RISK ASSESSMENT & METHOD STATEMENT

RAMS No.	Title:	Rev No.
01	Water Treatment Building Demolition	01

Site Name & Number:

Portobello Wastewater Pumping Station

Site Location:

A259 Telscombe Cliffs, Peacehaven, BN10 7BE

Client:

Document Revision / Authorisation Record

Revision No#	Prepared by Positon Date	Authorised by Positon Date	Details
01	L. Batchford H&S Manager 31/01/19	G. Williams Contracts Manager 31/01/19	First Issue
02			
03			

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1. Site Particulars

Scope of Works:

The following scope of works is to demolish the former water treatment station structure and its internal plant, undertaking isolations of the plant, structural Demolition to the external superstructure, and removal of the internal plant before infilling the basement to formation level.

- Establish the Demolition Zone.
- Mobilise Demolition Machines to site.
- Undertake Isolation.
- Remove any unknown Asbestos & Hazardous Contamination.
- Install protection to the external ground level Shaft & ensure diversion pipes are routed correctly.
- Mobilise Dust Suppression.
- Commence structural Demolition.
- Remove internal Plant.
- In-fill the basement.

Hours of Works:

• Monday – Friday	• Saturday	• Sunday
○ *08:00 – 18:00*	○ *By Agreement Only*	○ By Agreement Only

Constraints to Work:

- Unknown Contamination.
- Work in Basement.
- Potential Asbestos.
- Coastal Weather conditions.
- Potentially unknown live services.
- Potentially Unstable Structure.

2. Access & Egress

Access to Site Entrance:

- Vehicular access to site will be from the **A27**, taking the turn off onto the **B2123 The Drove**, which follows on to become **Falmer Road**.
- Vehicles will continue until reach **High Street**, taking a left turning following the road to the **A259 Marine Drive** junction, taking a left turning. This road becomes **South Coast Road**.
- This road leads directly to site which is on the right hand side, requiring vehicles to enter the central road parting, before making the turn.

Workforce Access from Site Welfare:

- Access from the welfare to the workface will be established by the Principal Contractor with designated walkways maintained by the Site Manager using signage, and barriers, with site access plans displayed on the site notice boards.

3. Resources

The below tables details an overview of the main items and is not an exhaustive list – for more details on the exact items on site please refer to the Costing Information.

Labour	Qty
Demolition Operatives	TBC
Traffic Marshals	2
Demolition Supervisor	1
Plant Operator	TBC

Plant & Equipment	Qty
Excavators	TBC
Powered Hand tools	1
Podiums	1
Dust Suppression	TBC

Materials	Qty
Diesel	TBC
Hydraulic Oil	TBC
Propane	TBC
Oxygen	TBC

4. Methodology

The following details the summary, and sequence of the method of work to be adopted to achieve the activity stated. The information detailed below should be briefed out to ALL PERSONS involved within the activity, to ensure they understand their roles, responsibilities, and controls to be adopted to undertake the task safely.

Methodology Summary:

The purpose of this Method Statement is to outline the plan of works to demolish the Water Treatment Building & internal Plant as the Specialist Demolition Contractor working under the Principal Contractor.

Authorised Hold Point Signee Name:	Role /Position:	Initial Signature ID:
	Demolition Manager	

Methodology Sequence:

Mobilisation	*Sectional Completion Sign & Date:*	

Hold Point: **TMP Distribution**	**Initial Sign**	**Date**
The Principal Contractor will supply a Traffic Management Plan, this is to be distributed in advance of attending site to drivers and our supply chain, who will be accessing the site to undertake work or deliveries.		

- The Site Manager will then ensure that all staff on site are given an Induction detailing the site rules.
- The Site Manager will ensure that suitable PPE identified within the Risk Assessments of this document have been issued to all staff undertaking works ensuring adequate training and instruction given regarding their use, inspection, and storage.

Hold Point: **General Emergency Response Plans**	**Initial Sign**	**Date**
ERP will be produced for Accident/Injury, Fire, Security Breach, & Substance Spill – these will be briefed out to all staff on site and ensure that all equipment required to carry out the response are suitable and on site.		

Training: **Manual Handling TBT**
Staff will be briefed on correct manual handling techniques (if not already trained) which are to be adopted when lifting, and mechanical aids will be used where able.

Hold Point: **Temporary Works Boundary Demarcation Installation**	**Initial Sign**	**Date**
The Site Manager & Site Supervisor will set out the Demolition Area using Heras Fencing. The proposed site boundary on the south side of the work to consist interlocking concrete Kelly blocks to act as wave protection, blocks to be positioned 500mm in from promenade edge. This will be installed as per manufacturer's instructions under supervision of the designated TWS with designs checked by the PD before being added to the site Temporary Works Register being sign-off and inspected as per Temporary Works Requirements.		

- Once all of the above actions have been implemented a Pre-Start Briefing will be held daily to provide instruction to the workforce clarifying the safety arrangements, and methodology by the SBS Site Manager, who will then inspect the adequacy of the pre-start control measures and emergency response plans before authorising the commencement of work.
- Operatives will be instructed to commence establishing designated walkways and safety equipment as per the site plans setting out barriers, signage, fire extinguishers, notice boards, spill kits, and eliminating any existing hazards i.e. removing trip hazards, isolating uncontrolled areas, etc.

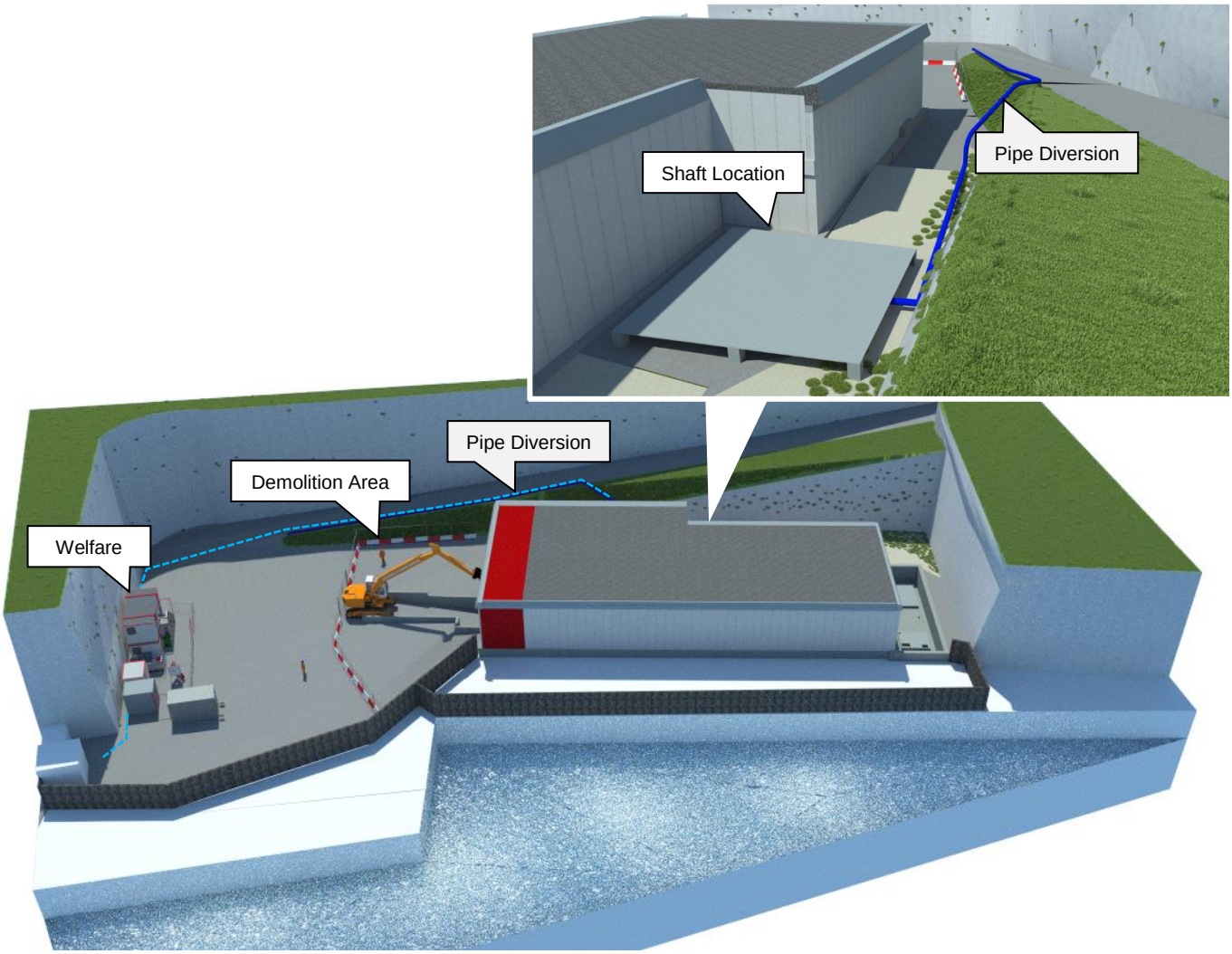
Enabling Works	*Sectional Completion Sign & Date:*	

Hold Point: Service / Utility Isolation	**Initial Sign**	**Date**
The Site Manager will ensure that the Service & Utility Isolation are made on site at the boundary, holding physical evidence of isolation certification within the Site Office. The grounds around the building within the demolition zone will be investigated to confirm the absence of any unknown below ground services prior to mobilisation of machinery.		

Hold Point: Water Ingress	**Initial Sign**	**Date**
The PC will dewater any accumulations of water within the basement area, ensuring that this is suitably clear of water, and measures in place to bail out any ingress of water. This will be continually monitored by the Demolition Team and reported to the Principal Contractor if ingress is observed. Water accumulations will be removed to Southern Water's Peacehaven WTW.		

Hold Point: Shaft Diversion & Protection	**Initial Sign**	**Date**
The Principal Contractor will ensue that the Shaft is diverted using pipework from the shaft to its discharge point near the welfare, this will be managed to prevent obstructing demolition. The Shaft will be protected from potential damage from Demolition Activities by the SBS by installing a Steel Plate cover, this will be approved by the Principal Contractor and inspected as per Temporary Works Requirements.		

The diagram below shows the intended mobilisation of the controlled Demolition Area, and Welfare Area. In Blue is the intended location of the Shaft diversion away from the demolition work.



Structural Demolition	*Sectional Completion Sign & Date:*	

For Structural Demolition to commence, the following items are to have been completed:

- ✓ Asbestos Clearance Certification held.
- ✓ Shaft Protected & diverted.
- ✓ Service Isolation Certificate held on site.
- ✓ Dust Suppression Mobilised.
- ✓ PC & PD Approval of RAMS.

Hold Point: **Permit to Demolish**	**Initial Sign**	**Date**
The Site Manager will issue a **'Permit to Demolish'** to the Demolition Supervisor, who will implement the controls detailed within the Permit and Risk Assessments of this document.		

Hold Point: **Emergency Response Plans**	**Initial Sign**	**Date**
All staff involved in the task will be **ERP: Asbestos Discovery, Overturned Plant & Structural Collapse** prepared & signed onto the ERP. No work will be permitted without a full plan in place with certified equipment & trained staff available to carry out a response.		

Hold Point: **Temporary Works *Edge Protection**	**Initial Sign**	**Date**
The Site Manager will establish edge protection on any leading edges which are to be exposed during demolition to prevent people, and vehicles from falling with protection set 1.5m perimeter from the demolition edge and will be added to the site Temporary Works Register and inspected as per Temporary Works Requirements.		

Training: **Waste Note Completion TBT**
Waste Transfer Notes are to be fully completed as per requirements of the Site Waste Management Plan & statutory duties, a competent person will be trained and designated to ensure compliance. Displayed completion guidance will be available at the point of work for staff to refer to, to ensure compliance is met.

Training: **Plant Safety TBT**
Staff will be briefed on Plant Safety (if not already trained) detailing how to integrate pedestrians & plant safely and the communications methods which are to be adopted when approaching or getting the attention of an operator.

- The Site Manager will ensure that all Demolition Operatives have the required competencies identified by the NFDC, and Asbestos Awareness Training to identify 'Rogue ACM's' during demolition.
- The Demolition Area access points will be established, with a segregated 'holding area' directly at the access point before entering the Demolition Zone to give pedestrians a safe place to stand before entering.
- Safety Signage is to be displayed before entering the Demolition Zone, with workplace Fire Points, Spill Kits, and COSHH Storage established before work.
- A waste segregation area will be set out with appropriate signage. This area will be for the segregation of the different waste streams such as WEEE, metal, concrete, etc.
- The Site Manager will undertake a clearance search of the structure before isolating access to prevent uncontrolled access prior to Demolition.
- The Demolition Supervisor will control the Access Point into the Controlled Demolition Area, maintaining a register of all staff entering & exiting the area ensuring they are competent to ensure with the correct PPE & Approved Equipment for their works – they will ensure that no unauthorised person enters the Controlled Area, and will close/isolate the access points Post Shift & or during Down-Time.
- The Demolition Excavators (Size TBC) will be mobilised within the loading bay area under Supervision, with a hydraulic grab, muncher, and breaker attachments. This will be mobilised with the dust suppression system.
- Once all of the above actions have been implemented a Pre-Start Briefing will be held daily to provide instruction to the workforce clarifying the safety arrangements, and methodology by the SBS Site Manager, who will then inspect the adequacy of the pre-start control measures and Emergency Response Plans before authorising the commencement of work and **Open the Permit to Demolish**.

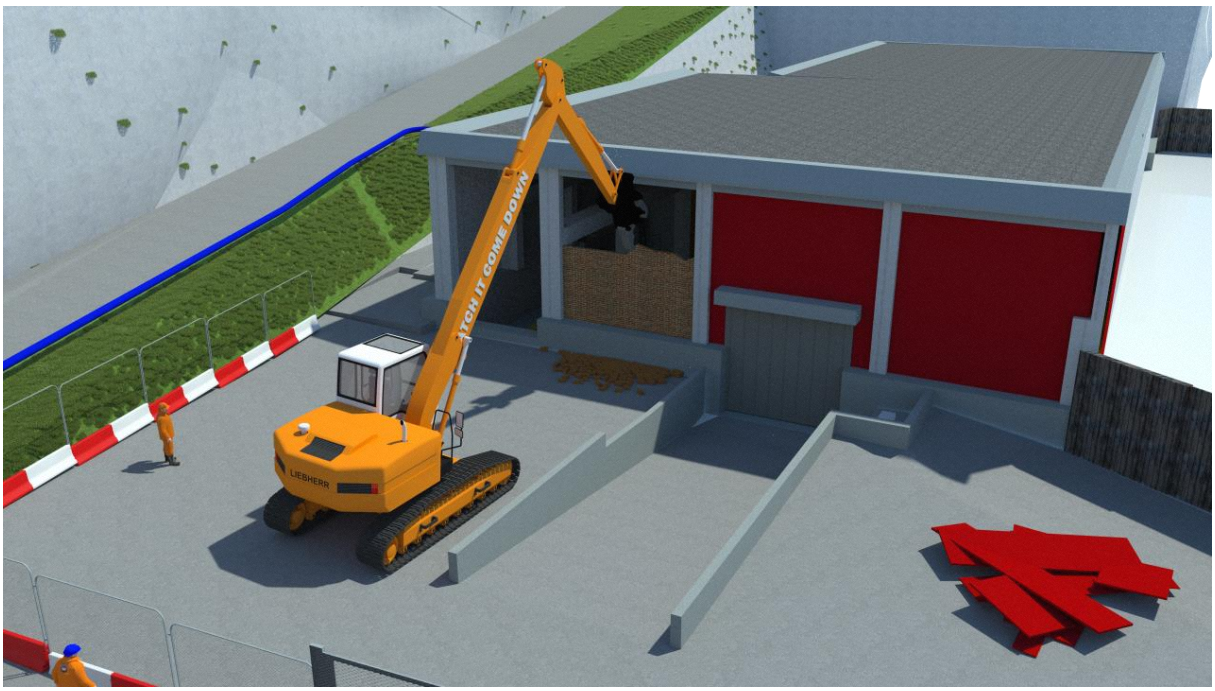
Design:	**Principle Methodology**

The external superstructure if formed from a reinforced concrete column & beam frame, these sections are filled with an internal block work, and an external concrete panel which is pinned to the frame, all together forming the superstructure.

This will be removed in the reverse order which it has presumed to have been installed, with the Concrete Panels removed first, followed by the Block Work, then the Frame, this will be conducted in an order which best retains structural stability, and accessibility for the Demolition Machine.

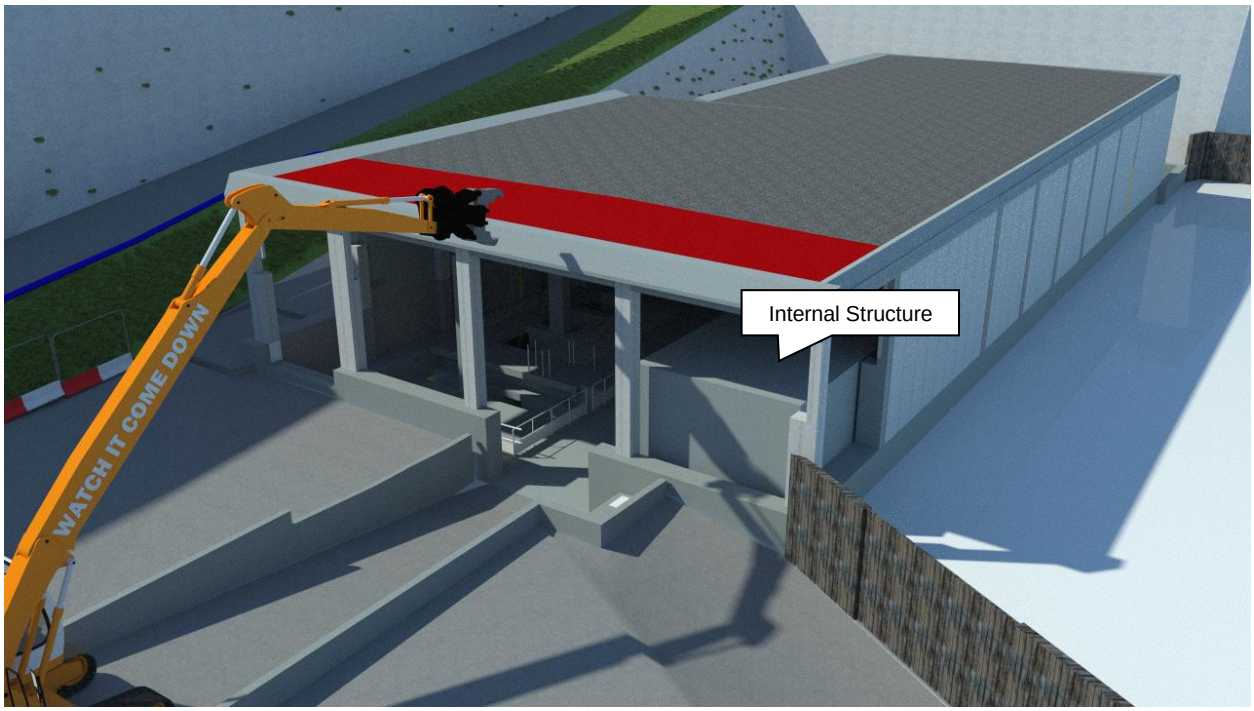
- To deconstruct the walls while leaving the supporting columns in situ, the machine will first remove the external concrete panels firstly by breaking into one of the Concrete Panels to enable the grab attachment to take hold of the remaining individual Panels.
- The Machine will then pull out each individual concrete panel off from the Frame whole, these will then be mechanically handled by the machine into a processing area where they will be broken down and used for infilling.

- Once a bay section of the Panels has been removed, the same principle will be utilised to remove the Block Work, the machine will break into the wall to enable the attachment to reach into the structure, enabling the machine to reduce the wall by pulling the Block Work towards the machine so that it can be processed to be used for infilling.



- Once the front walls have been removed, an internal office area will be exposed, this will have had all asbestos removed as per the entire structure, this will not require protection, migrating material may damage the structure by design of the process – once machine access is enabled, the machine will remove the entire structure remotely with all demolition arising's and will processes the waste segregating each waste source.

- The diagram below shows the first section of walls have been removed, now the bay section of the roof highlighted in Red is then to be removed while leaving the horizontal beam in situ to retain structural stability during demolition. Material will be allow to migrate to ground level where it will be removed for processing once access is enabled.



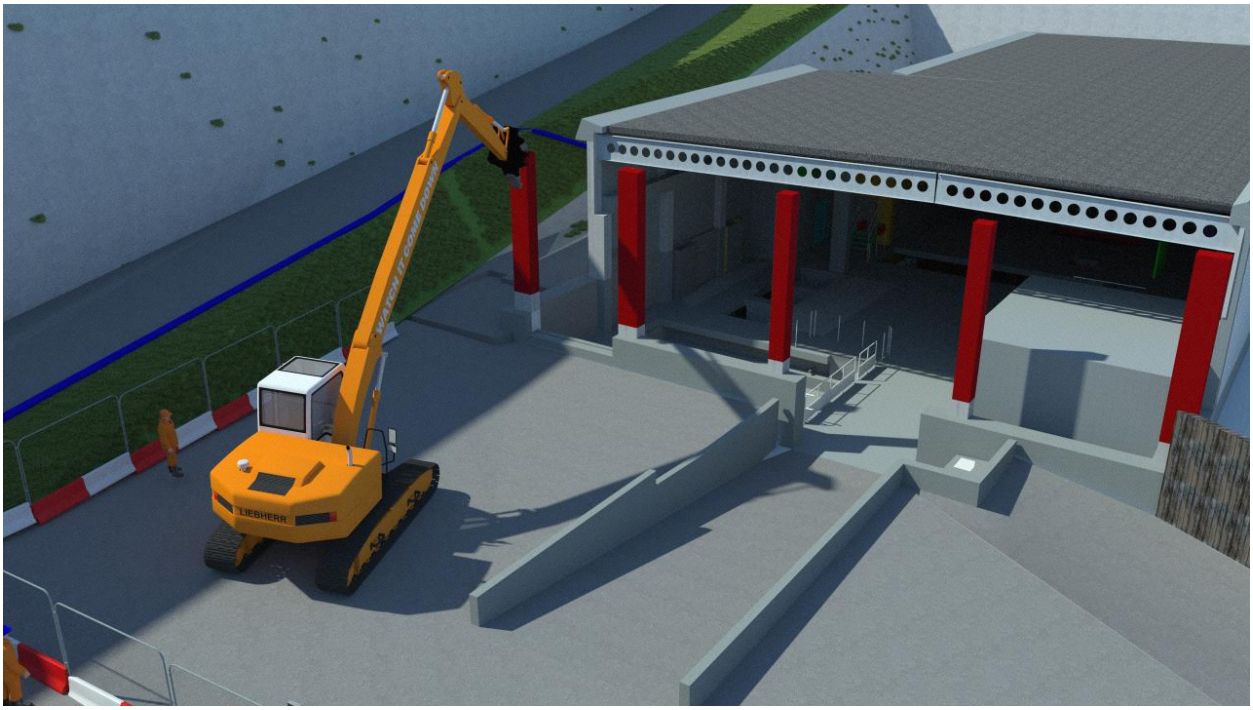
- With the bay section of the roof removed, the machine will then commence the demolition of the structural Frame which has been liberated from the walls and roof.

- Working from the centre of the central beam, the machine will munch away the beam allowing the material to migrate to ground level. This will be repeated on the adjacent beam to leave the central 3# free-standing vertical columns.

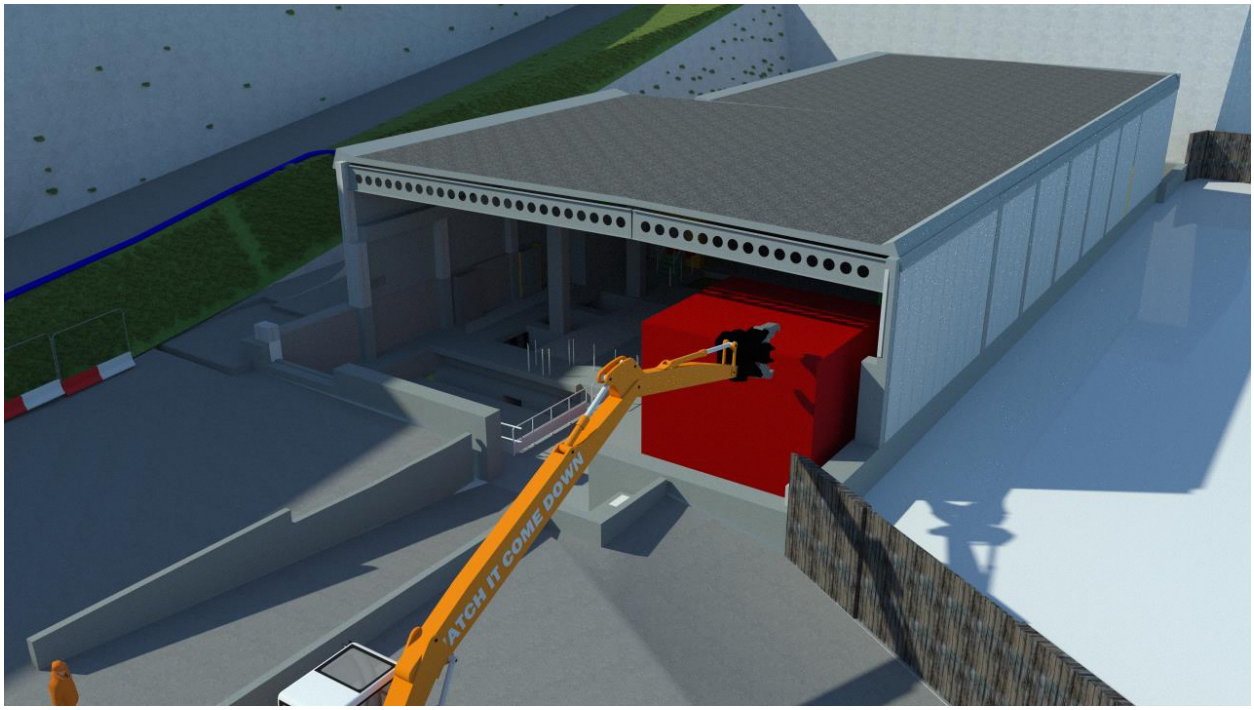
- The machine will then continue this process by removing the side elevation beams highlighted in red on the below diagram. This will leave all of the 5# front facing columns free-standing.

- A per the diagram below, the 5# free-standing vertical columns highlighted in Red will then be reduced to the base by the machine as far as reasonably practicable to leave a rough cut *this will be manually reduced down to flush at a later time.

- The machine will reposition itself under Banksmen & Supervisor assistance to best access the required target of demolition, utilising the loading bay area & access ramp.



- With the first cycle of the methodology sequence complete, the now exposed internal structure will be demolished remotely by the machine, shearing the structure appropriately and pulling the material out from its location into the processing area where its material will be segregated into its waste streams.



Note: The demolition sequence to remove the superstructure will continue as detailed by so far as reasonability practicable that the machine working from the Loading Bay area & Access Ramp can reach.

Once this is no longer practicable, the Plant Operating Area will be required to move into the structure, to allow the machine to safely reach the rest of the structure.

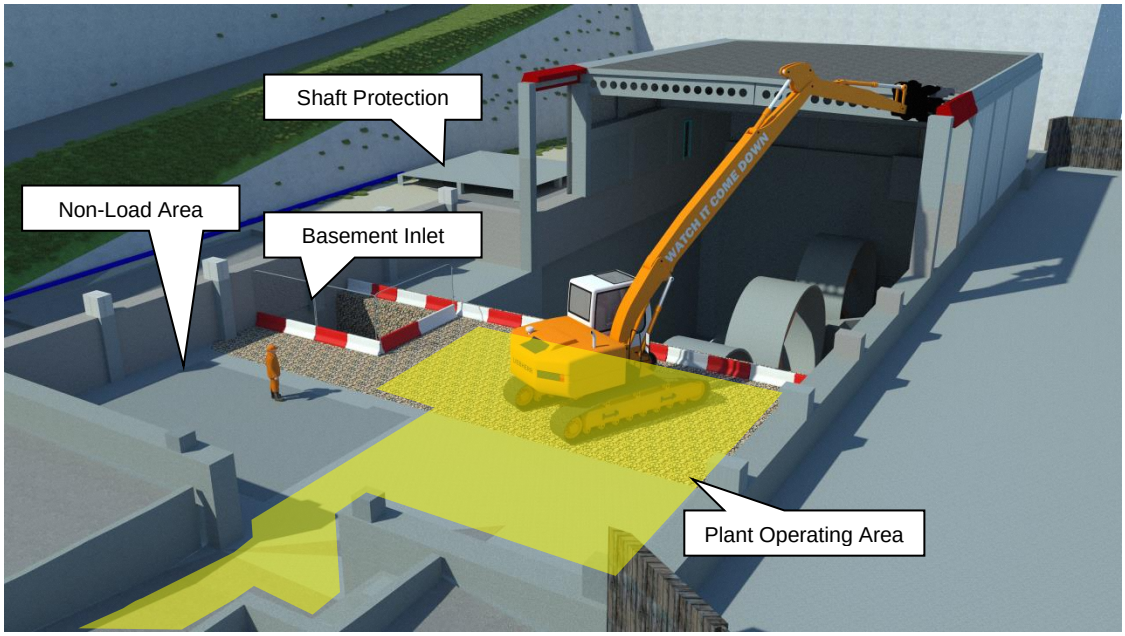
To achieve this suitable site derived and imported material will be required to infill the basement areas to safely enable the machine to access first working from the internal ground level slab (highlighted in shaded Yellow), before progressing onto the infill pad.

Additionally there is existing pipe inlets which are located within the basement on the northern wall which is to be retained and protected, this area will not be infilled, and will have edge protection installed as per the diagram below, the infill will be sloped steeply down to the basement around this inlet pipe.

The area identified as the Non-Load Area will not be loaded by plant due to the unfilled cavity below.

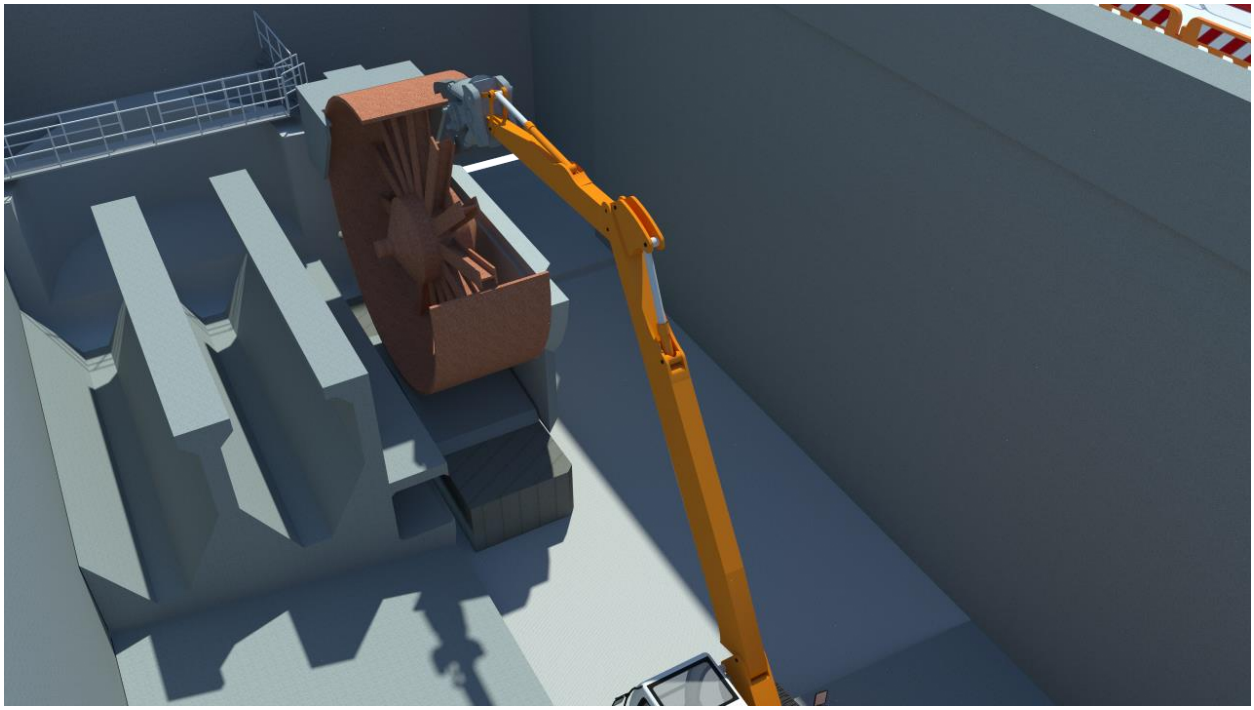
**Assessment to be made on site.*

Tippers will deliver Import material by accessing as per the TMP, before being reversed under Banksmen supervision down the access ramp to dump the material which will then be installed by the machine.



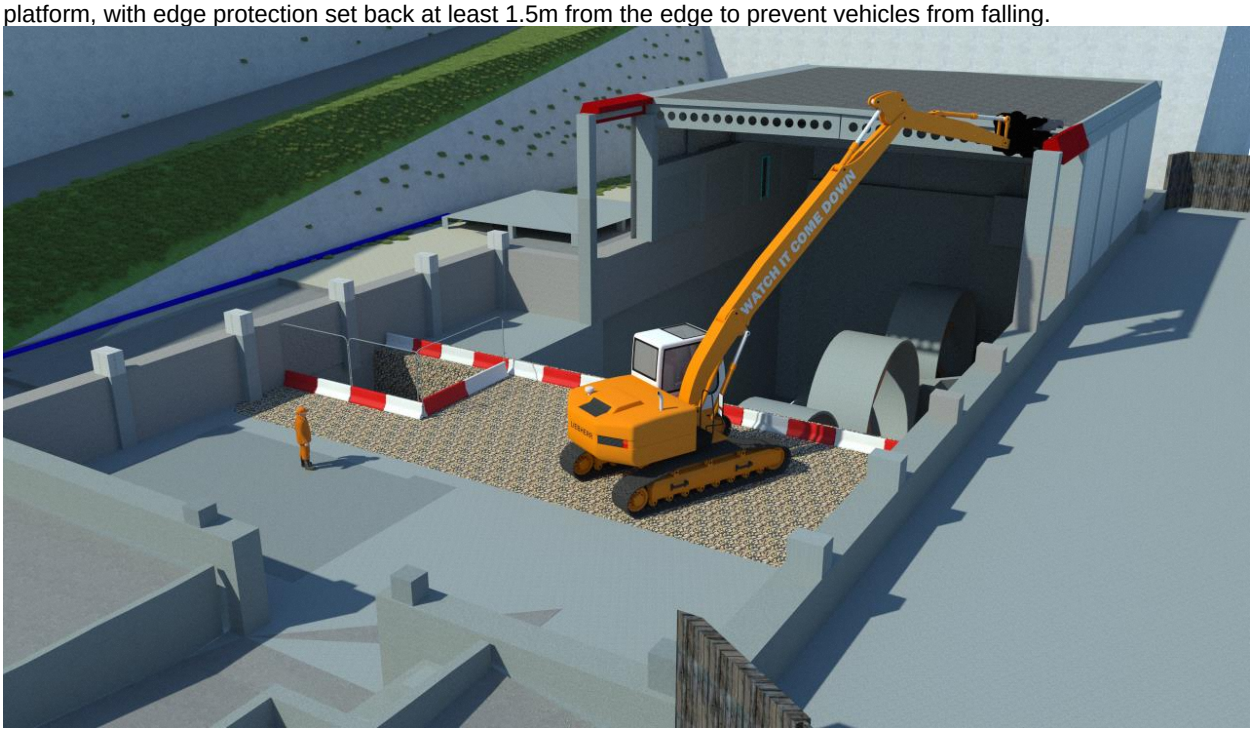
- Once demolition has progressed as far as practicable working from the slab & infill to the point where the internal plant is exposed, the machine will then be manoeuvred into a position where it can shear the plant and pull out the material.

- The below diagram shows the machine reaching down into the basement from the infill pad to sear and pull out the plant material.



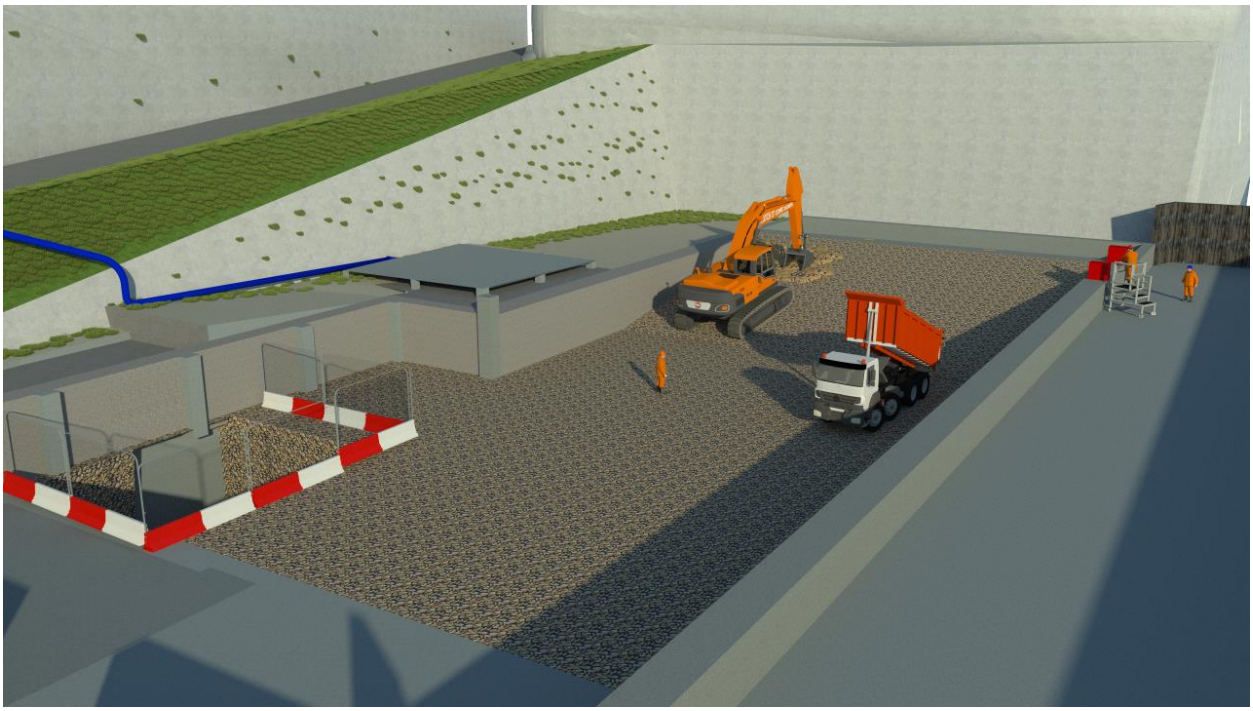
- The machine will then continue to work from this location, until the plant material is removed, or in unable to safely reach the demolition target – where this occurs the machine will continue the infill to increase the plant operating area into the structure to enable it to reach its required target, infilling and pits, voids, or pockets.

- The diagrams below shows the progression of demolition & infilling into the structure. The edge of the infill will be ramped as far as reasonably practicable to enable the machine to undertake demolition working from a suitable level platform, with edge protection set back at least 1.5m from the edge to prevent vehicles from falling.



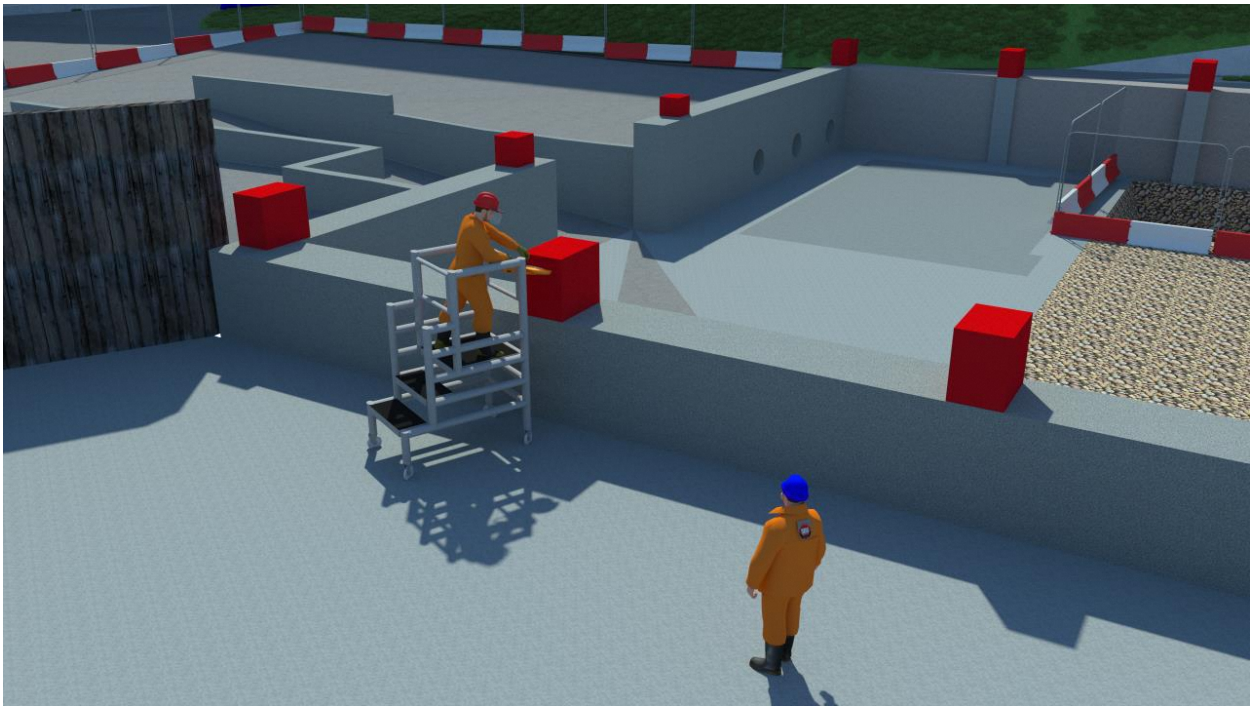
- The Demolition sequence will then continue until the entirety of the Superstructure, and Basement Plant, has been demolished. Infilling will be completed by placing the building concrete segments and then setting with a delivery of foam concrete. This will continue to the end of the structure.

- Once achieved, the basement will have been eliminated by design. Tippers and concrete wagons will then enter to deploy the remaining concrete segments and deliver the foam concrete to infill to formation level as below.



- With the full extent of the superstructure reduced, and the basement infilled to a reasonable level, operatives working from podiums will reduce the rough cut columns down flush with the base, this will be undertaken by Demolition Operatives working to the controls identified within the Risk Assessment for powered hand tools, HAVS and work at height access equipment.

- The task will then be repeated progressing around the perimeter of the structure until all columns have been reduced.



Hold Point: **Permit Termination**	**Initial Sign**	**Date**
Once the Demolition works have been complete, the Site Manager will inspect the quality works to confirm the intended result has been achieved and left in a safe conduction before **Terminating the Permit to Demolish.**		

- The reduced size excavator will then be demobilised making way for a larger size excavator (Size TBC) to continue the remainder of the demolition working from ground level.
- The operation to infill the basement will continue until final formation level has been installed, this will ramp down from the inside of the building footprint to meet the base of the existing access ramp.
- All waste material on site removed as per the Site Waste Management Plan, and a clearance inspection undertaken by the Site Manager to confirm that all material has been suitably removed.
- Drawing JN.639149-02 shows the intended completion state of the project.

Snagging Inspection	**Initial Sign**	**Date**
Once the works have been complete, the Site Manager will inspect the work place to ensure that all items identified within the Scope of Works and Task Sheets have been completed sufficiently. They will then report back to the Principal Contractor of the completed works.		

3. PPE Requirements

All required PPE shall be in accordance with relevant BS EN / ISO standards. *The following PPE / RPE is required to be used as per categories identified below:*

Mandatory PPE items:	Required	Activity	Type
Hard Hat (BS EN 397)	☒	*Site Access*	Colour Coded as per Site Rules
Hi-Vis (BS EN 471)	☒	*Site Access*	Colour Coded as per Site Rules
Safety Boots (EN ISO 20345)	☒	*Site Access*	Ankle Support

Task Specific PPE items:	Required	Activity	Type
Hand Protection	☒	*Manual Handling*	Safety Gloves
Eye Protection	☒	*Demolition Work*	Safety Glasses
Hearing Protect	☒	*Demolition Work*	Defenders / Plugs
Coveralls	☒	*Demolition Work*	Flame-Retardant
Harness	☒	*Working at Height*	X2 Lanyard
RPE	☒	*Demolition Work*	Dust Mask

4. Competency & Supervision

Competency:
Given the works to be completed, the following competencies and supervision will be required onsite, all requirements stated below are in addition to the prerequisite CSCS / CCDO / CPCS cards. Copies of training shall be issued during induction and retained on site.

Role / Task	Competency
Demolition Operative	*Demolition Gold Card*
Plant Operator	*CPCS (Per tasks undertaking i.e. Processing, lifting, etc.)*
Traffic Marshal	*Banksmen / Traffic Marshal Training*
RPE Users	*All RPE users are to be Face Fit Tested to correct Mask.*
Temporary Work Installation	*Temporary Works Supervisor / Temporary Works Coordinator*
All Site Managers	*CCDO Gold Card. 1st Aider*
Burning / Fire Watcher	*Hot Works Training. Fire Marshal*
Tirfor Operations	*Manufacture Instruction Briefing*
Work at Height	*Harness & Lanyard Training*
Crusher Operations	*Crusher Operator Training*

Supervision:
The following details any tasks that require direct works supervision and the names of the designated (competent) supervisors.

Role	Supervisor Name	Date duties relinquished
Site Manager		
Site Supervisor		
Demolition Supervisor		

5. Permits

As part of Syd Bishop & Sons risk control strategy, permits are used for all high risk activities. Identified below are the permits applicable to these works and the duration for which the permits will be issued. Permits are valid for a Maximum of one week and are to be signed off daily by the appropriate persons.

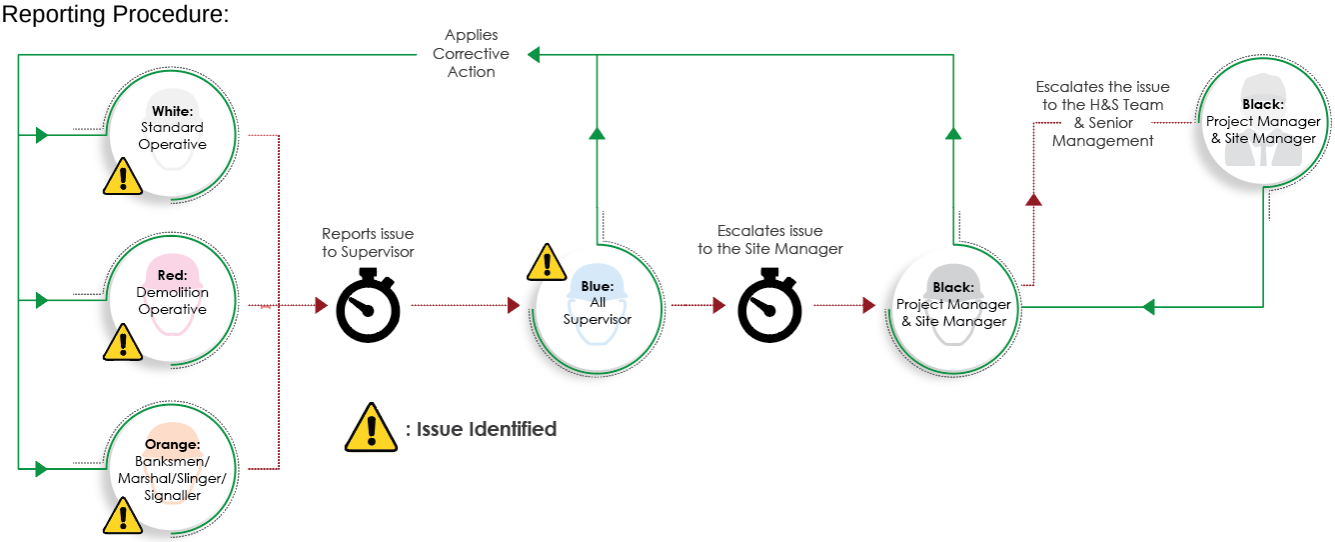
No#	Permit	Authorised By	Applicable to works
01	Demolish	Principal Contractor	☒
02	Work at Height	Principal Contractor	☒
03	Hot Works	Principal Contractor	☒
04			☒
05			☒
06			

6. Emergency Arrangements

Syd Bishop & Sons Emergency Response Plans (ERP's) are contained within a standalone document identified below and ready in conjunction with the specific RAMS & the Construction Phase Plan (CPP), with displays placed with in welfare areas or at workface entry points. Identified below are the relevant ERP's for the works.

Specific ERP:	ERP – General	Rev No:	01
ERP No#	**ERP Type**	**Specific to Works:**	
01	Accident / Injury	☒	
02	Fire	☒	
03	Substance Spill	☒	
04	Overturned Plant	☒	
05	Working at Height	☒	
06	Asbestos Disturbance	☒	
07	Structural Collapse	☒	
08	Security Breach	☒	

Reporting Procedure:



Risk Assessments

The table below is to be used to identify the activities being undertaken as part of these RAMS. Each Risk Assessment should detail to the control measures associated with the task to be adopted, and any residual risk rating and likelihood remaining post control measures.

RA Order No#	Risk Assessment Title	RA Ref No#
1	*Demolition with Excavators*	09
2	*Oxy Propane Cutting*	38
3	*Storage of Gas Cylinders*	51
4	*Refuelling. Leaks & Spillage*	17
5	*Hand Tools - Powered*	21
6	*Hand Tools – Non Powered*	22
7	*HAVS*	24
8	*Dust*	13
9	*Manual Handling*	33
10	*Exhaust Emissions*	14
11	*Loading & Unloading Flatbeds & Low Loaders*	30
12	*Noise*	37
13	*Discovering ACM's During Works*	10
14	*Slips, Trips and Falls*	49
16	*Leptospirosis*	27
17	*Staff Working Alongside Excavators*	52
18	*Work at Height*	60
19	*Access Towers*	01
20	*Working in Excavations*	61
21	*Mobile Crusher*	36
22	*Works in Basement Areas*	08
23		
25		
26		

Risk Matrix

Probability of Harm	Severity of Harm				
	1: Minor	**2: Moderate**	**3: Serious**	**4: Major**	**5: Catastrophic**
1: Improbable	**Low Risk**	**Low Risk**	**Low Risk**	**Low Risk**	**Low Risk**
2: Remote	**Low Risk**	**Low Risk**	**Medium Risk**	**Medium Risk**	**Medium Risk**
3: Possible	**Low Risk**	**Medium Risk**	**Medium Risk**	**High Risk**	**High Risk**
4: Probable	**Low Risk**	**Medium Risk**	**High Risk**	**High Risk**	**High Risk**
5: Likely	**Low Risk**	**Medium Risk**	**High Risk**	**High Risk**	**High Risk**

Probability Classification (P)	Severity Classification (S)	Degree of Risk (PxS)
0: Impossible	**0: No injury / affect**	**0: No risk**
1: Improbable – Very low probability of such an event occurring.	**1 = Minor** – Minor accident, resulting in no injuries or lost time, little or no damage to property or the environment.	**1 to 5 = Low Risk** – ensures controls are adhered to and activity need not alter
2: Remote – Would rarely occur.	**2 = Moderate** – Potential injury necessitating less than 3 days off work, damage to property or the environment requiring remedial work.	**6 to 11 = Medium Risk** – tolerable, but efforts should be made to reduce the risk where cost effective and reasonably practicable.
3: Possible – May occur on occasions.	**3 = Serious** – Accident reportable under RIDDOR 95, serious damage to property or the environment.	
4: Probable – Could occur frequently.	**4 = Major** – Accident resulting in serious or permanent injury, major or permanent damage to property or the environment.	**12 -25 = High Risk** – Unacceptable except in extraordinary circumstances, all control measures must be taken regardless of cost.
5: Likely – Very likely to happen unless activity prevented.	**5 = Catastrophic** – Accident resulting in death or severe disablement, destruction of property, irreversible damage to the environment.	

Ref No:	Risk Assessment Activity
RA09	DEMOLITION WITH EXCAVATORS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Sticking Buried Services	Fumes	SBS Employees	~~Other Contractors~~
Overhead Service	Collision	~~Site Visitors~~	~~Members of the Public~~
Falling/injected materials	Excavator overturning	~~Young Persons~~	~~Vulnerable groups~~
Burst/Leaking hydraulics	Access/Egress	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- Excavator operators shall be trained and competent to CPCS standard or equivalent.
- Excavator shall be checked/maintained/serviced by a competent persons at regular intervals as per regulation.
- Excavators shall be marked with a unique ID number and safe working load (SWL)
- Excavator shall have Certificate of Thorough Examination and shall be inspected at regular intervals by a competent person as required under LOLER 1998.
- Operator shall carry out daily inspections using the Daily Plant Checks Document to accurately reflect the condition of the excavator. Any defects are to be reported to management immediately.
- Spill kit and plant nappies to be used when refuelling, and in the event of a spillage.
- Attachment pins are to be used at all times, and under no circumstances are they to be replaced with re-bar.
- Excavators shall be inspected weekly by a competent person as required under PUWER 1998.
- Excavators shall be fitted with an amber flashing beacon and a reversing warning system.
- Operators shall use the seat belt restraint provided and any other device fitted for the provision of safe operation.
- Excavator to be operated a ground level as flat as reasonably practicable.
- A trained banksmen shall be provided to oversee all excavations works and complicated manoeuvres.
- Under no circumstances shall passengers be carried.
- Operators shall observe site speed limit at all times.
- Mirrors or CCTV shall be provided to allow the excavator operator to have 360 degree vision.
- A CAT scan shall be carried out of the area to be excavated prior to work commencing.
- Dust suppression systems to be utilized during works.
- Under no circumstances is a load to be left elevated.
- Under no circumstances are operatives to work under an elevated load, or within close proximity to the excavator without the drivers and banksman's knowledge.
- The excavator operating area is to display warning signs and an exclusion zone of the demolition area.
- Stop blocks are to be provided when operating near deep excavations.
- Operators to ensure excavators are left in a position that allows for their safe access/egress to the excavator. With operators to wear mandatory site PPE during transit to and from the excavator.
- Suitable lighting for work areas/traffic routes and plant headlights to be operational.
- Edge protection on the back of excavators to be suitable and well maintained.
- Ground conditions/floor loading to be assess before use of excavator.
- Additional site specific controls to be completed for use of 360 Mini-Excavator.
- Demolition Specification requirements for Excavator.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

Manufactures manual/guidance PUWER / LOLER SSOW for the task	Relevant COSHH Assessments Traffic Management Plan HSG144 – Safe Use of Vehicles on Construction Sites

Ref No:	Risk Assessment Activity
RA38	**OXY / PROPANE CUTTING**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Flammable Gas	Flames	SBS Employees	Other Contractors
Toxic Fumes	Heat	~~Site Visitors~~	~~Members of the Public~~
UV Radiation	Burns	~~Young Persons~~	~~Vulnerable groups~~
Fire	Damaged surfaces	~~Migrant Workers~~	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- The task shall be controlled by a Permit to Work system.
- A suitable fire extinguisher & or water hose is to be present locally to the works – designated fire points are not to be used for general extinguishing or dousing.
- Only trained/competent operatives shall undertake the task.
- Gas cylinders to be stored/handled on a trolley/banks in a secure, upright position.
- Gas cylinders to be fitted with flashback arrestors.
- Hoses and cylinders to be inspected for damage and leaks prior to use.
- An exclusion zone is to be provided around the work area, which shall include screens to protect others were necessary, and appropriate signage.
- Operatives to wear suitable flame retardant overalls and gauntlets and including tinted visors
- In the event that there is a risk of the inhalation of poisonous/toxic fumes, RPE which conforms to EN 143 shall be worn by operatives with combination filters.
- Once Hot Works has ceased, at least a 1 hour Fire Watcher period is to be in effect post completion.
- Before work commences the area is to be suitable clear of potential fuel sources, and trip hazards.
- Before commencing ERP for Fire are to be in place and signed onto by all relevant staff.
- Fire Drills are to be undertaken prior to commencing Hot Works operations being recorded and regularly carried out following site changes.
- A fire watcher shall be provided to supervise the task.
- COSHH Assessments to be read and understood before undertaking the task for Oxygen & Propane.
- Cylinders are to be stored in a locked cage with adequate signage, and fire point.
- Least amount of flammable substances to be stored onsite as practicable.
- Hoses to be purged when not in use.
- The hoses are to be managed effectively to reduce the risk of a trip hazard as far as reasonably practicable.
- Any smouldering materials are to be extinguished immediately.
- Ensure area is well ventilated. Avoid works in confined spaces.
- Operatives to be face fit tested and harness trained if necessary for the works.
- Check of material before cutting (e.g. lead / galvanised) materials to be tested before cut were necessary.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

Fire Risk Assessment	The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)
Emergency Fire Plan	HSE Fire Safety in Construction HSG 168
The Regulatory Reform (Fire Safety) Order 2005	Suppliers/Manufactures guidance/manual
EH40: Workplace Exposure Limits	

Ref No:	Risk Assessment Activity
RA51	STORING GAS CYLINDERS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Sources of Ignition	Flammable gas	SBS Employees	Other Contractors
Poisonous fumes	Cylinder damager	~~Site Visitors~~	~~Members of the Public~~
Unauthorised access	Impact / Collision	~~Young Persons~~	~~Vulnerable groups~~
Confined spaces	Mixture of substances	~~Migrant Workers~~	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	3	5	HIGH

4. CONTROLS MEASURE

- Both full and empty gas cylinders shall be stored outside in a separate secure compound at ground level with sufficient ventilation provided, an open mesh cage is preferable.
- Cylinders shall be stored securely in an upright position, with the valve tightly closed.
- Cylinders shall be stored so that individual gas types are kept together in separate areas of the storage compound.
- Cylinders to be protected from potential impact, damage, and away from heat and ignition sources.
- A separate storage compound to be established for the Oxygen cylinders.
- A gas storage compound shall be sited at least 3m apart, away from pedestrian/vehicular traffic routes and away from occupied buildings.
- Only trained/competent operatives are to use and handle the cylinder's, using the transport trolley provided.
- The relevant COSHH Assessments are to be addressed before using the substance.
- Cylinders are to be returned to supplier after use.
- Quantity is to be kept to a minimum on site, stocking only enough to complete the works.
- Access to the cylinders are to be controlled by the 184 Supervisor, with the cages being locked at all times.
- Cylinder cages are to be established away from smoking areas, and suitably clear of potential sources of ignition and debris.
- Storage areas are to have the relevant fire extinguisher local present and warning sign displayed.
- Oxygen is not to be stored with grease lubricants.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

Relevant COSHH Assessment. Suppliers guidance CITB D: High Risk Activities P138-P158	Regulatory Reform Fire Safety Order DSEAR 2002 EH40: Workplace Exposure Limits

Ref No:	Risk Assessment Activity
RA17	**REFUELING. LEAKS OR SPILLAGES**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Hydraulic Oil Exposure	Exposure to Fuel	SBS Employees	Other Contractors
Slips	Damaged surfaces	~~Site Visitors~~	~~Members of the Public~~
Environmental damage	Equipment failure	Young Persons	~~Vulnerable groups~~
Fumes	Fire	Migrant Workers	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- All fuel bowsers provided on site shall be double bunded.
- Access to Bowers is to be locked and only access via 184 Supervisor authorisation.
- Additional bund storage shall be provided for substances to stand in, which shall have to capacity to contain at least 110% of the substance in the event of either leak or spillage.
- Spill kits, and plant nappies to be provide for use during refuelling, and readily available in the event of a leak.
- Suitable numbers of staff on site will be Spill Kit Trained.
- ERP for Spill are to be produced within ERP: Fuel Tank Demolition document and briefed out to staff including an Emergency Contact number of a Spill Contractor. Drills are to be carried out periodically to ensure the effectiveness of responses.
- All spills shall be cleaned up as soon as is practicable and reported to management.
- Spill drills to be conducted at regular intervals.
- COSHH Assessments should be read and understood before substance brought on site or used.
- Impermeable safety gloves are to be worn when handling substances.
- Substances are to be segregated from sources of ignition.
- Do NOT eat, drink, or smoke when using the substances, wash hands thoroughly after use.
- Plant nappies to be placed under all static machinery specifically during hour of hours.
- Any leaking plant or equipment is to be quarantined until repaired.
- Plant & Machinery are to be stood on hard standing ground so far as reasonably practicable.
- Permeable ground, drains and water courses are to be identified as high risk areas with strategically placed Spill Kits local to the area.
- Suitable fire points to be established at relevant areas across site, and placed at locations were required.
- Rags used to wipe away drips or residue are to be discarded and not incinerated.
- Any defect discovered are to be reported to management and documented in the daily plant checks.
- All drivers shall be trained in the safe charging of their vehicles fuel tanks.
- Hot equipment/machinery to be allowed sufficient time to cool down before refuelling.
- Pouring funnels to be used when manually pouring inserting substance.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

Relevant COSHH Assessments for substances. HSG191 Emergency Planning for Major Accidents. EH40: Workplace Exposure Limits	Environment Agency Pollution Prevention Guidance HSE: Emergency response / spill control

Ref No:	Risk Assessment Activity
RA21	HAND TOOLS - POWERED

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Flying/Falling materials	Sharpe edges/blades	SBS Employees	Other Contractors
Damaged equipment	High Pressure Air	~~Site Visitors~~	~~Members of the Public~~
Electricity	Manuel Handling	~~Young Persons~~	~~Vulnerable groups~~
Cuts / Puncturing	Poor safety features	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- Operatives shall be trained/competent in the use of the tool required with specific training for that item, or briefing training on manufactures instructions.
- Work area is to be clean/tidy before work commences and shall be free of obstacles/trip hazards.
- Electrically powered tools shall not be exposed to rain or used in wet/damp surroundings unless they are designed and protected for this purpose.
- Electrically powered tools shall not be used in the vicinity of combustible fluids, dusts or gases unless they are specially protected and certified for the use in these areas.
- Operatives shall select the correct tool for the task that they intend to perform as identified by the manufactures instructions and refrain from overloading the tool.
- PPE identified by the manufactures instructions shall be worn in addition to standard site requirements.
- Ensure all cables & air lines are managed to eliminate trip hazards as far as reasonably practicable.
- Operatives shall not overreach the work area, shall avoid abnormal body postures and maintain proper balance at all times.
- Power plug & air lines to be disconnected when the tool is not in use, before servicing and when changing blades.
- Tools shall be kept clean, in good working order and adequately stored when not in use.
- Tools are to be inspected once a week using the PUWER Register Document by a competent person. And visually inspect before use for damage.
- Any defects are to be reported to management immediately & recorded on inspection sheets.
- Tools are to have a valid PAT Tested by a competent person.
- All electrical tools are to be powered using the least amount of voltage practicable i.e. 110v.
- Working hours are to be recorded on to a Hand Arm Vibration register as required.
- Under no circumstances are vibration exposure limits to be exceeded.
- Safety features & protective guards are to be operational & adjusted by the user before start.
- All tools to be fitted with the appropriate safety features, and are set to the correct adjustment accordingly by the user before use.
- Operatives are not to intentionally miss-use or tamper with anything provided for the provision of H&S.
- Pneumatic tools airlines are to be fitted with secure couplers and whip checks arrestors.
- Operatives to have sufficient awareness of potential hazards such as asbestos and lead coatings.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

COSHH Assessments for relevant substances	Manufactures Guidance/Manuel
HAVS Forms / PAT	Provision Use Work Equipment Regs 1998
ACOP L22 Safe Use of Work Equipment	PPE Regulations

Ref No:	Risk Assessment Activity
RA22	HAND TOOLS – NON POWERED

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Flying/Falling materials	Sharpe edges/blades	SBS Employees	Other Contractors
Damaged equipment	Dust	~~Site Visitors~~	~~Members of the Public~~
Moving parts	Manuel Handling	~~Young Persons~~	~~Vulnerable groups~~
Cuts / Puncturing	Poor safety features	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	3	4	HIGH

4. CONTROLS MEASURE

- Operatives are to only use Hand tools having received authorisation, instruction, and training from the Site Supervisor.
- Operatives shall ensure the correct tool for the task is selected.
- The selected tool shall be in good working order and sufficient to carry out the task.
- Operatives shall be trained in the use of the selected tool and competent to carry out the task as per manufactures instructions.
- Specific demolition tools are only to be used trained Demolition Operatives.
- Toolbox talks are to be given in how to wield hand tools which require physical motion and force as per Manufactures requirements and Manual Handling guidelines.
- Operatives shall wear the appropriate PPE for the task identified by the manufactures instructions in addition to standard site requirements.
- Operatives using hand tools shall be supervised by a competent person.
- The work area shall be suitably free of debris/trip hazards before, during and after work has finished.
- Sufficient space will be provided between and around persons using hand tools to prevent collision or impact with others, or others using tools.
- Equipment that is discovered to be faulty is to be reported to management, and removed from use.
- All tools to be fitted with the appropriate safety feature and set to the correct adjustment accordingly by the user before use.
- The user is to ensure all safety features are working correctly before use.
- Non-spark, Non-conductive tools to be used.
- Operatives shall NOT deliberately miss-use equipment, or tamper with any mechanism provided for safety.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

COSHH Assessments for relevant substances ACOP L22 Safe Use of Work Equipment PPE Regulations	Manufactures Guidance/Manuel Provision Use Work Equipment Regs 1998

Ref No:	Risk Assessment Activity
RA24	**HAVS**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Damage to Structures	Noise	SBS Employees	Other Contractors
Debilitating Issues	Dust	~~Site Visitors~~	~~Members of the Public~~
Loss of grip	Joint Pain	~~Young Persons~~	~~Vulnerable groups~~
Loss of dexterity	Nerve Damage	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- The task shall be planned accordingly, with the SSOW briefed out to all operatives involved in the task.
- Equipment with the lowest vibration output to be selected for use so far as reasonably practicable.
- Equipment to be used in accordance with the manufactures instructions.
- Equipment to be maintained and inspected by a competent person at regular intervals.
- Any defects to be reported to management and documented in the PUWER register.
- Only trained, and competent operatives to operate vibration producing equipment.
- Operatives shall wear the appropriate PPE for the task.
- HAVS monitoring shall be carried out, the vibration exposure per operative shall be restricted to as little as possible and NOT exceed the daily exposure limit value of 5m/s squared per 8hr working period.
- Aim to keep below 2.5m/s as far as reasonably practicable.
- HAVS monitoring records to be kept in the HAVS record folder and made available on request.
- Health surveillance to be carried out by Occupational Health nurse to identify those operatives who are approaching or exceed stage one on the Stockholm scale.
- Ensure side handles are fitted correctly to tools.
- Ensure cutting edges/tips are sharp.
- Use anti-vibration gloves were practicable.
- Do NOT grip the tool to hard.
- Report any ill health to management immediately.
- This type of activity should be restricted and avoided were possible.
- Should not be carried out during extreme cold or inclement weather.
- Regular job rotation system should be managed.
- Regular breaks to be scheduled with provision of providing suitable heating.
- Persons under 18 or with existing health issues are not permitted to use HAVS tools.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

HSE Control of Vibration at Work Guidance	Local GP / SBS Nurse
Manufactures Guidance/Manuel	HSE: Vibration Calculator
Vibration at Work Regulations 2005	HSE: HAV good practice guidelines Construction

Ref No:	Risk Assessment Activity
RA13	DUST

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Dust	Eye irritation	~~SBS Employees~~	~~Other Contractors~~
Cross contamination	Public contamination	~~Site Visitors~~	Members of the Public
Systemic illness	Dust migrating to public	~~Young Persons~~	~~Vulnerable groups~~
Neighbouring Properties	Wind/Gust migration	~~Migrant Workers~~	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- So far as is reasonably practicable work methods which limit the production of dust shall be implemented.
- So far as is reasonably practicable dust shall be kept below the Workplace Exposure Limit (WEL) of 0.3 mg/m³ over a Time Weighted Average (TWA) of 8 hours.
- An appropriate means of dust suppression shall be used for tasks creating dust.
- Remote demolition is to be completed in it majority by muncher/grab/bucket demolition, with reduced used of Hydraulic Breaker to reduce dust production from Hydraulic Breaking.
- Clean well maintained welfare facilities shall be provided, which shall include showers for dusty works to prevent workers from migrating dust out from the site on their persons when traveling from site.
- Any on site drains will be protected to prevent the ingress of excessive silt.
- Spoil heaps will be dampened down regularly to prevent gust/wind migrating dust
- Tracking routes will be dampened down regularly to vehicle movements and plant tracking 'kicking up' dust.
- Dust level monitoring shall be carried out throughout site especially at the site perimeter and records kept of this.
- Operatives will be given regular health screening, which shall include lung function tests
- Operatives shall be given a toolbox Talk on silicosis
- Operatives shall be supplied with appropriate eye protection and respiratory protection equipment (RPE).
- Operatives shall be face fitted for and trained in the use of appropriate RPE.
- Clean well maintained welfare facilities shall be provided, which shall include showers for dusty works.
- So far as is reasonably practicable hand held tools/equipment shall be fitted with dust capture systems.
- Waste materials shall be removed on a regular basis to prevent dust-spread.
- All dust generating Activities are to be Supervised.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

Air Quality Managements Guidance on Risk Assessment	EH44 - Dust in the workplace
CIS36 – Construction Dust Revision 2	HSG150 – Health and safety in construction
HSG53 – Respiratory equipment at work	MOL Control of Dust Emission Supplementary Guidance

Ref No:	Risk Assessment Activity
RA33	**MANUAL HANDLING**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Load – Size/Weight	Poor technique	SBS Employees	Other Contractors
Lighting & walkways	Hazardous Content	~~Site Visitors~~	~~Members of the Public~~
Route, distance,	Cuts & abrasions	Young Persons	~~Vulnerable groups~~
Slips, trips, falls,	Musculoskeletal injuries	Migrant Workers	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- A visual manual handling assessment shall be carried out by the handlers prior to the commencement of work taking into consideration: the task to be undertaken, the capability of the individual undertaking the task, the load that will be handled & the environment in which the task will be undertaken.
- Operatives shall be trained in the method of kinetic lifting via a TBT.
- Where possible, lifts by a single person should be kept within the recommended guidelines. Male 25Kgs, Female 15Kgs.
- Manual Handling guidance displays will be displayed across site for operative reference.
- Operatives shall wear appropriate safety gloves, and steel toe cap boots as identified by the standard site requirements.
- A good standard of housekeeping shall be maintained to prevent trip hazards.
- Where possible, lifting operations should be carried out in pairs or more where mechanical means are not viable.
- The lift should be planned accordingly, outlining what is to be lifted, where it is to be lifted to and the route taken to get it there.
- Where ever possible, items that require lifting, should be placed in an area where there is little or no need to bend, twist, and stretch or over reach.
- The load should be assessed, ascertaining weather or not it is heavy, bulky or unwieldy, difficult to grasp, unstable or the contents within likely to shift, hot, sharp or dangerous.
- The individual should take into account their own ability, strength, height and build. Items should not be packaged so that the majority of the 'normal' workforce has to reply too heavily on the above mentioned factors.
- The route that is taken to transport the load should have smooth and even surfaces, be well lit and free from obstacles. This will be done by providing task specific lighting where natural lighting is not available. Designated walkways and route shall be set up to reduce the need to work on uneven surfaces.
- If the load requires pulling or pushing a sack barrow or manually operated pallet track shall be provided but must not be used on uneven surfaces.
- Loads should be carried close to core of the body
- Where ever possible, loads should be spilt up to reduce overall weight
- Carrying between levels should be avoided and the use of lifts/chutes should be used where ever possible.
- Loads must not be carried over head height

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

http://www.hse.gov.uk/msd/manualhandling.htm HSE – Manual Handling	MAC Assessment PUWER

Ref No:	Risk Assessment Activity
RA14	**EXHAUST EMISSIONS**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Exposure to Fumes	Burns	SBS Employees	Other Contractors
Reduced visibility	Death	~~Site Visitors~~	~~Members of the Public~~
Cancer	Ignition	Young Persons	Vulnerable groups
Material Contamination	Lung Disease	~~Migrant Workers~~	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- All plant & equipment will be sufficiently maintained and certified for use to ensure the item runs correctly and efficiently to reduce emissions.
- All plant & equipment will be critically inspected on arrival to ensure fit for purpose.
- Plant to be suitably maintained and inspected as per PUWER 1998 with a recorded daily & weekly inspection.
- Filters and Catalytic converters to be used on Plant and vehicles to reduce emissions.
- Ensure exhausts are appropriately positioned to avoid the accumulation of fumes.
- Exhaust and fume ejection is to be visually monitored and included as part of the recorded inspection.
- Equipment that produces excessive and continuous visible fumes is to be quarantined and repaired.
- Ensure fumes are not allowed to muster and are well separated from sources of ignition.
- Ensure exhausts are not directed into pits, trenches, excavations or other places of work where fumes can muster.
- Ensure exhausts do NOT become blocked, and are properly fitted and maintained.
- Do NOT handle used exhausts without PPE flame & heat retardant gauntlets when hot.
- Do NOT eat, drink, and smoke when exposed. Wash hands thoroughly after exposure.
- Keep plant idling to a minimum, machine turn off when not in use.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

HSE Guidance Control of Exhaust Emissions HSG187	Manufactures guidance/manual EH40: Workplace Exposure Limits

Ref No:	Risk Assessment Activity
RA30	**Loading & Unloading Flat-Beds & Low-Loaders**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Slips	Uneven ground	SBS Employees	Other Contractors
Falls from height	Inclement weather	Site Visitors	Members of the Public
Substance spill	Plant Movements	~~Young Persons~~	~~Vulnerable groups~~
Falling material	Manual handling	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- Loading and unloading is to be conducted on firm level ground so far as reasonably practicable.
- Staff working on the flat bed is to be eliminated where possible by working from the ground.
- When working from the flat bed on uneven ground, either fall arrest, or edge protection I to be used. (I.e. collapsible edge protection.)
- Access on the off the flat bed is to be undertaken using the access equipment installed on the vehicle. Staff are not to jump on to, or from the flatbed.
- Access equipment is to be inspected visually by the user before gaining access, and any defects reported to the fleet office, or responsible person.
- Staff are not permitted to stand on the load at any time, unless using controlled access for getting in and out of other vehicles being loaded onto the flatbed.
- Stacked / loaded material is to be stacked evenly, with the weights distributed evenly across the flatbed, and the material stacked in accordance with weight starting with the heaviest.
- Substances that are to be carried are to be controlled via a COSHH Assessment detailing Tremcard, being secured, and protected by impact so far as reasonably practicable.
- On board Spill Kit and Fire Extinguisher to be available suitable to the load.
- Fragile items are to be secured using nets rather than chains or straps to prevent/eliminate the potential for the load to collapse, or dislodge during transit, which may cause falling material, or substance leak.
- The loading of items onto the flatbed are to be conducted using mechanical aids, where manual handling is required loading is to be conducted from ground level, and edge protection used when handling on the flatbed.
- Packing materials (timbers) are to be used to maintain load stability, and even weight distribution where required.
- PPE is to be worn when loading and unloading as per site rules.
- Additional care is to be taken following inclement weather making surface slippery through ice, or rain.
- Additional caution is to be taken when there is inadequate lighting, using personal lights, or vehicle lights to increase visibility. Work on the flatbed is not to be undertaken in darkness.
- Loose items stored on the flatbed are to be secured sufficiently to prevent coming loose during transit, and ideally store so they can be access via the ground.
- Load securing chains, traps, and nets are to be fit for purpose, being visually inspected before use, and defects reported to the fleet office, or responsible person.
- The vehicle driver is to visually inspect all loaded loads before moving to ensure integrity, and before unloading to check for any movement which may have occurred.
- Loading and unloading is to be undertaken in a controlled, designated location, unless instructed otherwise by a competent person.
- Under no circumstances are persons permitted to work from the flatbed without being briefed on this risk assessment.
- Plant to be visually inspected before being unloaded.
- Machine operator is to access the Plant via a ladder to the cab door footed by another operative**.**

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

HSE Guidance: Access to work on flatbed vehicles.	Manual Handling & W@H Regulations.

Ref No:	Risk Assessment Activity
RA37	**NOISE**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Hearing loss/damage	Imped communication	SBS Employees	~~Other Contractors~~
Tinnitus	Disorientation	Site Visitors	Members of the Public
Headaches	Nuisance	~~Young Persons~~	~~Vulnerable groups~~
Nausea	Disrupts wildlife	~~Migrant Workers~~	Environment

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- Noise levels shall be assessed prior to work commencing which can be obtained from manufactures guidance for equipment.
- In the event that noise levels are above the low action limit of 70dbA, hearing protection plugs and/or ear defenders will be provided.
- In the event that noise levels are above the exposure limit of 75dbA, where possible plant/machinery shall be placed inside an enclosure to reduce noise levels.
- In the event of noise levels being above the higher exposure limit of 85dbA – the works are to be re-assessed to reduce the noise levels to the low level.
- Where hearing protection PPE is required to be worn signage shall be put in place to enforce this & to warn persons that they are entering an area of high noise level exposure.
- Health surveillance shall be provided for all operatives who work continually in high noise areas.
- Job rotation to be employed to limit exposure.
- Noise level monitoring shall be carried out around the site perimeter and within the site boundary and via portable hand held devices to gauge point of work emissions.
- Placing loud machinery a good distance away from operatives and sensitive neighbours.
- Providing training and information to operatives who may encounter loud noise risk areas via TBT's.
- Provision of PPE either in the form of ear defenders or in-ear plugs shall be available to operatives whilst on site regardless of noise levels if they request it.
- Setting up screens and barriers to deflect sound away from working areas.
- Ensuring that equipment is securely fixed or on noise dampening mats to prevent additional noise from vibration.
- Equipment shall be maintained at regular intervals to ensure compliance with section 60/61 requirements.
- Methods of communication such as hand signals to be utilised by staff operating in areas of high noise or where noise may effect communication.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

http://www.hse.gov.uk/noise/ http://www.hse.gov.uk/vibration/hav/roadshow/al7.	Section 60/61 Monitoring results.

Ref No:	Risk Assessment Activity
RA10	**DISCOVERING ACM DURING WORKS**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Exposure to fibres	Pleural Thickening	SBS Employees	~~Other Contractors~~
Mesothelioma	Manual Handling	~~Site Visitors~~	Members of the Public
Asbestosis	Contamination	~~Young Persons~~	~~Vulnerable groups~~
Lung Cancer	3rd Party Exposure	~~Migrant Workers~~	~~Environment~~

1. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	2	5	HIGH

2. CONTROLS MEASURE

- Immediately stop work.
- Remove yourself and verbally warning others in the immediate vicinity.
- Summon the SBS Contracts Manager via radio/phone, and confirm location.
- Prevent access to the area until SBS Contracts Manager arrives.
- SBS Contracts Manager (or Asbestos Compliance Officer / or onsite Asbestos Supervisor) to don overalls and half mask to assess the substance.
  - If suspected as Asbestos area is to be isolated to prevent entry.
  - If material has been disturbed and is exposed to the natural elements, then it is to be covered to prevent further release caused by the elements.
  - Display warning signage of suspected ACM's.
- SBS Management to arrange for a sample to be collected and analysed by an accredited laboratory, as well as air testing if material is internal.
  - If confirmed as Asbestos, a specialist contractor is to be employed to remove the Asbestos.
  - SBS Management will arrange a safety meeting with relevant parties to discuss the potential of further unknown similar occurrences of ACM's on site.
- If confirmed as NOT asbestos then controls will be permitted to be rescinded.

- **SAFETY NOTE: Do not attempt to contain asbestos without correct controls, training, or instruction. All operatives undertaking demolition are to have Asbestos Awareness Training and be competent in identifying ACM's.**

3. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

4. ADDITIONAL GUIDANCE

Control of Asbestos Regulations 2012	HSG248 – An Analysts Guide to Asbestos
ACoP - L143 - Managing and Working with Asbestos	HSG264 – A Surveyors Guide
Manual Handling Risk Assessment	HSG247 – A Licenced Contractors Guide to Asbestos

Ref No:	Risk Assessment Activity
RA49	SLIPS TRIPS & FALLS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Uneven surfaces	Breaks	SBS Employees	Other Contractors
Inadequate lighting	Soft tissue damage	Site Visitors	~~Members of the Public~~
Changes in level	Cuts, abrasions	~~Young Persons~~	~~Vulnerable groups~~
Obstructions	Trailing Cables	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- A good standard of housekeeping shall be maintained throughout Site 184.
- So far as is reasonably practicable uneven floor & ground areas shall be eliminated.
- Information/safety signage shall be provided of falls and uneven grounds.
- All access/egress routes shall remain clear of obstruction at all times.
- Edge protection shall be provided to the Site by maintaining the existing handrail and installing perimeter heras fencing.
- Equipment for the cleaning of muddy footwear shall be provided in the form of boot clean stations, water, brooms and fixed brooms on metal grating.
- All spills shall be cleaned up immediately.
- Icy surfaces/pathways shall be treated with rock salt.
- Walkways are to be segregated/highlighted where possible to ensure that they are not obstructed by items that may cause a trip hazard.
- The contamination of walkways will be avoided by supplying bunds around equipment and fuel containers/Designated waste storage areas.
- Any loose/protruding items shall be removed or fixed down to prevent any tripping hazards.
- Differences in walkways, low steps or edging shall be highlighted where required with spray paint/line marker
- Cables where possible will be run around boarders or under cable covers and mats and not across walkways.
- Gradients in floor levels to be highlighted where it is not possible to level them.
- PPE footwear to have ankle support, fit correctly and be tied properly and be in good condition with sufficient grip or anti-slip soles when working on the Site crown.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

http://www.hse.gov.uk/slips/

Ref No:	Risk Assessment Activity
RA27	LEPTOSPIROSIS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Rats	Water courses	SBS Employees	Other Contractors
Taps	Eating on Site	~~Site Visitors~~	~~Members of the Public~~
Pest Control Traps	Delayed symptoms	Young Persons	~~Vulnerable groups~~
Excessive waste	Poor hygiene	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- All persons shall be made aware of the Leptospirosis risk at the site induction.
- All operatives shall wear safety gloves.
- All persons on site to maintain a rigorous hygiene regimen especially when leaving a known contaminated area.
- A good standard of housekeeping shall be maintained across site, particular attention shall be paid to kitchen and canteen areas, with all food waste being disposed of into a closed solid bin.
- NO eating, drinking or smoking out on site. Hands and face are to be washed thoroughly before doing so.
- Dead rats/vermin are NOT to be handled without appropriate PPE and authorisation.
- System of reporting visual sightings of rats to management is to be established.
- Health surveillance for operatives to be carried to identify any early signs of infection.
- If risk is water borne, ensure waterproof PPE is worn, ensure all cuts have waterproof covers.
- At risk groups shall not be exposed to contaminated areas.
- Operatives to be issued with a Health card to be given to GP if taken ill.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

HSE Guidance Leptospirosis EH40: Workplace Exposure Limits	Local GP / Nurse

Ref No:	Risk Assessment Activity
RA52	STAFF WORKING ALONGSIDE EXCAVATORS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Crushing injuries	Fumes	SBS Employees	Other Contractors
Falling material	Collision	~~Site Visitors~~	~~Members of the Public~~
Miscommunication	Excavator overturning	~~Young Persons~~	~~Vulnerable groups~~
Unawareness	Access/Egress	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- Excavator operators shall be trained and competent to CPCS standard or equivalent.
- Excavator shall be checked/maintained/serviced by a competent persons at regular intervals as per regulation.
- Operator shall carry out daily inspections using the Daily Plant Checks Document to accurately reflect the condition of the excavator. Any defects are to be reported to management immediately.
- Attachment pins are to be used at all times, and under no circumstances are they to be replaced with re-bar.
- Excavators shall be inspected weekly by a competent person as required under PUWER 1998.
- Staff working around the excavator are to be suitably trained with CCDO, and CSCS competency cards.
- Instruction is to be given to all staff regarding working around, or within close proximity to moving plant.
- Excavators shall be fitted with an amber flashing beacon and a reversing warning system.
- Operators shall use the seat belt restraint provided and any other device fitted for the provision of safe operation.
- Excavator to be operated a ground level as flat as reasonably practicable.
- A trained banksmen/supervisor shall be provided to oversee all works and complicated manoeuvres where excavators are working around or in close proximity to staff.
- Under no circumstances shall passengers be carried, or stop on the machine while operating.
- Operators shall observe site speed limit at all times, and not operate unless instructed by the banksmen/supervisor.
- Mirrors or CCTV shall be provided to allow the excavator operator to have 360 degree vision.
- Swell restrictions and reversing restrictions are to be applied.
- Dust suppression systems to be utilized during works.
- Under no circumstances are operatives to work under an elevated load, or within close proximity to the excavator without the drivers and banksman's knowledge.
- Two thumbs up system to be in use between staff and the plant operator.
- Suitable access egress is to be maintain around the excavator for staff and the Operator.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

PUWER	CITB: D High Risk Activities

Ref No:	Risk Assessment Activity
RA60	**WORKING AT HEIGHT**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Falls from height	Snagging	SBS Employees	Other Contractors
Falling tools/materials	Overhead services	~~Site Visitors~~	~~Members of the Public~~
Suspension injuries	Crushing	~~Young Persons~~	~~Vulnerable groups~~
Death	Equipment failure	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- When planning work at height consideration shall be given to the effects of weather conditions and under no circumstances shall work at height be permitted where weather conditions have the potential to jeopardise the health and safety of persons.
- All operatives involved in working at height shall be trained/competent in doing so and in the task at which they will be undertaking.
- Any task which has the potential for persons to fall from around or on top of the Site shall be considered as working at height and so far as is reasonably practicable suitable and sufficient edge protection shall be provided where the main guard rail shall be positioned at least waist height or 950mm above any edge from which persons have the potential to fall
- So far as reasonably practicable operatives shall use tethered tools whilst undertaking work at height.
- All staff involved are to be signed onto and prepared in the ERP: Work at Height rescue with sufficient trained staff, approved equipment available to perform the rescue.
- Measures shall be taken to prevent materials /objects from falling whilst work at height is being undertaken
- So far as is reasonably practicable an exclusion zone shall be set up to prevent access to unauthorised vehicles/pedestrians beneath the area where work at height is being undertaken
- Suitable and sufficient warning signage shall be put in place.
- Work at Height PPE/Equipment is to be Risk Assessed in conjunction with this Work at height Risk Assessment.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

Work at Height Regulations 2005	Fixed Scaffold Risk Assessment
INDG401- Work at Height a Brief Guide	Mobile Scaffold Tower Risk Assessment
Work at Height Procedure	Working with MEWPS Risk Assessment
Permits	Use of Fall Arrest Harness Risk Assessment

Ref No:	Risk Assessment Activity
RA01	**ACCESS TOWERS**

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Falls from height	Overhead services	SBS Employees	Other Contractors
Falling objects	Collapse	~~Site Visitors~~	~~Members of the Public~~
Tower overturning	Crushing	~~Young Persons~~	~~Vulnerable groups~~
Collision with plant	Miss use	~~Migrant Workers~~	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	4	HIGH

4. CONTROLS MEASURE

- The selection, erection, dismantling & inspection of mobile scaffold towers shall only be undertaken by PASMA trained operatives.
- The tower once erected shall be inspected by a PASMA trained competent person prior to use, on a weekly basis and a record kept of this.
- Towers shall only be used on level, firm & stable ground.
- No person shall be allowed to erect, alter or dismantle any mobile scaffold tower, unless they are PASMA trained and authorised by the site supervisor.
- All tower components shall be checked for defect prior to use, with damaged components being placed beyond use and ultimately destroyed
- All wheels shall be kept locked whilst the tower is in use and all persons shall vacate the tower prior to it being moved.
- All operatives who are required to use mobile tower scaffolds will be instructed in their safe use and movement.
- Stabilisers/outriggers shall be fitted where space permits
- Mobile tower scaffolds shall not be used on sloping, uneven or obstructed surfaces.
- Tower scaffolds shall only be used in a vertical position.
- The tower scaffold working platform shall have either integral, or be fitted with, guard rails, intermediate rails and toe boards, where the main guard rail shall be positioned at least 950mm above the edge of the working platform, a sufficient number of intermediate rails shall exist so that the unprotected gap does not exceed 470mm and toe boards shall be fitted to prevent objects rolling or being kicked off the scaffold tower.
- Towers shall be anchored to a rigid structure if exposed to high wind or in the event that they are to be used for jet washing activities and if the height to base ratio exceeds the manufacturer's recommendations.
- Under no circumstances shall persons working from a tower scaffold overreach or attempt to work from a ladder off the working platform.
- Safe distances shall be maintained between towers and overhead power lines.
- So far as is reasonably practicable operatives working from the tower scaffold platform shall use tethered tools.
- Operatives shall not at any time climb from within the confines of the tower platform
- Operatives shall refrain from hoisting materials up the tower
- The SWL of the tower shall not under any circumstances be exceeded
- Mobile tower scaffolds shall be dismantled when not in use.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	4	LOW

6. ADDITIONAL GUIDANCE

CIS10 – Tower Scaffolds	INDG401- Work at Height a Brief Guide
HSG150 – Health and Safety in Construction	Work at Height Risk Assessment
Work at height Regulations 2005	Work at Height Procedure

Ref No:	Risk Assessment Activity
RA61	WORKING IN EXCAVATIONS

1. GENERAL HAZARDS		2. GROUPS AT RISK	
Dust	Fire/explosion	SBS Employees	Other Contractors
Live services	Build-up of fumes	~~Site Visitors~~	~~Members of the Public~~
Falling objects/collision	Collapse of excavation	~~Young Persons~~	~~Vulnerable groups~~
Access/egress	Limited space	Migrant Workers	~~Environment~~

3. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

4. CONTROLS MEASURE

- The use of plant, including petrol cut off saws and burning equipment, shall be limited with plant emissions being controlled by an exhaust capture system or increased ventilation.
- So far as is reasonably practicable dust shall be kept below the Workplace Exposure Limit (WEL) of 0.3 mg/m³ over a Time Weighted Average (TWA) of 8 hours.
- Where possible natural or forced ventilation should be used, however in the event that neither of these measures is practicable a Local Exhaust Ventilation (LEV) system should be considered.
- Access/egress routes shall be fixed, well lit, signed & kept clear of obstruction at all times.
- Consideration shall be given to the amount of plant being allowed into the work area.
- Suitable lighting shall be provided which shall have a back-up battery supply and in the event that it is found to be necessary suitable task lighting shall be made available.
- A good standard of housekeeping shall be maintained at all times.
- Consideration shall be given to the ingress of water. Use water pumps to remove the water ingress.
- Noise levels shall be limited with noise monitoring being undertaken as required.
- Two point of access/egress should be maintained at all times.
- The above area around the excavation should be suitably controlled, and the edge protected via a fixed handrail, soft barrier 1.5m from the edge, or by a manned supervision (Not Permanent Solution.)
- Exhaust vents shall be positioned to prevent the must of fumes within the excavation.
- Consideration should be given to prevent the ingress of toxic gasses that are denser then air, and could potentially must in excavations.
- Non-Spark tools to be used.
- Service scanning is to be completed before digging into the excavation.
- The excavation must be suitably supported via Temporary Works (Trench Box) or by design (Battered)
- A daily excavation inspection is to be carried out by a competent person.
- Where excavations have restricted, or solely ladder access, arrangements are to be in place for the rescue of injured persons.

5. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

6. ADDITIONAL GUIDANCE

BS EN 6187-Code of Practice for Demolition	Fire risk assessment
Confined space entry risk assessment	Regulatory Reform Fire Safety Order 2005
L101- Safe Work in Confined Spaces	EH44 - Dust in the workplace

Ref No:	Risk Assessment Activity
RA36	**MOBILE CRUSHER**

7. GENERAL HAZARDS		8. GROUPS AT RISK	
Moving parts	Vibration	SBS Employees	Other Contractors
Falling materials	Mobile plant	~~Site Visitors~~	~~Members of the Public~~
Noise / Dust	Work at height	~~Young Persons~~	~~Vulnerable groups~~
Crush injuries	Entrapment	~~Migrant Workers~~	Environment

9. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	4	5	HIGH

10. CONTROLS MEASURE

- Any permits required shall be obtained prior to work commencing.
- The crusher shall be set up within a designated segregated area
- All operatives involved with the crushing works shall attend the method statement briefing, shall confirm that they understand the method statement fully and sign the acknowledgement sheet before leaving the briefing.
- Before commencement of any crushing activities the crusher operator/competent person shall undertake a visual inspection of the crusher and record the findings on the appropriate machine check sheet.
- No operative shall be permitted on the machinery whilst it is running, the only reason an operative can access the machine foot plates is to clear a blocked hopper and this must only be undertaken once the power has been isolated.
- There shall be a suitable and sufficient isolation system in place to allow the operator to stop the machine to clear blockages.
- All access ways shall be fitted with guardrails.
- So far as is reasonably practicable guardrails shall not be breached**, HOWEVER WHERE THIS IS UNAVOIDABLE TO GAIN ACCESS TO A BLOCKAGE THE CRUSHER SHALL BE ISOLATED, LOCKED OFF AND THE KEYS REMOVED**, a safety harness shall be worn if there is the potential to fall and the crusher operator shall ensure that no further material will be loaded on top of the operative.
- Care shall be taken when the blockage is released to ensure that the released material does not roll back/fall towards the operative.
- Raw material shall be screened prior to delivery to the hopper
- When raw material is being delivered into the hopper the operator of the loading machine must be able to see into the hopper or be provided with a Banksman.
- All vehicles traversing the work area shall observe the site speed limit, all personnel shall be made aware of vehicle movements and take care for themselves and others.
- Operatives shall stay away from the conveyor belt. All moving parts shall be guarded, screens protecting the sides of the belt and other mechanisms shall be replaced correctly following clearing/cleaning.
- Under no circumstances; shall the cover plates to the screw, impact mechanisms or any other part of the machine be opened whilst machine is in operation. **SWITCH OFF AND ISOLATE FIRST**. All access plates shall be correctly replaced.
- This machinery is very loud and dirty and produces largely concrete dust which will be caustic when it becomes wet. This will cause burns to the mucous membranes of the face, eyes, inside the nose and mouth. Hence PPE requirements will include a dust mask, gloves, safety boots, hard-hat, and goggles will be necessary to prevent contamination of the eyes.
- Full PPE including hearing and eye protection **MUST** be worn at all times whilst the machine is in operation.
- **IF AT ANYTIME THROUGH MONITORING IT IS NOTED THAT DUST OR NOISE EXCEDES THE ANTICIPATED LEVELS WORKS SHALL BE STOPPED AND RE-ASSESSED.**
- Weekly PUWER inspections shall be undertaken and recorded

11. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

12. ADDITIONAL GUIDANCE

HSG144 - Safe Use of Vehicles on Construction Sites	NFDC – Guidance Notes on the Safe Use of Mobile Crushing Plant in the Demolition Sector

Ref No:	Risk Assessment Activity
RA08	**WORKS IN BASEMENT AREAS**

13. GENERAL HAZARDS		14. GROUPS AT RISK	
Dust	Fire/explosion	SBS Employees	Other Contractors
Noise	Build-up of fumes	~~Site Visitors~~	~~Members of the Public~~
Falling objects/collision	Poor lighting	~~Young Persons~~	~~Vulnerable groups~~
Access/egress	Limited space	Migrant Workers	~~Environment~~

15. RISK RATING (Before Controls)	Likelihood	Severity	Risk
	5	5	HIGH

16. CONTROLS MEASURE

- The use of plant, including petrol cut off saws and burning equipment, shall be limited with emissions being controlled by reducing the emissions, ensuring suitable ventilation, monitoring, and where required exhaust capture system or increased ventilation systems.
- Air monitoring shall be undertaken and in the event that it is found to be necessary operatives working times shall be limited to reduce exposure.
- So far as is reasonably practicable dust shall be kept below the Workplace Exposure Limit (WEL) of 0.3 mg/m³ over a Time Weighted Average (TWA) of 8 hours.
- So far as is reasonably practicable no work uncontrolled work should be undertaken within the basement work area, however where there is a unavoidable necessity for work to be carried; controlled access should be established, a permit to enter, and sufficient emergency rescue provisions provided.
- No work is to be conducted within the basement while demolition of above ground / overhead structures is being undertaken.
- Access/egress routes shall be fixed, well lit, signed & kept clear of obstruction at all times.
- Access/egress for plant shall be of a suitable incline with consideration being given to headroom.
- Consideration shall be given to the amount of plant being allowed into the work area.
- Suitable lighting shall be provided which shall have a back-up battery supply and in the event that it is found to be necessary suitable task lighting shall be made available.
- A good standard of housekeeping shall be maintained at all times.
- Consideration shall be given to the ingress of water.
- Noise levels shall be limited with noise monitoring being undertaken as required.
- Edge protection to be established 2m from the edge.
- Basement is controlled demolition zone.
- Access and egress is to be sufficient for plant to enter safely.
- Provisions are to be established to prevent vehicles from falling into the basement, or falling to lower levels.
- The entry of vehicles into the basement is to be controlled by a Supervisor, with a Supervisor/Traffic Marshal to provide instruction and supervision for all movements.

17. RISK RATING (After Controls)	Likelihood	Severity	Risk
	1	5	LOW

18. ADDITIONAL GUIDANCE

BS EN 6187-Code of Practice for Demolition	Fire risk assessment
Confined space entry risk assessment	Regulatory Reform Fire Safety Order 2005
L101- Safe Work in Confined Spaces	EH44 - Dust in the workplace

Briefing Sheet

By signing I confirm that I have understood the content of the attached document / Briefing given to me and will adhere to its requirements.

No#	Name	Sign	Date	Re-brief Dates	
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