



ORBITAL

RISK ASSESSMENT MATRIX

#	Hazard	Persons Affected			Control Measures			Site Specific		
		L	S	R	L	S	R	L	S	R
5	Protection of the Public	Employees Sub-C Public Other	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	H	H	H	<ul style="list-style-type: none"> Maintaining the safety and security of the public, users of the gardens and in particular children are of the highest priority through the construction phase. Particular regard must be given to the segregation of vehicle movements from users of the garden, maintaining access for those users and reinstatement of the footpath out of hours The existing footpath from the access gate to the rear of the property will be fenced off using Heras Fencing along the full length to provide segregation of the public from vehicle movements through the gardens. Any exits backing onto the footpath from residential properties will be allowed a crossing point with a Heras pedestrian gate fitted to the adjacent side of the fencing leading onto the temporary footpath. To ensure that any cross over is adequately controlled for the safety of users, strict banksman control of vehicles will be in place when vehicles are moving along the footpath. At the end of every day the Orbital responsible person will survey the footpath in the compound area and along its full length for any disturbance or damage caused by the vehicle movements and this will be made safe at the end of every working day, either by re-levelling where necessary or by temporary non-slip coverings. A Banksman will be permanently sited at the gate entrance during any interface to assist and guide members of the public to the new footpath and to provide safe vehicle movement into and out of the segregated footpath. Where plant operations outside the gate (for example loading or unloading to wait and load waste away vehicles or delivery of materials for the construction works) are taking place, the area will be fully segregated from members of the public using red and white chapter 8 barriers. A second Banksman will guide any plant traversing the footpath to the site compound. The banksman will walk directly in front of the vehicle holding a red flag. Vehicle movements when traversing the footpath will be limited to 5mph. 	L	M	L
2	Mechanical Plant	Employees Sub-C Public Other	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	H	H	H	<ul style="list-style-type: none"> All lifting appliances are to be thoroughly examined every twelve months All lifting equipment, such as slings and chains are to be thoroughly examined every six months. All mechanical plant is to undergo a weekly inspection by a competent person and the findings recorded in a weekly plant inspection register. Only competent persons are to operate lifting machinery. All lifting equipment must be visually checked before use. Materials are to be lifted with suitably rated lifting chains or slings. The safe working load must be clearly displayed. Operatives must keep clear of all loads being lifted. Foremen are to supervise all lifting operations. 	L	M	L



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3	Slips and Trips	Employees Sub-C <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Public <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M	M	M	<ul style="list-style-type: none"> It is noted that the footpath is sloping, therefore the any temporary covering and temporary footpath will need to be non-slip to ensure that users remain safe. Work areas to be properly organised and kept in a good state of housekeeping. Storage areas to be properly organised. Walkways to be kept clear of materials and waste at all times with particular attention to designated pedestrian routes. 	L	M	L
4	Dust	Employees Sub-C <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Public <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M	M	M	<ul style="list-style-type: none"> Dust suppression measures must be employed for all cutting operations Dust suppression can be by: <ul style="list-style-type: none"> Water from a pressurised bottle or mains supply Local exhaust ventilation Dust suppression systems are to be regularly inspected and any findings reported straight away. In conjunction with mandatory PPE, other specific PPE must be worn: <ul style="list-style-type: none"> Safety glasses (EN166) Dust mask (FFP3) The site has been assessed using the Mayor of London's Best Practice Guidance on The control of dust and emissions from construction and demolition, November 2006, section 4.1 as a Low risk site as it is: <ul style="list-style-type: none"> Under 1,000 square metres of land. Development of between one and ten properties. Has potential for emissions and dust to have an infrequent impact on sensitive receptors. <p>This is based on the site being within the enclosure of the existing building.</p> <ul style="list-style-type: none"> In accordance with the guidance the following actions will be taken: <ul style="list-style-type: none"> Barriers will be erected / maintained around dusty activities and the site boundary. The site will be planned so that dusty activities are kept within the protected site boundaries where practicable. Delivery / collection vehicles will switch off engines where possible. The onsite mini-digger will be thoroughly cleaned before being moved from site. All materials will be supplied covered including all cement and ballast that will be supplied in closed bags and covered in shrink wrapped plastic sheeting. No materials will be supplied in loose form. No site run off of water or mud until the water has been left to settle and is free from particles (as explained in the CTMP). During demolition: <ul style="list-style-type: none"> Special care to ensure that the site is closed. Water to be used as a dust suppressant if appropriate / needed. Cutting equipment to use water as a suppressant or to have a local extraction ventilation system. 	L	L	L



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5	Noise and Vibration	Employees Sub-C Public Other	M	M	M	L	M	L
		<input checked="" type="checkbox"/> Employees <input checked="" type="checkbox"/> Sub-C <input type="checkbox"/> Public <input type="checkbox"/> Other						

- Noise will be kept within the legal limits as defined in the Environmental Protection Act 1990.
- Noisy operations will only take place during the following site working hours:
 - Monday to Friday - 8am to 6pm
 - Saturdays - 8am to 1pm
- All work will be carried out in accordance with BS 5228-1:2009 and BS 5228-2:2009. All works will employ Best Practicable Means as defined by Section 72 of the Control of Pollution Act 1972 to minimise the effects of noise and vibration. All means of managing and reducing noise and vibration which can be practicably applied at reasonable cost will be implemented.
- The following measures will be taken:
 - Consultation / communication with neighbours / affected others prior to the start of the works.
 - Use only of modern, quiet and well maintained equipment, all of which will comply with the EC Directives and UK regulations set out in BS 5228-1:2009.
- Use of electrically powered hand tools rather than air powered tools that require a compressor unless particularly hard concrete or other ground obstructions are encountered. If used air powered tools and a compressor will be used for to the minimum extent practicable.
- Operating the site as a closed site, that is:
 - i. Leaving the building facade and roof in place during the work.
 - ii. Having all windows and door closed during noisy operations within the building (the basement is being built only within the footprint of the existing building).
 - iii. Installing insulation in the windows and other openings at ground floor to reduce noise escaping the site.
 - iv. Closing openings in the building / hoarding with timber and lining insulation.
- Avoidance of unnecessary noise (such as engines idling between operations or excessive engine revving, no radios no shouting)
- Use of screws and drills rather than nails for fixing the hoarding.
- Careful handling of materials, so no dropping of materials from height into skip etc. Spoil will be deposited into the skip from approximately two metres height but this does not cause unreasonable noise.
- Ensuring that the conveyor is well maintained with rollers in good working order and well oiled.
- Isolating the neighbouring properties from vibration / breaking out work where practicable. In particular the edges of the existing concrete slab at ground floor will be broken out first (isolating the remaining slab at ground floor) before the main part of the existing ground floor slab is removed.
- Collection / delivery times will be as given in the CTMP.
- Collection / delivery vehicles will not loiter / wait in the area before the allowed times.
- Vibration will be kept well below the levels that may damage buildings, given in BS 7385-2:1993.



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		Employees			M			M			L			M			L		
		Sub-C	Public	Other															
6	Vibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
	<i>Saved for Future Use</i>																		
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- Where possible we will make use of plant mounted breaking and digging equipment. This will minimise any personal exposure experienced through hand operated equipment.
- Where the works restrictions dictate the need to use hand held equipment we will prioritise the use of tools with the lowest vibration output for example generally electrically powered breakers have less vibration output than Pneumatics.
- All equipment and tooling will be regularly inspected and these inspections recorded.
- We will assess each tool based on a ready reckoner system and provide data on key trigger times.
- All users will need to keep a log and report to the safety representative after each shift of equipment used and time. It is essential that all users report these figures to the safety rep so that exposure can be controlled within the acceptable exposure limits.

L = Likelihood before control (High/Med/Low) S = Severity before Control (High/Med/Low) Risk = Risk before Control (High/Med/Low) Residual Risk = After Control (should be Low)
 Site Specific Provisions = Use to ensure Risk Assessment is specific to that work place.