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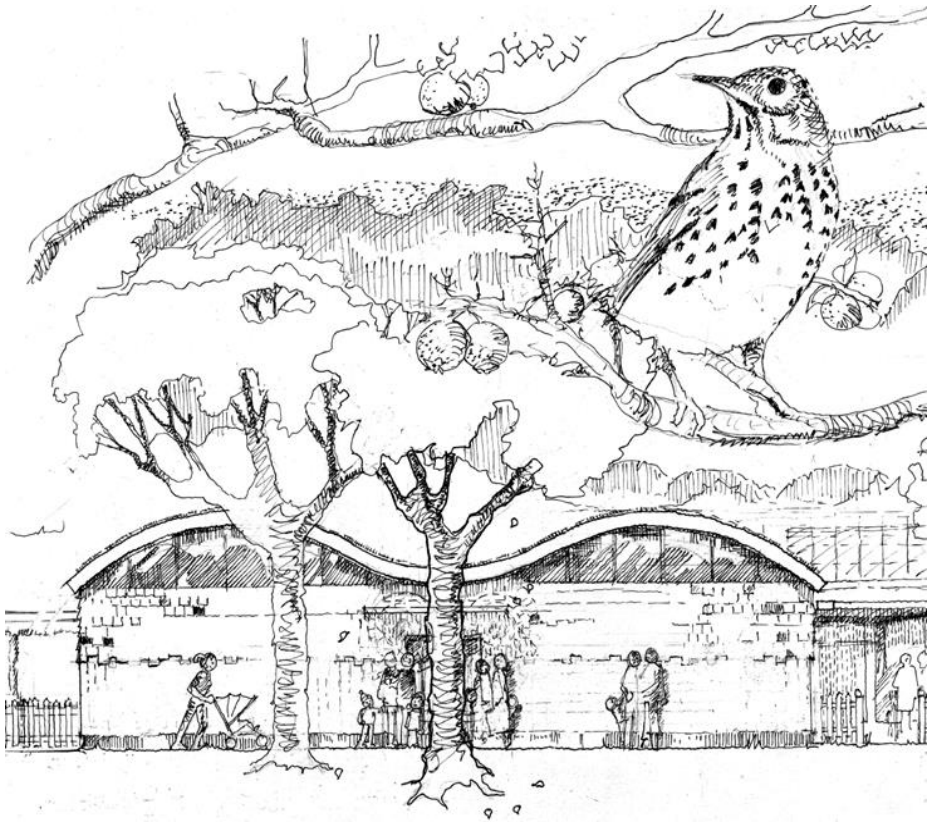


Marble Hill Playcentres – New Development

Construction Management Plan

February 2021

Rev 03 – For Planning

Contents

1. Introduction

1.1.1 This Construction Management Plan (CMP) sets out the high level construction delivery plan for the project. The overall aim of the project is to develop a new modern and accessible base for use by Marble Hill Playcentres, so they can remain open through-out the year, replacing the existing buildings which are no longer fit-for-purpose.

1.1.2 The strategies contained within this plan are at concept stages, and will be developed over the following stages, in consultation with the Local Planning Authority (LPA), local resident / Stakeholders, and eventually by the chosen Construction Contractor. This document will also be used to set requirements for the contractor during his construction phase.

1.1.3 This CMP aims to address how any impacts associated with the proposed works will be safely managed, mitigated against stakeholder and legislative requirements, and also helps manage the cumulative impacts of construction.

1.1.4 Where possible, the CMP follows the industry best practice guidelines to control environmental impacts, traffic disruption, site logistical issues and stakeholder communications.

2. Project Summary

2.1 Overview

2.1.1 The scope of the proposed development comprises demolition of the existing structures at the Marble Hill Playcentres and replacement with new child-focused inclusive community hub with facilities for baby, child and Special Needs support where user groups are able to share bespoke accommodation in an environment that embraces natural surroundings. It is health-promoting, encourages self-development and social skills through play and learning, and also through music. In recognising that child and parental pressures and dysfunction affect each other, it addresses the wider problems of development and child rearing, such as stress and life crisis, and is holistic in its approach. The design is based on researched principles on therapy and health enhancing design.

2.1.2 Marble Hill Playcentres (MHP) is a long established charity operating child and family play and education (Early Years) services in Marble Hill Park, Twickenham. It is known for its One O Clock Club (babies and mothers), Nursery (0 up to 5 years) and Adventure Play (5-14 years). The setting in a beautiful park with a large play area is a rare and much valued asset, but the premises are elderly and need urgent renewal.

2.1.3 There is a dire shortage of child and young adult Special Education and General Special Needs (e.g. SEND, EIS and SN). There is also a pressing need in Richmond upon Thames for nursery facilities, aggravated by closures. The charity plans to replace the elderly buildings with new bespoke facilities for all these user groups and assist SN charities without proper facilities by also accommodating them.

3. Approach to Construction

3.1.1 The project will be built on the north side of Marble Hill Park, which is owned by English Heritage and situated within a conservation area. The surrounding park is used by locals for dog-walking, football and other community activities. The park is much loved by the community, large trees are dotted around the site and residential properties are located north of the site.

It is of the utmost importance that the construction process has minimal impact on the environment and the project team fully engage with the community to understand their concerns, to involve them in decision making and minimise the impacts of construction.

3.1.2 This Construction Management Plan (CMP) aims to present a starting point to hold discussion with the Local Planning Authority (LPA) LB Richmond Upon Thames, English Heritage (EH), and the wider community.

4. Transport & Traffic

4.1 Site Work Hours

4.1.1 All contractors working on this project will be required to comply with hours of working stipulated by MHPC or in Planning Conditions as set by the Local Planning Authority (LPA).

4.1.2 The standard working hours are:

- 8am – 6pm Monday to Friday
- 8am – 1pm Saturday
- Sunday & Bank Holidays, no working

4.1.3 Contractors who require to work outside these hours will be required to liaise with and receive approval in writing from MHPC. This will usually only be granted for limited operations when all other alternatives have been exhausted.

4.1.4 No work is to be undertaken outside the stipulated core hours on weekdays or Saturdays, and no work is to be undertaken on Sundays and Bank holidays, without prior arrangement with MHPC and sanctioned by the LPA or Environmental Health Officer. This may be granted for certain operations which are influenced by other factors e.g. tower crane erection requiring road closures or transport escorts as dictated by the Police, concrete pours that need to be completed and minor fitting out work within buildings.

4.1.5 Night work is not to be undertaken without prior approval of MHPC. Night work will require to be properly planned and be only for operations that cannot be undertaken in normal working hours. This work should only be for limited operations unless special sanctions are agreed with the Environmental Health Officer in advance.

4.1.6 Emergency work may be required to be undertaken outside of core hours and again should have prior approval.

4.1.7 To maximise productivity within the core hours, contractors may require a period of up to one hour before and up to one hour after normal working hours for start-up and close down of activities. This will include but not be limited to:

- preparation to receive early / late deliveries.
- labour movements to and from the place of work,
- essential maintenance
- This will **not** include operation of plant or machinery likely to cause a disturbance to local residents or businesses; these periods will not be considered an extension of core working hours.
- Specific requirements or requests to avoid other activities in the park.

4.2 Vehicle Access / Material Delivery

4.2.1 It will be the contractor's responsibility to manage vehicle all deliveries to site.

4.2.2 The project team has investigated possible sites for an off-site material storage centre. Various sites were considered but due to a lack of local suitable venues a designated off-site centre is not expected, and given the relatively small size of the project is not wholly necessary.

4.2.3 Material is to be brought to site in a 'just in time' fashion. This is to minimise the amount of storage and space required on site.

4.2.4 Timed deliveries will restrict HGV movements to specifically allocated time slots to reduce the risk to the general public from delivery traffic.

4.2.5 The use of Delivery Management System (DMS) is to be considered, to book slots or to 'call-off' material and rationalise the number of deliveries.

4.2.6 Waste removal will be by a combination of 20 yard 'muck-away' trucks and shared sub-contractor segregated material skips. Larger 40 yard 'roll-on roll-off' will be used to reduce the number of skip journeys where possible.

4.2.7 A wheel wash bay will be explored with the LPA and contractor for use throughout the works to reduce dirt onto the roads and risk of accidents due to the slippery surfaces.

4.3 Delivery Routes

4.3.1 Construction HGV Traffic will have mandated routes to follow. These routes will be communicated and detailed during the pre-construction stages to the supply chain through the main contractor.

4.3.2 Routes will be chosen so to avoid the narrowest roads, and to minimise left-hand turns by HGV's, which is a key consideration as clashes with cyclists most frequently occur when vehicles attempt left-hand turns.

4.3.3 All construction vehicles will access the site via Richmond Road, and through the largely single file road leading to the existing car-park.

4.3.4 Where it is deemed necessary, EH and the LPA will agree with the Contractors for the undertaking of any temporary works to the car-park access road to facilitate access for large vehicular access to Projects.

4.3.5 All delivery routes for the proposed development will be shown in the contractor's CMP for discussion with the LPA and acceptance by the Employer.

4.4 Road Closures

4.4.1 Subject to discussion with the Utility providers, it is not anticipated there to be any road closures needed for the undertaking of the project.

4.5 Footpath & Footways

4.5.1 Public footpaths and footways are separate entities when it comes to the Highways Act (1980). The footpaths are public rights of way that are not associated with carriageways (i.e. not part of a road). From a review of LBRUT online public right of way map (extract below, public

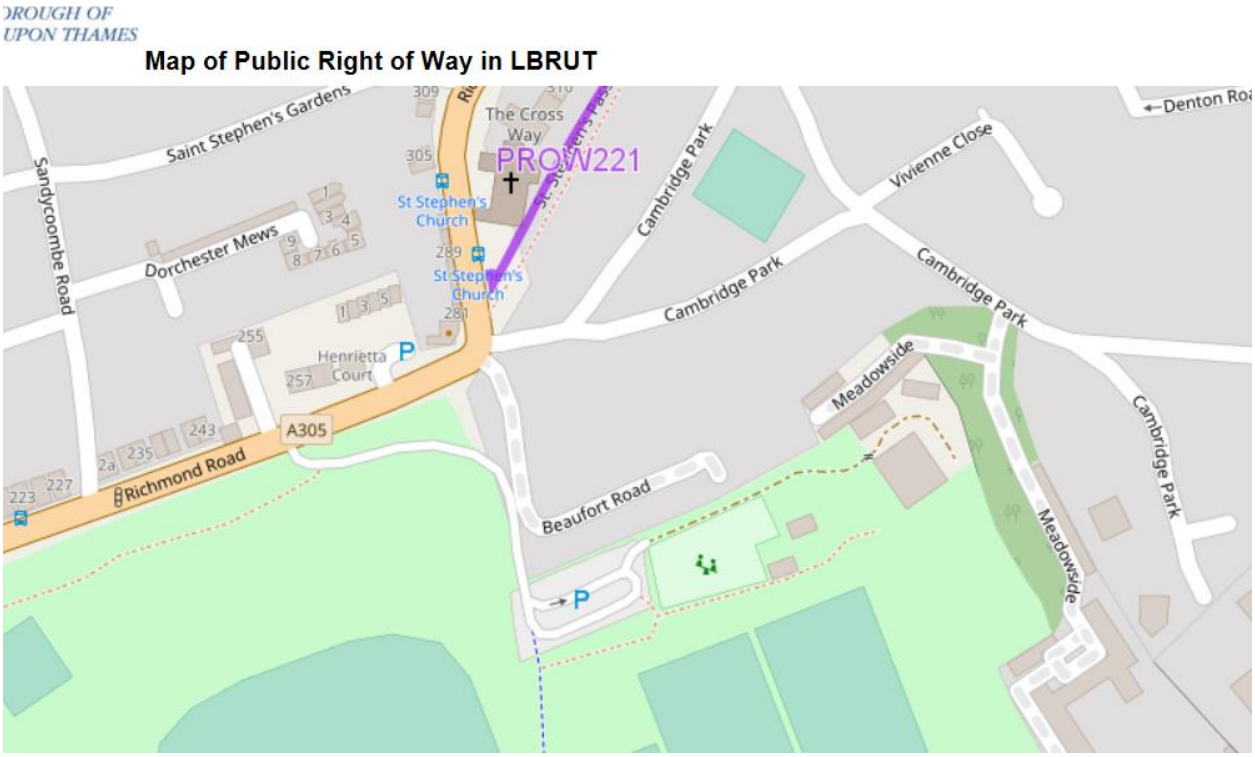
footpaths shown pink), there are no footpaths, footways or bridleways are affected by the proposed works.

https://gis.richmond.gov.uk/webmap/prow_01.aspx

Public Rights of Way

All current public rights of way in the borough can be viewed using our interactive map. The map is colour coded in the following ways:

- Footpath (FP): Continuous purple line
- Bridleway (BW): Continuous green line
- Byways open to all traffic (BAT): Continuous brown line



4.6 Parking, Loading / unloading Arrangements

4.6.1 All contractors are aware there will be limited provision for parking on site for operatives and staff undertaking work on the project. Circa 18no spaces will be requested.

4.6.2 The site compound will be designed to ensure the greatest separation of contractor and construction vehicles from members of the public. One of the greatest risk on construction sites is the danger of reversing vehicles on site. Within this tight site, reversing vehicles will occur, however it route can be planned where the initial manoeuvre can be undertaken within a section of the site compound, and a Banksman will assist with the remainder of the journey. This will ensure that no members of the public will be anywhere around a reversing vehicle. The contractor's parking will also assist by providing separation from public parking and the bulk of

construction vehicles.

4.6.3 The carpark will remain safe to pedestrians at all times, and following the completion of the project, an inspection of the car-park surface will be made, and repairs will be undertaken as necessary.

4.7 Parking Bays Suspension

4.7.1 Temporary loss of parking bays will occur due to the need to allow sufficient space of larger HGVs, and contractor parking, however up the 40no public spaces will still be available at all times.

4.7.2 Outside of Construction times, the Contractor Parking and other disabled spaces can be used by park users.

4.8 Utilities

4.8.1 Where utility connections are required with associated highway works, these will be co-ordinated between the Utility Companies and the LPA by the Contractor.

4.8.2 A Utilities disconnections and temporary works phase is planned prior to main contract works. This will be confirmed by the main contractor prior to the works commencing.

4.9 Traffic Management Orders

4.9.1 Contractors requiring a temporary traffic management order must follow the requirements of Section 14(1) of the Road Traffic Regulation Act 1984. Orders or notices will be issued for matters such as:

- Parking restrictions
- Road closures
- Other traffic management measures such as one-way working, banned turns etc.
- MHPC / LBRuT specific requirements

4.10 Footpath closure

4.10.1 It will be the Contractor's responsibility to apply for all Consents and manage the process.

4.10.2 Applications must be made at least 12 weeks before the restriction needs to come into force. The applicant will comply with statutory requirements (giving public notice, display of street notices, statutory notification) and, together with the applicant, must carry out local publicity. The Local Authorities agreement is subject to other works programmed in the vicinity.

4.10.3 Contractors must provide the following for Orders as follows:

- A temporary traffic management order application form
- A traffic management plan, in accordance with Chapter 8 of the Traffic Signs Manual.
- A method statement of the works to take place
- A risk assessment of the works to take place
- A draft letter to residents
- A temporary traffic signals notification form (if necessary)
- The specified payment

4.10.4 A site meeting will be necessary between the relevant Council officer and the applicant's works manager or representative.

4.11 Pedestrians and Cyclists

4.11.1 Safe routes for pedestrians and cyclists accessing the park will be designated and maintained at all times.

4.12 Site Boundary / Public Highway

4.12.1 All allocated contractor worksites and site areas will be separated from the public with a 2.4m minimum tall timber hoarding with appropriate vehicular gates and pedestrian access to facilitate a safe working environment.

4.12.2 The basic hoarding/fencing with integrated lighting design (if required) is to be developed by the contractor for employer approval. The contractor will manage and cover the cost of all licences.

4.12.3 Additional project specific branding / signage may be required and will be subject to an additional cost.

4.12.4 Hoarding and barriers should be used to segregate vehicles and plant from pedestrians. Banksmen will be utilised where necessary to provide maximum safety, and will be able to judge and coordinate traffic and pedestrian flow at all times.

4.12.5 Hoardings and/or signage will provide clear and concise specified areas for vehicles and pedestrians alike, and the contractor will be responsible for erecting standardised hoarding.

4.12.6 Hoardings will have viewing windows for adults and children to see the activities and site progress.

4.12.7 The contractor will upkeep and regularly maintain all public facing hoardings to a required standard, frequent cleaning and redecoration will be required.

4.13 Traffic Management and Avoidance of Congestion

4.13.1 The project will require that the impacts on the local community from construction traffic are minimised and that public access is maintained where reasonably practicable. The impact of road based construction traffic will be reduced by identifying clear controls on vehicle types, hours of site operation, and routes for large goods vehicles.

4.13.2 The project will agree the traffic management measures that may be required to be implemented with the LPA and this will include:

(a) measures to ensure that the maintenance and condition of public roads,
(b) traffic monitoring arrangements with local highway authorities;
(c) measures to provide for road safety for the public and construction staff and temporary traffic control measures;
(d) procedures to be followed for the temporary or permanent closure or diversion of roads
(e) installation of any appropriate traffic management signage
(f) measures to be implemented to reduce construction traffic impacts or impacts associated with parking on residential streets;
(g) permitted access routes and accesses for construction traffic;
(h) procedures to address any highway incidents or vehicle breakdowns relating to construction traffic, especially at peak times;
(i) Procedure for use of the narrow access road with English Heritage, including traffic management, early warning of large deliveries and potential traffic light system.

4.13.3 The Contractor will produce traffic management plans as part of their own Construction Health and Safety Plans.

4.14 Transporting the Workforce

4.14.1 Noting there is little contractor parking on this project, Construction Workforce Travel Plans will be prepared by the Main Contractors with the aim of encouraging the use of public or sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses. The plans will include:

(a) identification of a travel plan co-ordinator and a description of their responsibilities;
(b) site activities and surrounding transport network including relevant context plans;
(c) anticipated workforce trip generation and how it may change during the construction process;
(d) travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network;

(e) methods for surveying workforce travel patterns;

(f) process for monitoring and reviewing the construction workforce travel plan.

4.15 Traffic Management Plans

4.15.1 MHPC will ensure that their contractors submit a Traffic Management Plan (TMP) section within their Project Construction Environmental Management Plan (CEMP, CMP or similar) prior to starting works. The TMP will include:

(a) compliance with the routes identified

(b) a list of roads on the wider road network that may be used by direct-to-site construction traffic including any restrictions to construction traffic on these routes;

(c) a register of applications for consents associated with temporary traffic management measures;

(d) emergency access protocols;

(e) dealing with large goods vehicles and abnormal loads;

(f) monitoring for deviation from authorised routes;

4.16 Proposed Overhangs to the Public Highway

4.16.1 Any scaffold overhangs, fans and cranes required for construction activity will be the responsibility of the Contractor to apply for. We do not anticipate any being required.

4.17 Maintaining a Clean Public Highway

4.17.1 The Contractor will be responsible to implement all reasonably practicable measures to avoid/limit and mitigate the deposition of mud and other debris outside of the site boundaries. These measures will have regard to the nature and use of the site(s) in question, and will include:

(a) hard standing at the access and egress points will be cleaned at appropriate intervals;

(b) the correct loading of vehicles and sheeting of loads where necessary to avoid spillage during their journeys;

(c) wheel cleaning measures (wheel wash bay) will be considered to prevent the transfer and accumulation of mud and other granular deposits on the public highway;

(d) the use of mechanical road sweepers combined with water sprays for the suppression of dust to clean hard standings, roads and footpaths in the vicinity of the sites;

(e) the flushing of gullies in the vicinity of the site.

(f) after completion of any works affecting a highway, all surplus materials arising from the works will be cleared from the highway, leaving it in a clean and tidy condition in accordance with the reasonable requirements of the highway authority.

5. Environmental Plans - Ecology

5.1 Ecology Management

5.1.1 The contractor will make a concerted effort to address the impact on any local wildlife and ecology. Appropriate measures will be adopted to protect the ecology of the adjacent areas in which the building is to be constructed.

5.1.2 Where construction works need to be controlled in terms of their potential environmental effects, the contractor' Construction Environmental Management Plan (CEMP or similar document) will be developed by the contractor.

5.1.3 MHPC will require the contractor to manage impacts from construction on ecological resources, including the following:

- protected and notable species;
- habitats and features of ecological importance

5.1.4 Where reasonably practicable, environmental mitigation will be provided through the design and implemented by the contractors. This may require preparatory work to be undertaken ahead of the start of construction to permit timely progress of the programme of work.

5.1.5 Ecological management measures will be undertaken by the contractor, include the following, as appropriate:

(a) identification of features of interest for all known areas of nature conservation which may be affected due to construction;

(b) plans showing the locations of all known areas of nature conservation interest that may be affected due to construction and access routes, and the location of any ecological features which are to be created/installed prior to construction e.g. bat roosting features/boxes.

(c) provision of guidance on ecological best practice methods to be followed in order to mitigate potential ecological effects during construction;

(d) procedures to be adopted in the event of unanticipated discovery or disturbance of protected species or habitats;

(e) actions for the contractor to prevent the spread of invasive species. Report the presence of invasive species if found.

(f) reference to the relevant procedures, including any special measures, to be implemented in the event of a pollution incident, where this occurs on or adjacent to a designated conservation site or where protected and/or notable species are known to be present

(g) individual habitat management plans for:

- European Protected Species e.g. great crested newt, dormice and bats
- Presence of Badgers (note none are currently found)

- Foxes
- Invasive species such as Japanese knotweed

5.1.6 Contractors will, where it is reasonably practicable prevent any urban habitat loss within the grounds required for the project by keeping the working areas to the minimum required for construction.

5.2 Reducing Potential Impacts on Ecology

5.2.1 Measures are to be put in place by the contractor for management of potential ecological impacts as a result of construction relating to:

(a) protection of identified retained habitats
(b) protection of bird nesting habitats
(c) potential destruction of urban wildlife habitats
(d) disturbance of bat presence and bat corridors
(e) protection of arboriculture
(f) control of noise and vibration
(g) control of dust
(h) control of water quality and flow
(i) control of light pollution.

5.2.2 Only use pesticides where specified or approved, and then only suitable products listed on www.pesticides.gov.uk. Work near water, drainage ditches or land drains must comply with the 'Guidelines for the use of herbicides on weeds in or near watercourses and lakes'.

5.2.3 Containers must comply with manufacturer's disposal recommendations. Remove from site immediately empty or no longer required. Operatives using pesticides must hold a BASIS Certificate of Competence, or work under supervision of a Certificate holder.

5.3 Protected Habitats and Species

5.3.1 MHPC require its contractors to obtain and comply with all the requirements of any wildlife licences, including all protected species licences necessary for construction of the projects. The potential wildlife constraints within the site could be:

a) Nesting birds – nesting bird checks will have to be undertaken by a suitably qualified Ecologist on any vegetation clearance that will be conducted during the nesting bird season which is March to September inclusive.
b) Badgers – No badger setts have been found on site. As such, a licenced sett closure will not be necessary, though continues monitoring will be required.
c) Roosting bats – Local trees have been identified within or adjacent to the proposed build development with a low potential to support bats. For those trees harbouring bats, a works

exclusion zone will be set up and a directional lighting plan will be created to minimise disturbance. See the detailed Ecology Co-Op Reported dated Sept 2019 for further details.

5.4 Control of Invasive / Non-Native Species

5.4.1 No cases of Japanese Knotweed have been found in the surrounding area. (**TO BE CONFIRMED BY EH**) Appropriate strategies and measures for the inspection, treatment/control of invasive, non-native species (both plants and animals) and injurious weeds such as Japanese knotweed, Cotoneaster and rhododendron will be implemented across the Site.

5.5 Arboriculture

5.5.1 Only two small trees and one stump are identified as requiring removal by the works, numbers 3, 4 & 23. These trees were found to be in poor health are due to be removed for the benefit of larger nearer trees, a number of new replacement trees will be installed.

5.5.2 A further tree (T26) will be explored for possible removal to enable safe access into site. This small tree is of poor C1 quality and if removed will be replaced by a new tree. Further tree pruning will be explored to facilitate access once the exact access requirements are confirmed by the contractor, however we believe that no further pruning will be required.

5.5.3 Existing trees will remain in place and all works will be undertaken in accordance with the relevant guidelines in BS 5837 (2012) Trees in Relation to Design Demolition and Construction Recommendations and the Planning Conditions, to ensure that any construction within close proximity of these trees is undertaken in accordance with best practice and any potentially adverse impacts are adequately controlled. Construction Exclusion Zones (safe zones) will be set up with fencing around the trees to protect them from accidental damage.

5.6 Tree Management / Protection Plan

5.6.1 Trees which are identified as at risk by the works are to be adequately protected from damage utilising tree protection measures which will include some or all of the following:

(a) preparation of detailed Arboricultural Tree Management Plans / Method Statements for specific operations near trees as required.

(b) Tree Management Plans / Impact mitigation plans produced as part of the Planning Condition Submissions.

(c) access facilitation pruning and lifting of crowns to prevent inadvertent damage.

(d) assessment for bird or bat roosting potential.

(e) assessment of location of roots and identification of the Root Protection Areas (RPA) which will be designated as construction exclusion zones (CEZ) within which trees and soil structure will be protected from activities that have a potential to cause damage.

(f) appropriate Tree Protection Fencing and Barriers. CEZ's will be appropriately protected using approved fencing / isolation methods and ground protection as appropriate.

(g) protection from dust and plant fumes.

(h) supervision of sensitive operations and regular monitoring by an Arboricultural Consultant.

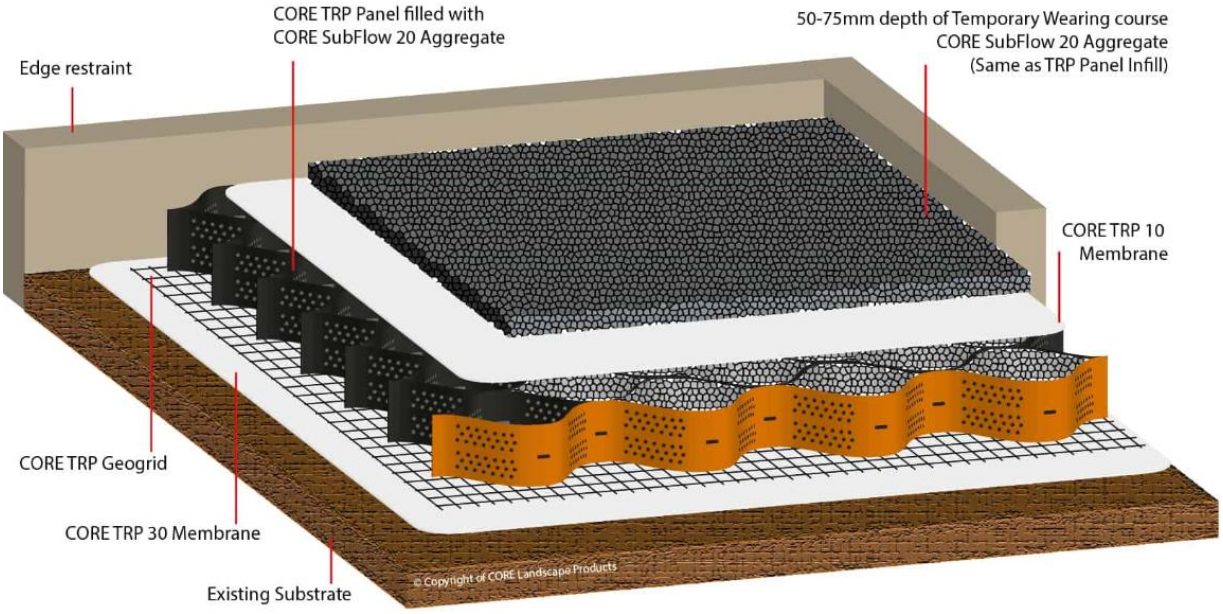
(i) maintenance of vegetation buffer strips, where reasonably practicable;

(j) standard guidance for working within root protection zones (RPZs) including procedures to follow in the event that significant roots are uncovered during work;

(k) Any tree surgery and felling operations will comply with the general principles of *BS 3998 (2010): Tree work - Recommendations.*

(l) Measures to prevent compaction of soils; for example the use of Core Tree Root Protection (APN12 Compliant), which may be needed near the site main entrance gates to protect trees T1 & T25. (see below)

TEMPORARY SITE ACCESS



5.7 Tree planting and replacement

5.7.1 Trees intended to be retained which may be accidentally felled or die as a consequence of construction works will be replaced. Where reasonably practicable, the size and species of replacement trees will be selected to achieve a close resemblance of the original trees most effectively. The supply, storage, handling, planting and maintenance of new planting will be undertaken in accordance with appropriate British Standards, including BS8545 (2014) Trees

from Nursery to Independence in the Landscape – Recommendations, BS 5837(2012) Trees in relation to design, demolition and construction; BS 3998 (2010) Tree Work. Recommendations and BS 4428 (1989) Code of practice for general landscape operations (excluding hard surfaces) and other appropriate guidance.

5.8 Landscape Management

5.8.1 Appropriate controls will be put in place to protect the beauty of the park from construction activities including new designated landscape areas and reconfigured play areas.

5.8.2 Controls will include, as appropriate:

- the sustainable management of landscape issues;
- a plan showing areas of existing trees and vegetation within the site to be retained (and protected), and those to be removed;
- the involvement of an ecological specialist as required, in relation to vegetation clearance and tree works;
- a programme for undertaking any planting works and protection of existing and new areas of planting;
- inspection, maintenance (of up to 5 years) and management of existing and new planting;
- prevention of damage to the landscape and landscape features adjacent to the construction sites by movement of construction vehicles and machinery;
- removal, handling, storage and transplanting of any vegetation which is to be reused, relocated or transplanted;
- provision of suitable specialist landscape management staff with specific responsibility for monitoring and supervising the landscape works,
- contractor tree maintenance/aftercare will be carried out after Practical Completion, with dead/dying trees/plants replaced.

5.9 Earth Removal / Relocation

5.9.1 This project will be undertaking a small amount of subsoil removal around the existing buildings for the replacement building. Topsoil will be separated from earth so as to avoid contaminating the topsoil. If possible, the topsoil will be retained on site for future use and the subsoil will be removed from site for disposal (**process to be agreed with Terra-Firma).**

5.9.2 Demolition waste (hardcore/rubble) will be permitted to be stored on site for reuse later in the project. This will reduce haulage on the road and keep costs low.

5.9.3 MHPC will require its contractors to implement appropriate inspection, monitoring and maintenance of landscaping and planting and seeding works throughout the construction period until PC so all elements remain in good condition until handover.

5.10 Surface Water and Groundwater Management

5.10.1 The installation of a wheel-wash bay will be investigated to avoid spreading earth/dirt throughout the carpark and local roads. This station will be connected to a sump which will itself be regularly cleaned by the contractor. The contractor is to source all permits required.

5.10.2 The contractor is to manage its site activities and working methods to protect the quality of surface water and groundwater resources from other adverse effects,

5.10.3 Given the low level of excavation ground works, ground water monitoring systems will not be required from the contractor during the construction works, however emergency procedures will be implemented in the case of any pollution incidents. Best Practice Management will be used. Where required, the contractor will include arrangements to obtain appropriate approval for works from the relevant regulatory body or statutory undertaker, which could affect any surface water or groundwater resource.

5.10.4 Surface water and groundwater control measures could include the following, as appropriate:

(a) ground water-dependent ecosystems, and ground and surface water which could be affected during construction (including maps and schedules);

(b) plans showing all watercourses, surface water bodies and ground water bodies

(c) plans identifying sources of potential pollution;

(d) plans showing drainage within the site;

(e) a description of the measures to be used to protect surface water and groundwater from pollution, including site good practice and the *EA Groundwater protection: Principles and practice (GP3);* and precautions to be taken to prevent damage to services and to avoid pollution.

5.10.5 No substance that could be harmful to the environment is to be allowed to enter any public or private sewer or watercourse. All waste paint is to be disposed of in a way prevents land pollution e.g. reuse or mix with a proprietary solidifier. If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

5.10.6 MHPC will require its contractors to consult with the relevant regulatory bodies where required, regarding the measures to be implemented to contain and manage surface water run-off from the construction site. In order to prevent deterioration of the water environment and other adverse impacts including changes to flow volume, water levels and water quality. Measures to be implemented will include the following, as appropriate:

(a) use of oil interceptors, if required by the relevant regulatory body or where relevant the statutory undertaker, at site offices and works compounds;

(b) use of pollution shut-off valves in compounds with formal drainage;

(c) obtaining the necessary approval to enable discharge of dewatering, surface water run-off and waste water from the construction site to soakaway or filtration systems, watercourses, foul sewers or disposal off-site;

(d) appropriate measures such as use of bunds of non-erodible material or silt or sediment fences adjacent to watercourses;

(e) implementing a surface water or groundwater monitoring plan, particularly in relation to works which may affect aquifers;

5.11 Control of Pollution, Including Storage and Control of Oils and Chemicals

5.11.1 In relation to storage of any oil-based materials including petrol, diesel, waste and vegetable and plant oil, and above ground fuel and oil storage tanks, MHPC require its contractors to comply with the Control of Pollution (Oil Storage) (England) Regulations 2001, as amended, and the EA *Pollution Prevention Guidelines 2*.

5.11.2 Stationary plant will be used with secondary containment measures such as interceptor drip trays to retain any leakage of oil or fuel, which will be emptied at regular intervals to prevent overflow.

5.11.3 Spillage kits will be stored at key locations on site as set out in the pollution incident control plans, in particular at refuelling areas, spillage kits will also be kept with mobile bowsers

5.11.4 Control plan and in particular at refuelling areas. Spillage kits will also be kept with mobile bowsers.

5.12 Control and Management of Foul Drainage

5.12.1 MHPC will require its principal contractors (and subcontractors) to manage and dispose of foul water and sewage effluents from site facilities, and take the following measures, as appropriate:

(a) containment by temporary foul drainage facilities and disposal off-site by a licensed contractor; or

(b) by preference, connection to the local foul sewer system as agreed with the relevant authorities;

5.12.2 Any foul drainage discharge to the public sewer will require approval from the relevant water company. If not permitted, provisions need to be adopted to remove the liquid from site for disposal, such as via tanker.

5.13 Excavations and Dewatering

5.13.1 MHPC will require its contractors to undertake risk assessments as appropriate associated with any deep excavation work and dewatering impacts on surface water, groundwater and abstractions, where required.

6. Environmental – Noise, Vibration , Air

6.1 Noise & Vibration

6.1.1 Best practice measures will be applied during construction works to minimise noise and vibration impacts arising from construction activities to the local community and any designated quiet areas, neighbouring residential properties, local businesses and offices and the public generally.

6.1.2 Best Practice Means are defined in Section 72 of the *Control of Pollution Act 1974* and Section 79 of the *Environmental Protection Act 1990 and BS 5228-1* as those measures which are practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications.

6.1.3 The equipment and construction plant used by MHPC's Contractors will comply with relevant *EC Directives* and corresponding UK legislation on noise emissions, namely the noise limitations stipulated in *European Commission Directive 2000/14/EC* transposed into *UK Statutory Instrument 2001/1701*.

6.1.4 Contractors will need to identify the sources of likely noise from the major primary activities required in particular the following:

(a) Demolition
(b) Excavations
(c) Piling (if any)
(d) Concreting Operations
(e) Plant and Equipment
(f) Drilling, grinding & hammering
(g) Scaffolding
(h) Construction Traffic
(i) Loading and Unloading Operations
(j) Steel erection
(k) Fabrication work
(l) Generators

6.2 Noise Mitigation

6.2.1 MHPC will require its contractors to consider mitigation in the following order:

(a) ***prediction evaluation*** - understanding noise regulations, legal limits and establishing effective assessments and method statements for managing and monitoring noisy activity and where possible select alternative construction methods

(b) ***noise and vibration control at source*** – where noise is unavoidable consider the selection of quiet and low vibration equipment, the placement of equipment on site, construction activity that can be undertaken off site and programme and methodology to consider quieter methods at times that will not disturb occupants

(c) ***screening*** – utilisation of acoustic enclosures, acoustic barriers, perimeter hoardings and other forms of insulating and shielding and muffling measures

(d) ***out of hours working and quiet periods*** – agreeing with MHPC a plan for undertaking noisy works in short periods with breaks and out of hours where it may affect LOCAL BUSINESSES, administrative workers and students or could affect exam periods. Out of hours working would be by arrangement with MHPC.

6.2.2 The recommendations of *BS 5228 Code of practice for noise and vibration* control on construction and open sites will be implemented.

6.2.3 It is understood that neighbour properties will be particularly susceptible to noise and vibration impacts and every effort will be made to keep noise to a minimum.

6.3 Control of Noise

6.3.1 The effects of noise from construction sites will be controlled by introducing management and if required monitoring processes to ensure that best practice methods are planned and employed to minimise noise during construction. The Contractor will need to produce a Noise Management Plan to be reviewed and agreed by MHPC prior to start on site. The plan will include management and monitoring processes to ensure as a minimum:

(a) integration of noise control into the preparation of method statements;

(b) ensuring proactive links between noise management activities and community relations activities (including neighbours);

(c) preparing details of site hoardings, screens or bunds that will be put in place to provide acoustic screening during construction, together with an inspection and maintenance schedule for such features;

(d) developing procedures for the installation of noise insulation or provision of temporary re-housing and to ensure such measures are, where required, in place as early as reasonably practicable;

(e) developing a noise monitoring protocol including a schedule of locations and stages during construction of the Projects when monitoring will be undertaken, that compliments the MHPC cumulative monitoring schedule;

(f) preparing and submitting Section 61 consent applications (if required);

(g) undertaking and providing to MHPC, and where required the local authority Environmental Health Officer, all monitoring required to ensure compliance with all acoustic commitments and consents; and

(h) implementing management processes to ensure on-going compliance, improvement and rapid corrective actions to avoid any potential non-compliance.

6.3.2 MHPC's Contractors will, as far as reasonably practicable, ensure that the noise from reversing alarms are controlled and limited, the site will be designed to reduce the need for reversing (particularly in public areas). A one-way system is not possible to implement on this constrained site. The use of traffic marshalling with controlled distribution to site will eliminate the need for reversing alarms in most public areas. Where reversing alarms are to be used, this will be managed through the following hierarchy of techniques:

(a) the site layout will be designed to limit and, where reasonably practicable, avoid the need for the reversing of vehicles. The Contractor will seek to ensure that drivers are familiar with the worksite layout;

(b) reversing alarms incorporating one of more of the features listed below or any other comparable system will be used where reasonably practicable;

- highly directional sounders;
- use of broadband signals;
- self-adjusting output sounders; and
- flashing warning lights

6.3.3 Reversing alarms will be set to the minimum output noise level required for health and safety compliance.

6.3.4 A register of plant and equipment and statutory certification will be maintained on site.

6.3.5 Plant and equipment liable to create noise and/or vibration whilst in operation will, as far as reasonably practicable, be located away from sensitive receptors.

6.3.6 All plant, equipment and noise control measures applied to plant and equipment shall be maintained in good working order and operated such that noise emissions are minimised as far as reasonably practicable. As far as reasonably practicable, any plant, equipment or items fitted with noise control equipment found to be defective will not be operated until repaired.

6.3.7 Machines in intermittent use will be shut down or throttled down to a minimum during periods between working. Static noise emitting equipment operating continuously (Generators for tower cranes) will be housed within suitable acoustic enclosures, where appropriate.

6.3.8 Radios / audio equipment will not be allowed on site.

6.4 Control of Vibration

6.4.1 The Contractor will use Best Practicable Means to control ground borne vibration and any consequent ground borne noise. The Contractor will undertake vibration risk assessments, and where significant impact thresholds are expected to be exceeded, The contractor will develop a Vibration Control and Mitigation Plan. The relevant thresholds for determining

significant impacts (for both building damage risk and human disturbance) will be sourced from relevant standards and guidance including *BS 5228 Part 2, BS 7385 Parts 1 and 2, and BS 6472 Part 1*. Where relevant, other stakeholder imposed threshold values will also be complied with particularly in the case of buried utilities infrastructure, and any local vibration-sensitive equipment.

6.4.2 Criteria and/or procedures for vibration control are specified for three purposes and assessed using three different sets of parameters:

(a) to protect the occupants and users of buildings from disturbance, for which vibration dose values are assessed (vibration dose values (VDVs) are defined and their application to occupants of buildings is discussed in *BS 6472- 1 Guide to evaluation of human exposure to vibration in buildings – Vibration sources other than blasting, 2008*;

(b) to protect buildings from risk of physical damage, for which peak component particle velocities are assessed in accordance with *BS 7385-2 Evaluation and measurement for vibration in buildings*. Guide to damage levels from ground borne vibration, 1993;

(c) to protect particularly vibration-sensitive equipment and processes from damage or disruption, for which peak component acceleration, velocity or displacement are assessed as appropriate to each process or item of equipment.

6.4.3 MHPC will require its contractors to notify and consult it and the relevant local authority regarding any works predicted to generate a PPV above 10mm/s. Where it is agreed that there is no reasonable or practicable means to reduce predicted or measured vibration then the contractors will:

(a) In consultation with MHPC, seek to agree with the local authority, monitoring for vibration and strain induced in the building during the works;

(b) In consultation with MHPC, seek to agree with occupiers of properties:

- the surveys to be carried out and any consequent actions;
- any additional reasonable and practicable mitigation to be provided for occupants;

6.4.4 Where the predicted vibration at the foundations of such buildings exceeds 5mm/s PPV then MHPC will require its contractors to undertake an initial structural survey of the building. Based on the survey, the level of vibration above which condition surveys and continuous vibration monitoring are required will be confirmed and agreed with the building owner.

6.4.5 Where the condition and vibration monitoring surveys demonstrate that vibration from the Projects works has given rise to building damage then MHPC will require its contractors to make good that damage.

6.4.6 Protection will be required for any vibration-sensitive equipment/processes. MHPC will endeavour to avoid any impact on sensitive equipment. Any actions to control or mitigate

impacts will be agreed between its contractors and the operator of the equipment. Where a Section 61 consent is in place, the local authority will be notified.

6.4.7 The projects will be considered and identified for the requirement of an application for *Section 61 of the Control of Pollution Act 1974* and agreed with LPA/LBC. For these identified projects MHPC contractors will be requested to obtain consents from LPA/LBC for the proposed construction works, excluding non-intrusive surveys. Applications will normally be made to the relevant local authority for a Section 61 consent at least 6 weeks before the relevant work is due to start.

6.4.8 Details of construction activities, prediction methods, location of sensitive receivers and noise and vibration levels will be discussed with LBC and MHPC both prior to construction work and throughout the construction period.

6.4.9 The "Section 61" projects contractors will follow the requirements of *BS 5228 Code of Practice for Noise and Vibration Control on Construction*, and MHPC will seek to agree with LPA/LBC a common format and model consent conditions for Section 61 applications.

6.5 Noise and Vibration Monitoring

6.5.1 To undertake if required, site-wide noise, vibration and air monitoring through-out the works, with the monitoring locations, and system to be agreed by the Employer. The Employer will have full access to the live on-line monitor reports.

6.5.2 The Section 61 projects contractors shall maintain an overall programme for submitting applications based upon the construction programme and for seeking additional dispensations and variations as required.

6.5.3 The contractor will:

(a) Provide a description of the construction activities and the method of working as well as proposed hours of working;

(b) Establish an inventory of sound power levels, either from measurements, manufacturers' specifications, or *BS 5228* databases;

(c) Use sound power levels, the description of the works and the construction programme to establish predicted airborne noise levels in accordance with *BS 5228: Part 1*. Predicted noise levels will initially be based on construction noise only, 1m from any affected façade containing windows to bedrooms or living rooms in any residential property or noise-sensitive business, and account for acoustic screening;

(d) Identify suitable mitigation measures as appropriate, review BPM and re-work all calculations as necessary;

(e) Take into consideration the needs of local business when planning and mitigating noisy works, in particular that of the local residents and park users.

(f) Adopt appropriate baseline ambient noise monitoring results, from various sources including:

- MHPC's baseline ambient noise and vibration information;
- Measurements by MHPC's other Contractors, where available;

6.5.4 If required, undertake additional baseline noise surveys at the reasonable request of MHPC to monitor local noise and vibration.

6.5.5 Undertake a vibration (and ground borne noise) risk assessment as part of the early planning of the works to establish whether significant magnitudes of vibration which could affect building occupants, or introduce a risk of damage to other infrastructure or buildings, and identify suitable mitigation, control and monitoring strategies;

6.5.6 Seek draft consent conditions from LPA to enable unreasonable or unenforceable conditions to be identified and resolved prior to formal issuing of the consent;

6.6 Air Quality

6.6.1 MHPC will require its contractors to manage dust, air pollution, odour and exhaust emissions during the construction works in accordance with Best Practicable Means. Dust control procedures will be implemented to avoid as far as is reasonably practicable the emission of dust and other particulates that would adversely affect the air quality to ensure there is no significant deterioration of current air quality as a result of construction works.

6.6.2 Prior to starting each construction site an assessment should be undertaken by the contractor to assess the overall risk from atmospheric pollutants from the site following the *GLA* and *IAQM Guidance*.

6.6.3 It is considered that a lot of construction activities during the works are likely to fall into the Medium to High Risk categories owing to the demolition and excavation phases. The contractor's Risk Assessment should examine the specific activities planned for the project, identify the main likely sources of atmospheric pollutants and undertake site and project planning to attempt to minimise these emissions and to place them away from sensitive receptors.

6.6.4 Dust monitoring will comprise agreed monitoring techniques at locations on site boundaries or near to local receptors. Results will be reviewed and available for inspection upon request.

6.6.5 Construction and demolition works will be carried out in such a way as to limit the emissions to air of pollutants particularly dust and fine particles (PM10) and exhaust emissions (NOx). This will include the following as appropriate:

(a) good housekeeping procedures relevant to limiting dust and air pollution;

(b) controls and measures to control or mitigate the effect of potential emissions or nuisance caused by the construction works with the level of mitigation applied consistent with the level of risk identified in the Air Quality Assessment in accordance with the IAQM guidance on the assessment of dust from demolition and construction 2014;

(c) if required, dust and air pollution monitoring measures to be employed during construction of the project;

(d) measures relevant to control risks associated with asbestos dust

6.6.6 Cumulative monitoring of dust and air quality will be undertaken throughout the construction period to enable proactive management of dust levels.

6.6.7 The project will comply with the *Environmental Protection Act 1990* and local policy guidelines to ensure that the developments are managed in a way that is not detrimental to the local amenity or local residents.

6.6.8 Proposed site layouts will be planned to locate machinery and dust-causing activities away from sensitive receptors, where reasonably practicable. Appropriate methods, such as the erection of hoardings or other barriers along the site boundary, will be used, where appropriate, to mitigate the spread of dust to any sensitive buildings or other environmental receptors.

6.6.9 Smoking or the burning of material on site is not prohibited.

6.6.10 Below are the processes and mitigation measures to be explored with the appointed contractor:

Activity	Mitigation Measures	Key
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	Highly Recommended
	Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.	Highly Recommended
	Display the head or regional office contact information.	Highly Recommended
Dust Management	Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site.	Highly Recommended
Site Management	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	Highly Recommended
	Make the complaints log available to the local authority when asked.	Highly Recommended
	Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book.	Highly Recommended
	Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are coordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.	Not Required
Monitoring	Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.	Desirable

Activity	Mitigation Measures	Key
	Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.	Highly Recommended
	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	Highly Recommended
	Agree dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.	Highly Recommended
Preparing and maintaining the site	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible	Highly Recommended
	Erect solid screens or barriers around dusty activities or the site boundary that are, at least, as high as any stockpiles on site.	Highly Recommended
	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	Highly Recommended
	Avoid site runoff of water or mud.	Highly Recommended
	Keep site fencing, barriers and scaffolding clean using wet methods.	Highly Recommended
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.	Highly Recommended
	Cover, seed or fence stockpiles to prevent wind whipping.	Highly Recommended
Operating vehicle/machinery and sustainable travel	Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London NRMM standards, where applicable	Not Applicable
	Ensure all vehicles switch off engines when stationary - no idling vehicles	Highly Recommended
	Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.	Highly Recommended
	Impose and signpost a maximum – speed-limit of 10mph on surfaced and 10mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).	Desirable
	Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.	Highly Recommended
	Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)	Desirable
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	Highly Recommended
	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	Highly Recommended
	Use enclosed chutes and conveyors and covered skips.	Highly Recommended

Activity	Mitigation Measures	Key
	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	Highly Recommended
	Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Highly Recommended
Waste Management	Avoid bonfires and burning of waste materials.	Highly Recommended
Demolition	Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	Desirable
	Ensure water suppression is used during demolition operations. . Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. . In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.	Highly Recommended
	Avoid explosive blasting, using appropriate manual or mechanical alternatives.	Highly Recommended
	Bag and remove any biological debris or damp down such material before demolition.	Highly Recommended
Earthworks	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	Highly Recommended
	Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable	Highly Recommended
	Only remove the cover in small areas during work and not all at once	Highly Recommended
Construction	Avoid scabbling (roughening of concrete surfaces) if possible	Desirable
	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Highly Recommended
	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	Desirable
	For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	Desirable
Trackout	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	Highly Recommended
	Avoid dry sweeping of large areas.	Highly Recommended
	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Highly Recommended
	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	Highly Recommended
	Record all inspections of haul routes and any subsequent action in a site log book.	Highly Recommended
	Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.	Highly Recommended

Activity	Mitigation Measures	Key
	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	Highly Recommended
	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	Highly Recommended
	Access gates to be located at least 10m from receptors where possible.	Highly Recommended

6.7 Control of Emissions from Construction Plant and Equipment

6.7.1 Vehicles that are under the control of the contractor will be required to meet as minimum *Euro VI emission standards*.

6.7.2 All Non-Road Mobile Machinery (NRMM) shall comply with the *Non-Road Mobile Machinery (Emissions of Gaseous and Particulate Pollutants) (Amendment) Regulations 1999* (including latest applicable amendments). All NRMM will use fuel equivalent to ultra-low sulphur diesel.

6.7.3 All NRMM with a power output above 37kW will be fitted with suitable after-treatment devices that are on the approved list of the *Energy Savings Trust* or have an equivalent or better performance for emissions of NOx and PM_{10}.

(a) Measures will be implemented to limit emissions from construction plant and vehicles, which will include the following, as appropriate:

(b) operation of construction plant in accordance with the manufacturer written recommendations;

(c) vehicles and plant will be switched off and secured when not in use;

(d) vehicle and construction plant exhausts to be directed away from the ground and be positioned at a height to facilitate appropriate dispersal of exhaust emissions;

(e) using low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices.

(f) the enclosure, shielding or provision of filters on plant likely to generate excessive quantities of dust beyond the site boundaries;

(g) devices such as dust extractors, filters and collectors will be used on drilling and sawing equipment;

(h) movement of construction traffic around the site will be controlled by the contractor and kept to the minimum reasonable for the effective and efficient operation of the site and construction of the projects;

(i) use of tower cranes to reduce vehicle movements;

(j) construction plant will be located away from site boundaries which are close to sensitive receptors where reasonable and practicable;

(k) a drop-off Zone for receipt of site deliveries and unloading will be designed to minimise the requirement for onsite plant. Scheduling of deliveries will be in place;

(l) the use of diesel or petrol powered generators will be reduced by using mains electricity or battery powered equipment where reasonably practicable;

(m) non-road mobile machinery will use ultra-low sulphur diesel, where reasonably practicable;

(n) cutting and grinding operations will be conducted using equipment and techniques which reduce emissions and incorporate appropriate particle suppression measures;

(o) damping down of dust generating equipment and road surfaces where dust may be generated

(p) measures to keep roads and accesses clean;

(q) vehicle, plant and equipment maintenance records will be kept on site and reviewed regularly.

(r) using ultra low sulphur fuels in plant and vehicles where possible.

(s) all project vehicles will hold current MOT certificates, where applicable to demonstrate that they will comply with exhaust emission regulations for their class. (European Emission Standards pursuant to the *EC Directive 98/69/EC*)

6.8 Control of Dust and Emissions from Demolition Activity

6.8.1 Any appointed demolition contractors will be required to provide Demolition Plans for demolition and associated activity. The methodology will be dictated by the type of construction and other influencing factors, such as the location of adjacent buildings and noise and dust generation

6.8.2 Dust pollution from demolition activities will be limited through the use of the following measures, as appropriate:

(a) stripping of insides of buildings before demolition;

(b) buildings or structures to be demolished will be sprayed with water or screened as necessary, prior to and during demolition;

(c) rubble chutes will be shielded or enclosed or water used to suppress dust emissions from such equipment;

(d) skips and bins are to be covered and secured;

(e) burning of any material will not be permitted on sites;

(f) avoidance of the prolonged storage of waste materials on site;

(g) removal of waste from the site will comply with the requirements of this CMP relating to the transportation of materials

6.8.3 Existing concrete and brickwork will be reused on site in order to reduce costs and additional haulage. However it may need to be crushed on site which typically caused noisy and dust

issues. The position and the specification of the concrete crusher will be selected to machine will be chosen to minimise impacts on local residents. The crushed concrete will also be dampened down to minimise dust.

6.9 Control of Dust and Emissions from Excavations Activity

6.9.1 Dust pollution from excavations and earthworks activities will be limited through the use of the following measures, as appropriate:

(a) excavated material to be carted away will be loaded using minimum 'drop heights' from excavators into vehicles involved in the transport of excavated material;

(b) imported bedding and backfill material that could generate dust such as gravels and sands are to be kept damped down prior to being placed into excavations

(c) compacting and rolling of large areas of excavated areas, and spreading of fill is to be undertaken using dust damping down measures

(d) ensure there are adequate wheel-wash facilities provided at site exit, wherever there is to be significant excavation works and where there is adequate space to locate these.

(e) ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit.

(f) re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil.

6.10 Control of Dust from Material Transportation, Storage and Handling

6.10.1 The unloading, storage and handling of construction materials can be a significant source of dust emission. The adoption of appropriate control measures will be applied starting with storage areas being sited in locations away from work areas where operatives and public can be exposed to the effects of any emissions

6.10.2 Dust and air quality management measures will be implemented to limit pollution arising from the transportation and storage of materials, including the following, as appropriate:

6.10.3 covering materials, deliveries or loads entering and leaving the construction site for the purposes of preventing materials and dust spillage.

6.10.4 vehicles transporting materials within or outside the construction site will not be overloaded;

6.10.5 stockpiles and mounds will be kept away from sensitive receptors where reasonably practicable and sited to take into account the predominant wind direction relative to sensitive receptors;

(a) materials stockpiles likely to generate dust will be enclosed or securely sheeted, kept watered or stabilised as appropriate;

(b) fine dry material will be stored inside buildings or enclosures with measures in place to ensure no escape of material and of overfilling during delivery;

(c) mixing of large quantities of concrete will be undertaken in enclosed areas or shielded;

(d) the number of handling operations for materials will be kept to the minimum reasonably practicable;

(e) materials handling areas will be maintained to constrain dust emissions through the use of measures such as damping facilities or others appropriate to reduce or prevent escape of dust

6.11 Control of Dust on Temporary Haul Routes

6.11.1 In the park and site compound, haul routes will be required to relocate the stored material, and also to enable material distribution. The material selected for the temporary road will be agreed with MHPC and a low dust material will always be recommended. This road will also receive regular cleaning / damping down when required.

6.11.2 For cost purposes tarmac and/or MOT / crushed concrete will be used for the road way, and a 4ft strip of tarmac or crushed concrete for foot traffic, with a temporary fence between.

6.12 Control of Dust on Highways

(a) Where required, use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site.

(b) Avoid dry sweeping of large areas.

(c) Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.

6.13 Air Quality Monitoring

6.13.1 Air quality monitoring can be a valuable tool for dust management on site and this will be implemented where risk assessments on typical construction activities have identified a high risk site. At all sites, the general principles from the GLA guidance for air quality would be followed. It is recognised that the most sensitive receptors during some of the planned works will be the local neighbours.

6.13.2 During all construction works, regular visual inspections would be undertaken by the responsible person to identify dusty activities and to ensure that the appropriate planned mitigation is being used. Where visible dust is seen, further mitigation measures (usually the use of water sprays) will be applied to reduce these as far as practicable.

6.13.3 Dust and air quality monitoring will be undertaken across the programme to manage cumulative impacts, including PM10 monitoring and dust soiling rates. Monitoring stations will be located at the MHPC boundary adjacent to construction activity and at opposite ends of the works so that the contribution by the Programme of work can be determined. Based on pre start monitoring baseline data action trigger levels will be determined and where these

levels are breached this will be investigated by MHPC and the appropriate Construction Manager to determine if the construction activities were responsible and appropriate action will be taken.

6.14 Light Pollution

6.14.1 In determining the temporary lighting arrangement on projects, consideration will be given to local residents and other sensitive receptors that may experience a nuisance by light. Where appropriate, measures will be implemented to reduce obtrusive light. No hoarding lighting will be installed.

6.14.2 Where possible, daylight only construction schedules will be adopted to minimise adverse lighting. It is unavoidable that construction work will require work during the hours of darkness over the winter months.

6.14.3 Where appropriate the following measures will be considered for implementation:

(a) dim or switch off lights where it is safe to do so
(b) use specifically designed low lighting equipment that reduces the effects of pollution
(c) consider careful location of lights required for the works
(d) avoid flood-lighting in areas adjacent to sensitive receptors i.e. nearby residential properties
(e) where light glare may cause a nuisance, light shielding will be considered.
(f) use of timers and sensors for switching off lights

6.15 Controls for Ground Settlement

6.15.1 Techniques for controlling settlement of buildings and protecting buildings from irreparable damage are well developed for projects. The Contractor will have the responsibility to implement all the required and appropriate techniques in order to control and limit, as far as reasonably practicable, the effects of settlement which would be generated by this project.

6.15.2 An assessment will be carried out using established methods to identify the risk of damage to buildings. Details of any necessary protective works, including their design and method of implementation will be established and agreement sought with the building owner, prior to protective works being carried out.

6.15.3 Nearest building is over 10 meters away from the demolition, as the buildings planned for demolition are low-rise and of lightweight construction, structural condition surveys of adjacent buildings are unlikely to be required.

6.15.4 Due to the distance to local buildings, the monitoring of ground movement/settlement is not expected to be required.

6.16 Controls for Contamination and Discovery

6.16.1 Any site assessment and remedial works required will be undertaken in accordance with

DEFRA/ Environment Agency's Model Procedures for the Management of Land Contamination (CLR11)

6.16.2 The contractor will adhere to the Planning Conditions and any LPA required Contamination Remediation Plan, which is to be formally submitted to the LPA upon the Contractor's appointment for formal approval.

6.16.3 Adequate site investigation data will be used to enable an assessment of the possible adverse effects arising due to land affected by contamination, the development of appropriate construction methods and design of appropriate mitigation to be undertaken. Additional site investigation work will be undertaken, if necessary and this will include the following, as appropriate;

(a) historical and current land uses;
(b) historical and current activities, processes and waste products;
(c) geological and hydrogeological setting;
(d) existing results of soils, gas, surface water and groundwater
(e) monitoring/sampling/testing; and
(f) appropriate risk assessments

6.16.4 Report immediately any suspected materials discovered during execution of the Works. Agree methods for safe removal or encapsulation with the Local Planning Authority.

6.16.5 Site investigations will be undertaken in accordance with the following;

(a) BS 10175:2011 Investigation of potentially contaminated sites. Code of practice;
(b) BS 5930:1999 & A2: 2010 Code of practice for site investigations;

6.16.6 Relevant local authorities and the EA will be consulted regarding site investigations for areas of land affected by contamination and, where appropriate, the risk to ground and water resources, processes and abstractions will be assessed.

6.16.7 Measures to be implemented will include, as appropriate, undertaking ground investigation work, risk assessments, monitoring of ground movement, groundwater and ground gas, and undertaking structural or condition survey of buildings or structures adjacent to the works where there may be potential risks of ground movements which may damage structure

7. Waste Management

7.1 General

7.1.1 It is the Contractor's responsibility to remove his waste from site. Waste will be transferred to a licenced off-site transfer station for further segregation and recycling. Where possible 40 yard skips (or generally larger sized skips) will be used to reduce the number of vehicle movement.

7.1.2 A construction site waste management plan (SWMP) or similar, will be required from the contractor.

7.1.3 Demolition waste will be managed separately by the demolition contractor, but will follow the principles of the *SWMP Regulations 2008 (now revoked) or similar.*

7.1.4 The disposal of waste generated during the construction of Projects including any surplus spoil will be managed to maximise the environmental and development benefits from the use of surplus material and to reduce any adverse effects of disposal

7.1.5 In general the principles of the waste management hierarchy will apply which favours waste minimisation, reuse of materials and recycling over disposal to landfill.

7.1.6 The principle objectives of sustainable resource and waste management are:

(a) to use material resources more efficiently,

(b) reduce waste at source

(c) reduce the quantity of waste that requires final disposal to landfill in accordance with the waste hierarchy.

(d) These are to be translated to the Projects as follows

(e) the application of designing-out waste principles to minimise construction waste;

(f) working towards a cut and fill balance in relation to excavation arisings;

(g) the part segregation of construction and demolition materials on-site and further segregation through the waste contractor, to maximise diversion from landfill via re-use, recycling and recovery.

7.1.7 MHPC require its contractor to undertake regular audit and inspection of waste management activities to ensure compliance with the requirements of statutory controls.

7.1.8 The types, quantities and fate of waste generated during the construction process shall be identified, measured and recorded. This information shall be reported on a periodic basis to facilitate monitoring against any MHPC key performance indicators and to measure progress against any waste reduction performance targets that may apply.

7.1.9 A register of all waste loads leaving the site will be maintained to provide a suitable audit trail for compliance purposes and to facilitate monitoring and reporting of waste types, quantities and management methods.

7.2 Minimising Waste Generation

7.2.1 MHPC will require that its contractors act to minimise the waste generated from their construction activities where reasonably practicable. This will include measures such as 'just-in-time' deliveries, careful storage of materials on-site, minimisation of packaging and use of re-usable packaging etc.

7.2.2 All waste will be managed in accordance with the waste hierarchy (i.e. prevention, preparing for re-use, recycling, other recovery and disposal as set out in the *Waste (England and Wales) Regulations 2011*), and in such a way as to prevent harm to human health, amenity and the environment. Waste management measures will be prepared that facilitate the re-use and recovery of material and diversion of waste from landfill in line with the waste hierarchy.

7.2.3 MHPC will require its contractors to maintain responsibility for the management of waste generated from their project. The contractors' staff will be suitably trained to undertake these duties, which will include, waste management handling, inspection and reporting.

7.3 Management of Excavated Material Waste

7.3.1 Excavated material that is either uncontaminated or which can be remediated to a suitable standard and can be used for site engineering and restoration purposes will be managed in accordance with the controls specified by the *CL:AIRE Definition of Waste: Development Industry Code of Practice* and/or in accordance with an appropriate environmental permit or exemption from permitting.

7.3.2 Materials Management Plan(s) (MMP) where applicable will be developed describing the methods for reusing soil waste generated from sites. The movement and placement of materials will be as described in the MMP tracking system and recorded in a verification report for each site. This will help to maximise opportunities for re-use of excavated material.

7.3.3 In line with the Best Practicable Environmental Option (BPEO), and the waste hierarchy, opportunities for the use of excavated material within habitat creation, or landscaping schemes will be explored where possible, in order to avoid sending [uncontaminated] material to landfill, but that this will be subject to logistical arrangements and the availability of potential 'receiving projects' at the post-planning stage.

7.4 Segregation and Storage of Waste

7.4.1 Skips and other storage receptacles will be sheeted, and bins will remain lidded or closed, during times when waste is not being deposited into them. They will also be covered to prevent the escape of waste whilst in transit and loaded for maximum payload efficiency.

7.4.2 Skips and storage receptacles shall be inspected on arrival to ensure they are fit for purpose.

7.4.3 Mixing of inert, hazardous and non-hazardous wastes, either whilst stored on-site or upon collection will not be permitted.

7.4.4 Liquid wastes will be stored on hard-surfaced areas with secondary containment systems to prevent spillages.

7.4.5 The storage and segregation of waste will comply with any air quality management measures that are necessary to prevent harm to human health, amenity and the environment through nuisances such as dust, odour or pests.

7.4.6 Waste bins will be used for the collection and storage of waste within site boundaries to facilitate the segregation of waste for re-use, recycling and recovering where appropriate.

7.5 Waste Control during Construction

7.5.1 The contractor will ensure minimisation of wastes arising on site and reuse where possible either directly or by recycling using the bins provided.

7.5.2 Initiatives to reduce other waste streams will include as far as practically possible:

(a) Minimising raw material waste through analysing design and construction techniques where possible;

(b) Making a commitment to develop waste minimisation opportunities by maintaining a role in the management of the supply chain during construction.

(c) Liaison with suppliers to enable packaging material to be sent back for reuse, the use of off-cuts where possible and the recycling of off-cut material by the supplier

(d) Engaging subcontractors in the process of maximising the use of recycled aggregates hard-core and alternative cements according to application ;

7.5.3 To ensure compliance with legislative requirements only Environment Agency licenced waste hauliers, waste management contractors and approved landfill sites will be used.

7.5.4 Suitable protection measures will be incorporated in the design of the waste management areas to prevent pollution and regular inspections carried out.

7.5.5 Movement of waste from site will be in vehicles that are properly covered and inspected prior to entry onto public highways.

7.5.6 Waste transfer notes will be retained and will fully describe the waste in terms of type, quantity and containment.

7.6 Duty of Care Requirements

7.6.1 MHPC will require its contractors to maintain a duty of care at all times to ensure that waste generated during the construction period is handled in accordance with the relevant legislation governing its storage, transfer, treatment and disposal.

7.6.2 Demolitions Contractors will be expected to put in place all relevant authorisations prior to the removal of any waste from site and maintain a register of this information. This will be in relation to the transfer of waste (waste carriers); any off-site waste management facilities (permitted or exempt sites) to which waste is taken to and any requirements for hazardous waste premises

notification.

7.6.3 MHPC will ensure that an environmental permit or registered exemption is in place prior to any on-site transfer, treatment or disposal of waste being undertaken, if required.

7.6.4 Any waste leaving the site will be accompanied by appropriate duty of care documentation in line with the relevant statutory requirements for waste transfer and hazardous wastes (as appropriate). Duty of care documentation will be retained by the contractors in line with statutory requirements.

7.6.5 Contractors will maintain a register of all waste loads leaving the site and/or a tracking system for excavated material destined for reuse to provide a suitable audit trail and to facilitate monitoring and reporting of waste and material types, quantities and management methods.

8. Archaeology

8.1.1 Through either a Heritage Statement or a desk based assessment and/or pre-construction field investigations if necessary, MHPC will identify already known areas of archaeological interest which may exist on the site and to reduce the construction effects on these areas. Subject to the LP's requirements a Watching Brief will be put in place and adhered to by the contractors.

8.1.2 Although the full Watching Brief or overall process has not yet been formalised with the LPA, the below are standard Watching Brief requirements the Contractor may be required to adhere to:

(a) A MHPC or Contractor's appointed Archaeologist will be in attendance through-out stages of ground excavation.

(b) The contractor will monitor the excavations for all groundworks. Excavation should be undertaken using a flat bladed bucket and preferably in a single direction to enable archaeological remains to be recorded prior to disturbance from being driven over. If possible archaeological remains are encountered, machine excavation will cease to allow the remains to be investigated further.

(c) The Archaeologist will inspect the surfaces revealed. Any archaeological structures or features revealed will be recorded in plan and section as appropriate. The main contractor will allow the archaeological contractor reasonable time and resources to undertake any inspection or recording required.

(d) Further limited excavation may be necessary to clarify the extent and nature of some archaeological deposits. In this case, the archaeological contractor will undertake the excavation by hand.

(e) If significant remains are unexpectedly encountered the archaeological contractor will inform the LPA and/or County Archaeological Officer and the Employer immediately and further mitigation measures will be agreed.

(f) In such circumstances all works will cease in the vicinity and an exclusion zone will be established until further advice has been obtained from a specialist archaeological consultant.

8.1.3 The Principal Stages for handling archaeology in the planning process, in line with the *Government's Planning Policy Statement 5 (PPS5)* are:

(a) Pre-Determination:

- Desk-based assessment

(b) Post-Determination:

- Field Evaluation
- Preservation in situ
- Preservation by record (excavation)

(c) Public dissemination of results

9. Culture / Heritage

9.1.1 Heritage and Townscape Assessments as well as Archaeological Statements will be undertaken and issued to the Main Contractor for consideration when finalising the Construction Management Plan.

9.1.2 MHPC and its Principal Contractors will manage the impact of construction works on cultural heritage assets, which will include:

(a) designated assets: scheduled monuments, listed buildings and conservation areas;

(b) non-designated assets: archaeological and palaeo-environmental remains including geological deposits that may contain evidence of the human past, historic landscapes and historic buildings and the built environment and locally designated assets.

9.1.3 All works will be managed in accordance with accepted industry practice and guidance, taking account of the relevant sections of the *National Planning Policy Framework (NPPF) (2012)*.

9.1.4 General cultural heritage management measures will include:

(a) provision to relevant contractors of locations and descriptions of all known cultural heritage assets within and adjacent to, construction works, including restrictions to construction methods to protect cultural heritage assets, where these have been identified;

(b) a programme detailing the implementation of cultural heritage investigation works prior to and during construction;

(c) that the cultural heritage works are properly programmed by the principal contractor;

(d) contractors monitoring compliance against the programme of cultural heritage investigation works using appropriately qualified environmental management staff;

(e) contractors facilitating archaeological and built heritage specialists undertaking the works as specified as an appropriate mitigation measure;

(f) all archaeological, built heritage and historic landscape intervention, recording, analysis, dissemination and archiving will be undertaken by a suitably qualified and demonstrably experienced organisation; and

9.1.5 MHPC and the project team will ensure that where required, suitable measures and procedures will be developed in consultation with Historic Buildings and Monuments Commission for England and the local authorities and will include the following, as appropriate:

(a) implementation of controls to avoid damage by settlement where reasonably practicable (and to record effects should these occur) to structures of historic importance or interest and

the movement of construction vehicles and machinery as they relate to areas of heritage interest that may comprise standing archaeological remains and historic buildings;

(b) development of procedures for topsoil stripping and excavation before commencement of such works and the interface of those works with archaeological investigations, including procedures to be adopted in the event of a potentially nationally significant unanticipated discovery or disturbance of significant archaeological remains;

(c) procedures adopted to preserve archaeological remains in situ beneath earthworks;

(d) procedures for the recording, dismantling and re-erection of buildings of heritage significance;

(e) management of protective measures that will be implemented for heritage assets that are to be retained within the land required for construction;

9.2 Human remains

9.2.1 Should human remains be found during construction, MHPC and its contractors will immediately cease works, call the local police and comply with all relevant legislative and project specific requirements.

9.3 Treasure Act

9.3.1 Should during the course of construction artefacts be located that are deemed by their material content or context to be treasure, as defined by the *Treasure Act 1996*, then all necessary measures to comply with the requirements of the Act and any project specific requirements will be implemented.

9.3.2 The Act declares that any 'treasure' must be reported to the local coroner within 14 days of the find. The contractor will report immediately any fossils, antiquities and other objects of interest or value discovered during execution of the works. Keep objects in the exact position and condition in which they were found.

9.4 Written Scheme of Investigation

9.4.1 If required a project-wide generic written scheme of investigation (WSI) will be prepared in advance of site preparation and construction, in consultation the Local Authority. This document will detail the generic principles, standards, methods and techniques to be employed on the project for cultural heritage works.

9.4.2 A site specific WSI will be developed for site areas of specific cultural heritage works.

9.4.3 All cultural heritage works will be undertaken in accordance with the generic and site specific WSIs.

10. Other Site Rules

10.1.1 The contractor will be responsible for the safe management of the site(s). However in addition to his standard site rules, MHPC aim to improve the industry standards by:

10.1.2 The Contractor shall not allow his employees, operatives or those of his sub-contractors to bring any animals onto the site, at any time.

10.1.3 The Contractor must ensure that all his employees, operatives or those of his sub-contractors use appropriate language and do not swear whilst on Site or outside site.

10.1.4 Drinking of alcohol and taking of drugs by persons working on the site will not be permitted.

10.1.5 All site operatives will maintain high levels of PPE whilst on site in line with statutory requirements, contractors shirtless/topless or wearing unsuitable or inflammatory clothing will not be allowed.

10.1.6 The use of radios / loud speakers will not be permitted.

10.1.7 Safe access routes will be required through-out the site to enable accompanied visitors.

10.1.8 The contractor will actively assist English Heritage, where use of a shared access road is required.

10.1.9 The contractor will prevent excessive electromagnetic disturbance to apparatus outside the site.

11. Security and Safety

11.1 Public Safety

11.1.1 The MHPC Safety policy should be taken into consideration by all appointed contractors when producing their Health and Safety Plans. It is accepted that contractors will use their organisations processes and documents for such plans however acknowledgement and understanding of MHPC policies are required within any MHPC related project safety plan.

11.1.2 Contractor's Health and Safety personnel are encouraged to liaise closely with MHPC Health & Safety Officer throughout the life cycle of a project.

11.1.3 Public safety will be high priority on both MHPC and the appointed contractor's agenda during a construction project.

11.1.4 Contractors will carry out the following in order to make sure that the public are safe during construction work in conjunction with their organisational best practice for public safety;

- Ensure the erection of hoarding around the site perimeter to prevent public trespassing before any works start
- Security or locks on each access gate
- All scaffolding to have netting and kickboards in place
- Temporary pedestrian walkways with overhead cover protection (if required)where the site is restricting dedicated routes
- No materials to be lifted by a crane outside of the site boundaries unless otherwise notified and area closed from public access
- Segregation of contractor parking and public parking.

11.2 Security Plan and Interface

11.2.1 Contractors will employ an independent security company as appropriate to manage site security.

11.2.2 The contractor's will develop a site security plan and the approach to management of security during the construction phases of any MHPC project.

11.2.3 24/7 CCTV will be explored with the contractor.

11.2.4 Contractors will liaise with each-other to communicate security matters and any out-of-hour works/visits.

11.3 Emergency Response Team

11.3.1 Appointed contractors will develop an Emergency Response Plan. This plan will include procedures to address all foreseeable situations that may occur during construction. This will be for discussion with the local police.

11.3.2 The contractor is responsible for carrying out site safety inductions which will include information regarding instances of emergency response. The construction site will also have a dedicated access point for emergency response teams.

11.4 Incident Management

11.4.1 The appointed contractor shall implement their own incident management procedures for all incidents associated with their project.

11.5 Terrorism

11.5.1 In the event of a terrorism act that directly targets the project, the contractor's Major Incident Plan will be initially implemented in the event of terrorism and associated processes followed, however the Police and national security services will be contacted immediately and will take control of the surrounding area.

11.5.2 Contractors are responsible for evacuating all worksite personnel and securing the site from public access until an emergency response team can attend the site.

11.5.3 The aftermath of a terrorist attack on a construction site will require the contractor, Employer and the Police to meet together to discuss the path forward according to the Major Incident Plan structured procedures.

11.6 Fire Control

11.6.1 All construction sites and associated accommodation and welfare facilities will have in place appropriate plans and management controls to prevent fires.

11.6.2 Contractors must comply with 'Fire Prevention on Construction Sites'.

11.7 Worksite Security

11.7.1 Construction worksites will be under the control of the appointed contractor, which have a statutory duty to prevent unauthorised access to the site. The contractor will carry out site specific assessments of the security and trespass risk at each site and implement appropriate control measures.

11.7.2 The following measures may be used by the contractors to prevent unauthorised access to the site:

(a) use of high perimeter fencing or hoarding but only where necessary for site security and public safety;
(b) site lighting at site perimeters;
(c) adequate security guards and patrols;
(d) CCTV and infrared surveillance and alarm systems where required;
(e) communications initiatives for local community to warn of emergency situations
(f) consultation with neighbours on site security matters through the community liaison team;

(g) consultation with local crime prevention officers on security proposals for each site

(h) immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding to gain access to restricted areas and neighbouring properties.

(i) Notices to park users advising on the method for retrieving footballs / kites etc which have inadvertently entered site during its closed hours.

11.8 CCTV Requirements

11.8.1 At the outset, it's important to for the appointed contractor to consider what the CCTV system being installed is there to achieve. It can offer a deterrent against malicious damage, arson, or theft attacks. It can also help provide prosecution evidence for the police.

11.8.2 These intentions will determine the type of system and equipment required. If required and utilised the contractor will install CCTV around their worksite as part of their Site Security Plan.

11.8.3 The contractor must comply with best practice requirements for CCTV and their published CCTV policy document which outlines MHPC's objectives of safeguarding personal data and movement.

11.9 Site Work Induction

11.9.1 The contractors will provide site inductions to all visitors and staff.

11.9.2 Once inducted, the Employer / Employer's Agents will have free access to site.

11.10 Unexploded Ordinance (UXO)

11.10.1 The Employer or contractor will agree the appointment a UXO surveyor prior to ground excavations on site.

11.10.2 The appointed contractor will carry out risk assessments for the possibility of unexploded ordnance being found within construction areas. An emergency response procedure will be prepared and implemented by the contractors to respond to the discovery of unexploded ordnance.

11.10.3 This will include notifications to the Employer / PM, relevant local authorities and emergency services.

11.10.4 If required a desk base UXO assessment will be undertaken, and the report will be made available to all contractors/sub-contractors prior to commencement so all recommendations can be implemented.

11.11 Park Events (Additional Management)

11.11.1 MHPC will identify keys events that will produce larger crowds than originally anticipated by the contractor in their security management plan and issue a notice prior to the event occurring. The contractor will be expected to organise deliveries outside of these event times

as well work closely with EH and MHPC in order to minimise impact on both parties.

11.12 Security Perimeters

11.12.1 All construction sites will have secure perimeters to protect the community from construction work. The following measures will be applied, as appropriate:

(a) maintenance of adequate fencing and hoardings to an acceptable condition to prevent unwanted access to the construction site, to provide noise attenuation, screening, and site security where required. This will include the need to provide viewing points at relevant locations, if appropriate;

(b) use of different types of fencing, including hoardings used for noise control;

(c) painting the side of hoardings facing away from the site, and to keep them free of graffiti or posters;

(d) providing site information boards with out of hours contact details, telephone number (for comments/complaints), and information on the works programme, at key locations;

(e) displaying notices on site boundaries to warn of hazards on site such as deep excavations, construction access, etc.;

(f) providing signage to indicate re-routed pedestrian/cycle paths;

(g) providing information on routes to alternative community facilities;

(h) displaying notices confirming that facilities and / or businesses whose access or view may be affected by construction works, remain open with directions for how to access them;

(i) maintenance of protective fencing (Heras or equivalent) and/or specialist fencing (e.g. reptile fencing) to protect environmentally sensitive features during construction; and

(j) retaining existing walls, fences, hedges and earth banks for the purpose of screening as far as reasonably practicable.

(k) Installation of 'no access' signage to the north side access road, except for construction or EH vehicles.

(l) Notices to park users advising on the method for retrieving footballs / kites etc which have inadvertently entered site during its closed hours.

11.12.2 Design of hoardings around construction activities shall ensure fitness for purpose and include consideration of the character of the surrounding landscape (e.g. solid hoarding in urban areas, use of artwork where appropriate). Fencing and hoarding shall be kept well maintained throughout construction.

11.12.3 Clear sight lines will be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable, opportunities for anti-social behaviour and crime and to ensure safety of vehicles. Footways of adequate width to facilitate pedestrian flows will be provided with signs provided to facilitate safe access around the site boundary. Adequate lighting will be installed near hoardings.

11.12.4 Businesses located close to hoardings will be consulted on their design, materials and construction to reduce impacts on access to and visibility of their premises.

11.12.5 Fencing and hoarding will, as far as is reasonably practicable, be located such that it does not damage sensitive habitats, trees or hedgerows.

12. Community, Stakeholders and Communication

12.1 Local Communities

12.1.1 MHPC have a strong relationship with the community and endeavour to maintain and improve relations during all stages of a project. MHPC will focus particularly on the groups who may be directly affected by construction impacts including local residents, businesses, land owners, community resources and existing users of Marble Hill Park.

12.1.2 A full Stakeholder Schedule will be developed to record and monitor the nature of liaison with each stakeholder.

12.1.3 A Project Comms Team will be appointed to the MHPC Project Team.

12.1.4 Stakeholder Leads will be appointed as single points of contact for each key stakeholder.

12.1.5 The scale and duration of the MHPC development plans means that a Community Liaison Working Group will need to be established. The group would comprise of representatives from:

(a) MHPC Project Management Team
(b) MHPC Communications Team
(c) English Heritage
(d) Neighbourhood Representatives
(e) The Project Manager
(f) Project Stakeholder Lead (as required)

12.1.6 The Group should sit at regular intervals to manage the concerns of both MHPC Community and Wider Local Neighbourhood Community during the life of the development works.

12.1.7 This Group will provide appropriate information and be the first point of contact to resolve any community issues. The contractor delivering the MHPC project will have an appointed community relations personnel who will work closely with the MHPC community liaison team in order to provide the most up to date news and information on that project.

12.1.8 The Group should be a proactive forum for communicating and reporting on the following:

- Health and Safety Issues
- Environmental concerns
- Programme of works update.
- Initiatives
- Key Upcoming Major Construction Activities that may impact the Community
- Traffic Management Issues
- Pedestrian & Cyclist Routes
- Signage and Wayfinding
- Planning – Community Engagement Plans
- Complaints
- Park Events

12.2 Public & Park Users

12.2.1 Construction will inevitably temporarily affect parts of Marble Hill Park but this is to be kept as minimal as possible. Marble Hill Park will remain accessible and safe access into this part of the park will be continuously provided. Information will be provided to users, and regularly updated, detailing the available areas and safe access routes around the grounds. Notices and way-finding will be required to be provided around the park throughout the construction period.

12.2.2 Fewer parking spaces will be available during the construction programme, particularly during work hours, however a process will be put in place for the use of contractor parking during Saturday and Sundays by the park users.

12.3 Newsletters and Other Communications

12.3.1 Prior to commencement, where possible all neighbouring occupiers and MHPC stakeholders will be contacted to be explained the activities to be undertaken, the duration of the works and the working hours. Communication with MHPC and local communities will be enhanced by the use of newsletters, site notice boards, apps, tweets, Facebook and the MHPC website.

12.3.2 A regular newsletter may be issued by the contractor to the surrounding community in the form of an email or hardcopy to keep all parties informed about progress to date and the forthcoming works. This will act as an informal means of communication different to the community forum held at MHPC.

12.3.3 The contractor will address the codes of conduct required from operatives and staff working at MHPC, during their site inductions and ensure these standards are being adhered to.

12.3.4 Where relevant, neighbours will also be specifically informed about any abnormal work or road closures proposed.

12.3.5 Any special unusual activities to take place such as road closures or large deliveries of plant will be notified by way of a supplementary letter issued to the relevant parties again in the form of hard copy and email.

12.3.6 The surrounding buildings are owned by third parties, and therefore it is likely that the most significant impacts will be on locals and locals businesses. Regular meetings will be planned on a case by case basis for English Heritage and all stakeholders.

12.4 Party Wall Awards

12.4.1 It is expected that no party wall awards are required. However this will be confirmed by the Contractor.

12.4.2 If required, the contractor will be required to assist with the Employer' Party Wall Surveyor, and provide works and programme information, and meet with residents and the Party Wall Surveyor if or when required.

12.4.3 If required, the contractor is to provide mitigation measures to avoid damage to local properties, and provide engineering solutions to minimise the damage to local properties.

12.4.4 The contractor may be requested to comment on the pre-works condition surveyors, and any in-construction and post construction inspections as requested.

12.5 Considerate Constructors Scheme

12.5.1 The Contractor will be required to register with the Considerate Constructors Scheme and to comply with its requirements. The code commits those contractors in the Scheme to be considerate and good neighbours, as well as clean, respectful, safe, environmentally conscious, responsible and accountable.

12.5.2 The Considerate Constructors Scheme highlights the importance of considering the needs of local people, businesses and visitors. Consultation will be carried out regularly, to ensure this is being achieved.

12.5.3 The Scheme is independently audited by the Considerate Constructors Scheme and points are awarded depending upon the level of compliance.

12.5.4 This Scheme will assist MHPC to monitor the Implementation of the CMP.

12.6 Helpline

12.6.1 MHPC will consider the setting up of a helpline direct or emergency contact number. The information regarding this helpline will be published alongside all community information issued as well as clearly presented on the project site hoarding.

12.6.2 The MHPC community liaison team will work closely alongside the contractor's community liaison personnel in order to deal with queries and issues logged through the helpline as quickly as possible.

12.6.3 The helpline will take the form of an email address and/or telephone line directly linked to MHPC community liaison team.

12.6.4 An automatic email subscription or Facebook account will be available by contacting MHPC community liaison team on the information provided on all publications and site hoarding, stating the project(s) for which you require information.

12.7 Complaints Procedure

12.7.1 A complaints procedure will be set up and managed by the contractor on terms previously agreed with MHPC to log and respond to issues raised by MHPC employees, neighbours, or members of the public. Where possible, measures should be put in place to avoid recurrence of the complaint.

12.7.2 Complaints will be handled through the project helpline. MHPC and contractors will work together to deal with related issues to their projects. Each complaint will be logged and a response issued directly to the initial source within 1-3 working days depending on the severity

of the complaint.

12.7.3 Complaints will be reviewed at each community forum with evidence of dealing with the complaint illustrated to members of the community as well as the measures put in place in order to avoid recurrence.

12.8 Feedback and Improvement

12.8.1 MHPC will strive to implement a lessons learned approach. This will be carried out through the MHPC Project Team with input required from the contractor. Each comment will be logged on the system used reviewed to improve and add value to later project stages.

12.8.2 Appointed contractors are required to carry out the same procedure internally amongst their project team at the end of each project and feed these comments back to the MHPC project manager for registration on the MHPC system.

12.8.3 Perspectives from both organisations at the end of any project will allow for positive improvements on any future project being carried out by MHPC and the contractor.

Appendices

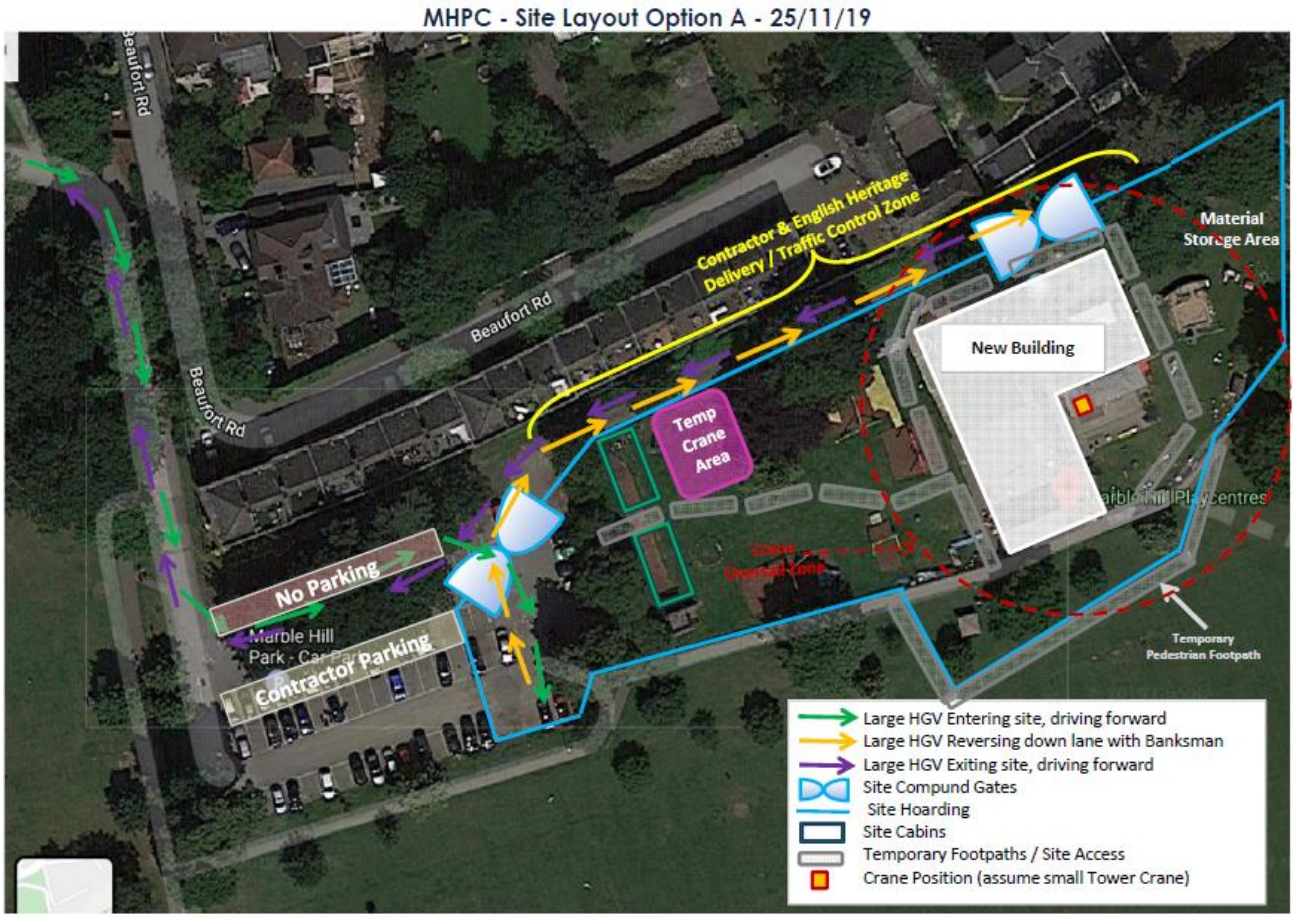
A. LB Richmond Upon Thames Right of Way Map

LONDON BOROUGH OF RICHMOND UPON THAMES

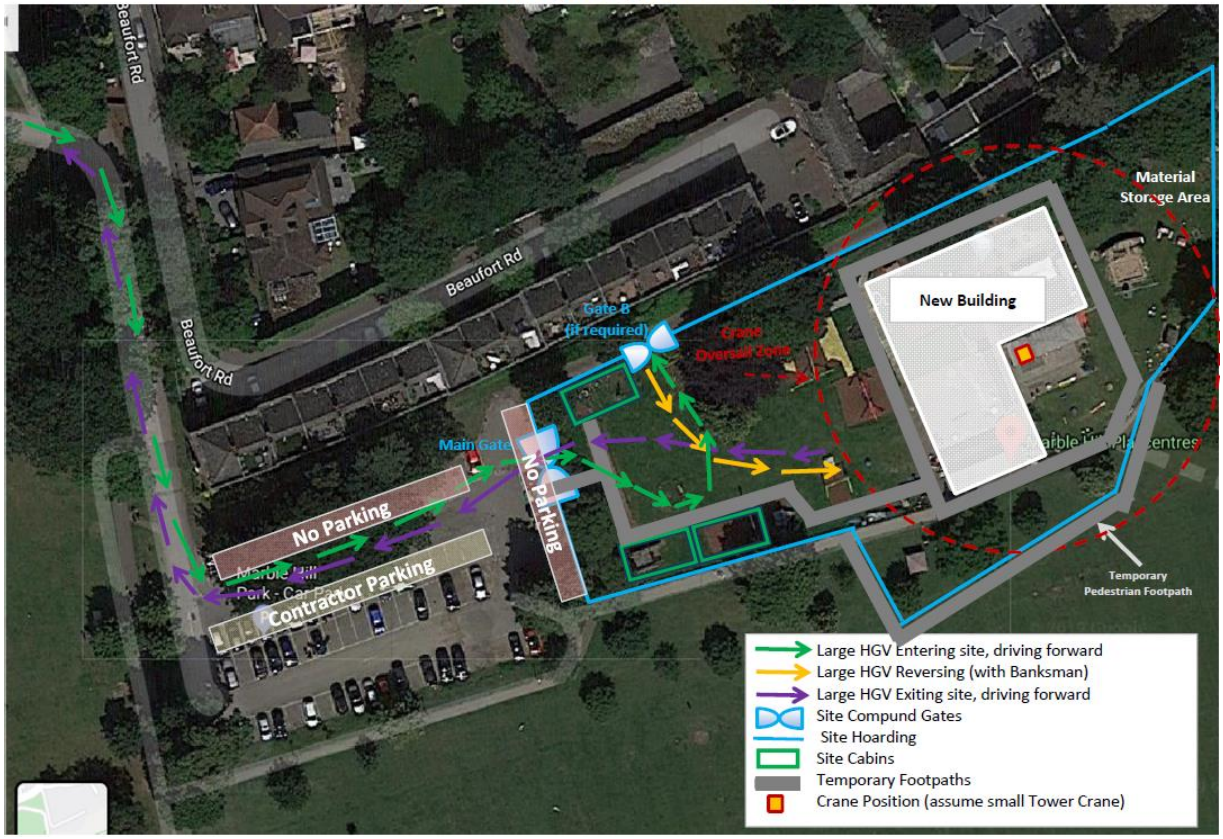
Map of Public Right of Way in LBRUT

B. Site Layout Plans

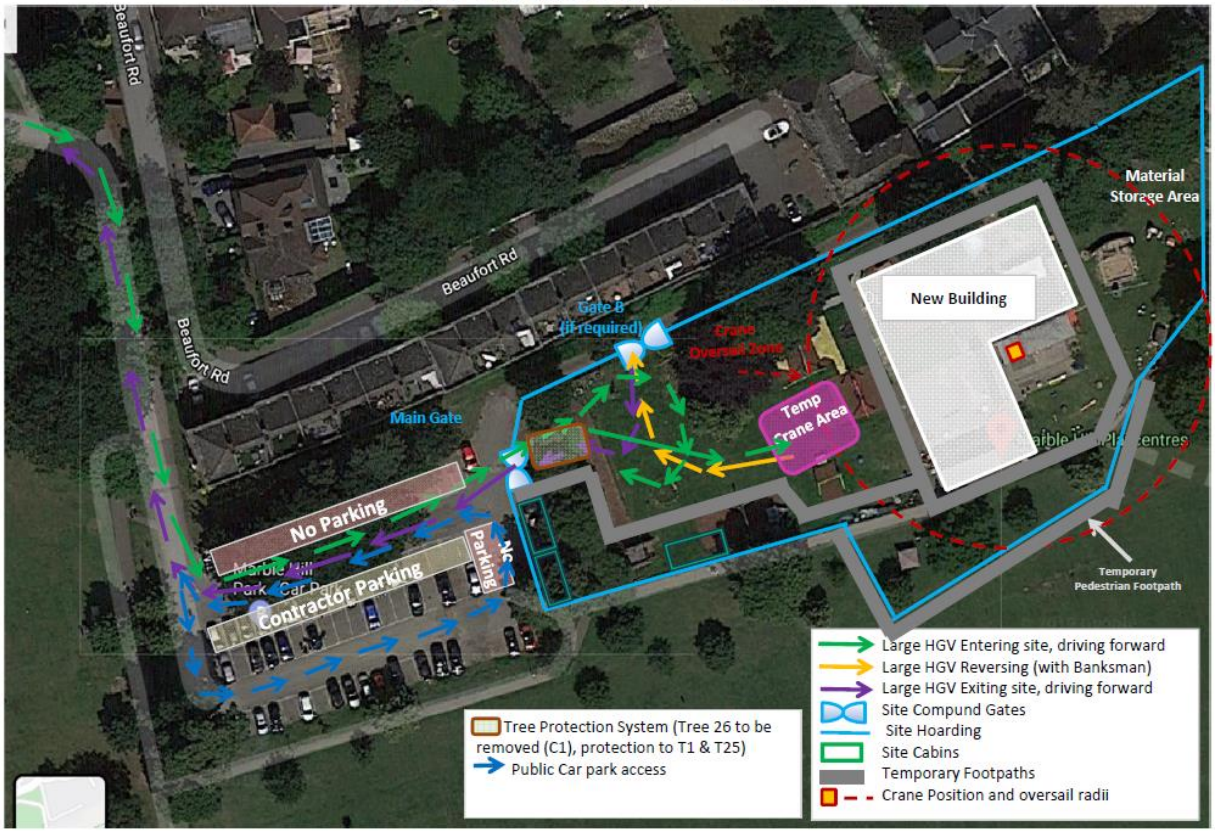
(All Draft for development with Main Contractor)



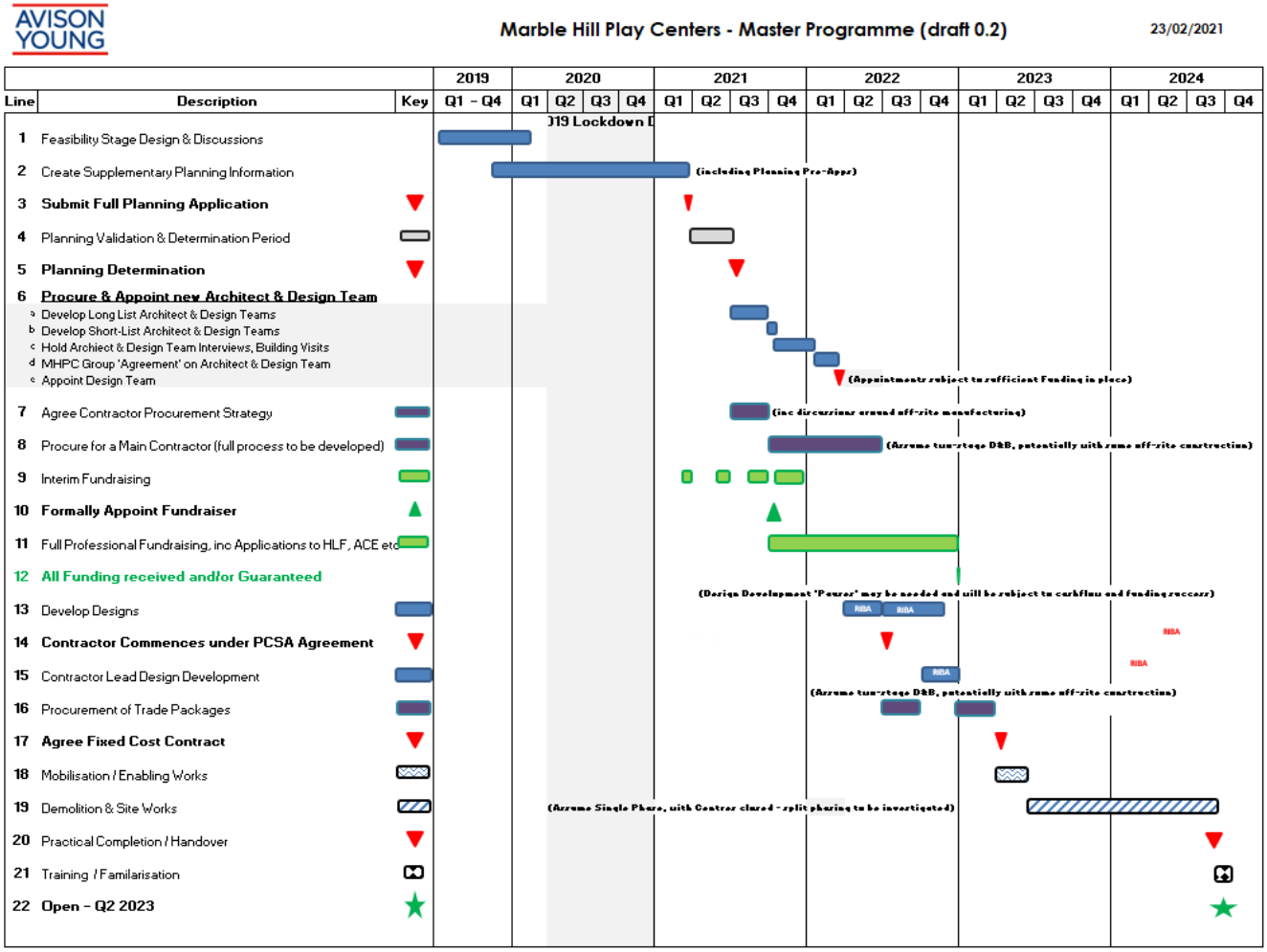
MHPC - Site Layout Option B - 25/11/19



MHPC - Site Layout Option C - 03/12/19



C. Master Programme (DRAFT)



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