 2019.**
- **All tree protection measures and controls previously detailed in the AIA Report Ref: (GOS_VHHS_AIA_001) dated 21ST June 2019 must be complied with in full and without deviation.**

2.1 – Time Limits

It should be understood that trees are not static objects, but growing, living organisms; and their condition, size and relationship to buildings and other trees can change significantly and sometimes unpredictably over a period of time. Therefore this report has a validity period of 12 months from the date of publication and is subject to any suggested management recommendations being undertaken within the correct time frames.

2.2 – Severe Weather Limitations

Impacts of severe drought, storm, inundation, land slip or subsidence are not covered by this report.

2.3 – Tree Safety Matters / Tree Risk Assessment

The Arboricultural Impact Assessment (AIA) in accordance with *BS 5837:2012 (Trees in relation to design, demolition and construction - Recommendations)* is carried out in sufficient detail to gather data for and to inform the current project.

Our appraisal of the structural integrity of trees on and adjacent (if applicable) to the site is of a preliminary nature and sufficient only to inform the current development proposal. The tree assessment is carried out from ground level as is appropriate for this type of survey, without invasive investigation.

The disclosure of hidden tree defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious visual defects that are significant in relation to the existing and proposed land use. As such, General Management Recommendations (GMR) or Preliminary Management Recommendations (PMR) may be made regarding the assessed trees, in respect of good urban tree management.

2.4 – Visual Tree Assessment (VTA)

The Visual Tree Assessment (VTA) method of inspection is an internationally recognised tree hazard assessment method developed by Prof. Claus Mattheck: *Body Language of Trees – a handbook for failure analysis (HMSO, 1994)*.

The basis of VTA is the identification of (external) symptoms which a tree produces in reaction to a weak spot or area of mechanical stress. These can then be interpreted in terms of potential direct impact hazard features within a tree.

The VTA method of inspection does not allow for opinions to be made concerning the risk of a trees potential to cause indirect impact on nearby structures. Indirect impact refers to potential problems caused by changes in soil moisture content in shrinkable soils (i.e. those soils with a high clay content); to which trees can be a contributing factor.

The tree inspection survey undertaken at the above site was conducted in accordance with Stage 1 of the VTA process.

3.0 – Background and Appraisal

An Arboricultural Impact Assessment (AIA) was originally undertaken at Vine House in May 2019, in relation to a development proposal to renovate the existing single storey, boiler house and green house structure to a habitable garden room, including an extension to create a wider footprint to the south.

The original AIA Report *Ref: (GOS_VHHS_AIA_001)* was published on the 21st June 2019, to support the planning application for the above development proposal. It is understood that planning permission was granted for the above construction work at the property.

Further to the above project elements, a new basement level is now being planned as part of the development scheme. The proposal is to construct an additional basement level beneath the footprint of the dwelling, in addition to the previously approved above ground extension work.

On assessment of the previously recorded tree constraints at the property, the additional basement level will not extend beyond the footprint of the dwelling into the garden areas where tree Root Protection Areas (RPA) may be affected. As such, no negative impact will be inflicted on the trees due to the basement being constructed beneath the dwelling only.

However, the increased intensity of the construction work the basement element will add to the overall project has been given close consideration.

The following points are made regarding the increased intensity of the basement construction element and the necessary tree protection amendments:

- 1) Since the original AIA in May/June 2019, T5 has been removed. As such, there is adequate space and clearance over the East side boundary wall for the proposed conveyor belt apparatus to be installed without impact on tree branches;
- 2) All tree protection measures in the West side garden are to remain unchanged from the recommendations made in the AIA Report *Ref: (GOS_VHHS_AIA_001)*;
- 3) All tree protection measures in the East side garden are to remain unchanged from the recommendations made in the AIA Report *Ref: (GOS_VHHS_AIA_001)*, with only a minor alteration to accommodate the conveyor belt set up required for the removal of the basement excavated spoil:

An access hole is to be cut into one of the Heras fence panels which is part of the Construction Exclusion Zone (CEZ 1) fence line in the East side garden. The conveyor belt can be constructed to pass through the hole in the fence panel and continue to extend over the East side boundary wall. The conveyor belt is to be fully enclosed with plywood and elevated over the East side boundary wall on supporting poles, which are to be installed on a load bearing ground plate at ground level.

The conveyor belt apparatus will deliver the excavated spoil into a skip located in the parking bay on Holgate Road, adjacent to the East boundary wall. The single parking space is to be suspended for the duration of the development works, to allow a skip to be ever present throughout the development phases. Once delivered, the skip is to remain in place and be emptied at regular intervals by a grab lorry.

Since the removal of T5, there is adequate space for the conveyor belt apparatus to be installed over the East boundary wall without causing impact on the crowns of T2, T3, T4 and T6 which remain. The eastern crown spreads of T2, T3, T4 and T6 do not extend beyond the kerb line on Holgate Road, therefore the grab lorry can operate to remove spoil from the skip without impact on the trees branches. As an additional precaution, timber guide poles can be installed on the backside of the skip and operations to empty the skip must be supervised by a groundsman during operation of the grab boom.

3.0 – Background and Appraisal – Cont’d

A revised Tree Protection Plan (TPP) for the East side garden ONLY is provided in Section 4.0 below and an Elevations Plan is provided in Section 5.0, which does not require alteration of the originally proposed fence line location to create CEZ 1. (See *Tree Protection Plan (TPP) in Section 9.0 of the AIA report Ref: GOS_VHHS_AIA_001*).

The only amendment to CEZ 1 is the requirement to cut a hole in one of the Heras fence panels (which is easily achieved, being of steel mesh construction), to allow for the conveyor belt apparatus to be constructed and pass through the CEZ fencing.

The temporary ground protection measures outside of CEZ 1 in the East side garden are to remain unaltered, as detailed in the *Tree Protection Plan (TPP) in Section 9.0 of the AIA report Ref: GOS_VHHS_AIA_001*.

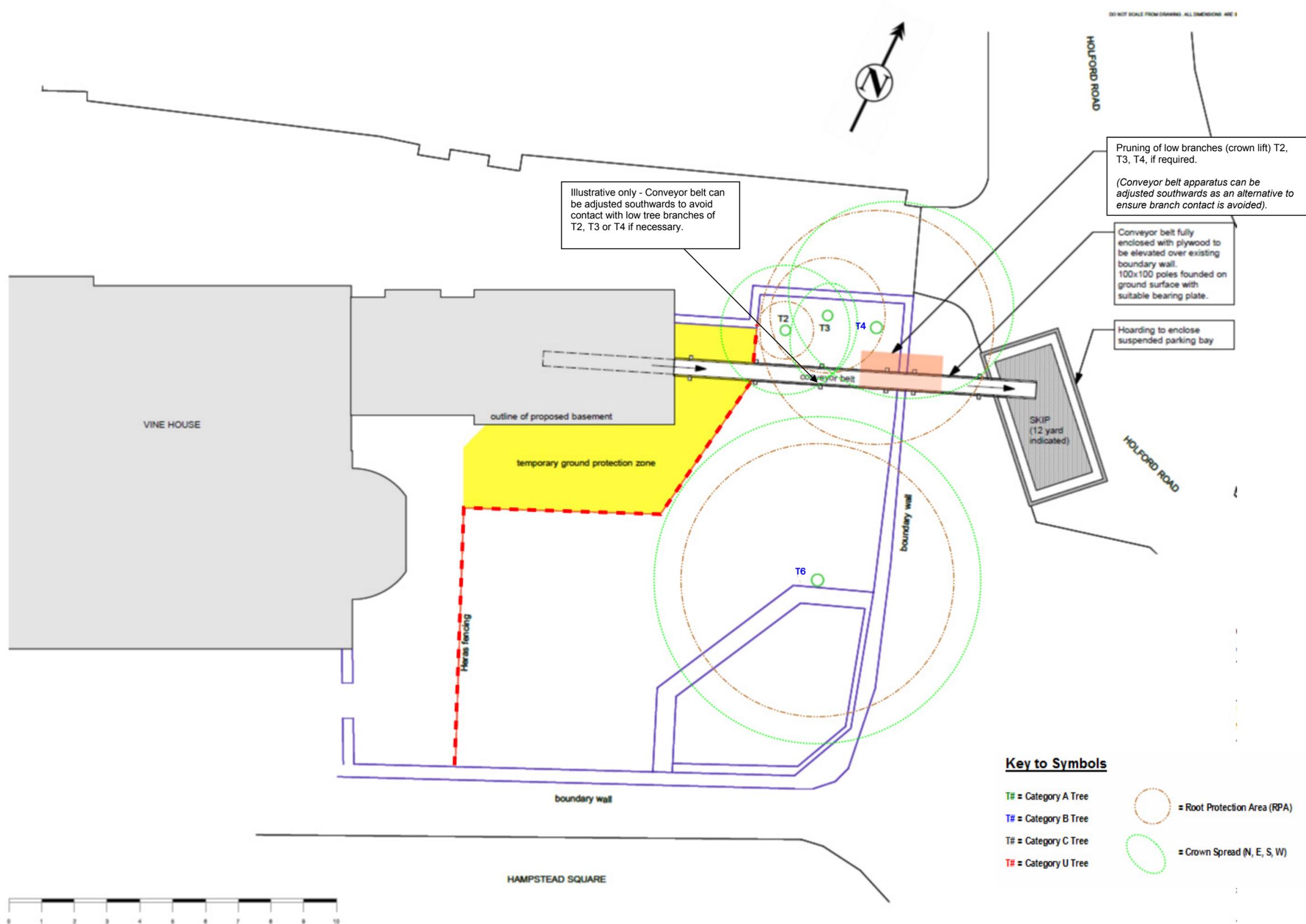
An additional ground plate is to be laid inside the CEZ 1 fence line, required as a base for the conveyor belt support poles, as this will be inside the calculated RPA for T4. (See Section 4.0 below).

All tree protection measures in the West side garden are to remain completely unaltered, as detailed in the *Tree Protection Plan (TPP) in Section 9.0 of the AIA report Ref: GOS_VHHS_AIA_001*.

If further details concerning the parking bay suspension on Holgate Road, or waste management details are required, these should be sought from the applicant separately.

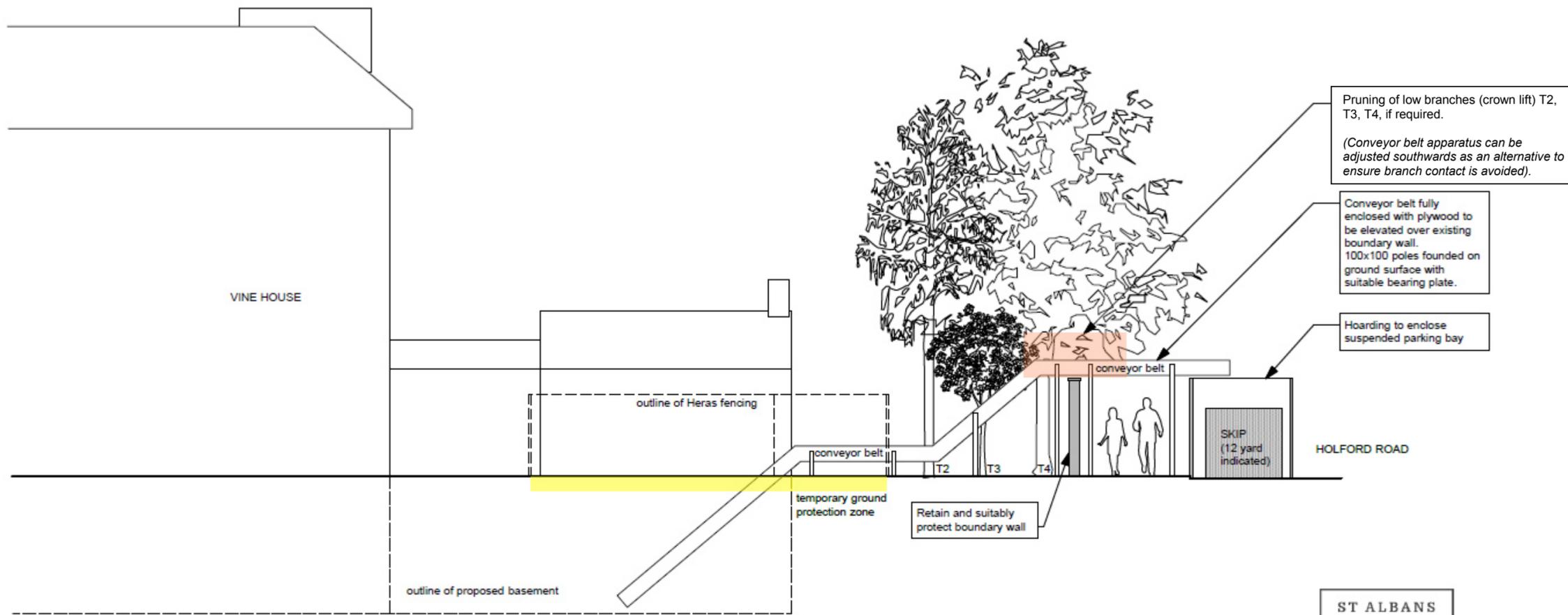
The Tree Protection Plan (TPP) taken from Section 9.0 of the original AIA report Ref: GOS_VHHS_AIA_001 has been reproduced in Appendix A for reference.

4.0 – East Side Garden – Tree Protection Plan



5.0 – East Side Garden – Tree Protection Plan (Elevation Plan)

DO NOT SCALE FROM DRAWING. ALL DIMENSIONS ARE IN MM AND INDICATIVE ONLY.



ST ALBANS	
BASEMENT	
<small>ST ALBANS BASEMENT +44 (0) 1727 370 874 sales@stalbansbasement.co.uk</small>	
CLIENT	
MRS J BENNETT	
PROJECT	PROJECT NO.
PROPOSED BASEMENT EXTENSION	19064
ADDRESS	
VINE HOUSE HAMPSTEAD SQUARE LONDON NW3	
DRAWING	
CONSTRUCTION METHOD STATEMENT - ELEVATION	
SCALE	DRWG NO.
1:100 @ A3	002
DRAWN BY	ISSUE DATE
DC	29.11.19
	REV
	.

6.0 – Project Phasing

The following phasing of the development project is proposed:

- **Pre-development Phase 1** – Undertaking off all General Management Recommendations (GMR) tree surgery works (if required).
- **Pre-development Phase 2** - Installation of all required tree protection measures (i.e. barrier fencing to create the on site Construction Exclusion Zones (CEZ) and all temporary ground protection measures as required). Set up of conveyor belt apparatus.
- **Development Phase 1** – Construction of the new basement level, single storey extension and new bin store area.
- **Post-development Phase 1** – Remove all construction tools, machinery, scaffolding, waste, materials, skips, temporary units (site huts etc.) and any other construction related apparatus.
- **Post-development Phase 2** – Dismantle and remove the Construction Exclusion Zone (CEZ) fencing and temporary ground protection measures.

All tree surgery works (if required) must be undertaken prior to commencement of the development phases and prior to the installation of the Construction Exclusion Zone (CEZ) fencing and temporary ground protection.

7.0 – Addendum Report Summary

I have been instructed to provide an Addendum to the originally published Arboricultural Impact Assessment (AIA) Ref: (GOS_VHHS_AIA_001), following the addition of a new basement element to the original development proposal.

The AIA Addendum report considers the addition of the basement element to the original development proposal and provides revised tree protection measures accordingly, where applicable.

In summary, the addition of the basement element will not impact adversely on tree Root Protection Areas (RPA), as the basement is to be constructed beneath and within the dwelling footprint only, where tree RPAs will not be affected.

The increased intensity of the construction activity for the basement element of the proposal has been considered in line with the required tree protection measures and it is concluded that no alterations to the West side garden Tree Protection measures is necessary.

The Barrier fencing required in the East side garden to create CEZ 1 can also remain unaltered in terms of its installation position, as can the temporary ground protection measures over the lawn area.

The requirement to cut an access hole in one of the steel mesh Heras fence panels to allow the conveyor belt apparatus to be installed is the only necessary alteration, which can be easily achieved without affecting the overall tree protection benefits of the CEZ 1 fence line.

This Addendum Report MUST be read in conjunction with the originally published AIA report Ref: (GOS_VHHS_AIA_001) dated 21ST June 2019.

All tree protection measures and controls previously detailed in the AIA Report Ref: (GOS_VHHS_AIA_001) dated 21ST June 2019 must be complied with in full and without deviation.

If any design changes are made to any aspect of the proposed development project due to the identified tree constraints, operational restrictions, geotechnical concerns or otherwise, revisions or additions to tree protection, damage mitigation measures and site layouts will need to be made and a revised report produced.

This is a Development Control, not a Building Control focused document. In regard to the latter, this deals with foundation depth and design in relation to trees using NHBC/Zurich national guidance. For advice, consult with the local council Building Control Officer or an approved NHBC inspector in order to gain Full Plans Approval or a Completion Certificate. The latter are governed by the Building Act 1984 and Building Regulations 2010. As such the above Building Control issues are outside the remit of a Consulting Arborist.

Full detailed specifications of the development project and engineering methods etc. will be supplied by the development team separately.

Detailed information regarding the site setup, plant use, waste management and construction methodology was not available at the time of writing and should be requested separately from the development team in a Construction Management Plan (CMP), as required.

The CMP must take fully into consideration and adhere to all required tree protection control measures, as detailed in the AIA report.

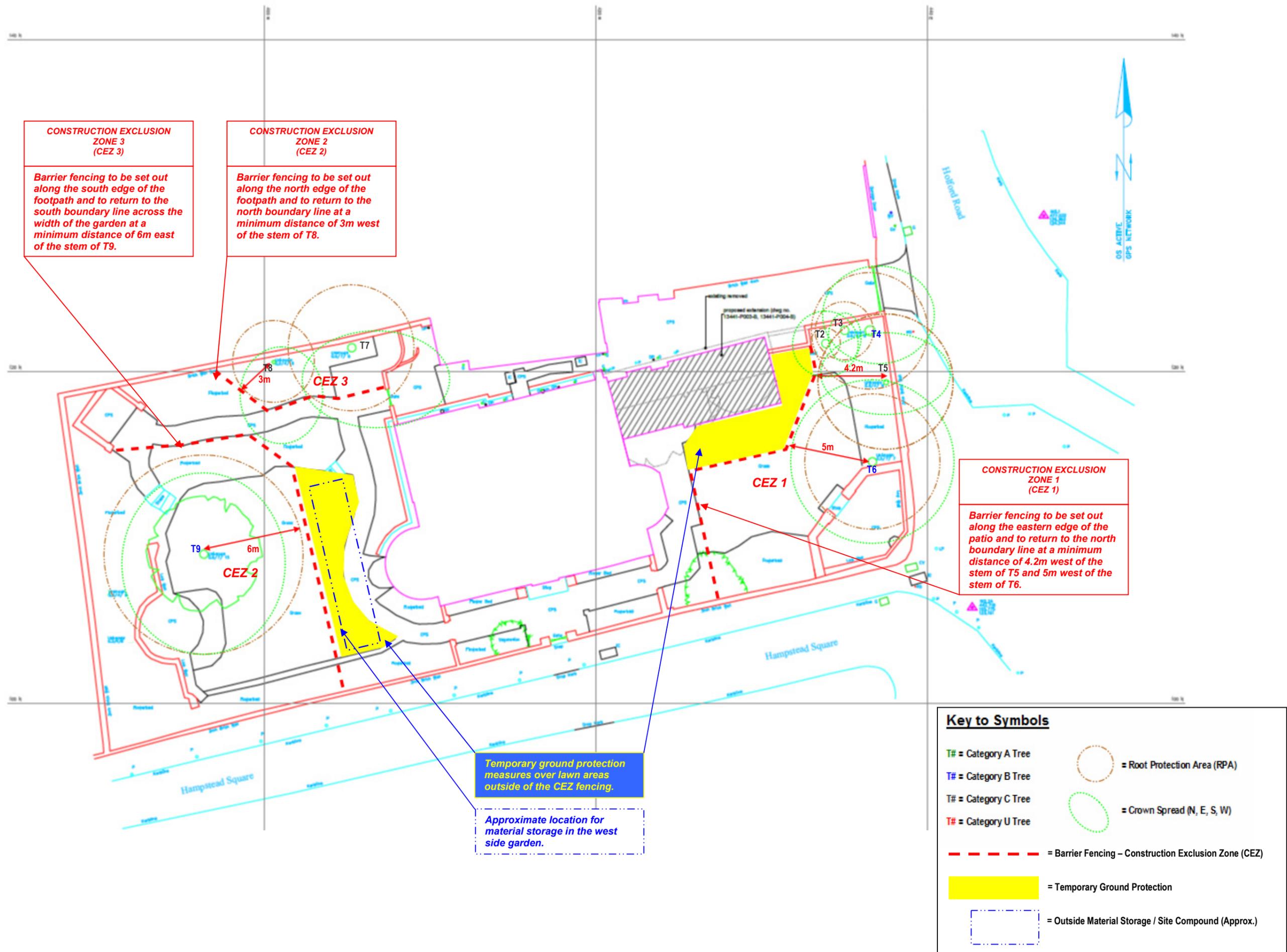
8.0 – Legal and Planning Consents

- Appropriate legal and planning consent should be gained before undertaking any tree work; for example if the tree(s) are subject to a Tree Preservation Order (TPO), permission must first be obtained from the Local Authority. Permission is not required for emergency tree work on dead, dying or dangerous TPO trees; however the Local Authority should still be advised.
- Six weeks notice is required to be given to the local authority via a Section 211 Notice for any proposed tree surgery work on trees situated within a designated Conservation Area. Permission is not required for emergency tree work on dead, dying or dangerous trees situated within a Conservation Area; however the Local Authority should still be advised.
- Tree owners have a responsibility as a common law duty of care, as well as responsibilities under statutory law, to ensure that trees growing within the boundaries of their property are maintained to reduce to an acceptable level the risk of potential harm befalling other people or property.
- In the course of undertaking any tree work, the client is advised to ensure that operational assessments and procedures are in place, and to take due consideration of the legal requirements.
- Key legislation includes (but is not restricted to):
 - The Wildlife and Countryside Act (1981)
 - Occupiers Liability Act (1957/84)
 - Highways Act (1980/86)
 - Town and Country Planning Act (1990/Regulations 1999/Amendment 2008/09)
 - Anti-Social Behaviour Act (2003) – Part 8 (High Hedges)
 - The Countryside Rights of Way Act (2000)
 - The Conservation (Natural Habitats etc.) Regulations (1994)
 - The Badgers Act (1992)

9.0 - Publications

- Other publications which are relevant to the development proposal to which further reference is advised includes but is not restricted to:
 - National House Building Council (N.H.B.C) Chapter 4.2 – (Building near trees);
 - National Joint Utilities Group (NJUG) Volume 4 – (Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees).

Chris Wallis *Tech Cert (ArborA), AHort II (Arb.)*
Tree Sense Arboricultural Consultants



CONSTRUCTION EXCLUSION ZONE 3 (CEZ 3)

Barrier fencing to be set out along the south edge of the footpath and to return to the south boundary line across the width of the garden at a minimum distance of 6m east of the stem of T9.

CONSTRUCTION EXCLUSION ZONE 2 (CEZ 2)

Barrier fencing to be set out along the north edge of the footpath and to return to the north boundary line at a minimum distance of 3m west of the stem of T8.

CONSTRUCTION EXCLUSION ZONE 1 (CEZ 1)

Barrier fencing to be set out along the eastern edge of the patio and to return to the north boundary line at a minimum distance of 4.2m west of the stem of T5 and 5m west of the stem of T6.

Temporary ground protection measures over lawn areas outside of the CEZ fencing.

Approximate location for material storage in the west side garden.

Key to Symbols

T# = Category A Tree		= Root Protection Area (RPA)
T# = Category B Tree		= Crown Spread (N, E, S, W)
T# = Category C Tree		
T# = Category U Tree		
		= Barrier Fencing – Construction Exclusion Zone (CEZ)
		= Temporary Ground Protection
		= Outside Material Storage / Site Compound (Approx.)