



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Version 2 – September 2023



MOORHILL

West-end

Southampton

SO30 3AZ

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1. Introduction.

Address: Moorhill Road, West End, Southampton.

Client Team

- Client: Octopus Healthcare Properties
- Employer Agent: Meadhurst Project Management
- Principle Designer: Bernard Simms Associates

The proposed development will consist of a 70-bedroom care home over 3 floors, with associated therapy rooms and external garden space.

Site location – The site is located on Moorhill Rd, West End which is just off of junction 7 of the M27 and situated between 2 southern water underground reservoirs with Telegraph Wood situated to the rear of the site.

2. Programme.

The programme assumes to commence in autumn 2023, with 3 months of enabling works inclusive of, site clearance, main drainage install, S278 entrance and car park formation to allow the site offices, canteens and toilets to be installed before then moving onto the main works consisting of the foundations, substructure, drainage and superstructure utilising traditional construction methods of brick and block capping off with a flat roof over 8 months before internal works begin and run through to practical completion for 6 months whilst the landscaping runs concurrently until summer 2025.

3. Local liaison.

Highwood will engage with the local community, so our neighbours have a level of understanding of our activities. Feedback will be encouraged to inform our activities on site.

- A notice board will be placed at the site boundary providing contact information and scheme details. This will include programme information, contact details (Office and Site) and security arrangements.
- For our neighbours sharing Moorhill Rd and the surrounding area, we will issue newsletters containing specific information about our activities. Copies of these newsletters will be available on the site notice board.
- Once permanent welfare facilities are established residents will be offered the opportunity to visit the site office to meet the project team, raise any issues and view drawings.
- Site working hours will be between 08:00 – 18:00 (Mon-Fri). Sat 08:00 – 13:00 with no working on Sundays & bank holidays unless otherwise agreed with the local authority prior.

To assist in the above, the project will be included into the Considerate Constructor Scheme with a target of 40 points being set.

Our neighbours will be encouraged to communicate with Highwood either directly with the site team or via the head office, any feedback or complaints received will be addressed and managed by the Project Manager with a log held on site detailing any actions required and the outcome.

4. Welfare Facilities.

The main site setup will be positioned within the car park of the development and as shown in appendix 1. This will have a dedicated pedestrian route through the site from the site entrance.

The accommodation will be stacked and will consist of 2 x 32' canteen/drying room units with 2 x 32' office units stacked above. There will also be two 3 + 1 toilet blocks connected into the mains at the earliest opportunity. A signing in system will be located within the site welfare area and a smoking and vaping shelter will be located local to the site set up.

5. Site Boundary and Security

The boundary of the site will be secured with a combination of site hoarding, Heras fencing and existing fencing. Branded hoarding will be located along the boundary of Moorhill Rd.

CCTV will be in various locations on the boundary to protect site, the cameras will be installed on hoarding, fencing and temporary accommodation.

6. Working Hours.

Working hours will be within the following hours:

- 08:00 – 18:00 Monday to Friday
- 08:00 – 13:00 Saturdays
- No working on Sundays and public holidays

These hours will be followed unless otherwise agreed in writing by the relevant planning authority. Outside the above periods the following working is permitted-

- a) pre-planned construction works to highway infrastructure requiring possessions where first notified to the relevant planning authority and local residents.
- b) emergency works; and
- c) works which do not cause noise that is audible at the boundary of the Order limits

Any emergency works conducted must be notified to the relevant planning authority as soon as possible and on the next working day of their commencement.

Consideration will be given to foraging bats and where practicable, works external to the building will not commence until 30 minutes after sunrise and will cease 30 minutes before sunset.

7. Deliveries

All delivery vehicles will access site via Moorhill Road through the designated vehicle access point to site. Construction traffic leaving site will be directed left out of the project on Moorhill Rd to head back to junction 7 of the M27.

No delivery vehicles will be off-loaded on the road with all vehicles being off-loaded within the site boundary either via the site forklift or crane. All deliveries to site will be pre-arranged with the project team so as to avoid peak congestion times for the surrounding area. Due to the surrounding area being highly residential, school opening and closing times will be avoided.

It is anticipated that an average daily count of twenty delivery vehicles will not be exceeded.

Refer to appendix 4.

8. Turning and Vehicle Movements.

The existing hardstand area will be utilised for the early stages of the project for material storage areas and plant and pedestrian routes. The adaption to the site entrance and installation of the permanent car park along with the associated drainage will be one of the first tasks to complete upon commencing on site to minimise the likelihood of transferring mud onto the public highway.

A wheel wash facility will be introduced located at the vehicle entrance/exit to site to ensure that all vehicles leaving site are suitably cleared of mud and inspected by the gateman so as to ensure no mud is tracked onto surrounding roads during periods on site when mud is being produced. Should this methodology fail, and mud/debris be tracked onto the highway, a commitment is made to deploy mechanical road sweepers to clean such transferred material from the highway at the earliest convenience at the developers expense.

Vehicle and pedestrian segregation will be in place for the duration of the works and continually monitored throughout the development. Delivery vehicle management will be by our gateman/banksman.

9. Parking.

All parking for contractors attending site will be within the site boundaries and not on the surrounding residential roads. The existing hardstand will be utilised for site parking as shown on the site logistics plan in appendix 1.

10. Material storage.

A dedicated material storage area will be allocated within the site boundary, this can be seen on the site logistics plan in appendix 1. This area will be managed and monitored by the site forklift operator and project team.

Where materials are affected by weather (Plasterboard) are being stored outside on site, these will be appropriately protected and raised off the ground.

Storage locations for all materials that create dust, including soil, will be located away from the sensitive receptors adjacent to the site, except where impractical. Where this is not practicable additional precautions will be taken such as covering and dampening down spoil heaps.

Prolonged storage of materials on site prior to use and/or disposal will be avoided.

11. Material distribution and re-use

All material distribution around site will be carried out by the site forklift and crane. Subcontractors requiring the crane or forklift will be issued slots throughout the day and deliveries scheduled to ensure timely off-loading is possible.

Where possible spoil excavated as part of the works will be re-used throughout the course of the project. A detailed audit trail will be kept of all soil materials being retained both for landscaping and for reuse in the construction process. These soils to be retained will be stored separately from other soils from the site and any involved in the construction process.

12. Health and Safety.

The planning, organising and implementation of the project will be in accordance with Highwood Construction's Health and Safety Management System. The Principal Designer will be fully consulted throughout the process so that the mandatory notices are issued in the required timescales.

13. Crane.

A tower crane will be located to facilitate construction in a position on the site in order to use the minimum sized crane to enable the loading out of all construction materials. The crane will be fully tested after erection and the weight limits set as appropriate. The crane will be used to lift the larger components, such as floor beams, from the delivery vehicle to its place on the building. All delivery vehicles will park and unload on site with no vehicles will be parked outside of the site.

See appendix 1

14. Environmental considerations.

Noise:

Noisy activities will be completed within working hours with no working on public holidays.
Switching all audible warning systems to the minimum setting required by the Health and Safety Executive.
Reverse warning alarms will be fitted with white noise (broadband) systems.

Best Practicable Means' and the guidance provided within BS:5228 will be employed to minimise construction impacts, including, for example: -

- No deliveries should occur outside of the hours identified above.
- Careful selection of working methods and programme;
- Where applicable, selection of the quietest working equipment available.
- Where practicable, positioning equipment behind physical barriers, i.e. existing features, hoarding etc;
- Ensuring that regularly maintained and appropriately silenced equipment is used.
- Handling all materials in a manner which minimises noise, such as minimising drop heights.
- Switching all audible warning systems to the minimum setting required by the Health and Safety Executive. Reverse warning alarms should be fitted with white noise (broadband) systems.
- Where processes could give rise to significant levels of noise for extended periods of time, noise levels should be monitored regularly by a suitably qualified person with the survey results kept on file; and,
- In terms of on-site employees, appropriate actions should be undertaken with regard to the Noise at Work Regulations including the requirement for the use of ear defenders and appropriate warning notices.

Where processes could give rise to significant levels of noise for extended periods of time, noise levels will be monitored regularly by a suitably qualified person with the survey results kept on file.

Dust

Activities where dust is being produced suitable water suppression will be used to minimise the production of dust. The following methods used will include:

- Mist cannons will be used during any demolition works to ensure minimal dust is created and no dust escapes the boundary of the site.
- During periods of warm weather haul roads will be damped down and swept periodically to reduce the dust created from the movement of plant.
- For all other activities creating dust, suitable extraction and suppression will be utilised to eliminate the production of dust.
- Storage locations for all materials that create dust, including soil, will be located away from the sensitive receptors adjacent to the site, except where impractical. Spoil piles will also either be covered or dampened down during periods of dry weather.

Lighting

The use of construction lighting outside of construction hours will be limited and be kept to a minimum necessary for workforce, public and/or safety. Construction lighting will also be restricted to internal lighting during construction hours with external lighting only being utilised around the welfare facilities during winter periods and low levels of light.

Lighting adjacent to public highways and footpaths will be appropriate for the safety of passing public and shall ensure that light spillage, particularly onto highways, is limited to the minimum possible level necessary. Absolute minimal artificial lighting will be placed in locations where it will cause light spillage on habitat corridors which are likely to be used by wildlife.

Glare from construction floodlighting will be minimised by positioning lights to less than 70 degrees from the vertical uplift and will be directed into the Site. This will reduce upward light spill and subsequently reduce the impact on the Dark Sky environment.

Lighting will be managed within accordance to any potential detriment to surrounding ecology.

Smoking & Vaping:

Smoking and Vaping will be prohibited across the site other than the designated smoking & vaping area located within the welfare compound.

Watercourse/Pollution Management:

All works where there is a risk of pollution to the environment will be done so in accordance with Highwoods environmental management system to ensure compliance with the control of Pollution Act 1974.

Where possible, water will not be abstracted from excavations. However, if this is required all water will be pumped through a silt buster in order to remove any possible contaminants and silt before discharging into another area of the site or drainage system. In the event this is required the quality of the water will be monitored regularly to ensure there are no signs of contaminants.

The Omnia report highlights there is in 'no water or historical water abstractions coated within a groundwater source protection zone (Cooke, 2021). Due to ground water being prevalent at 2.60m BGL, designated at a 'seepage' flow rate and the contamination report highlighting limited containments within the soil; mitigating actions will be redundant.

Insignificant groundwater was encountered during the site investigation at depths of <2.6m bgl. The water strike that took place (no1.) had the location reference of SA103. The water strike identified only 'seepage' at this level (Cooke, 2021).

Where works require excavation below this level and groundwater is encountered a dewatering strategy will be implemented to ensure there is no risk of contamination from the works being completed.

The Groundsure report indicates that there were no surface water abstraction licenses identified on-site of within a 250m radius of the site; despite there being indication that historically the two water courses attributed to the nearby reservoir.

To ensure construction activities have no effect on the watercourse the below controls will be adopted throughout the project.

- Fuel bowsers will be double bunded with a 110% bund capacity and located on top of an impermeable surface to prevent any spillages leaking into ground.
- Small items of plant and fuel will be stored on top of bunds/plant nappies to contain any spillages.
- As well as the above all works will be completed in compliance with Highwood COSHH Procedure, and Guidance Note of the monitoring of groundworks which is expected to pose the most risk.
- A dedicated plant refuelling area will be created on a hardstand and located away from any sensitive receptor to eliminate any contaminants leaking into the groundwater.
- All COSHH substances will be stored within bunded and locked COSHH cabinets and as per their specific COSHH assessment.
- Emergency spill kits will be available in the event of a small spillage and an emergency spill contractor will be appointed and will attend in the event of a larger spillage.
- All plant and equipment will be inspected for leaks on a daily basis.
- Small items of plant (e.g. Genny's) will be located on drip trays so as to contain any spillages.

Where possible proprietary washout systems will be promoted with our contractors as a means of concrete washout. However, as a minimum standard a lined skip will be used for concrete washout. The skip will be monitored on a regular basis to ensure there are no spillages.

Sediment traps/basins should be installed prior to any major earthworks or regarding of the land take place and additional sediment traps and/or silt fences should be installed as ground works are occurring to keep sediment contained within appropriate locations.

Contamination:

The investigation report completed by Omnia did not highlight any level of contamination within the ground during testing. However, it was highlighted that not all areas were able to be tested. E.g. underneath concrete slabs and buildings. Before any spoil is removed from site WAC testing will be completed to identify any possible contaminants.

In the event any contaminated ground is identified a suitable remediation strategy will be completed before any further works within the contaminated area are undertaken. The ground investigation table '5-1 summary of Groundsure Data' indicates that no contamination was found within the soil. Due to the lack of contamination evident; generic methodology will be applied to the excavations taken place by Highwood construction (Cooke, 2021).

To reduce further the levels of contamination introduced through the construction process, Highwood will:

- Ensure fuelling of plant is managed on a temporary works surface that is compacted to reduce the effects that may occur through the absorption. This will be inline with COSHH based guidelines highlighted.
- All washing out of concrete mixers and cement mixers will be into skips, limiting the potential soil contamination.
- All potentially harmful chemical will be stored adequately in site containers.

Ecology:

No known protected habitats have been identified within the area. The site grassland/shrubbery areas were deemed 'poor' in rating and therefore will be managed through the concept landscape design submitted at RIBA stage 1, subsequently adhering to the requirement to aid the protection of protected invertebrates. The encouraged use of Herbinicula presented within the detailed planting schedule will sufficiently cover the required habitat needs presented in the Tetra tech survey (Cooke, 2021). The unrestorable foliage will be removed upon commencement of construction. Upon commencement of works, the main contractor, Highwood construction will operate on precautionary stance to the removal of any shrubbery, grasslands, trees, and shelters in order to protect Hazel Dormouse population. Dormice provisions have been directly introduced into the general arrangements landscape drawings to account for any loss of habitat caused by the removal of the dead shrubbery on site.

The natural arboriculture of the site within the survey was found to have low to negligible potential for bat Roosting's along with the pre-existing structures surveyed on site that maintained a low to negligible potential. The evidence in the reports therefore remove the main contractor's duty to provide adequate roosting opportunities for the bats identified within the locality of the site, due to there being adequate housing being provided within the surrounding semi-ancient woodland within '2km' of the site survey (Cooke, 2021) Although the existing site has 'insignificant' natural provisions for the local bat roosting's, the main contractor will maintain the adequate trees identified on site for potential roosting, if deemed restorable. A total of 94 No. recorded bats were discovered within a 2km radius of the site across 7 species with 52% of the total number recorded at the common pipistrellus, widely prevalent and predominately active between April to October (Cooke, 2021). Highwood's commencement of works will fall within these months to reduce the risk of disturbance to hibernating bats and a further bat survey completed as the tree works will be after August 31st. Upon further review, as the main contractor we will agree to put 2 No. provisional bat boxes (as recommend) located in 2 No. trees of ecological interest, if deemed the tree's specified are restorative. A detailed street lighting approach will be used when approaching the scheme to ensure that the light pollution during and post construction is of no detriment to the bats recorded in the locality of the site; whilst encouraging further potential roosting. All lighting will:

- Have a maximum coverage of 70%.
- Be installed at a low level to reduce its potential effect on feeding patterns.

Arboriculture:

Any arboricultural works will be completed as per the Arboricultural Method Statement, provided by James Fuller Arboriculture (Ref: JFA0289). The tree retention plan within appendix 2 will be adhered to throughout the scheme. Where there are any works required to be completed close to a tree that is designated with a

TPO (Tree Protection Order) a suitable Tree Protection Zone will be created with Heras fencing and be installed at the earliest opportunity prior to any construction activity.

Landscape, Minerals and soil management:

The site investigation works suggest that gravelly fine to coarse sand is predominate in the top-soil courses of the site. In the depth indicative of foundations (04-1.60m BGL) an orange clay combined with coarse sand presents (Cooke, 2021).

Any clay/gravel recovered during topsoil stripping will be used raise ground levels according to design in order to reduce its environmental impact of transfer off-site. Low pockets of 'River Terrace' gravel can be discovered in deeper areas within the subsoil (Cooke, 2021). If excavations discover such materials as the expressed; the main contractor will act within guidelines to maintain the gravels purity and will remove it via transfer to a quarry for recycling purposes.

- When stripping, stockpiling, or placing soil, do so in the driest condition possible and use tracked equipment where possible to reduce compaction.
 - Confine traffic movement to designated routes.
 - Keep soil storage periods as short as possible.
 - Clearly define stockpiles of different soil materials.

Waste Management:

All waste will be removed by a licensed skip company and be accompanied by a completed Waste Transfer Note (WTN). Waste Carriers Certificates and disposal site Licences will be obtained from our waste contractors to ensure all waste is being managed by a reputable company.

The ground investigation reports highlighted 2 No. bore holes where inert waste was discovered at 0.4-1.6 BGL. Due to their inert nature, the materials found have been deemed re-usable within the site. The reuse of the expressed materials can be used to adjust ground levels to suit the development or can be relocated off site.

Reports will be provided on the monthly basis by our waste contractor providing a detailed breakdown of recycled and recovered wastes.

In the event any Hazardous waste is created it will be segregated and removed by an appropriate removal company and a hazardous waste consignment note obtained.

Where possible waste will be segregated to aid with recycling. Plasterboard skips will be covered so as to prevent water ingress. Skips will also be exchanged on a regular basis. Any waste stockpiles will be damped down by water sprays and sheeted if required. Waste materials shall not be burnt on-site.

Where possible spoil will be re-used on site to reduce the requirement to import any spoil onto site. However, this will only be the case if the spoil is of a suitable grade which will be confirmed after appropriate testing.

Resource and Energy Management:

Both water and energy usage on site will be monitored by the project team on a monthly basis. This will include both usage for the welfare facilities and on-site usage. Site welfare facilities lighting will utilise PIR sensors to reduce electricity usage and the utilisation of grey water will be explored throughout the project. Use of solar panel welfare centres maybe introduced if energy usage is deemed excessive and detrimental to the ecological value of the site.

Archaeological and Historical Importance:

The archaeological survey produced by EPD highlighted that the site was of no historical significance and therefore not under any heritage constraints. The results of the survey have guided the approach we intend to take as the main contractor. The survey did indicate 'small' and 'poorly preserved agricultural activity of the 19th and 20th century. This finding was presented through the historic cartography, aerial photographs, and LiDAR imagery, reducing the need to present mitigating factors (EPD, 2022). Due to the lack of archaeological significance within the site boundary, excavations will proceed under the normal parameters adopted within common practices, however we will:

- Report any artefacts of historical significance to a governing body if found in the excavation of the development.
- Protect and maintain any objects or area of historical significance.
- Only excavate inside of the parameter's shown in the survey issued by EPD.

15. Appendices.

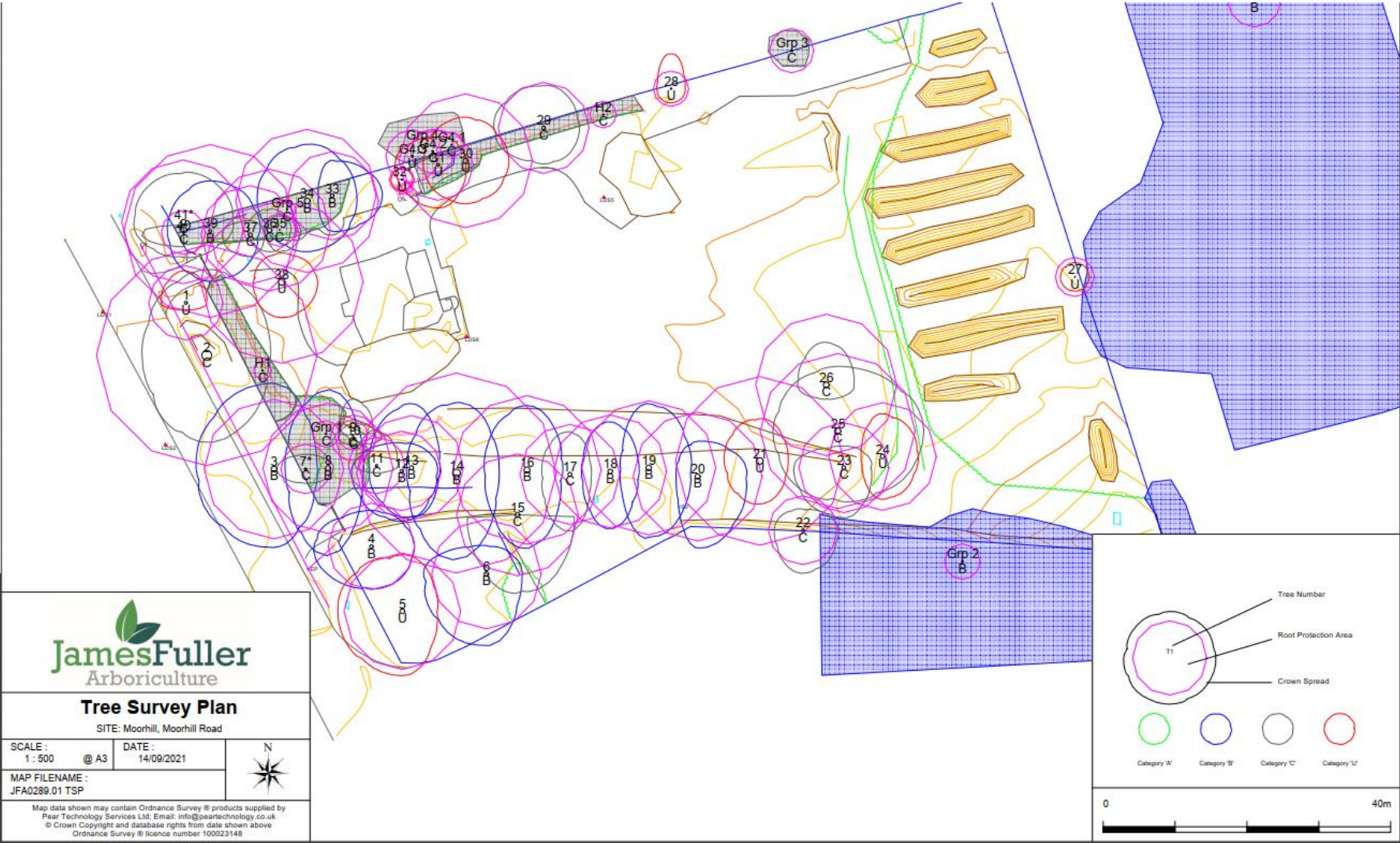
Appendix 1 – Site Logistics Plan

Appendix 2 – Tree Retention Plan

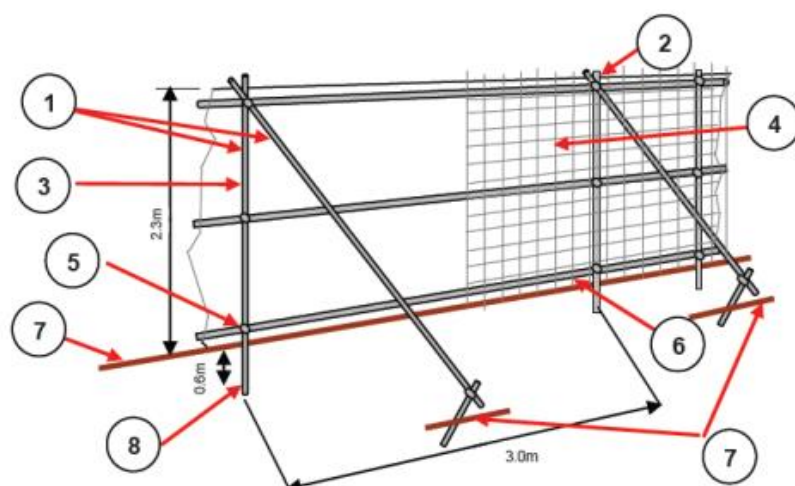
Appendix 3 – Tree Protective Fencing

Appendix 4 – Site Delivery/Travel Route

Appendix 2 – Tree Retention Plan



Appendix 03 – Tree Protective Fencing



Example of protective barrier:

1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of barriers to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground



Appendix 04 – Delivery/Travel Route

