## Site investigations

undertaken using hand tools (forks, shovel, trowel, brush). Soil will be loosened with the aid of a fork or trowel and the spoil

Site investigations are to be undertaken within the RPAs of retained trees to determine the size, depth and location of any roots that may be present for the purpose of informing foundation design.

All excavation within the RPAs will be initially undertaken to a minimum depth of 800mm deep for any excavation or to the full depth of the proposed foundations, hard surfacing or underground services. The soil is to be loosened with the use of a fork or pick and then cleared with the aid of an air-spade and air-vac using a specialist arboricultural contractor; If an air-spade is not used and all excavations are to be

removed from with the aid of a shovel. Where an air spade or specialist arboricultural contractor is not employed, all excavations are to be undertaken under direct arboricultural supervision. All roots are to be retained in situ and the project arborist will visit the site to recordand photograph the depth, location, and size of any roots present; during this visit the project arborist may be able to cut specific roots with the use of a hand saw or secateurs. The edge of the excavation closest to the retained trees and all uncovered roots will be covered over with a minimum of two layers of damp hessian to prevent drying out, and where necessary be shuttered to prevent soil collapse or contamination. If appropriate soil beneath the depth of 800mm may be sheet piled with any deeper excavations being undertaken by a machine with an appropriate bucket under direct arboricultural supervision. If a decision is made for a machine to be used it must work form outside of the RPA or have appropriate ground protection in

place to move and work upon. Upon the completion of the site investigations all trial excavations are to be back filled with the original material or inert fill. It may be suitable to insert a root barrier in locations where the proposed roots are not

present or are beginning to enter to prevent root activity within areas deemed to be root free.

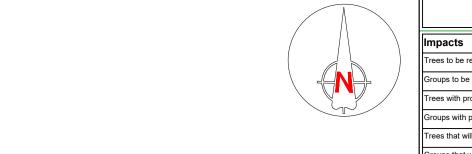
## Utility apparatus

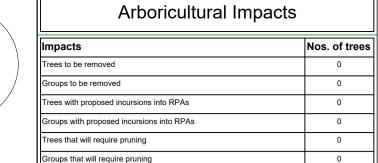
Underground utility apparatus
Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the rout and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside of RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts, all inspection chambers should be sited outside of the RPAs.

Where underground apparatus is to pass within the RPAs, detailed plans showing the proposed route should be drawn up in conjunction with the project arboriculturist. In such cases trenchless insertion methods should be used with entry and retrieval pits being located outside of the RPAs. If this option is not feasible and providing roots can be retained and protected excavations should be undertaken using hand held tools (air-spade, forks, shovels) or a combination of trenchless and manual excavation (broken trench).

Any design and installation should be undertaken in accordance with the National Joint Utilities Guidelines (NJUG). Above-ground utility apparatus
Above-ground apparatus(including CCTV cameras and lighting) should

be sited to avoid the need for detrimental tree pruning, as such the current and future crown size of the tree should be assessed. Tree branches can be pruned back with care to provide space, though it is not appropriate for repetitive and significant tree work to bean initial design solution unless this is a suitable management outcome for the tree. Any pruning should be undertaken in accordance with





Tree Work Schedule

No.	Species	Works	Category
		No tree work is required	

## No. of individual trees to be removed

U	A	В	С			
N/A	N/A	0	N/A			
No. of groups to be removed						

## Arboricultural Method Statement

All tree work is to be undertaken in accordance with British Standard Please refer to Arbtech Consulting Ltd. Tree Schedule, Arboricultural Method Statement and Tree Protection Plan, for full details of all surveyed trees and how all aspects of the development maybe implemented without detriment to retained trees.

**Issue:** Replacement wearing course situated within RPAs of groups G1 & G2. **Solution:** Replacement wearing course to be designed in conjunction with an arboriculturalist, once site investigations have taken place.

Rev: Date: Notes: **ARBTECH** 

Unit 3, Well House Barns, Chester, CH4 0DH www.arbtech.co.uk, email@arbtech.co.uk, 01244 660558

Arlington Works, 21-27 Arlington Road, Twickenham, Middlesex, TW1 2BB

Sharpe Refinery Service Ltd

Arboricultural Impact Assessment

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Drawing No: Arbtech AIA 01

July 2018 1:200 @ A1

All dimensions should be checked on site. No dimensions are to be scaled from this drawi

ervices. his drawing was produced in colour - a monochrome copy should not be relied upon. Arbtech Consulting Ltd, 2013