

ARBORICULTURAL METHOD STATEMENT

From commencement of the development, the following methodology shall be implemented in the manner and sequence described below

SEQUENCE OF WORKS

1. Pre-commencement site meeting
2. Tree and hedge removal and pruning
3. Construction of new retaining structure
4. Erection of Phase 1 'tree protection barriers'
5. Installation 'temporary ground protection'
6. Main construction phase
7. Erection of Phase 2 'tree protection barriers'
8. Construction new hard surfaces within RPAs
9. Removal of 'tree protection barriers' and 'temporary ground protection'
10. Construction of new paths within 'tree protection areas'
11. Construction of new raised embankment within RPA of T15
12. Landscaping works

1. **PRE-COMMENCEMENT SITE MEETING**
- To outline working methods in relation to trees, a site meeting of the following shall take place prior to commencement of any demolition or construction activity:
- Client
 - Structural engineer
 - Main contractor
 - Site agent
 - Project arboriculturist
- Before the site meeting, existing incoming services and drainage shall be accurately located both on site and on a copy of this drawing

2. **TREE AND HEDGE REMOVAL AND PRUNING**

- a. All tree and hedge removal and pruning work shall be implemented in accordance with Tree Work Plan CW10007-P-TW-2
- b. All reasonable care shall be taken to avoid damage to retained trees and hedges
- c. All tree stumps within any area designated as a 'tree protection area' or otherwise protected on this drawing shall be removed by mechanical stump grinder and shall not be excavated in their entirety by mechanical excavator
- d. All tree removal and pruning works shall be carried out in compliance with British Standard 3998: 2010 Tree work - Recommendations (BS3998)

3. **CONSTRUCTION OF NEW RETAINING STRUCTURE**

- a. The new retaining structure between points A and B on this drawing (around T10) shall be installed to an engineer-designed construction specification and method statement to be agreed with the Local Planning Authority (LPA) and in accordance with the requirements of section 7.5 of British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations (BS5837)
- b. The specification shall include detailed working drawings and details of existing and proposed ground levels, and final formation levels
- c. Any excavation of ground or pruning of roots required to accommodate final formation levels shall be carried out by hand, using hand tools, under the supervision of the 'project arboriculturist' and in accordance with the requirements of section 7.2 of BS5837

4. **ERECTION OF PHASE 1 TREE PROTECTION BARRIERS**

- a. The main contractor shall erect Phase 1 'tree protection barriers' as detailed on this drawing
- b. The 'project arboriculturist' shall inspect installation of the Phase 1 'tree protection barriers' prior to commencement of any construction works, site preparation, excavation or delivery of plant and materials

5. **INSTALLATION OF TEMPORARY GROUND PROTECTION**

- a. The areas of ground identified by blue black-hatching as 'temporary ground protection' on this drawing shall be installed to an engineer-designed construction specification and method statement to be agreed with the LPA and in accordance with the requirements of section 7.4 of BS5837
- b. The specification shall include details of existing and proposed ground levels, depth of construction, final formation levels and final surface levels
- c. The 'temporary ground protection' shall be constructed over the existing ground without excavation other than the removal, by hand, using hand tools, under the supervision of the 'project arboriculturist' of surface vegetation and minor (<100mm high) surface irregularities or loose soil to a depth of not more than 100mm. Any excavation of ground within the blue black-hatched areas shall be carried out in accordance with section 7.2 of BS5837
- d. The 'temporary ground protection' shall be constructed using the 'Cellweb' 3-dimensional cellular confinement system (or equivalent)
- e. Edge restraints shall be constructed from pressure treated timber boards secured to timber posts, or other means to be agreed with the LPA. In the installation of edge restraints, there shall be no excavation of ground other than as described at c. above
- f. The 'project arboriculturist' shall inspect installation of the 'temporary ground protection' prior to commencement of any construction works, site preparation, excavation or delivery of plant and materials

6. **MAIN CONSTRUCTION PHASE**

- a. There shall be no storage of construction equipment, plant or materials within any area designated as a 'tree protection area' or otherwise protected on this drawing
- b. No fires shall be lit within 20m of any retained tree or hedge
- c. The site agent shall supervise all deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees and hedges are not at undue risk of damage
- d. There shall be no excavation within 200mm of a 'tree protection barrier'
- e. There shall be no new excavation for the installation, renewal or repair of underground services within any area designated as a 'tree protection area' or otherwise protected on this drawing
- f. The integrity of the Phase 1 'tree protection barriers' and 'temporary ground protection' shall be maintained for the duration of the main construction phase
- g. Any damage occurring to 'tree protection barriers' or 'temporary ground protection' during the main construction phase shall be reported to the project arboriculturist and immediately made good by the main contractor
- h. Site drainage and washings from concrete and mortar mixings shall be directed away from all 'tree protection areas'
- i. The 'project arboriculturist' shall visit the site monthly to assess the integrity of the tree protection
- j. The 'project arboriculturist' shall complete a report to be sent to the site owner and main contractor following each visit. In this regard, the site owner will instruct the 'project arboriculturist' prior to any works commencing on site

7. **ERECTION OF PHASE 2 TREE PROTECTION BARRIERS**

- a. On completion of the main construction phase, the main contractor shall dismantle and remove the sections of Phase 1 'tree protection barrier' between points C&D on this drawing, and immediately thereafter erect Phase 2 'tree protection barriers' between points B&C on this drawing
- b. The 'project arboriculturist' shall inspect installation of the Phase 2 'tree protection barriers' prior to commencement of any further construction works

8. **CONSTRUCTION OF NEW HARD SURFACES WITHIN RPAs**

- a. The area of new permanent hard surfacing identified by orange cross-hatching on this drawing shall be constructed over the existing ground without excavation other than the removal, by hand, using hand tools, under the supervision of the 'project arboriculturist' of surface vegetation and minor (<100mm high) surface irregularities or loose soil to a depth of not more than 100mm. Any excavation of ground within the orange cross-hatched areas shall be carried out in accordance with the requirements of section 7.2 of BS5837
- b. The new surfacing in the orange cross-hatched area shall be constructed using the 'Cellweb' 3-dimensional cellular confinement system (or equivalent)
- c. All aggregates used in the construction shall be no-fines, crushed gritstone or sandstone. **Limestone shall not be used**
- d. The wearing surface shall be of a material agreed with the LPA
- e. The construction shall be to an engineer-designed specification and method statement to be agreed with the LPA, and in accordance with the requirements of section 7.4 of BS5837. The specification shall include details of existing and proposed ground levels, final formation levels, depth of construction and final surface levels
- f. Edge restraints shall be constructed from pressure treated timber boards secured to timber posts, or other means to be agreed with the LPA. In the installation of edge restraints, there shall be no excavation of ground other than as described at a. above

9. **REMOVAL OF TREE PROTECTION BARRIERS AND TEMPORARY GROUND PROTECTION**

- The Phase 1 and Phase 2 'tree protection barriers' and the 'temporary ground protection' shall be removed only on completion of the construction works and in compliance with all relevant planning conditions. The 'tree protection barriers' and 'temporary ground protection' shall be removed by hand, using hand tools, under the supervision of the 'project arboriculturist'

10. **CONSTRUCTION OF NEW PATHS WITHIN TREE PROTECTION AREAS**

- a. The new footpaths within the 'tree protection areas' shall be installed following removal of the 'tree protection barriers' and 'temporary ground protection'
- b. The alignment of the new paths shall be set out on site by the 'project landscape architect' and the 'project arboriculturist'. The setting out of the new paths shall minimise removal and pruning of retained trees and scrub vegetation, and to minimise construction work within the RPAs of the retained TPO'd trees
- c. Any pruning of retained trees required to accommodate the new paths shall be carried out in accordance with the requirements of BS3998 and under the supervision of the 'project arboriculturist'
- d. Sections of new footpath within the RPA of any retained tree shall be installed to an engineer-designed construction specification and method statement to be agreed with the LPA and in compliance with the requirements of section 7.4 of BS5837. The specification shall include details of existing and proposed ground levels, final formation levels, depth of construction and final surface levels
- e. New footpaths within RPAs shall be constructed over the existing ground without excavation other than the removal, by hand, using hand tools, under the supervision of the 'project arboriculturist' of surface vegetation and minor (<100mm high) surface irregularities or loose soil to a depth of not more than 100mm. Any excavation of ground within RPAs shall be carried out in accordance with the requirements of section 7.2 of BS5837
- f. The new footpaths within RPAs shall be constructed using the 'Cellweb' 3-dimensional cellular confinement system (or equivalent)
- g. All aggregates used in the construction shall be no-fines, crushed gritstone or sandstone. **Limestone shall not be used**
- h. The wearing surface shall be of a material agreed with the LPA
- i. The construction shall be to an engineer-designed specification and method statement to be agreed with the LPA, and in accordance with the requirements of section 7.4 of BS5837
- j. Edge restraints shall be constructed from pressure treated timber boards secured to timber posts, or other means to be agreed with the LPA. In the installation of edge restraints, there shall be no excavation of ground other than as described at d. above

11. **CONSTRUCTION OF NEW RAISED EMBANKMENT WITHIN RPA OF T15**

- a. The new raised bank identified by black diagonal hatching on this drawing shall be constructed over the existing ground without excavation other than the removal, by hand, using hand tools, under the supervision of the 'project arboriculturist' of surface vegetation and minor (<100mm high) surface irregularities or loose soil to a depth of not more than 100mm. Any excavation of ground within the black diagonal-hatched area shall be carried out in accordance with the requirements of section 7.2 of BS5837
- b. The new raised embankment in the black diagonal-hatched area shall be constructed using the 'Cellweb' 3-dimensional cellular confinement system (or equivalent)
- c. All aggregates used in the construction shall be no-fines, crushed gritstone or sandstone. **Limestone shall not be used**
- d. The construction shall be to an engineer-designed specification and method statement to be agreed with the LPA, and in accordance with the requirements of section 7.4 of BS5837. The specification shall include details of existing and proposed ground levels, final formation levels, depth of construction and final surface levels

12. **LANDSCAPING WORKS**

- a. Landscaping works shall be implemented in accordance with a scheme approved by the LPA
- b. There shall be no rotation of ground within any area designated as a 'tree protection area' or otherwise protected on this drawing
- c. Sandy topsoil may be spread within the 'tree protection areas' to a depth of not more than 150mm to facilitate the establishment of new vegetation. No other addition of soil or other material shall be carried out within any area designated as a 'tree protection area' or otherwise protected on this drawing without prior consultation with the LPA
- d. No hard landscaping works or excavation for cables or any other service shall be carried out within the 'tree protection area' without the prior written consent of the LPA. All such excavations shall be carried out in accordance with the guidance set out in National Joint Utilities Group Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4 2007)

TREE PROTECTION SPECIFICATION

Tree Protection Areas shall:

1. Be secured prior to commencement of any construction works, delivery of site accommodation or materials and shall remain intact for the duration of the construction works
2. Preclude all construction activity with the exception of specified arboricultural works and such works as have been agreed by all parties and to be carried out under supervision
3. Be protected by 'tree protection barriers' and other measures as specified on this drawing
4. Preclude the storage or tipping of all materials and substances. Toxic substances such as fuels, oils, additives and cement shall not be stored within 5m of any area designated as a 'tree protection area' or otherwise protected on this drawing
5. Any incursion into 'tree protection areas' must be by prior arrangement, following consultation with the Local Planning Authority

Phase 1 Tree Protection Barriers

1. The Phase 1 'tree protection barriers' shall comprise 2.4m high, 1.2m wide, 18mm thick exterior grade softwood plywood boards (or oriental strand board)
2. A timber framework shall be constructed comprising 3m long by 100mm by 100mm timber posts, concreted into 600mm deep, 200mm diameter augured holes at maximum 3.6m centres. Two horizontal cross rails, 100 x 50mm shall be securely fixed to each upright at 0.5m and 1.9m above ground level
3. The fencing boards shall butt together and be securely fixed to the timber framework
4. No fixing shall be made to any tree and all reasonable care shall be taken to avoid damage to tree roots when locating posts
5. An A3 warning sign reading as per figure 1 shall be fixed to every 10m of Phase 1 'tree protection barrier'
6. The 'project arboriculturist' shall direct erection of the Phase 1 'tree protection barriers'

Phase 2 Tree Protection Barriers

1. The Phase 2 'tree protection barriers' shall comprise 2m high weldmesh 'Heras' type fencing
2. The fencing panels shall butt together and be securely fixed to 2.7m x 100mm x 100mm timber posts, set or concreted into 600mm deep, 150mm diameter augured holes at 3.5m centres
3. No fixing shall be made to any tree and all reasonable care shall be taken to avoid damage to tree roots when locating posts
4. An A3 warning sign reading as per figure 1 shall be fixed to every 10m of Phase 2 'tree protection barrier'
5. The 'project arboriculturist' shall direct erection of the Phase 2 'tree protection barriers'

Temporary Ground Protection

The areas of ground identified for 'temporary ground protection' on this drawing shall be designed by an engineer using the Cellweb Tree Root Protection System (or equivalent)

