



<b>Demolition Plan Incorporating CPP / CEMP</b>			
Project Name:	Former Chanson Foods Demolition	Job Number:	14180
Location:	Avon Street Bristol BS2 0PS		
Project Image:			
Client:			
Contact name:	Richard Williams	Number:	07731 339874
Reference Documentation:	ED096990 Avon St PCI (Demolition) Demolition Scope of Works UXO Risk Assessment Drainage and Flood Desk Study – 10572-TCE-S-TN-0003 14180 – Avon Street FRAP Various surveys supplied as part of PCI		

Document Issue and Communication Log							
Issue	Revision	Issue Date	Status	Produced by	Reviewed by	Received by (Operations)	Communicated to Supervisor
1	0	22/11/2023	For client comment	IB	TW	-	-
2	1	24/11/2023	Updated following CDM/Planning comments	IB	TW		

Disclaimer
<p>This method statement and risk assessment document is produced as part of the Wring Group's Safe System of Works and is intended to be used as a guide only for the Health &amp; Safety of Wring Group site operatives, visitors and adjacent occupiers of the site in question, so far as can be reasonably expected with the actual knowledge and information available to Wring Group at the time of issue of this document. As such no reliance should be placed (and Wring Group accepts no responsibility whatsoever for the consequences of such reliance) on this Method Statement by any person in any contractual arrangement. This does not affect the statutory rights of any party contracting with Wring Group under general health &amp; safety law</p>
<p><b>This document is to be read in conjunction with Wring Group Ltd Standard Operating Procedures (S.O.Ps)</b></p>



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MS - RAMS-IB/14180/22-11-2023 Former Chanson Foods Demolition

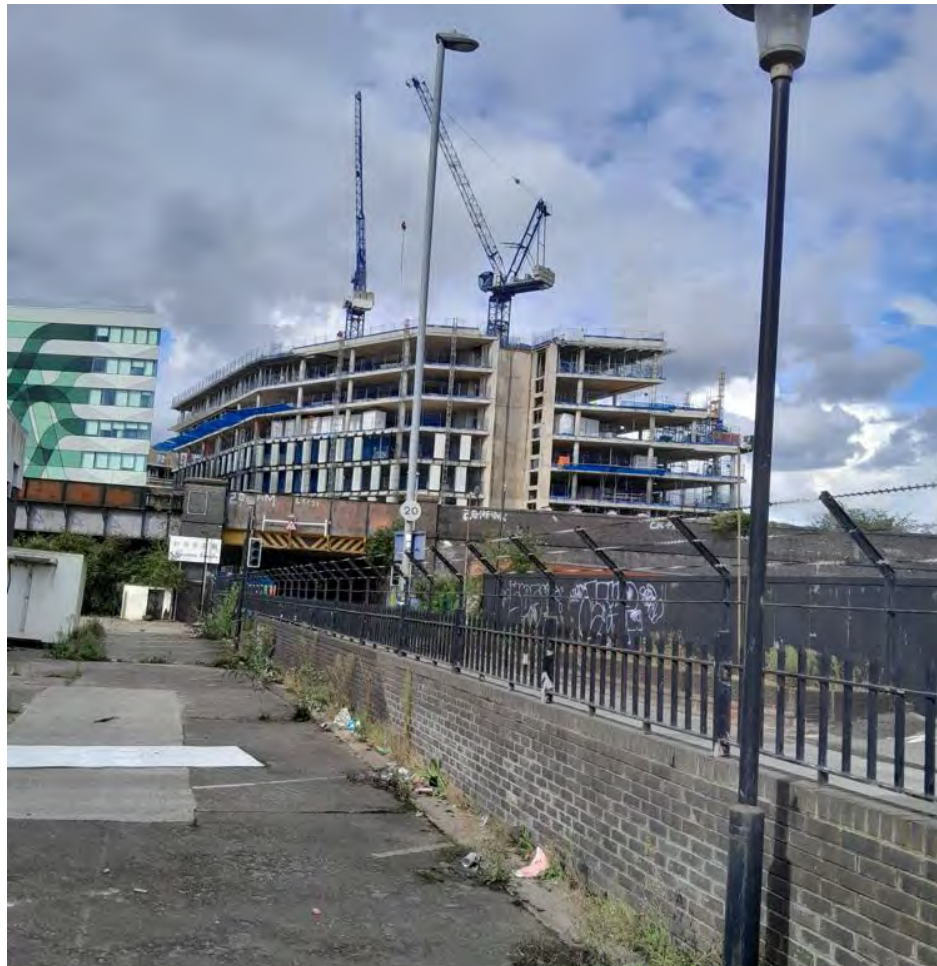
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**1.0 Contract Information**

<b>1.1 How to use this document</b>			
<p>This document is written to allow the safe demolition/site works to be undertaken on sites which Wring Group Limited have control. The method has been planned at the initial stages of the works and therefore has the potential to change throughout the project due to circumstances changing on site. The document is designed to be fluid allowing for amendments to be carried out two-fold. Minor amendments can be made on site by sufficiently trained and competent demolition site supervisors or on a higher level through the project management.</p> <p>The document must be read in conjunction with other site documentation such as Demolition/Refurbishment Asbestos survey, services information, site plans, WGL S.O.Ps, scaffolding designs, COSHH Data sheets, risk assessments and environmental registers. This list is not exhaustive.</p> <p>It is the job of the Project Manager to communicate the information within this document to the Operations Manager, Operations Director and Demolition Site Supervisor.</p> <p>It is the task of the Demolition Site Supervisor and Operations Manager to communicate this information to the site staff and any site-based representatives from the client team who wish to understand the project, either at the commencement of the project or sectionally throughout the project depending on the length and complexity of the works.</p>			
<b>1.2 Demolition Contractor</b>			
<p><b>Address:</b></p> <p><b>Tel:</b></p> <p><b>Email:</b></p>	<p>Wring Group Limited Vale Lane Bedminster Bristol BS3 5RU 01179 321320 info@wringgroup.co.uk</p>		
<b>1.3 Client Details</b>			
<p><b>Address:</b></p> <p><b>Contact Name:</b></p> <p><b>Tel:</b></p> <p><b>Email:</b></p>	<p>Hartshead House 2 Cutlers Gate Derek Dooley Way Sheffield S4 7TL</p> <p>Richard Williams 07731 339874 richard.williams@wsp.com</p>		
<b>1.4 Purpose of work</b>			
Information:			
Demolition (structural demolition operations)	<input checked="" type="checkbox"/>	Site clearance	<input checked="" type="checkbox"/>
Internal strip	<input checked="" type="checkbox"/>	Scaffolding	<input type="checkbox"/>
Asbestos removal	<input checked="" type="checkbox"/>	Crushing	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<b>Details:</b>	
<b>1.5 Sub-contractors</b>			
TBC			

<b>1.6</b>	<b>Scope of work</b>
	<ul style="list-style-type: none"> <li>To demolish former Chanson Foods including removing slabs and foundations</li> </ul>
<b>1.7</b>	<b>Brief description of work</b>
	<p>Wring Group will,</p> <ul style="list-style-type: none"> <li>Prior to starting onsite, arrange and manage all service disconnections.</li> <li>Carryout R and D asbestos survey</li> <li>Establish a site set up and safe working area</li> <li>Remove asbestos as identified in survey</li> <li>Demolish of above ground structures</li> <li>Breaking out of slabs and foundations</li> <li>Crushing of all hardcore to 6F2</li> <li>Stockpiling of crushed material onsite</li> </ul> <p>All above working in accordance with requirements from Network Rail, Environment Agency, Harbour authority and adjacent neighbours.</p>
<b>1.8</b>	<b>Present hazards identified</b>
	<ul style="list-style-type: none"> <li>Asbestos</li> <li>Live services</li> <li>Adjacent river</li> <li>Adjacent Network Rail asset</li> </ul>

1.9 Site photographs







<b>1.10</b>	<b>CDM (CPP only)</b>	
	<b>CDM information relating to the project.</b>	
	<b>Client:</b>	HOST Student Management (UK) Limited Carrington House, 126 130 Regent Street, London W1B 5SE Keith Dean (Senior Development Manager) 07770 303 438 kd@tigerdevelopments.com
	<b>Employers Agent/QS:</b>	WPS Hartshead House 2 Cutlers Gate Derek Dooley Way Sheffield S4 7TL Richard Williams 07731 339874 richard.williams@wsp.com
	<b>Planning Consultant:</b>	Savills Embassy House Queens Avenue Bristol BS8 1SB Matt Tucker (Associate) 07807 999 050 MTucker@savills.com
	<b>Civil/Structural Engineer/BAPA Consultant:</b>	ARUP 63 St. Thomas Street, Bristol BS1 6JZ Duncan Steel (Associate Director) 07825 996 695 duncan.steel@arup.com
	<b>MEP Engineer:</b>	Futureserv 10 Oxford Court, Manchester M2 3WQ Mike Perkins (Associate Director) 07970 520 133 mperkins@futureserv.co.uk
	<b>Principal Designer/CDM Advisor:</b>	Castle Owen Unit 1, Hussar Court, Hillsborough Barracks, Sheffield S6 2GZ Bob Baverstock (Associate) 07811 443 460 b.baverstock@castleowen.com

**2.0 Works Management**

2.1 Staffing management							
For specific job roles and responsibilities, please refer to Wring Group Lt Health, Safety, Environmental & Asbestos Procedures Manual. ISO 046							
Position	Name	Telephone	Visit status				
Site Supervisor	TBC	TBC	On-site				
Project Manager	Ian Barker	07747 488942	Regular				
Asbestos Manager	Wayne Sheldon	07868 524876	Key Times				
SHEQ Manager	Tim Whittle	07519 092517	Unannounced				
Managing Director	John Wring	07850 251303	Unannounced				
Operations Director	Dean Wring	07831 623540	Unannounced				
Operations Manager	Mark Gracie	07966 891824	Unannounced				
2.2 Supervisor operatives pre-start check list							
Operatives Name		WGL (W) Subbie (S)	Training certificates	CCDO Card	CSCS Card	Fit to work Certification	Face fit - HFM
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
<b>HOLD POINT</b>							
The Supervisor must ensure that the table above is completed in full for all operatives carrying out works on Wring Group Limited sites							
Supervisor Initial		Date		Time			



2.3 Supervisor pre-start check list					
	Item	Suitable and sufficient? (Y/N)	Comments	Signed	
1	Documentation RAMs				
2	Documentation Asbestos Survey				
3	Welfare				
4	Fencing / security measures				
5	Safe area around welfare				
6	First aid equipment				
7	Fire extinguishers				
8	Dust mitigation				
9	Back-ground noise readings				
10	Services information				
11	Services termination docs				
12	Relevant permits if required				
13	Environmental information				
14	Ecological information				
15	Tools and equipment				
16	Temporary works				
17	Scaffold / access				
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
<b>HOLD POINT</b>					
The Supervisor must ensure that the table above is completed in full for all operatives on-site working with Licensed Asbestos Products					
Supervisor Initial			Date		Time

2.4	Site works amendment (Minor changes)		
	<p>The site supervisor has the authority to make MINOR changes to this document, these are limited to basic wording amendments, sequencing, and minor demolition/works amendments. The amendments must be completed on a site amendment form and listed below. All other changes must be made by the Project Co-ordinator and communicated to the site staff by the Site Supervisor.</p>		
	Site works amendment list (Minor changes)		
	Brief details of change	Date	Communicated to site team?

2.5	<p><b>Site pack information</b></p> <ul style="list-style-type: none"> <li>• A job specific site pack will be issued to site and will contain the following.</li> <li>• Visitor Register             <ul style="list-style-type: none"> <li>○ Site Diary</li> <li>○ Scope of Works</li> <li>○ RAMS/COSHH</li> <li>○ Asbestos –R and D survey reports</li> <li>○ Services Information</li> <li>○ Site Induction Check List/Site Rules/Supervisor Hand Over Sheet(s)</li> <li>○ LOLER, PUWER, HAVS, Noise check lists</li> <li>○ Pre-Start Check List</li> <li>○ MEWP, PPE, Harness, RPE check lists</li> <li>○ Toolbox Talk Form</li> <li>○ Site Inspection Reports</li> <li>○ Confirmation of Site Verbal Instructions/Day Work, Plant Hire Sheet</li> <li>○ Company Documents - Insurance/EA Waste Carrier Licence</li> <li>○ Accident &amp; Environmental Incident Forms/Emergency Information</li> <li>○ Guidance Notes/Flow Charts</li> <li>○ Machine/Equipment certificates</li> <li>○ Personnel qualifications/certificates</li> </ul> </li> <li>• In addition to this each supervisor carries an information pack which includes             <ul style="list-style-type: none"> <li>○ Company policy statements</li> <li>○ COSHH assessments</li> <li>○ Generic risk assessments</li> <li>○ Wring Group Safe Operating Procedures</li> </ul> </li> </ul>
2.6	<p><b>Management of sub-contractors</b></p> <ul style="list-style-type: none"> <li>• The selection of subcontractors will take into account their safety policy, accident record and previous performance with respect to accident and ill health prevention on site.</li> <li>• All sub-contractors will receive a copy of the company policy statement.</li> <li>• All plant or equipment brought on to site by subcontractors must be safe and in good working condition, fitted with any necessary guards and safety devices and with any necessary certificates available for checking.</li> <li>• Information on noise levels of plant, equipment or operations to be carried out by the sub-contractor must be provided to our contracts manger before work commences.</li> <li>• No power tools or electrical equipment of a greater voltage than 110 volts may be brought onto site.</li> <li>• All transformers, generators, extension leads, plugs and sockets must be CE marked for industrial use, be in good condition and certified for their use.</li> <li>• Any injury sustained or damage caused by sub-contractor’s employees must be reported immediately to this company’s site representative.</li> <li>• Sub-contractor’s employees must comply with any safety instructions given by this company’s site representative. Sub-contractors must provide, for their employee’s suitable welfare facilities and first aid equipment, in accordance with the regulations, unless arrangements have been made for the sub-contractor’s employees to have the use of this company’s facilities in which case a certificate will be issued detailing facilities provided.</li> <li>• Any material or substance brought on site which has health, fire or explosion risk must be used and stored in accordance with the regulations and current recommendations and that information must be provided to any other person who may be affected on site.</li> <li>• Any risk assessment associated with any substance or process hazardous to health, which will be used on the site, must be provided to our contract management before work commences.</li> <li>• Sub-contractors are particularly asked to note that workplaces must be kept tidy and all debris and waste materials, etc. cleared as work proceeds.</li> <li>• All sub-contractors and visitors, on the company’s sites will wear PPE as stated within the relevant RAMS for the works being carried out.</li> </ul>

**3.0 Conditions of work and scope review**

**3.1 Site location / access plan**

The site is situated Avon Street. The access to the site for all deliveries or removals from site must be from St Phillips Causeway, via Albert Road and Avon Street, see route below. This is very important as there are a number of bridges with either weight or height restrictions. For all large machinery movements, a movement order must be put in place and route agreed prior to delivery.

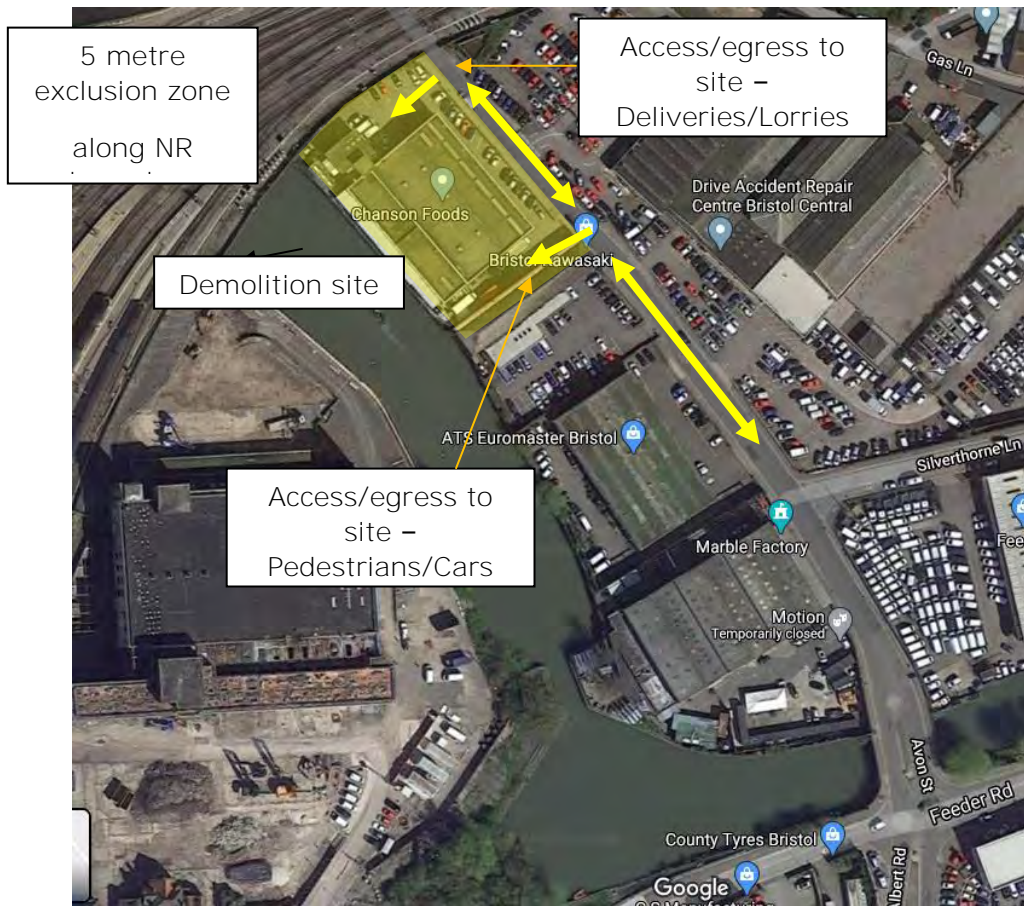
All deliveries/vehicle movements to be banked in and out of site. There will be room on site to turn vehicles. The work area will be separated, by the use of Heras fencing, within the site boundary.

There will be one entrance for cars and pedestrians and one entrance for Deliveries and Lorries, there will be room to turn vehicles in this area. Unloading/loading will take place in this area initially and then as demolition progresses within the demolition area.

Note, care to be taken as Avon Street is a busy pedestrian/cycle route.

Access to the work area will be via a locked gate controlled by Wring Group. A contact telephone number will be posted on the gate.

Within the work area pedestrian and vehicle routes will be kept apart. Exclusion zones will be created within the work area to suit enabling works activities in accordance with BS6187.





3.2 Working times (Out of hours emergency contact no. 01179 231320)									
	Works Permitted		Days		Nights		Hours of work		
	YES	NO	YES	NO	YES	NO	FROM	TO	
Monday	✓		✓			✓	07:30	18:00	
Tuesday	✓		✓			✓	07:30	18:00	
Wednesday	✓		✓			✓	07:30	18:00	
Thursday	✓		✓			✓	07:30	18:00	
Friday	✓		✓			✓	07:30	18:00	
Saturday		✓		✓		✓			
Sunday		✓		✓		✓			
Bank holidays		✓		✓		✓			
Deviations to the above	No work is permitted without prior approval from:								
	✓	Wring Group Manager			✓	Client			
		Principal Contractor			✓	Client Rep			
3.3 Relevant project dates									
Start on site	TBC								
Completion date	TBC								
3.4 Management and monitoring of works									
Item	Applicable		Description						
	YES	NO							
On site demolition supervisor	✓		Daily briefings held with site team. Toolbox talks						
Project manager visits weekly	✓		Various site visits to assess works.						
Operations manager visits weekly	✓		Various site visits to assess works.						
Operations Director visits	✓		If needed.						
SHEQ visits	✓		Unannounced visits						
BSG visits	✓		Three weekly intervals						
Client site visits / meetings	✓		If needed. TBC.						
Project meetings head office	✓		Held weekly on a Wednesday						
Weekly supervisor reports	✓		Required weekly on Tuesdays to Ops Director						
Supervisor meetings	✓		Held weekly on Friday am						



3.5	Detailed scope of works	
	Item	Detail
	Detailed scope of works	<ul style="list-style-type: none"> <li>• Demolition of former Chanson Foods building including office block.</li> <li>• Removal of slabs/foundations including crushing and stockpiling on site</li> <li>• All works in accordance with Environment Agency and Network Rail requirements.</li> </ul>
	Site / task photos	<ul style="list-style-type: none"> <li>• See section 1.9 and 3.1 above</li> </ul>
	Items / areas to protect	<ul style="list-style-type: none"> <li>• People and the environment.</li> <li>• Nearby buildings and structures.</li> <li>• Roadways and pathways.</li> <li>• Live services and plant</li> </ul>
	Items to be retained	<ul style="list-style-type: none"> <li>• See details in specific demolition methods section 7.10</li> </ul>
	Archaeology	<ul style="list-style-type: none"> <li>• Desktop study carried out, Client to provide further information prior to any works in the ground</li> </ul>
	Unexploded Ordnance(UXO)	<ul style="list-style-type: none"> <li>• Desktop study carried out, toolbox briefing required prior to starting works in the ground.</li> </ul>
	Ecology	<ul style="list-style-type: none"> <li>• A survey has been carried out.</li> <li>• No further works with regards to nesting birds if works carried out before March</li> <li>• No further works with regards to bats, when lighting is used, ensure that no light spill onto off site habitats</li> <li>• If there is any doubt on the above client's ecologist is to be contacted.</li> </ul>

3.6		Completion criteria			
	Demolition of structures to	<ul style="list-style-type: none"> <li>• Top of slab level.</li> </ul>			
	Slabs and foundations removed to	<ul style="list-style-type: none"> <li>• Yes, removal of slabs and foundation to a depth of 1m and crushed and stockpiled on site.</li> </ul>			
	All wastes removed from site	<ul style="list-style-type: none"> <li>• All items other than crushed hardcore to be removed to licenced facility.</li> </ul>			
	Crushed material storage location	<ul style="list-style-type: none"> <li>• TBC</li> </ul>			
	Security fencing to remain for	<ul style="list-style-type: none"> <li>• Removed on completion of each phase</li> </ul>			
	Drains to be capped	<ul style="list-style-type: none"> <li>• Any open drains to be capped.</li> </ul>			
	Service locations to be marked	<ul style="list-style-type: none"> <li>• By utility providers</li> </ul>			
	Completion certificate to be signed by	<ul style="list-style-type: none"> <li>• Client representative</li> </ul>			
3.7		Services			
	<ul style="list-style-type: none"> <li>• Electric to be isolated outside the footprint of the building by National Grid. Local isolations will take place to allow work to continue during lead in period.</li> <li>• Gas to be to be isolated outside the footprint of the building by Wales and West Utilities. Local isolations will take place to allow work to continue during lead in period.</li> <li>• Client to provide a suitable water source located at the site boundary to provide for welfare / dust suppression.</li> <li>• Temporary supplies will be used for site power, lighting etc by 110v only.</li> </ul> <p>Written confirmation of isolations to be kept on site as a reference.</p>				
	Isolation certification number		Date		
<b>HOLD POINT</b>					
The Supervisor must ensure that services have been made safe prior to works commencing. All findings must be communicated with site staff.					
If service termination certificates are not available, how have you made sure the services are disconnected?					
Tick the relevant box					
	Physical sever point	Witnessed termination	Other documentation	Tested the service	On site electrician confirmation
	Supervisor Initial		Date		Time

**3.8 Welfare provision**

**General**

In conjunction with The CDM Regulations 2015, all site based welfare and toiletry facilities will be set up prior to the project commencing by Client, for use by all site operatives & visitors as necessary, this will include seating, clean water hot & cold, a means to heat food, washing facilities including showers, and a drying room. If these are not in place works will not commence.



Welfare area to be set up consisting of;

- Canteen
- Office/meeting room
- Drying Room/Store
- Male/Female toilets

Area to be separated from work area see section 7.2.

Services for Welfare area as follows;

- Water from existing supply
- Sewer connection to existing foul drain or to a tank
- Electricity from self-contained generator


**Smoking**

No smoking is allowed on the site. Separate smoking area to be set up external to the welfare area.

**4.0 Key risks and emergency procedures**

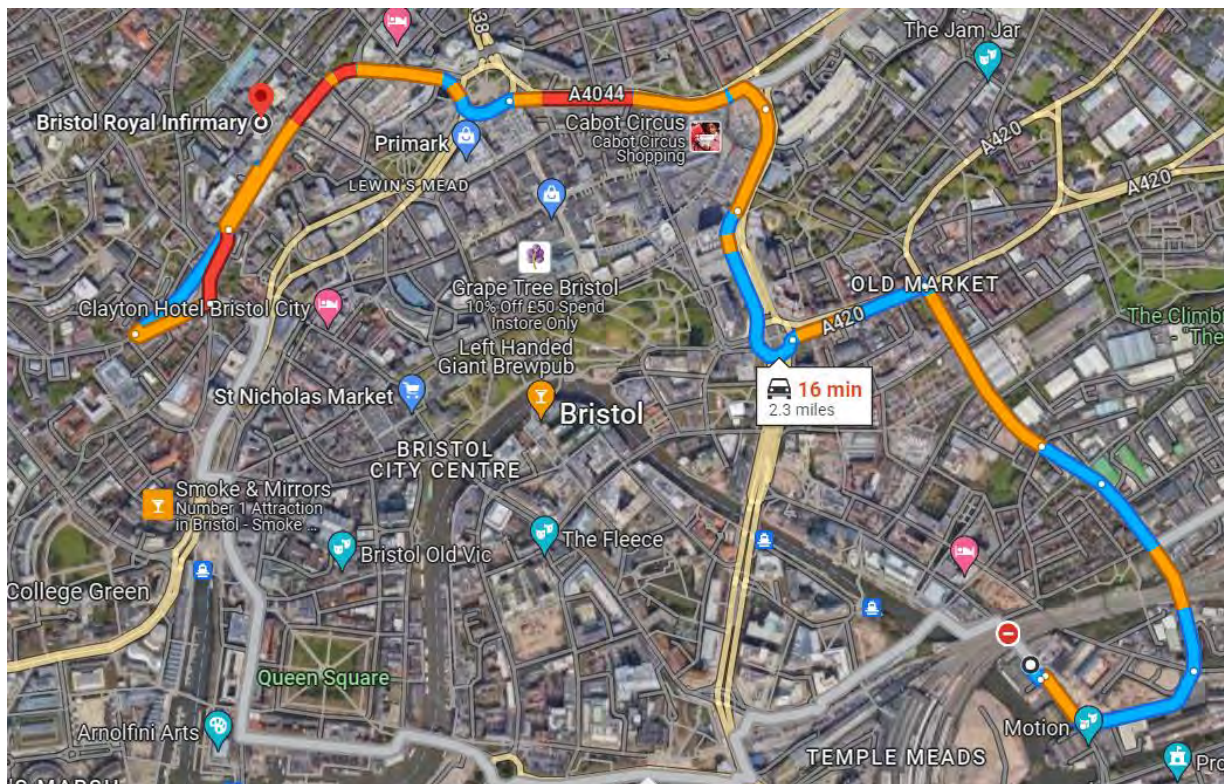
4.1 Key risks				
This information must be read in conjunction with site specific risk assessments and Wring Group S.O.Ps				
Working at height	Working near water	Working near public / live area	Working with machinery/vehicles	Manual handling activities
✓		✓	✓	✓
Live services	Dangerous structures	Exposure to H.A.Vs	Potential eye injury	Potential hearing damage
✓	✓	✓	✓	✓
Exposure of public or other workers to asbestos fibres	Unexpected release of asbestos fibres	Exposure to nuisance dusts / silica	Contamination with asbestos fibres	Fire / explosion
	✓	✓		✓
Open edges / voids	Confined space	Exposure to COSHH	Contact with other site users	Sharps / medical / human waste
✓		✓	✓	✓
Unauthorised persons	Exposure to heat	Exposure to cold	Exposure to inclement weather	Vermin waste
✓			✓	✓
Unexploded Ordnance (UXO)				Other
✓				
If 'Other' please specify:				
Any other relevant details please enter here:				

4.2	Emergency procedures / First aid / Mental health first aid
	<ul style="list-style-type: none"> <li>• As demolition personnel work in many different premises and buildings it is important that they are familiar with procedures and arrangements in the event of a fire. Such matters should be covered as part of the site induction and if anything changes this should be relayed to all personnel through toolbox talks, workers should be informed of the nature of the fire alarms or systems and with the means of escape from the working area and the area in which it is situated.</li> <li>• Demolition Site Supervisor will hold first aid certification.</li> <li>• There will be Emergency first Aid facilities within the site welfare and site vehicles.</li> <li>• <u>Minor Injuries</u> <ul style="list-style-type: none"> <li>○ All injuries to employees, visitors or the public resulting from accidents on site, however minor, are to be recorded in the accident book on site and the company office informed also inform site management.</li> </ul> </li> <li>• <u>Mental Health First Aid</u></li> <li>• Wring Group have various mental health first aiders available to assist.</li> <li>• Should you have any concerns for someone's mental health or require assistance yourself please contact Tim Whittle on 07519 092517.</li> <li>• <u>Major Injuries / Death / Dangerous Occurrence</u> <ul style="list-style-type: none"> <li>○ In the event of a major injury or fatality to any of the above, or a dangerous occurrence (contact with overhead power cables, machinery overturn, failure of lifting equipment or lifting gear, unplanned collapse of structure etc.) the following procedure is to be followed: <ul style="list-style-type: none"> <li>• Area to be made safe and first aid administered/emergency services contacted.</li> <li>• Demolition Site Supervisor/Operative to report the incident immediately to the Head Office by phone 01179 213320.</li> <li>• Mr D Wring will immediately inform the HSE by phone, e-mail, if applicable.</li> <li>• All accidents or incidents are to be reported to Project Manager.</li> </ul> </li> </ul> </li> <li>• <u>Incidents occurring during asbestos removal.</u></li> <li>• All personnel relating to works with asbestos will be trained to handle an emergency as part of the basic training.</li> <li>• Following an incident, it may be necessary to remove the victim's respirator at an early stage.</li> <li>• Decontamination should be carried out as far as possible.</li> <li>• Employees should vacuum themselves and the victim, sponge down RPE and boots, however evacuation of the seriously ill or injured employee should not be delayed by over-elaborate attempts to decontaminate the casualty.</li> <li>• If the victim can be moved, work colleagues can move them outside.</li> <li>• All personnel should decontaminate themselves in the decontamination area again where possible.</li> <li>• Arrangements for contacting the emergency services should be established at the start of the works and all relevant information passed to operatives during the site induction.</li> <li>• Information should be available for the emergency services to prepare their own response procedures and precautionary measures for asbestos and other hazards.</li> <li>• Spare disposable protective clothing should be kept available for personnel who have to enter the work area and who do not have their own equipment, e.g, ambulance personnel or paramedics.</li> <li>• <b>The first aid station on this site is located at the site welfare</b></li> <li>• <b>Out of hours emergency contact number 01179 213320</b></li> </ul>

<p><b>4.3</b></p>	<p><b>Fire procedures and controls</b></p>
	<ul style="list-style-type: none"> <li>All electrical items will be inspected and tested in accordance with the portable appliance testing regulations, (PAT test) and used in conjunction with a residual current device (RCD)</li> <li>Suitable and sufficient firefighting equipment will be located within works areas.</li> </ul> <p>The muster point will be the WELFARE UNIT unless stated in the site induction briefing at the start of the works.</p>  <ul style="list-style-type: none"> <li>Smoking will only be permitted in designated areas.</li> <li>Hot works will have to be carried out under the site's hot works permit procedures.</li> <li>Site inductions will be carried out upon arrival and locations of the firefighting equipment and muster points will be pointed out to all site operatives.</li> </ul> <p>Should a fire occur on site and emergency services be required call 999. You must notify emergency services of ANY SITE BASED hazard.</p>
	<p><b>Site specific fire / fire protection information:</b></p> <p>It is planned to use hot work the following permits will need to be issued by the site supervisor:</p> <ul style="list-style-type: none"> <li>Hot Works Permit</li> </ul> <p>Fire Plan</p> <p>During hot works the following will be adhered to, all operatives will attend the induction session before starting work on site. Our hot work will be limited to use of abrasive wheels and some flame cutting. At all times we will maintain a fire watch – such work will cease at least 60 minutes before we leave site and the site agent will be responsible for checking. We will also provide a relevant fire extinguisher kept in the work area.</p> <p>Audible and visual manually activated fire alarms will be positioned on each floor, on hearing this all operatives must proceed to muster point.</p> <p>A detailed fire risk assessment will be produced prior to works commencing on site and submitted for approval</p>
<p><b>4.4</b></p>	<p><b>Incident / Accident / Near miss procedures</b></p>
	<ul style="list-style-type: none"> <li>The site supervisor will hold emergency first aid certification as a minimum on site.</li> <li>There will be Emergency Aid facilities within the site welfare or site vehicles.</li> <li>All injuries to employees, visitors or the public resulting from incidents on site, however minor, are to be recorded in the accident book on site and the company office informed.</li> <li>In the event of a major injury or fatality to any of the above, or a dangerous occurrence (breach of enclosure / exposure to asbestos, contact with overhead power cables, machinery overturn, failure of lifting equipment or lifting gear, unplanned collapse of structure etc) the following procedure is to be followed:</li> </ul> <ol style="list-style-type: none"> <li>Site manager/Operative to report the incident immediately to the Office by phone.</li> <li>Mr D Wring will immediately inform the HSE by phone, e-mail, if applicable</li> </ol>

**4.5 Nearest Hospital**

**Bristol Royal Infirmary**  
 Marlborough Street,  
 Bristol,  
 BS2 8HW  
 Tel: 0117 923 0000



51.4506297, -2.5773338

- > Take Silverthorne Ln, Kingsland Rd and Midland Rd to Old Market St/A420  
 3 min (0.8 mi)
- > Take Bond St S/A4044 and B4051 to Lower Park Row  
 7 min (1.3 mi)
- > Continue on Lower Park Row to Upper Maudlin St/B4051  
 1 min (0.2 mi)
- ➔ Turn right onto Upper Maudlin St/B4051  
 Destination will be on the left  
 58 sec (404 ft)

**Bristol Royal Infirmary**  
 Upper Maudlin St, Bristol BS2 8HW

**HOLD POINT**

The Supervisor must ensure that the above information for all emergency procedures on site is communicated with the operatives on site.


Supervisor Initial	Date	Time

**5.0 Health and Safety – General information**

<b>5.1</b>	<b>Wring Group minimum requirements</b>					
	<ul style="list-style-type: none"> <li>Wring Group expect all persons attending this work site to understand requirements for their presence.</li> <li>This must be knowledge of what is required from them to include tasks, objectives and hazards on site.</li> <li>The information relating to the above is contained in this document. Induction and daily briefings will be held to ensure the information relating to the project is communicated.</li> <li>Each individual is required under Health and Safety at Work Act 1974 to take care of themselves and others who may be affected by what they do or do not do (acts or omissions)</li> <li>Individuals also have a duty to not needlessly or recklessly damage or miss use anything proved for their safety.</li> <li>Individuals are expected to come to work in a fit sate and to follow all site rules stated at the front of this document.</li> <li>Individuals are expected to communicate issues with regards safety to their site supervisor or the management team immediately.</li> <li>Individuals are expected to behave in a civilised manner and must not engage in aggressive or offensive behaviour.</li> </ul>					
	<b>Minimum PPE requirements on this site</b>					
	Safety Helmet	Hi-Vis	Safety Footwear	Gloves	Glasses	Other
	<ul style="list-style-type: none"> <li>Gloves and glasses task specific</li> <li>Please state 'Other'</li> <li>Flame retardant clothing task specific</li> </ul>					
<b>5.2</b>	<b>Operative competence</b>					
	<ul style="list-style-type: none"> <li>All operatives and visitors to site must hold CSCS certification.</li> <li>All operatives working on site will have relevant training and / or experience.</li> <li>All operatives using mobile plant hold the relevant CPCS operator certification, which will be checked prior to operating the plant.</li> <li>MEWP operators will hold current in date certification relevant to the equipment being used.</li> </ul> <p>Below are some of the basic requirements (This list is not exhaustive)</p> <ul style="list-style-type: none"> <li>Supervision – CCDO Gold Card, SMSTS, SSSTS</li> <li>Labour – CCDO Skilled Labourers or equivalent CSCS</li> <li>Demo Plant – CPCS Plant specific</li> <li>MEWP – IPAF – Labourers</li> <li>All operatives to have fitness to work certificates.</li> <li>All plant operatives to have Critical Work medical.</li> <li>First Aid / Mental Health First Aid – Demolition Supervisors.</li> <li>Manual Handling – All persons</li> <li>Working at Height – All persons</li> <li>PASMA – Demolition Site Supervisors / Labourer</li> <li>NNLW CAT B – Persons working with non-notifiable asbestos materials.</li> <li>Asbestos awareness – All persons (this is covered by NNLW CAT B also)</li> <li>Traffic marshal.</li> </ul> <ul style="list-style-type: none"> <li>Training records are stored on Demolition Site Supervisor IPADS and are updated regularly.</li> <li>Training meetings are held regularly to ensure training is kept up to date.</li> <li>Sub - contractors who visit site to carry out works will have training requirements checked prior to commencing works to ensure training is adequate for the tasks being undertaken.</li> </ul>					



5.3	<b>Manual handling</b>
	<ul style="list-style-type: none"> <li>The following materials / equipment handling could present problems on site: -</li> <li>Manual handling of debris from the demolition, use machine where possible.</li> <li>Changing of Machine attachments.</li> </ul>
5.4	<b>Working with Asbestos</b>
	<p style="text-align: center; color: red;">Read section 7.6 for asbestos removal procedures for this project.</p> <ul style="list-style-type: none"> <li>An asbestos R &amp; D survey will be carried out by Wring Group Ltd prior to works commencing. Any asbestos identified will be removed in accordance with the Control of Asbestos Regulations 2012.</li> <li>Wring Group hold a full licence issued by ALU to strip licenced asbestos containing materials.</li> <li>Should licenced materials be located through the site R &amp; D survey a separate Plan of Works (POW) will be created and an ASB5 submitted prior to the 14-day required planning and notification time before the removal can commence. (Unless being carried out as an emergency or under waver).</li> <li>Non-notifiable materials (NNLW) can be removed by Wring Group NNLW trained demolition operatives.</li> <li>Removal of asbestos materials identified in the site R &amp; D survey will be carried out under controlled conditions.</li> <li>The works will be carefully planned, and risk assessed.</li> <li>All operatives working with this material will ensure the correct respiratory protective equipment (RPE) is worn. Wring Group DO NOT permit the use of disposable masks when removing asbestos or during any other dust works.</li> <li>Operatives must be clean shaven in the face area and have a face fitted half mask with a P3 filter cartridge in date with prefilters.</li> <li>The masks must be clean and in good order and regularly checked.</li> <li>Work with NNLW products can follow Wring Group S.O.P but site-specific details of the works must be detailed and followed in RAMs documents.</li> <li>During removal works Wring Group monitoring policy must also be followed.</li> <li>When monitoring is carried out if any high readings are received exceeding exposure levels, information will be recorded in the Wring Group Corrective Action and Preventative Action (CAPA) Log. Investigations will be carried out by Asbestos Manager and corrective action taken. Details will then be reviewed in the Wring Group three monthly ISO management meeting.</li> </ul>
5.5	<b>Working at height</b>
	<p style="text-align: center; color: red;">Refer to section 7.9 for further information on the equipment and usage below.</p> <ul style="list-style-type: none"> <li>All working at height must be planned and fully risk assessed.</li> <li>Operatives working at height must have full training.</li> <li>Daily briefings between the Demolition Site Supervisor and site team must cover working at height scenarios and objectives along with hazards and control measures.</li> <li>All persons working at height, must ensure they are aware of those working around them and any equipment that could potentially be damaged from falling objects.</li> <li>Where harnesses and lanyards / inertia lines are used, the Demolition Site Supervisor and operative using equipment must ensure the items are the right safety equipment for the task and that all items are well maintained and certificated before use.</li> </ul>
5.6	<b>Confined Space</b>
	<ul style="list-style-type: none"> <li>No confined space works required.</li> </ul>
5.7	<b>Hot Work</b>
	<p style="text-align: center; color: red;">Refer to section 7.9 for further information on the equipment and usage below.</p> <ul style="list-style-type: none"> <li>Hot Works Permit will need to be issued by PC and the Demolition Site Supervisor.</li> <li>All operatives will attend the induction session before starting work on site.</li> <li>Our hot work will be limited to the use of abrasive wheels and oxy-propane cutting on this project.</li> <li>A fire watch operative will be designated for the works by the Demolition Site Supervisor to oversee the cutting operations.</li> <li>The work will cease at least 60 minutes before the end of the shift.</li> <li>The Demolition Supervisor will be responsible for checking.</li> <li>Task specific fire extinguishers will be positioned at the point of work.</li> <li>A fire plan will be created to include any hot works.</li> </ul>

	<ul style="list-style-type: none"> <li>• Fire-proof overalls to be worn at all times when carrying out any hot works, this includes cutting rebar or metals with a disc cutter.</li> </ul>
<p><b>5.8</b></p>	<p><b>Silica Dust</b></p>
	<ul style="list-style-type: none"> <li>• Silica dust is generated during the demolition process, including slab cutting and removal.</li> <li>• Dust suppression will be used and if required personal and background perimeter monitoring can be carried out.</li> <li>• Refer to section 7.10 and detail within the Demolition Method.</li> <li>• Monitoring for all types of respirable dusts will be carried out.</li> </ul>
<p><b>5.9</b></p>	<p><b>Principals of site zoning</b></p>
	<p style="color: red; text-align: center;">For further information, read in conjunction with NFDC Demolition Exclusion Zone Guidance Notes Document.</p> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>• The site will be segregated primarily into THREE distinctly different zones:</li> <li>• <b>RED</b></li> <li>• <b>AMBER</b></li> <li>• <b>GREEN</b></li> <li>• <b>RED ZONE</b> – Is an EXCLUSION ZONE that is defined as being the most restricted and is “an area of a site where no person may work”. Different structures require different methods of demolition. Key to designing and selecting the method is considering what can go wrong. Those decisions will lead to the size and nature of the designed RED ZONE.</li> <li>• <b>AMBER ZONE</b> – There may be other areas on site where access will be RESTRICTED to work undertaken by specialist occupationally qualified personnel as required by risk assessment and method statements. These are called AMBER ZONES. REST OF SITE – Access to other areas of the site, where demolition work is not being carried out, will be allowed for inducted and authorised workers.</li> <li>• <b>GREEN ZONES</b> – Some sites operate a GREEN or SAFE zone area where no PPE is required such as offices, site welfare and car parking.</li> <li>• All demolition will be carried out from within the <b>AMBER ZONE</b>. Depending on the size, complexity of the project the demarcation of the red zone within the amber zone may or may not be by physical barriers, in some areas a detailed briefing and review of the area with the whole team will suffice.</li> <li>• During demolition, the following safeguards must be in place:             <ul style="list-style-type: none"> <li>• Perimeter exclusion zones – marked by the erection of site security fencing and signage with internal fencing to segregate welfare/parking areas from demolition area or <b>AMBER ZONE</b>.</li> <li>• Internal site exclusion zones or <b>RED ZONES</b> – to safeguard members of staff from demolition face or / and drop zones.</li> </ul> </li> </ul>

- Control Measures – safe working procedures e.g. machines are only to be approached when the driver has acknowledged the presence of an operative and granted permission to enter the machine counter weight slew arc.
- Control measures will be held daily at the morning briefing to the site operatives.
- Specific controls will be briefed to site visitors during inductions.
- Where required it may be necessary to extend the site boundary and red zone boundary with the use of banksmen temporarily to ensure that all non-demolition personnel are kept safe from the works.
- This is particularly important if parts of the building are found to be unstable or in poor condition e.g. old concrete beams.
- In these situations, the supervisor will temporarily extend the site boundary using either heras fencing or banksmen at a safe distance to prevent public or other worker access.
- Banksmen are favoured if access needs to be controlled or may be required in the event of an emergency e.g. fire exit otherwise a solid fenced boundary will always be formed.

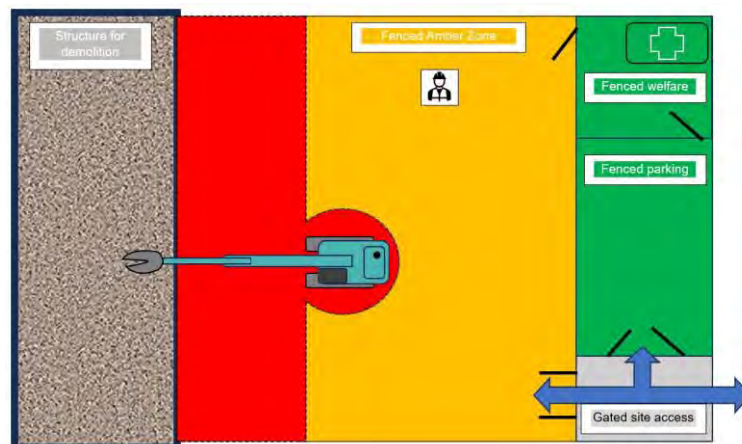
**Persons entering AMBER ZONES:**

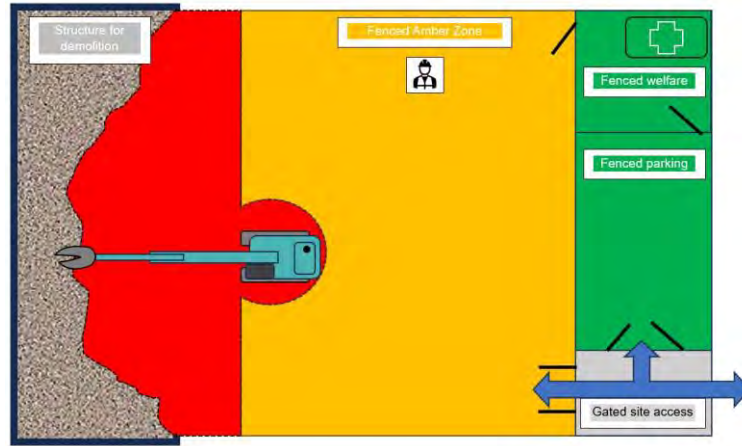
- During some operations it may be necessary for trained demolition operatives to enter the work area during demolition operations.
- This will be to offer support or assistance to the demolition rig operator.
- Where the demolition rig operator requires assistance due to restricted view or where banksmen duties are required, a full briefing will be held between the Demolition Site Supervisor, Demolition Rig Operator and Demolition Operative.
- A brief of the task will be undertaken covering the objectives and the hazards present.
- A safe location will be discussed from where the operative can stand.
- The operative will wear full high viz PPE.
- The demolition operative will be selected taking into account training, knowledge, experience and attitude towards safety to ensure the task can be carried out in a safe and controlled manner.
- Either hand signals or two-way radios will be used for communication as to what is required/happening.
- The same system may be used for dust control assistance from trained operatives.

**Below are examples of Zoning.**

Movement of amber zone during high reach demolition.

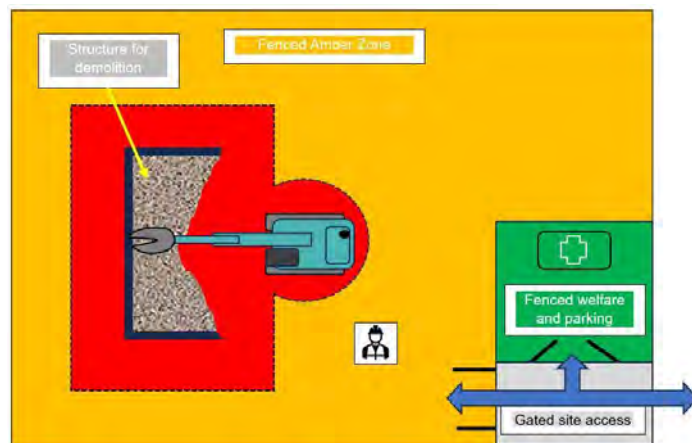
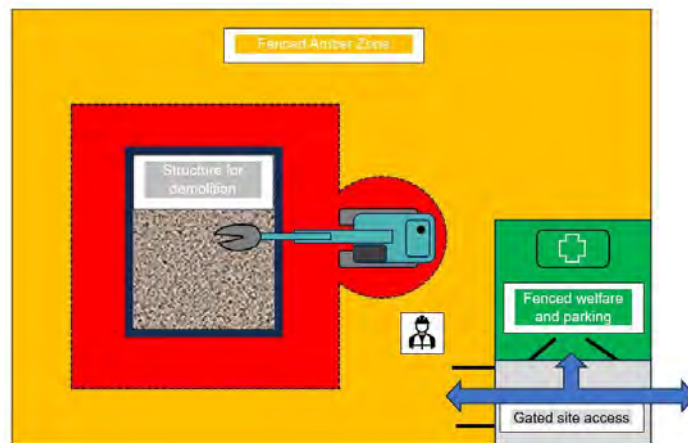
**Note – amber zone moves forward with demolition.**





Movement of amber zone during mechanical demolition.

Note – amber zone moves with demolition.



<b>5.10</b>	<b>Aspergillus / Legionella</b>
	<ul style="list-style-type: none"> <li>• Aspergillus fumigatus is a species of fungus.</li> <li>• It can be found throughout the environment, including in soil, plant matter, and household dust.</li> <li>• The fungus can also produce airborne spores called conidia.</li> <li>• Most people can inhale many of these spores on a daily basis.</li> <li>• Aspergillus is not harmful to persons with a healthy immune system, however for those who have a weakened immune system spores can cause infection in the lungs or sinuses.</li> <li>• If either are suspected, a works procedure must be created with a risk assessment prior to the works commencing.</li> <li>• Stop and discuss with the project manager.</li> </ul>
<b>5.11</b>	<b>Working near water</b>
	<ul style="list-style-type: none"> <li>• One boundary is adjacent to the river.</li> <li>• Details on demolition works in this area are included within section 7.8 and 7.10.</li> <li>• Personnel working near the water.                         <ul style="list-style-type: none"> <li>○ Heras fencing is to be erected 5 metres from the boundary edge along the river where personnel access is allowed during the demolition.</li> <li>○ On completion of the demolition heras fencing to be erected 5 metres from the boundary edge along the river in its entirety.</li> <li>○ Buoyancy aid/throw ropes to be available adjacent to river edge for use in an emergency.</li> </ul> </li> </ul>

## **6.0 Environmental information**

<b>6.1</b>	<b>Dust</b>
	<p>We do not envisage this work will generate high volumes of dusts, however, should any problem dusts be identified measures will be made available to address the issue.</p> <ul style="list-style-type: none"> <li>• Demolition works inherently produce dust, this can be produced through manual and mechanical works.</li> <li>• Dust can create hazards both to those working in close proximity and those who live / work nearby.</li> <li>• During demolition one of the key concerns is dust with every emphasis put on minimizing dust emissions.</li> <li>• To ensure good suppression the demolition area and material stockpiles must be, where reasonably practicable regularly wetted.</li> <li>• To assist with the wetting the Wring Group maintains a fleet of specialist plant, machinery, and equipment.</li> <li>• During the works the Residual Lime Dust and Cake material could be encountered, with the above also applying.</li> </ul>
<b>6.2</b>	<b>Noise</b>
	<ul style="list-style-type: none"> <li>• Although noise levels emitted from site will be higher than those normally experienced by neighbours, they will remain relatively low during the main demolition process due to the building being primarily reduced using hydraulic attachments where possible.</li> <li>• Throughout our works we comply fully with HSE control of noise regulations and local environmental health requirements.</li> <li>• We carry out frequent noise monitoring on site with our own decibel meter readers to ensure noise levels do not exceed the relevant levels depending on the operation, time, and location.</li> <li>• These readings are recorded on site and reviewed during site visits by management.</li> <li>• The methods set in our RAMS have been compiled using 'best practical means' to ensure nuisance noise levels do not exceed required levels. Daily monitoring from the Demolition Site Supervisor may suggest a change in sequence or process depending on the weather, structural state (rebound of noise) and location of the works.</li> <li>• Background monitoring, as a baseline, will be carried out before structural demolition works commence.</li> <li>• Noise will be monitored frequently as stated above, by Demolition Site Supervisor who will utilise the Decibel Meter Reader on their Ipad. This app gives a very good representation of the noise level and has been tested against a calibrated decibel reader to ensure accuracy.</li> <li>• A photograph will be taken of the test area and the outcome will be as follows.</li> </ul>




- When carrying out manual works the Demolition Site Supervisor will monitor noise levels and where required implement hearing protection zones.
- These zones will be communicated to all persons who may be affected by the elevated noise levels in the area.
- Works will be carried out in such a way as to reduce exposure to noise as far as is reasonably practicable.
- Where manual work is being carried out follow requirements set down in SOP for the specific piece of equipment being used.
- Checks of PPE will be carried out prior to works commencing to ensure it is suitable for the application.

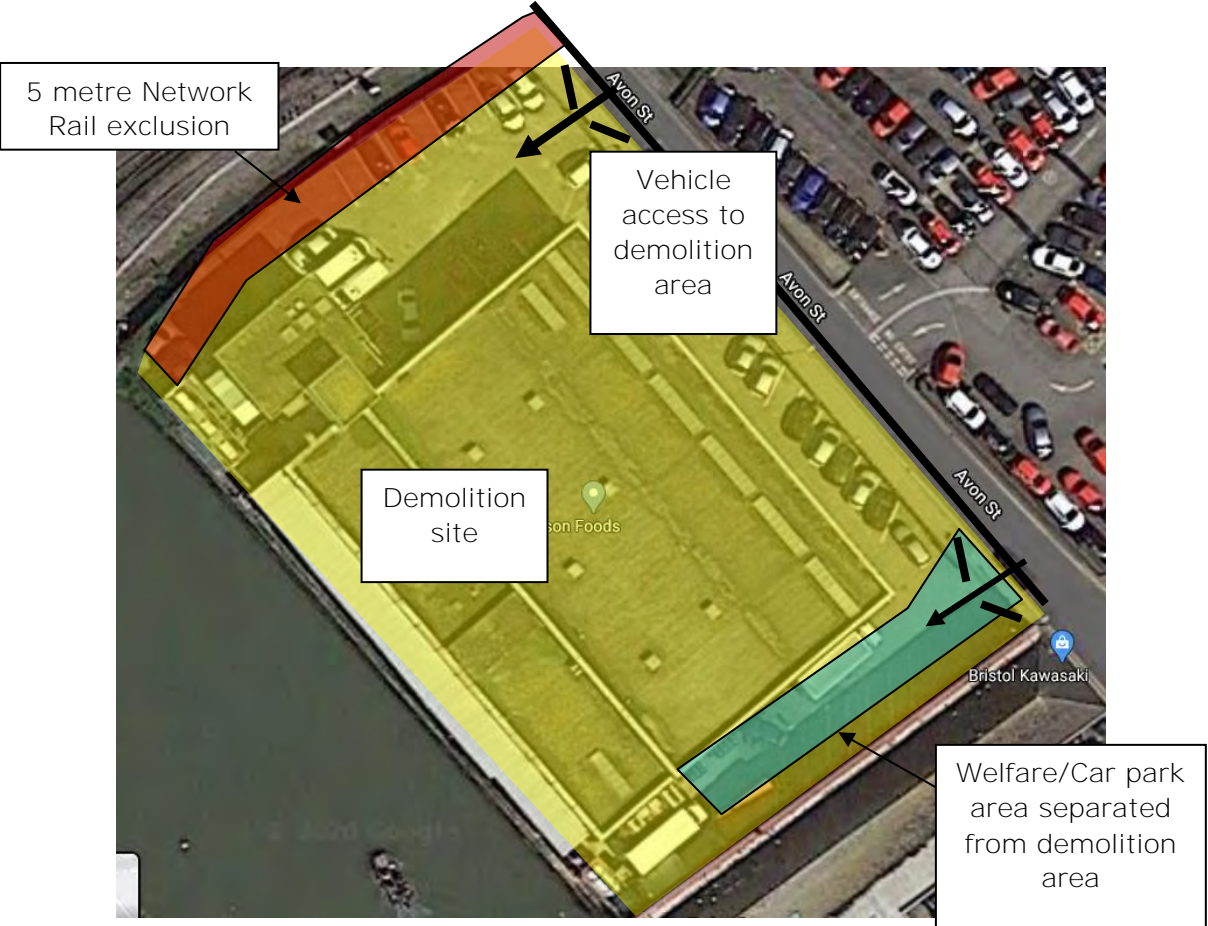
<b>6.3</b>	<b>Vibration</b>
	<ul style="list-style-type: none"> <li>• Vibration will be monitoring as required to ensure the works to not have any adverse effect on surrounding buildings or features that are to remain.</li> <li>• There will inevitable be some vibration caused by the mechanical plant during the demolition processes, however this will be minimal due to the methods stated in this document.</li> <li>• Vibration will also be transmitted to the operatives through the hand-held working tools used to carry out soft stripping and manual demolition tasks.</li> <li>• The vibration magnitude data has been gained from HSE information bank and used to complete the HSE HAVs calculator documentation.</li> <li>• The resulting information has been added into Wring Group SOP relevant to the individual tool.</li> <li>• As part of the task briefing between the Demolition Site Supervisor, the SOP relevant to the task will be reviewed and accepted.</li> <li>• The document will confirm the trigger time for the tool which will be conveyed and accepted by the operatives on carrying out the task.</li> <li>• The Demolition Site Supervisor will record data and trigger times on a site specific HAVs record sheet within their site working pack.</li> </ul> <p style="color: red;"><b>Any breaches of trigger time must be reported to SHEQ Co-ordinator and higher management immediately.</b></p> <ul style="list-style-type: none"> <li>• Whole body vibration can occur when operating plant on hard concrete surfaces, this will be alleviated by where possible and safe to do so, creating a hardcore pad between the slab and machine.</li> <li>• Equipment maintenance and frequently renewed equipment will also assist in reducing vibration transference.</li> </ul>
<b>6.4</b>	<b>Smoke and Vapour</b>
	<ul style="list-style-type: none"> <li>• Any steel work and pipework removed from the structures will be placed into a processing area with all of the steel being processed using machine mounted shears.</li> <li>• Machinery is relatively new and well maintained, emissions will not pose a significant issue on this project.</li> </ul>

<b>6.5</b>	<b>Fuels, oils etc storage and containment</b>
	<ul style="list-style-type: none"> <li>Fuels are to be stored in intrinsically safe double bunded steel tanks and kept in a suitable area away from the works and any site drains.</li> <li>Drip trays and plant nappies to be used at all times.</li> <li>Fuel storage tanks will not be transported around site.</li> <li>All plant is to be re-fuelled using the electric pumps fitted within the tank which is secured with a stout lock.</li> <li>All spillages to be reported to the Site Supervisor immediately.</li> <li>Storage areas are to be fully protected from collision or spillage and a clean-up spillage kit provided along with EA emergency number: 0800 807060.</li> </ul>
<b>6.6</b>	<b>Drainage on site</b>
	<ul style="list-style-type: none"> <li>All drains within the site to be removed and capped where they leave site</li> <li>All sewers/storm water drains are to be protected during the works.</li> <li>Drain covers to be used to prevent environmental pollution through spillages.</li> </ul>
<b>6.7</b>	<b>Cleaning of vehicles</b>
	<ul style="list-style-type: none"> <li>If required vehicles exiting the site will be cleaned using a hand-held jet wash facility.</li> <li>This will ensure that access roads are kept clear of any mud or debris.</li> </ul>
<b>6.8</b>	<b>Ecology information</b>
	<ul style="list-style-type: none"> <li>A survey has been carried out.</li> <li>No further works with regards to nesting birds if works carried out before March</li> <li>No further works with regards to bats, when lighting is used, ensure that no light spill onto off site habitats</li> <li>If there is any doubt on the above client's ecologist is to be contacted.</li> </ul>
<b>6.9</b>	<b>Archaeology</b>
	<ul style="list-style-type: none"> <li>Desktop study carried out, Client to provide further information prior to any works in the ground</li> </ul>
<b>6.10</b>	<b>UXO</b>
	<ul style="list-style-type: none"> <li>Desktop study carried out, toolbox briefing required prior to starting works in the ground.</li> </ul>

## 7.0 Methodology

7.1	Site plan / overview / sequence of work
	<p>The demolition works includes demolition of all above ground structures and removal of slabs and foundations.</p> <p>All hardcore is to be crushed to 6F2 and stockpiled onsite in a location to be agreed with the client.</p> <p>All works will require agreement with Network Rail and any works within the 5m exclusion zone will require site supervision from Network Rail representative.</p> <p>All below ground works within 16 metres of the river boundary will require agreement with the Environment Agency and Harbour Authority.</p> 



<b>7.2</b>	<p><b>Set up site and security arrangements</b></p>
	<p>The site is bounded by a variety of natural features including Network Rail listed boundary wall, river edge, , heras panels (3.5m wide x 2m high) will be used to secure the site along Avon Street and along boundaries with neighbours and Network Rail and 5 metres from the river edge, it will have access gates at both ends of the site one for pedestrians and cars/vans and one for deliveries/lorries.</p> <p>The work area will be secured using heras fencing panels. The work area will be separated from the welfare area and access into the work area will be via a lockable gate under the control of Wring Group Ltd, a contact number will be displayed to gain access. Drop zones/exclusion zones will be created using heras panels as and when required.</p> <p>Heras panels will be moved using 2 persons to manually handle them, standard, manual handling techniques to be used, and manufacturers data to be followed to correctly erect the panels.</p> <p>Manual handling to generally follow Wring Group standard operating procedure attached.</p> <p>There will be a 5-metre exclusion zone along the Network Rail boundary which will be fenced using Heras panels.</p> <p>For access detail read in conjunction with section 3.1</p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Internal boundaries to be agreed on site</b></p> <p>Welfare facilities and car parking will be set up, within the site and separated from the demolition area using heras fence panels, for specific welfare requirements see 3.8. Access see 3.1.</p> <p>All operatives must be inducted to the site. Wring Group supervisor will induct all site personnel in method of works to be undertaken and will sign up on its understanding on the induction sheets. All operatives will</p>

	<p>be walked around the site to ensure all are aware of the site layout, existing hazards, and location of areas of work e.g. asbestos and oils etc.</p> <p><b>As a minimum, visitors must wear eye protection, high visibility vest, safety shoes/boots, gloves and a hard hat.</b></p>
<b>7.3</b>	<b>Site investigations</b>
	<ul style="list-style-type: none"><li>• Location review – Adjacent to a river and live railway line</li><li>• Ground conditions – Solid concrete hardstanding. This should not pose any issue with regards the demolition rig positioning.</li><li>• Services – Investigations required, local isolation to be carried out first to allow works to continue, while utility providers sort disconnections outside the boundary.</li><li>• Potential for ground voids – as previously stated.</li><li>• Neighbours – see location review.</li><li>• Public – One boundary is along a live road and pathway.</li><li>• Interfacing – Lines of communication with Network Rail, EA and client</li></ul>

<b>7.4</b>	<b>Waste assessment and review</b>				
<p><b>WMP for the project may alter due to unforeseen circumstances.</b></p>					
<p>We have evaluated the materials being removed and the possible environmental impact during their removal. Waste products arising from our works will include,</p> <p style="text-align: center;">Ferrous and non-ferrous metals</p> <ul style="list-style-type: none"> <li>• Where practical to do so these materials will be separated into their individual waste streams then transported to their respective waste facility for further processing.</li> <li>• This process reduces waste to landfill and ensures where reasonably practicable to do so materials are recycled and reused.</li> <li>• Where safety allows, materials will be removed from the structure in a process called soft stripping. This allows for materials to be separated at source location and disposed of directly into their respective waste streams.</li> <li>• During the mechanical demolition process, the primary demolition rig will carefully remove items where safe to do so and separate into the items respective waste stream.</li> <li>• Where a secondary demolition rig is used for sorting and loading, materials will go through a secondary sorting to ensure maximum separation of waste streams is undertaken.</li> <li>• A detailed record of waste away from site will be held in the site office. This will state where the individual waste streams have been taken to.</li> <li>• At the completion of the project a full waste management pack will be completed.</li> <li>• Care will be taken to protect the environment during the works, dust monitoring, dust suppression and noise monitoring will be carried out.</li> <li>• Drains and water courses where applicable will be protected with ‘witches’ hat’ type drain catchment system.</li> <li>• Oil spills will be cleaned up immediately and reported through site documentation process.</li> <li>• Machinery used will be well maintained to minimise fuel consumption, fumes and potential leaks.</li> </ul> <p style="text-align: center;"><u>Licensed Waste recycling / disposal locations</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center; vertical-align: top;"> <p><u>Mixed Construction Waste</u> M J Church, Crown Industrial Estate, Crown Road, Warmley, Bristol, BS30 8JJ, Tel: 01179 675911 (Permit No – EPR/AB3804UY)</p> </td> <td style="width: 25%; text-align: center; vertical-align: top;"> <p><u>POPS</u> M J Church, Crown Industrial Estate, Crown Road, Warmley, Bristol, BS30 8JJ, Tel: 01179 675911 (Permit No – EPR/AB3804UY)</p> </td> <td style="width: 25%; text-align: center; vertical-align: top;"> <p><u>Steel/metal/ferrous, non-ferrous</u> EMR Ltd, The Docks, Sharpness, Berkeley, GL13 9UX, Tel: 01453 512 224 (Permit No – EA/EPR/JP3891EY/V002)</p> </td> <td style="width: 25%; text-align: center; vertical-align: top;"> <p><u>Asbestos</u> Viridor Waste Ltd Walpole Landfill Site Bridgwater TA6 4TF Tel: 01278 685182</p> </td> </tr> </table> <p><i>Whilst it is the driver’s responsibility to ensure that the load is safe when being transported the Demolition Site Supervisor will ensure that waste skips are suitably sheeted: Scrap containers are not overloaded before leaving site and necessary waste documentation i.e. duty of care is available and in order for all waste materials leaving the site.</i></p>		<p><u>Mixed Construction Waste</u> M J Church, Crown Industrial Estate, Crown Road, Warmley, Bristol, BS30 8JJ, Tel: 01179 675911 (Permit No – EPR/AB3804UY)</p>	<p><u>POPS</u> M J Church, Crown Industrial Estate, Crown Road, Warmley, Bristol, BS30 8JJ, Tel: 01179 675911 (Permit No – EPR/AB3804UY)</p>	<p><u>Steel/metal/ferrous, non-ferrous</u> EMR Ltd, The Docks, Sharpness, Berkeley, GL13 9UX, Tel: 01453 512 224 (Permit No – EA/EPR/JP3891EY/V002)</p>	<p><u>Asbestos</u> Viridor Waste Ltd Walpole Landfill Site Bridgwater TA6 4TF Tel: 01278 685182</p>
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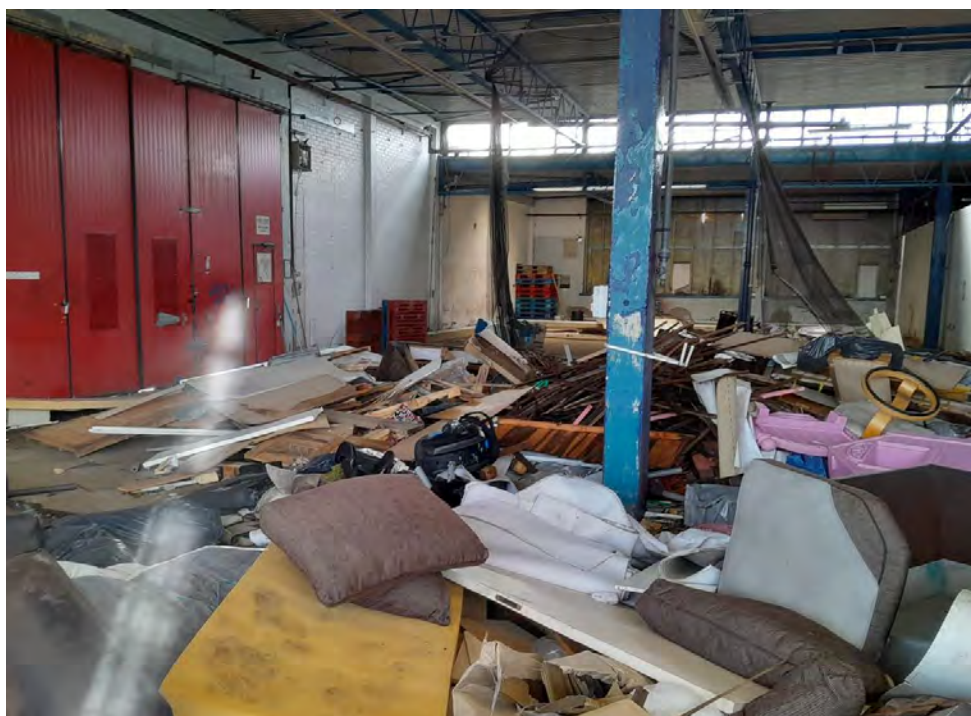
**7.5 Enabling works**

Asbestos R and D survey

- Wring Group will carryout an Asbestos R and D survey prior to any works commencing. However, due to the fly tipping, demolition operatives will work in tandem with the surveyors to ensure free access to all areas, (See below).

Removal of fly tipping from building

- The internal area have been subject to fly tipping, this will be removed prior to any works commencing, also working in tandem with the asbestos surveyors.





- The waste will have any furniture (POPS) separated and loaded into a waste skip, with all the other waste being loaded into waste skips, without being sorted.
- COSHH items will be stored in a safe area where a specialist contractor will remove all items to a specialist facility.
- The waste will be separated and loaded with a small demolition rig fitted with a rotation grab.

#### Services isolations

- These will be completed prior to any demolition taking place.
- If the utility companies cannot disconnect outside the boundary of the site in a timely manner, the services will be isolated at the incomer with suitable protection put in place.
- The location of the live services will be communicated to all via a toolbox talk prior to demolition starting.

#### EA approval

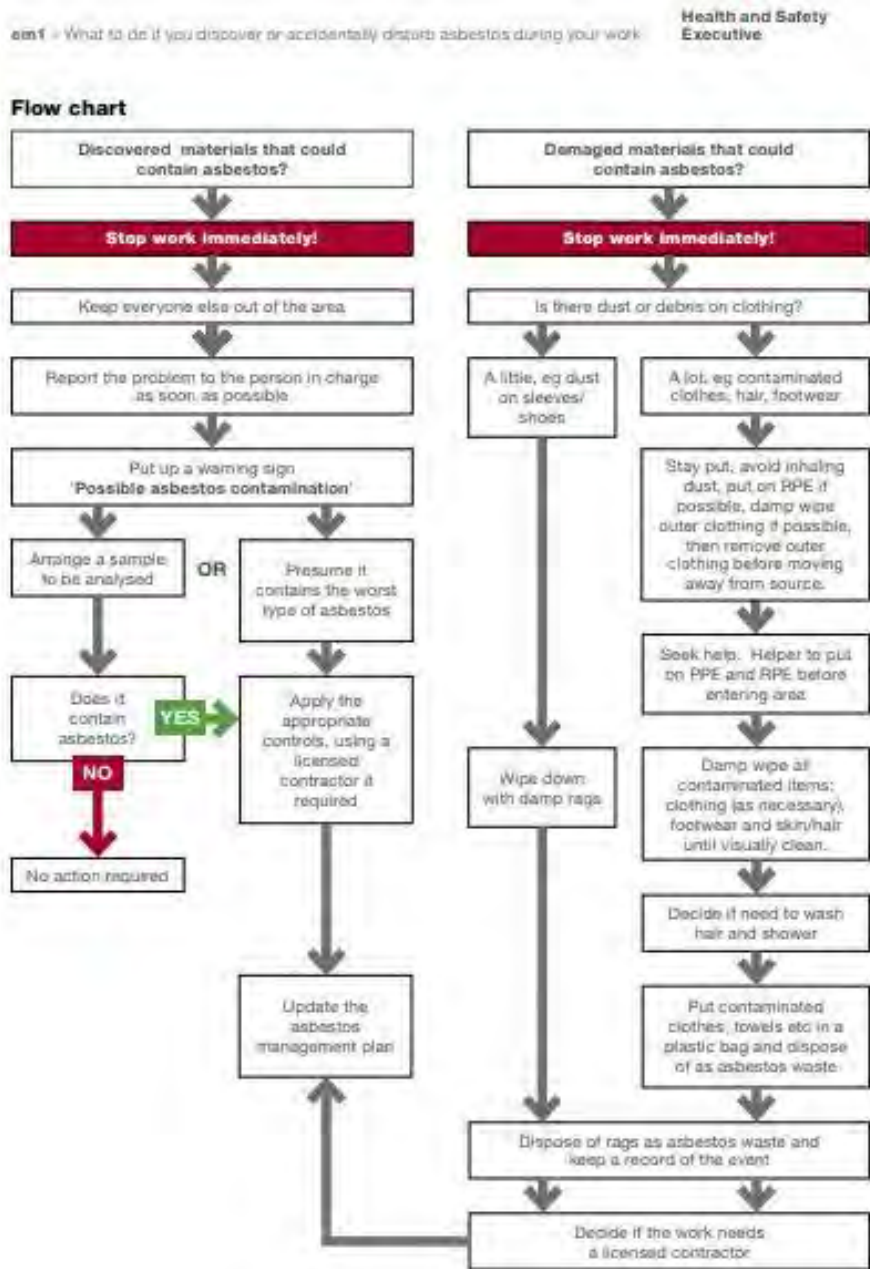
- A Flood Risk Activity Permit (FRAP) will be submitted to the Environment Agency for approval, no works in the ground within 16 metres of the river will take place until the permit is approved.

#### Network Rail approval

- Any works within 5 metres of the Network Rail boundary will require approval from Network Rail

**7.6 Asbestos**

- Wring Group Ltd are going to carry out a full R and D survey. Any asbestos identified in the survey will be removed prior to any demolition works commencing.
- If any suspect materials are found that have not been identified in the survey, works will stop in the area immediately and the Site Supervisor will arrange for samples to be taken of unidentified materials and forwarded to a designated laboratory for analysis. Dependent upon the results, demolition works will either recommence or revised methods implemented.
- Any material found during demolition activities suspected of being asbestos will result in work being stopped. Actions will be carried out as detailed in the Asbestos Unexpected Discovery flowchart as shown below taken from HSE EM1.



Site Specific asbestos information and removal detail.

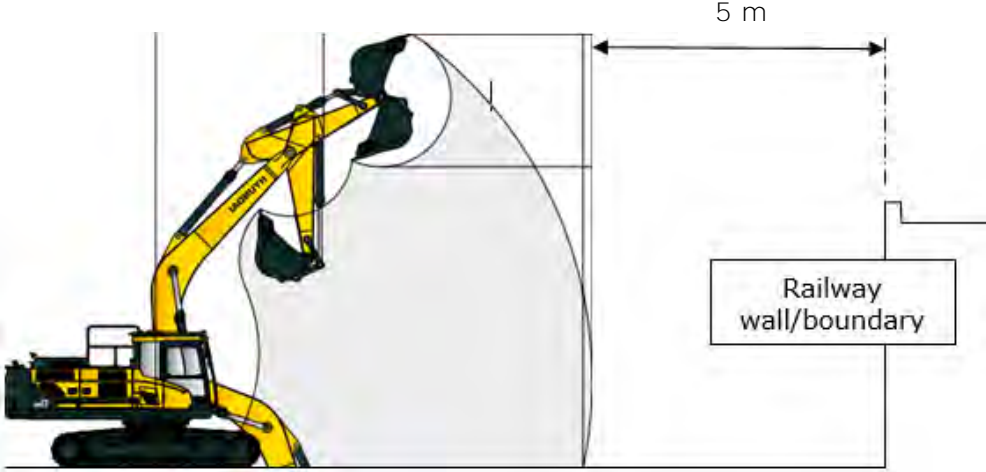
- This will be advised via specific RAMS once the R and D survey has been completed.

**HOLD POINT**







The Supervisor must ensure that information regarding removal of asbestos materials is completed within this form and signed off.






Supervisor Initial		Date		Time	
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<b>7.7</b>	<b>COSHH</b>	
	<ul style="list-style-type: none"> <li>The site COSHH Data sheets &amp; COSHH Assessments are not specifically contained within this method statement but have been included as a separate documents.</li> <li>These COSHH documents are to be read in conjunction with the works that have been set out in this method statement. Fuels are to be stored in intrinsically safe double banded steel tanks and kept in a suitable area away from the works.</li> <li>All plant is to be re-fuelled using the electric pumps fitted within the tank which is secured with a stout lock.</li> <li>All spillages to be reported to the Site Supervisor immediately. Storage areas are to be fully protected from collision or spillage and a clean-up spillage kit provided along with EA emergency number: 0800 807060.</li> </ul>	
	Site Specific COSHH information and removal / storage detail.	
	<b>Diesel</b>	<ul style="list-style-type: none"> <li>Brought to site for diesel powered equipment</li> </ul>
	<b>Petrol</b>	<ul style="list-style-type: none"> <li>Bought to site for petrol cutters</li> </ul>
	<b>Hydraulic oil</b>	<ul style="list-style-type: none"> <li>Hydraulic equipment such as demo rigs and MEWPS, use hydraulic oil. stores of this will not be kept on site</li> </ul>
	<b>Engine oil</b>	<ul style="list-style-type: none"> <li>For use in machinery and equipment, stores of this will not be kept on site.</li> </ul>
	<b>Grease</b>	<ul style="list-style-type: none"> <li>For use with mechanical equipment, small amounts will be stored in equipment's tool boxes or operators vans.</li> </ul>
	<b>Oxygen</b>	<ul style="list-style-type: none"> <li>For cutting of steel support frames</li> </ul>
	<b>Propane</b>	<ul style="list-style-type: none"> <li>For cutting of steel support frames</li> </ul>
	<b>Silica dust</b>	<ul style="list-style-type: none"> <li>Produced when removing slab and processing building materials</li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>

7.8	Areas to protect	
	<b>Environment</b>	<ul style="list-style-type: none"> <li>The surrounding environment and environment extending past site boundary.</li> </ul>
	<b>Roads/Pathways</b>	<ul style="list-style-type: none"> <li>All access roads/pathways to the site and within the site. Ensuring the following</li> <li>All speed limits are observed</li> <li>If tracking machines the road surface to be protected using mats or tyres. See section 2.2 in Demolition method statement</li> <li>There are a number of weight and height restrictions on bridges within the immediate area, ensure specified route is followed and movement orders for large machinery deliveries are in place.</li> </ul>
	<b>Public</b>	<ul style="list-style-type: none"> <li>Any public access will be prevented. Lorries / vehicles exiting the site must be vigilant to members of the public.</li> </ul>
	<b>Property/Equipment</b>	<ul style="list-style-type: none"> <li>All live property/equipment in close proximity to work area.</li> </ul>
	<b>Services</b>	<ul style="list-style-type: none"> <li>Any services that are to remain during the demolition.</li> </ul>
	<b>Adjacent Network Rail asset</b>	<ul style="list-style-type: none"> <li>Adjacent network rail facility</li> <li>The works are close to a Network Rail facility, there is a 5-metre exclusion zone.</li> <li>Any works adjacent to the railway must be carried out with the ballast weight of the machine facing away from the railway and arm of the machine facing the railway as below.</li> <li>All works will be at full reach.</li> <li>All works will employ a banksman</li> <li>Daily briefings will be carried out to discuss</li> <li>Wind Direction</li> <li>Machine position</li> <li>Work content for the day</li> <li>WGL will appoint a CEM and a CRE</li> <li>The CRE will co-ordinate all works as required with Network Rail providing all necessary method statements/WPP</li> </ul> <div style="text-align: center;">  <p>The diagram illustrates a yellow excavator positioned to the left of a vertical line representing the 'Railway wall/boundary'. A curved line indicates a 5-metre exclusion zone extending from the railway wall towards the excavator. A dimension line above the diagram shows the 5m distance. The excavator's arm is extended towards the railway wall.</p> </div> <ul style="list-style-type: none"> <li>Any work within the 5-metre zone will require the above plus site supervision from Network Rail</li> </ul>
	<b>Adjacent River</b>	<ul style="list-style-type: none"> <li>Any below ground works within 16 metres of the river will require agreement with the Environment Agency AND Harbour Authority. This will be in the form of a Flood Response Activity Permit submitted to the Environment Agency</li> <li>A condition survey above and below the water line will be carried out prior to work commencing and on completion</li> </ul>



7.9	<b>Equipment / PPE</b>	
<ul style="list-style-type: none"> <li>The Wring Group will utilise a wide range of plant and equipment during the demolition process these may include but not be limited to:</li> </ul>		
<b>Access:</b>	<p style="color: red;">Read in conjunction with SOP Aluminium Scaffold Towers and Podiums 025 and MEWP booms and scissors 006</p> <p style="color: red;">Where scaffold is used, refer to specific scaffold RAMS and design documents.</p> <ul style="list-style-type: none"> <li>MEWP Booms will be used to access high areas.</li> </ul> <div style="text-align: center;">  </div>	
<b>Primary Demolition:</b>	<p style="color: red;">Read in conjunction with SOP High Reach Demolition 001 and SOP Excavators and Demo Rigs 002</p> <ul style="list-style-type: none"> <li>360° demolition rig for building/structure demolition using a variety of attachments.</li> <li>Manual techniques for carrying out soft stripping and structural separation works.</li> </ul> <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> <li>The primary demolition rig used for this project will be a high reach demolition rig.</li> </ul>	
<b>Materials Handling:</b>	<p style="color: red;">Read in conjunction with SOP Excavators and Demo Rigs 002</p> <ul style="list-style-type: none"> <li>360° for loading materials into skips.</li> <li>6 – 8 wheeled hook loader lorries with waste bins.</li> </ul> <div style="display: flex; justify-content: space-around;">   </div>	
<b>Demolition Rig Attachments:</b>		<p><b>Hydraulic Rotating Selector Grapple / Grab</b></p> <ul style="list-style-type: none"> <li>Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.</li> <li>Various sizes and construction, light weight – heavy weight depending on required task and base machine.</li> <li>For light weight demolition such as timber roof structures walls where material separation is required.</li> <li>For material handling / separation / processing / loading.</li> </ul> <p style="color: red;">Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear</p>

	 <p>especially when loading of bins / skips. Refer to NFDC Exclusion Zones attached.</p> <p><b>Hydraulic Rotating Demolition Shear</b></p> <ul style="list-style-type: none"> <li>• Fitted to the plant via direct pins either boom or dipper mounted or tested quick hitch system.</li> <li>• Various sizes and construction depending on task and size base machine.</li> <li>• For demolition of steel structures.</li> <li>• For cutting of steel materials such as RSJ's. Size of cut depending on size of shear and base machine.</li> </ul> <p>Caution with this attachment as it can leave sharp edges and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.</p>  <p><b>Hydraulic Rotating Demolition Multi Processor. (Cracker, Pulveriser, demolition Shear)</b></p> <ul style="list-style-type: none"> <li>• Fitted to the plant via direct pins or tested quick hitch system.</li> <li>• Various sizes and construction depending on task and size base machine.</li> <li>• For demolition of concrete structures.</li> <li>• For cutting / pulverising of reinforced concrete materials such as beams and floor slabs. Size of cut depending on size of shear and base machine.</li> <li>• Jaws are interchangeable via fixed pins.</li> </ul> <p>Caution with this attachment as it can leave sharp edges on rebar and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.</p>
<p><b>Dust Management:</b></p>	<p>Read in conjunction with SOP Pressure Washer 035</p> <ul style="list-style-type: none"> <li>• Moto fog/dust boss unit to be used where dust levels have been assessed as elevating by the Demolition Site Supervisor. Please note, the unit is not to be used if dust is not present to conserve water usage and fuel usage.</li> <li>• Spray Bottles to be used for small soft stripping works during manual activities to reduce any dust potential.</li> <li>• Pressure washers will be used for sporadic dust suppression during demolition activities as it uses less water than a motofog. The unit can be rigged to spray without manually being held. This is the preferred method to reduce exposure and remove operative from a demolition zone. If used in a demolition zone operatives must stand in an agreed safe location discussed with the Demolition Supervisor and Demolition rig operator</li> <li>• Hoses will only be used as a last resort or during a fire watch scenario due to the high-water usage and run off.</li> </ul>    <p>Dust Extraction</p> <ul style="list-style-type: none"> <li>• The dust may also be controlled by use of an extraction unit or clean air circulation fan.</li> <li>• The requirement for this piece of equipment will be at the discretion of the Demolition Site Supervisor on this particular project.</li> <li>• An assessment will be made with all other control measures in place such as water mist sprays and low impact techniques as to whether dust extraction is needed.</li> <li>• If dust extraction is required ensure the exhaust location does not pose hazard.</li> </ul>

**General cutting:**

**Read in conjunction with SOP Recip Saws 032**

- General cutting of timber work and other materials will be carried out using either battery powered or 10v reciprocating saws.
- Use must follow HAVs information in SOP and use must be minimised where possible.
- The type of blade required, and site base application is to be assessed by the Demolition Site Supervisor



**Read in conjunction with SOP Hot Cutting 021**
















- Cutting steel only where allowed and subject to a hot works permit.
- Oxy – Propane cutting equipment will be used



**General hand tools:**

Read in conjunction with SOP Manual Handling and Hand Tools 003 and SOP Impact Drivers 026

- General hand tools on a working demolition site range vastly depending on the tasks that are undertaken.
- The detail and use of these manual hand tools are covered in this section loosely and rely on site-based assessment by the individuals training knowledge and experience with a given task along with the input if required from the Demolition Site Supervisor.
- As a general rule the following tools will be used.
- Mattock, Demolition wrecking bar, Sledgehammers, shovel, bolt cutters, spanners, claw hammers, wire cutter/nips, screw drivers, impact drivers, lump hammers, grease gun, retractable knives, mutts, coal chisels.

				
Mattock. For general demolition of items such as stud walls floorboards.	Wrecking bar. For general demolition of timber work and structures.	Sledgehammer. For breaking of walls, concrete, items which are hard fixed, pin driving.	Shovel. Clearing of small waste materials. Small excavations.	Bolt cutters. Staight and bull nose jaw, for cutting of fixings.
				
Spanners. Loosening and tightening of bolts/fixings and maintenance.	Claw hammers. More delicate demolition or material removal, nail removal.	Wire cutters / nips. For cutting of cables/wire.	Screw drivers. Careful removal of items where salvage or protection is required. Maintenance.	Impact driver. For quick removal / instilation of fixings / bolts.
				
Lump Hammer. Small masonry / demolition works and use with coal chisels	Grease gun. Maintenace of plant and equipment.	Retractable Knife. Cutting polythene / tape / carpet etc.	Mutt. Skirting board and flat wood and carpet / floor covering removal.	Coal Chisel. Small / delectate demolition or for removal of stuck bolt / screw heads.



**Plant and Equipment Inspection Regime**

- The plant and equipment on this site will be inspected following a stringent set of requirements.
- Plant. (Excavators, Demolition Rigs, MEWPS, Dumpers etc)
- Plant is to be inspected every six or twelve months under statutory regulation depending on the exact piece of plant and whether it is a piece of lifting equipment.
- Plant will be inspected on delivery to site by the Demolition Site Supervisor or the certificated and trained operator of that piece of plant.
- A record of this check / inspection will be kept in the inspection and defect log held on site.
- The Demolition Site Supervisor will ensure all test and check certification is in place and in date for each piece of equipment delivered to site.
- Any defects at this stage will be reported to Head Office.
- Significant defect will result in the equipment being taken out of use until repaired.
- The operator of the plant will carry out visual checks before each use and complete the daily defect sheet / book on site.
- Complying with PUWER and LOLER requirements the supervisor will carry out a weekly check on plant on site.
- Equipment. (Tools, towers, fencing, welfare, chains/shackles)
- Equipment such as aluminium scaffold towers / podiums etc will be checked by PASMA or IPAF trained persons (generally the Demolition Site Supervisor/Operative) before first use, when disassembled and re-erected and not exceeding any seven-day period. This will be recorded using a SCAFF-TAG system.
- Other work tools and equipment will be inspected weekly under PUWER/LOLER depending on the tool/equipment and a record kept within the site documentation.
- Fencing is to be checked at the start and end of every shift and in some cases depending on the site arrangements more frequently.

**PPE / RPE**

SAFETY EQUIPMENT PPE / RPE					
Mandatory X			Task Specific X		
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves (CUT 5)	X	Safety harness	X	Fall arrest lanyard	X
Gloves (CUT 3)	X	Safety wellingtons	X	Arm protectors	X
Fall restraint lanyard	X	Flame Retardant Overalls	X	Overalls (disposable)	X
R.P.E (SR 100)	X	Goggles (EN 166 B)	X	Glasses (EN 166 F)	X
Ear defenders	X	Shaded cutting goggles	X	Face Shield	X

**Asbestos removal coverall detail (If applicable)**

PPE colour detail		
Colour		Application
White		Stripping and working with NNLW materials. Setting up of areas such as enclosures and preparing the work area. Transiting bagged waste to the skip or van / vehicle. Carrying out Semi enclosed works in well ventilated areas and acting outside man
Blue		Transiting from decontamination unit to and from working area
Red		Removal operations known as 'stripping' in live enclosures

<b>7.10</b>	<b>Specific methodology / Temporary works</b>
	<b>Temporary works</b>
	<b>Temporary Works Co-ordinator for this project – IAN BARKER</b>
	<ul style="list-style-type: none"> <li>• Temporary works elements relate to this project.</li> <li>• These elements are listed below.</li> </ul> <p>1. Site based fencing – Heras – supplied and maintained by Wring Group Ltd, and installed to suppliers instructions. Fencing will be checked daily to ensure it is secure and fit for purpose.</p>
	<b>Specific methodology</b>
	<p><b><u>Soft stripping</u></b></p> <p>Prior to starting soft strip check and make operatives aware of:</p> <ul style="list-style-type: none"> <li>• Live services (THESE SHOULD BE PHYSICALLY MARKED UP ON SITE).</li> <li>• Hazardous Wastes – Any hazardous materials will be removed. Such materials may include oils and lubricants with lift equipment.</li> <li>• ALL FIRE ESCAPE ROUTES MUST BE SIGNED AND A SKETCH MADE OF THE ROUTE TO BRIEF OPERATIVES DURING THE INDUCTION.</li> </ul> <p>In addition, the supervisor should:</p> <ul style="list-style-type: none"> <li>• Check access routes are clear.</li> <li>• Ensure drop zones are establish, fenced and clearly signed.</li> </ul> <p>Soft stripping materials will include;</p> <ul style="list-style-type: none"> <li>• Loose rubbish.</li> <li>• Doors and linings</li> <li>• Pipework</li> <li>• Electrical cabling</li> </ul> <p>Note the areas of soft strip must be managed by the site manager and be clear of asbestos containing materials prior to charging the men to the task.</p> <p>Mandatory PPE to be worn during soft strip works</p> <ul style="list-style-type: none"> <li>• Hard Hat to EN397</li> <li>• Abrasive resistant rubber palmed gloves to EN388</li> <li>• Low impact eye protection to EN166</li> <li>• Steel toe capped footwear to EN20345</li> <li>• High visibility waist coat to EN471:2003 class 2 or 3</li> </ul> <p>Additional Task specific PPE</p> <ul style="list-style-type: none"> <li>• Use of pneumatic or electric hand tools- High impact eye protection to EN166</li> </ul> <p>Soft stripping is a labour-intensive operation which removes all the non-structural elements of the building. The process assists in maximizing the recovery and recycling of the demolition project. Typical waste streams suitable for recycling are:</p> <p>The process assists in maximizing the recovery and recycling of the demolition project. Typical waste streams suitable for recycling are:</p> <ul style="list-style-type: none"> <li>• Plasterboard: This will be separated and transferred to waste bins for treatment at a specialist recycling facility.</li> <li>• Clean timber: This will either be re-used whole or shredded for animal bedding / chipboard.</li> <li>• Dirty timber: This will be shredded and re-used in low grade chipboard where possible.</li> <li>• Steel pipework and fittings: This will be loaded for offsite recycling by a local metal merchant.</li> <li>• Copper and aluminium: Cables will be stripped for recycling as bright copper, whilst aluminium will be cleaned of any glass and loaded for recycling.</li> <li>• Glass: This will be separated where required, however will be mixed with the concrete hardcore as recycling of toughened plate glass is limited.</li> </ul>

**General Method:**

During all soft strip activities, operatives will be advised on the need for vigilance in identifying hazardous substances and or materials.

All such substances or materials will be assessed by the site supervisor and the appropriate action taken. Vigilance and care must be the watchword when removal of materials likely to spill or seep / escape to the ground. Such products must always be put inside sealed or secure containers.

In the event that these identified substances and or materials will pose an unacceptable risk to operatives during their removal, a specialist contractor will be engaged to carry out the works.

Working area to be pre-cleaned of any items which may cause slips, trips and falls.

110V electric cables to be run to working area.

Lighting to be checked and task lighting installed if required

Operatives are to pay particular attention to Hand Arm Vibration and the supervisor is to record tool usage if required

Adequate PPE will be worn during all soft strip activities and removal of potential hazardous materials/ substances. i.e. gloves, goggles, overalls, respiratory protection (P3 – Particulate), safety footwear etc. Soft strip materials will be disposed of via suitable waste containers. An excavator with fixed grab and bobcat will be used to load all materials stripped into waste bins. All such operations are to be undertaken in the clearly marked areas within the demolition site.

- All doors and linings to be removed by hand.
- All suspended ceilings to be removed by hand.
- Surface mounted M&E to be removed by hand.
- All cables, ducting and pipework, once isolated, to be removed. Hot work will be required. See section 7.9.
- Plasterboard partition walls will be removed by hand assisted by the use of a machine/bobcat.
- Materials will be removed to storage area adjacent to the building for separation.

The soft strip will take place within the office/canteen and welfare areas.

**Structural Demolition**

Bulleted Checklist for Building Reduction:

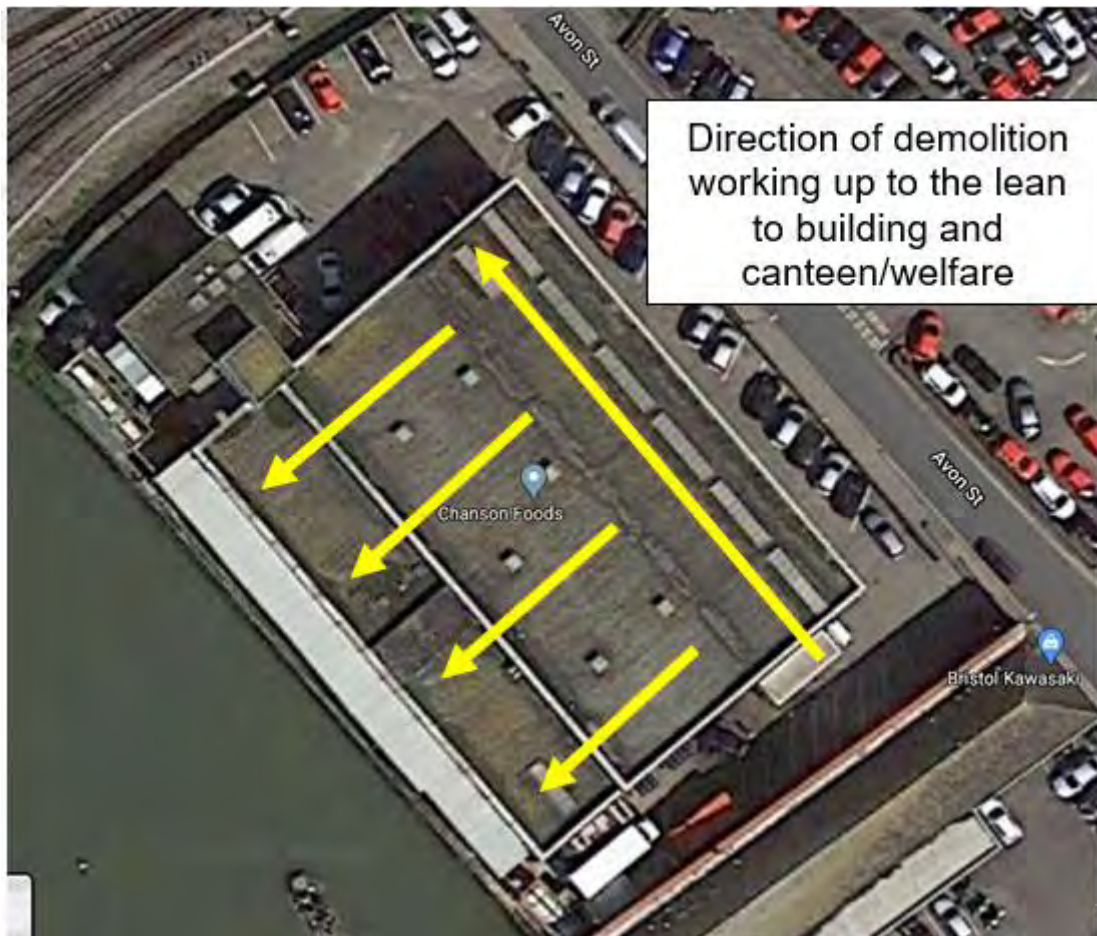
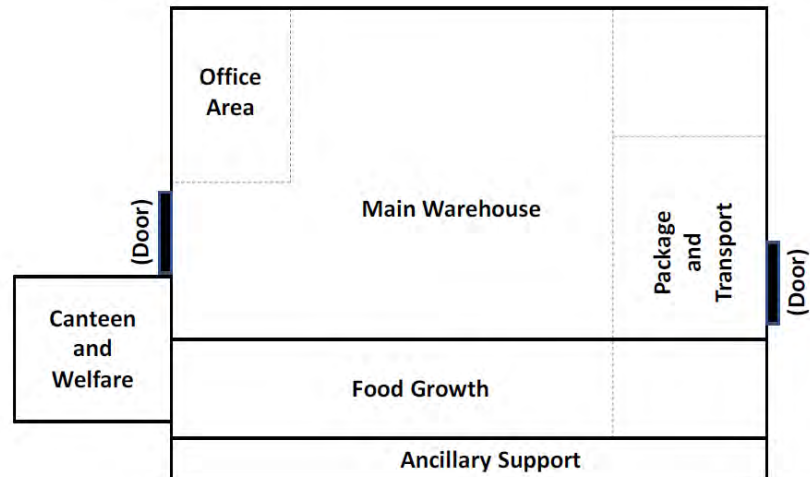
- Demolition area has been secured and relevant signs erected.
- Services have been disconnected and certificates received.
- All ecological issues have been addressed.
- Asbestos identified in the asbestos survey has been removed.
- All areas to be protected have been identified and communicated to all.
- Check direction of joists, paying particular attention to building extensions which may have weakened the original structure.
- Look at all openings and internal walls to establish whether sufficient lintels have been installed. Extreme caution should be taken if large openings are supported by lightweight beams, these are liable to fail prematurely during demolition.
- Ensure that all drop zones are clearly fenced and signed.

Note premature collapses occur when:

- Buildings have been built to a substandard specification or have been poorly modified.
- Buildings have been stripped out by others, often including joists.
- Roofs are left with their tiles in-situ, additional weight tends to push perimeter walls outwards.
- Buildings have large openings in load bearing walls, especially if two openings are on different walls e.g. converted shops, offices etc.

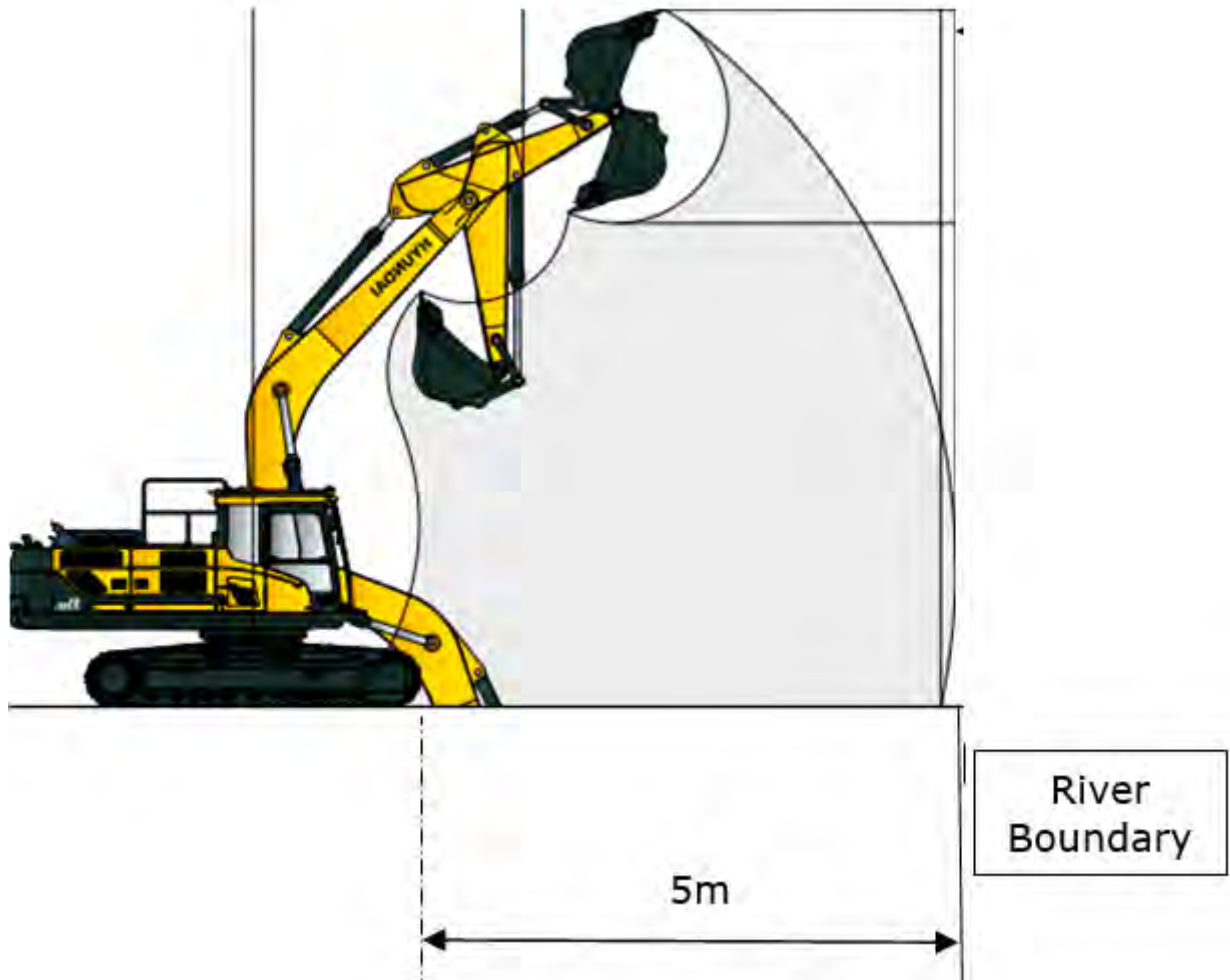
**Method**

The buildings are constructed from a mixture of steel framed structures and reinforced concrete. The roof is constructed from a steel frame with concrete roof with waterproof coverings. There is a small lean to building (ancillary support) adjacent to the river constructed from a lightweight steel frame with metal sheets. The canteen and welfare adjacent to the railway is a steel frame with concrete floors. The main warehouse is a steel frame with some internal concrete and block structures.

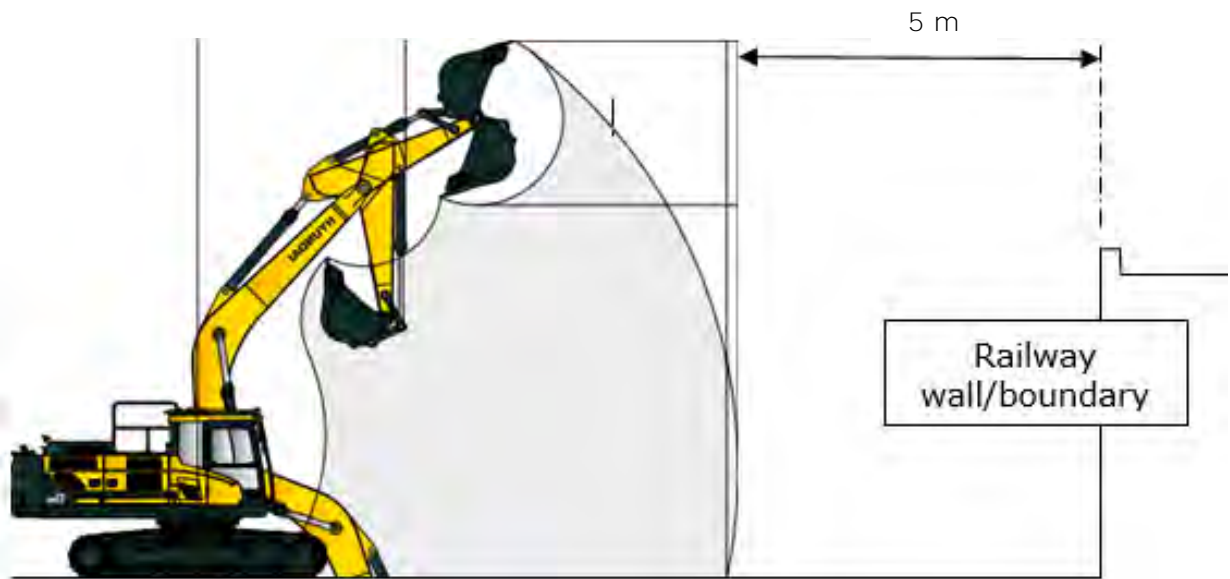




- Using a small demolition rig the internal structures will first be removed from within the building
- Using a demolition rig fitted with a shear and rotational grab attachment the structure of the building will be demolished working towards the railway and the river working top down.
- The demolition will work up to the canteen/welfare building which is nearest the railway and stop, ensuring the canteen/welfare structure is left in a stable condition.
- The demolition will work up to the river, leaving the last set of legs within the main warehouse intact, this will ensure the lean -to structure maintains its structural stability.
- The building will then be demolished by cutting the structure using the shear attachment to allow the rig to pull the structure away from the river and into the footprint of the building
- This work will continue along the length of the structure.



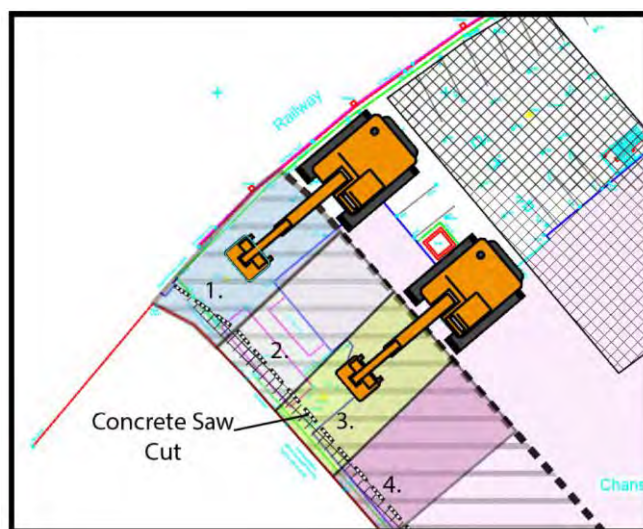
- To demolish the canteen/welfare, all works will be carried out from outside the 5 metre network rail exclusion zone. The demolition rig will sit with its ballast away from the railway and the structure will be reduced ensuring all material is pulled within the footprint of the building.
- All works will be at full reach.
- All works will employ a banksman



- All arisings to be separated into their relevant waste streams prior to removing from site to licensed waste facility for recycling/disposal. All site won hardcore is to be stockpiled on site and will be crushed on completion of the demolition works.

#### Slabs/Foundations and crushing

- The slab will be removed using a standard height demolition rig fitted with a hammer and bucket attachments.
- The slab will be broken up and process using a pulveriser attachment to remove any reinforcement, and then stockpiled prior to crushing.
- The area within the 5 metre Network Rail exclusion zone will be subject to agreement with Network Rail and sign off of RAMS/WPP and will require a Network Rail site supervisor in attendance.
- The method within 16 metres of the river boundary will require agreement on method and extent of removal from the Environment agency and Harbour Authority. In the form of a Flood Risk Activity Permit, see attached for full details of works within the 16 metre zone.



- All site won hardcore will be crushed using a licenced mobile crusher to 6F2 and all material will be stockpiled on site in a location to be agreed with the client.

**Dust mitigation**

During the breaking and removal of concrete control of dust is key. This will use dust boss units, which are a water mist spray unit. Any piles of hardcore will also be kept damp to ensure no dust is created during the moving or processing of the material.  
 Dust monitoring will be carried out prior to any works commencing, this will set a background standard, this will be done on a daily basis. Then dust monitoring will be carried out at regular intervals during the working day.  
 Weather will be closely monitored to ensure no works take place during extreme conditions, such as gale force winds etc.

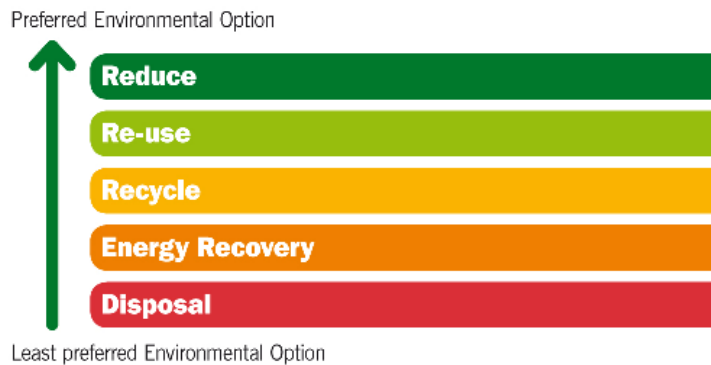


- The slab will be broken up using a demolition rig fitted with a hammer attachment. The slab will be broken then be grubbed up using a demolition rig fitted with a bucket attachment.
- The hardcore will be then loaded into a dumper using a demolition rig fitted with a bucket attachment, as before the dumper will transport the material to the South of the site to be stockpiled in an area agreed on site with the client.
- Please note due to the proximity of the railway, there is a 5 metre exclusion zone running to the west of the area. When using a hammer near the exclusion zone the demolition rig must sit with the ballast weight facing the railway. The demolition rig can only face the railway when fitted with a bucket attachment to pullup the slab towards them and away from the railway.
- Again as with the stockpile there is fencing to the South and East of the area to act as edge protection, in these areas leave approx.. 1 metre of slab and break in front of the fencing to ensure the open edge continues to be protected.

	<b>HOLD POINT</b>					
	The Demolition Supervisor must ensure works comply with demolition plan.					
	Supervisor Initial		Date		Time	

**7.11 Waste processing / removal**

## The Waste Hierarchy



- All waste arising from the works shall be separated into their respective materials, loaded into suitable containers and carted from site, to be disposed of at licensed tipping facilities.

<b>7.12</b>	<b>Site sign off requirements</b>	
	<ul style="list-style-type: none"> <li>Once all works have been completed to the scope and other formal instructions, the Demolition Site Supervisor must walk the site with the project manager / Co-ordinator and client or client rep and agree on the finish following works.</li> <li>The Demolition Site Supervisor must ensure an NPC is completed and returned to the office immediately.</li> <li>Refer to the table below to ensure all relevant items have been completed.</li> </ul>	
<b>7.13</b>	<b>Completion criteria</b>	
	Refer to section 3.9 and ensure the following items have been addressed and completed. These points should be referred to in the NPC.	
	Demolition of structures to	Top of slab level.
	Slabs and foundations removed to	Remove concrete upstands.
	All wastes removed from site	All hardcore to be crushed and stockpiled on site in a location to be agreed. All other items to be removed to licenced facility.
	Crushed material storage location	N/A
	Security fencing	To be erected to secure site and be left in place on agreement with client
	Drains to be capped	Where they are removed as part of the slab and obstruction removal
	Service locations to be marked	All isolated outside of the boundary
	Completion certificate to be signed by	Client representative
<b>7.14</b>	<b>Health and Safety File</b>	
	<p>This will be transferred to the client via electronic file</p> <p><b>The following information will be included if relevant.</b></p> <ol style="list-style-type: none"> <li>Description of the work</li> <li>Principal parties involved in the project (CDM dutyholders: Client, PD, PC, Designers and Contractors with contact details)</li> <li>Contractors and emergency contact details</li> <li>Residual hazards</li> <li>Hazardous Materials Used</li> <li>Key Structural Principles</li> <li>Fire Strategy</li> <li>Plant Maintenance Strategy</li> <li>Cleaning &amp; Access Strategy</li> <li>Nature, location and markings of significant services</li> <li>Survey Reports. Surveys names should be full name to avoid any doubt.</li> <li>As-built drawings of the building, its plant and equipment. List of drawings if applicable As Built/As Installed/ with full name, rev and date.</li> </ol>	

**8.0 Risk / environmental assessments**

<b>8.1</b>	<b>Risk Assessment</b>																																															
<b>Site specific risk assessments must be read in conjunction with Wring Group Ltd Standard Operating Procedure (S.O.P) Risk assessments</b>																																																
<p>Understanding this risk assessment : The initial hazard / risk has been classified as a High (H) Medium (M) or Low(L) in the risk rating column. The measures to control the hazard / risks should lower the hazard / risk rating to an acceptable level. If measure to lower the hazard and risk are detailed in this document they must be followed. If the controls are not sufficient or the hazard / risk changes you must contact your supervisor.</p> <p>Using the following tables, the site identified hazards are calculated and rated on their hazard / effect and probability rating. The final tables show actions that must be taken following the identification of the residual risk rating.</p> <p><u>Severity guide</u></p>																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" rowspan="2"></td> <td colspan="3" style="text-align: center;">PROBABILITY</td> </tr> <tr> <td style="text-align: center;">L</td> <td style="text-align: center;">M</td> <td style="text-align: center;">H</td> </tr> <tr> <td rowspan="3" style="writing-mode: vertical-rl; transform: rotate(180deg); text-align: center;">HAZARD EFFECT</td> <td style="text-align: center;">L</td> <td style="background-color: #90EE90; text-align: center;">L</td> <td style="background-color: #FFFF00; text-align: center;">M</td> <td style="background-color: #FFFF00; text-align: center;">M</td> </tr> <tr> <td style="text-align: center;">M</td> <td style="background-color: #FFFF00; text-align: center;">M</td> <td style="background-color: #FFFF00; text-align: center;">M</td> <td style="background-color: #FF0000; text-align: center;">H</td> </tr> <tr> <td style="text-align: center;">H</td> <td style="background-color: #FFFF00; text-align: center;">M</td> <td style="background-color: #FF0000; text-align: center;">H</td> <td style="background-color: #FF0000; text-align: center;">H</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 30%;">Hazard / Effect Rating</th> <th>Rating</th> </tr> </thead> <tbody> <tr> <td style="background-color: #FF0000; text-align: center;">H</td> <td>Fatality / major injury, significant environmental incident / damage</td> </tr> <tr> <td style="background-color: #FFFF00; text-align: center;">M</td> <td>Absence from work / significant pollution</td> </tr> <tr> <td style="background-color: #90EE90; text-align: center;">L</td> <td>First aid, no lost time, no significant pollution</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 30%;">Probability</th> <th>Rating</th> </tr> </thead> <tbody> <tr> <td style="background-color: #FF0000; text-align: center;">H</td> <td>Common / regular occurrence likely to occur.</td> </tr> <tr> <td style="background-color: #FFFF00; text-align: center;">M</td> <td>Occasional occurrence</td> </tr> <tr> <td style="background-color: #90EE90; text-align: center;">L</td> <td>Unlikely occurrence</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 30%;">Residual Risk Rating</th> <th>Rating</th> </tr> </thead> <tbody> <tr> <td style="background-color: #FF0000; text-align: center;">H</td> <td>Discontinue work, review operations</td> </tr> <tr> <td style="background-color: #FFFF00; text-align: center;">M</td> <td>Work may continue under immediate supervision – further controls to be considered.</td> </tr> <tr> <td style="background-color: #90EE90; text-align: center;">L</td> <td>Tolerable risk.</td> </tr> </tbody> </table>						PROBABILITY			L	M	H	HAZARD EFFECT	L	L	M	M	M	M	M	H	H	M	H	H	Hazard / Effect Rating	Rating	H	Fatality / major injury, significant environmental incident / damage	M	Absence from work / significant pollution	L	First aid, no lost time, no significant pollution	Probability	Rating	H	Common / regular occurrence likely to occur.	M	Occasional occurrence	L	Unlikely occurrence	Residual Risk Rating	Rating	H	Discontinue work, review operations	M	Work may continue under immediate supervision – further controls to be considered.	L	Tolerable risk.
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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Security	Trespass by unauthorised persons	Persons entering site without authority especially children. <b>Serious injury / death – coming into contact with hazards on site in live demolition / work areas.</b> Other persons on site. <b>Serious injury from failure of equipment if items to do with safety are tampered with by unauthorised persons</b>	<b>M</b>	<ul style="list-style-type: none"> <li>WGL are responsible for site boundary fencing and site operatives to ensure all fencing is maintained in secure and safe condition.</li> <li>Ensure all access points are kept clear and banksman assigned for movement of site vehicles/deliveries where necessary.</li> <li>Site fencing to be checked at beginning and end of each working day to ensure no unauthorized access possible – check clamps/secure fasteners fencing etc.</li> <li>Erect adequate signage to ensure all persons are warned of the works to include site contact details i.e. 'activities in progress', Construction Traffic, Hard Hat and Deep Excavations etc.</li> <li>Gates manned when used but kept closed and secure at all other times.</li> <li>All operatives' details recorded via Staff and Visitor Register.</li> <li>Un-authorized third parties to be escorted to site office for details and then escorted off site. Repeat infringements to be reported to the police.</li> </ul>	<b>L</b>
Security	Breach of site boundary due to inadequate fencing / signage / locks	Persons entering site without authority especially children. <b>Serious injury / death – coming into contact with hazards on site in live demolition / work areas.</b>	<b>M</b>	<ul style="list-style-type: none"> <li>Before starting work: ensure all fencing is erected by competent persons.</li> <li>Ensure all access points are kept clear and banksman assigned for movement of site vehicles/deliveries of necessary.</li> <li>Safe working: site fencing to be checked at beginning and end of each working day to ensure no unauthorized access possible – check clamps on heras fencing etc. Erect adequate signage to ensure all persons are warned of the works i.e. parent warning signs, construction traffic, hard hat, deep excavations etc.</li> </ul>	<b>L</b>
Welfare	Incorrect use of site-based welfare facilities	All persons entering the welfare unit. <b>Bacterial infections / illness, damage to equipment, burns, scalds</b>	<b>M</b>	<ul style="list-style-type: none"> <li>Suitable site welfare facilities in accordance of HSE regulations are to be provided.</li> <li>No eating/drinking or smoking is allowed on site unless in designated areas.</li> <li>Welfare facilities to be regularly cleaned and inspected. Washing facilities to be well stocked and checked regularly. Toilet facilities to be cleaned at a minimum of weekly intervals. Welfare requirements and the safe/correct use of to be communicated to the workforce during induction.</li> </ul>	<b>L</b>

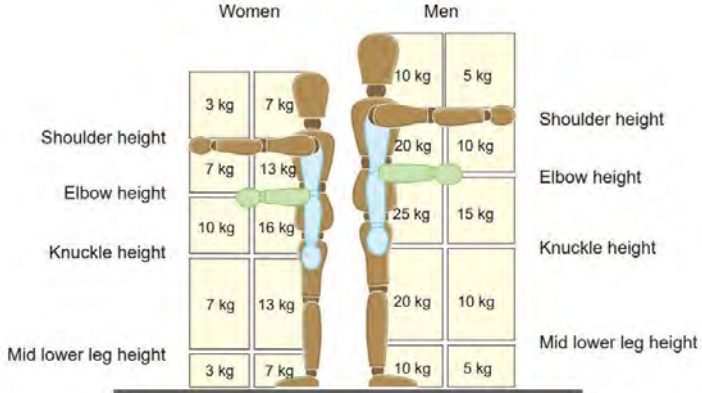
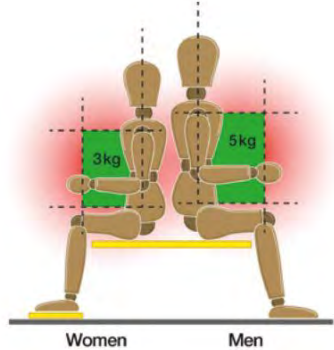
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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Site	Failure to use correct PPE/RPE or to use RPE/PPE incorrectly	All persons entering / working on site. Death, serious injury, injury, cuts / abrasions / crush injury / eye injury / respiratory illness / hearing damage	H	<ul style="list-style-type: none"> <li>The following must be worn as a minimum at all times;</li> <li>Hard HAT</li> <li>High Viz vest / jacket</li> <li>Industrial safety boots</li> <li>Suitable / task specific eye protection</li> <li>Suitable / task specific gloves</li> <li>Where required suitable RPE. (Sundstrom SR100 minimum)</li> <li>Failure to wear PPE / RPE will result in immediate removal from site.</li> </ul>	M
Site	Contact with live electricity	All persons entering / working on site. Death, electrocution, serious injury, injury, burns, scalds, fire, explosion	H	<ul style="list-style-type: none"> <li>All services to be terminated by Wring Group Ltd</li> <li>Whilst every effort will be made to isolate equipment and cables, all such equipment shall be treated as LIVE until certification of isolations/disconnections has been issued.</li> <li>Care will be taken and any suspected damage to cable and/or equipment will be reported to the site supervisor who will seek further advice from the client.</li> <li>All site electrical equipment will be powered by way of battery supply.</li> <li>All electrical equipment in use to be PA tested and daily user check completed.</li> <li>All trailing cable to be kept clear of walkways in order to minimise the risk of damage.</li> <li>Any electrical equipment thought to be faulty shall be taken out of service and reported to the supervisor.</li> <li>Live services to remain must be marked and operatives made aware of locations. This must be covered in site documentation.</li> </ul>	M
All areas	Slips, trips and falls	All persons entering / working on site. Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.	H	<ul style="list-style-type: none"> <li>Pathways to be kept clear of obstacles wherever possible.</li> <li>Safety harnesses to be worn where appropriate and advised during all work at height where access may not be controlled by MEWP or scaffolding. All work at height where harness and lanyard is required must be covered by separate Risk Assessment.</li> <li>All employees to be advised to maintain a safe environment.</li> <li>Keep all access points clear.</li> <li>Good housekeeping.</li> <li>Only use designated access points.</li> <li>Use designated pedestrian routes where available.</li> </ul>	M

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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>Supervisor to check primary and emergency access routes at the start of each shift.</li> <li>Access routes included in team briefing.</li> <li>Good lighting for all tasks and work activities. Ensure dark areas are correctly illuminated.</li> <li>Ensure open edges / pits / voids are barriered off to protect workforce and visitors.</li> </ul>	
All areas	Incorrect manual handling – General.	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.	<b>H</b>	<ul style="list-style-type: none"> <li>Follow information in Wring Group S.O.P and in HSE INDG143</li> <li>Avoid hazardous manual handling operations so far as is reasonably practicable.</li> <li>Persons must only lift what they feel comfortable to do so.</li> <li>All persons lift different at different capacity, the person making the lift must identify the weight that is suitable to them. (Please see drawing below for a guide)</li> <li>Assess the risk posed from lifting operations and avoid it if possible.</li> <li>Reduce the risk of injury by utilising control measures to lower the risk to as low as is reasonably practicable.</li> <li>Operatives should follow systems and procedures set out for the works.</li> <li>Utilise manual handling aids where required.</li> <li>Ask for help is a load is too heavy.</li> <li>Where possible always allow a lift to be carried out mechanically.</li> <li>During manual demolition works, split the loads down to make them smaller.</li> <li>If in doubt do not attempt a lift / move, ask for help first.</li> <li>The team carrying out the works must review risk assessments and site procedures, if they see a better way to carry out lifts, they must communicate this to the Site Demolition Supervisor.</li> </ul>	<b>M</b>



Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk																																				
				<div style="text-align: center;">  <table border="1" style="margin: auto;"> <thead> <tr> <th></th> <th colspan="2">Women</th> <th colspan="2">Men</th> <th></th> </tr> </thead> <tbody> <tr> <td>Shoulder height</td> <td>3 kg</td> <td>7 kg</td> <td>10 kg</td> <td>5 kg</td> <td>Shoulder height</td> </tr> <tr> <td>Elbow height</td> <td>7 kg</td> <td>13 kg</td> <td>20 kg</td> <td>10 kg</td> <td>Elbow height</td> </tr> <tr> <td>Knuckle height</td> <td>10 kg</td> <td>16 kg</td> <td>25 kg</td> <td>15 kg</td> <td>Knuckle height</td> </tr> <tr> <td>Mid lower leg height</td> <td>7 kg</td> <td>13 kg</td> <td>20 kg</td> <td>10 kg</td> <td>Mid lower leg height</td> </tr> <tr> <td></td> <td>3 kg</td> <td>7 kg</td> <td>10 kg</td> <td>5 kg</td> <td></td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> <li>Take into consideration how lifts are carried out.</li> <li>What is the load? Liquid, solid and the size.</li> <li>Follow training given.</li> <li>Keep back straight and lift with the legs.</li> <li>Ensure a good grip on item.</li> <li>Keep the item close to your body as possible.</li> <li>Ensure the load is stable and will not fall apart as the lift is undertaken.</li> <li>What position are you lifting from? (Consider the drawings above and below)</li> </ul> <div style="text-align: center; margin-top: 20px;">  </div>		Women		Men			Shoulder height	3 kg	7 kg	10 kg	5 kg	Shoulder height	Elbow height	7 kg	13 kg	20 kg	10 kg	Elbow height	Knuckle height	10 kg	16 kg	25 kg	15 kg	Knuckle height	Mid lower leg height	7 kg	13 kg	20 kg	10 kg	Mid lower leg height		3 kg	7 kg	10 kg	5 kg		
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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
All areas	Incorrect manual handling – Task	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.	<b>H</b>	<ul style="list-style-type: none"> <li>• Can the task be carried out another way.</li> <li>• Utilise mechanical aids to move loads which are too heavy / awkward to manually move.</li> <li>• Where large volumes of materials are produced from soft strip / manual demolition, items will be placed in stockpiles / drop zones to minimise distances travelled. Items then will be moved with demolition rigs and hydraulic grapples.</li> <li>• If items have to be moved consider the method of movement, if it is too heavy / awkward to manually carry a lifting / movement aid must be used.</li> <li>• (Please see below for a guide)</li> </ul>  <ul style="list-style-type: none"> <li>• If pushing or pulling is required ensure the correct posture is used. Use the hands to push keeping the torso largely upright and do not twist. Hands should be kept between the hip and shoulder height.</li> <li>• The distance should be no more than 20 m without a break.</li> <li>• Does the lift require two people? If so the individuals carrying out the lift should be of similar height and capability. Discuss the lift prior to starting and communicate throughout the lift.</li> </ul>	<b>M</b>
All areas	Incorrect manual handling – Environment	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.	<b>H</b>	<ul style="list-style-type: none"> <li>• Assess the environment before lift takes place, ensure the route is clear.</li> <li>• Is the route over rough uneven ground? If so can the load be moved mechanically, if not can the ground be levelled.</li> <li>• Is the ground dry, firm and level?</li> <li>• If the ground is wet and slippery can the lift be postponed until dry and not slippery? If not another method of lifting should be considered.</li> <li>• Check that the load you are to carry does not obstruct a clear view ahead.</li> </ul>	<b>M</b>

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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
All areas	Collision between pedestrians and plant, vehicles, transport.	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, Crush injury, death.	H	<ul style="list-style-type: none"> <li>WGL to manage plant / personnel separation on site depending on work activities. Discuss in morning briefings.</li> <li>Separate pedestrian and vehicle routes where reasonably practicable. Pedestrians to wear high visibility jackets and clothing.</li> <li>Working areas to be appropriately lit.</li> <li>Active demolition areas to be clearly designated with secure fencing and signage.</li> <li>Minimise un-necessary plant movements e.g. locate fuel bowsers as close to working area as safely possible.</li> <li>Follow principals of exclusion zones as per Wring Group S.O.P.</li> <li>Educate operatives with task briefings and information.</li> </ul>	M
Demolition area	Fall from height –Tools and debris	All persons entering / working on site. Dropping loads, tools, debris or incorrect moving can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, Crush injury, death.	M	<ul style="list-style-type: none"> <li>Keep edges free of debris.</li> <li>No one to work under active demolition area. Loose or unstable debris to be removed at end of shift / during works.</li> <li>All tools working at height should be tethered.</li> <li>A secure exclusion zone below the work area should be set up. In this scenario, if a secure exclusion zone is in place, tool tethering is not required unless a falling tool could damage property of equipment.</li> </ul>	L
Demolition area	Falls from height – Open edges	All persons entering / working on site. Dropping loads, tools, debris or incorrect moving can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, Crush injury, death.	M	<ul style="list-style-type: none"> <li>Erect barriers as open edges are created.</li> <li>Ensure signage is fitted to all barriers.</li> <li>Barriers should allow hazard to be visible to minimise anyone climbing over barrier.</li> <li>Communicate open edges during inductions and task briefings.</li> <li>Access To high areas by way of trained operative and MEWP Boom only. Fall restraint harness must be used at all times.</li> </ul>	L
Demolition area	Failure of demolition plant – overloading / roll over	Demolition plant operator, site operatives, public:- Death, serious injury, crush injury, cuts, broken bones, lacerations, damage to property.	H	<ul style="list-style-type: none"> <li>Follow Wring Group S.O.P. Demo Rigs.</li> <li>Follow all relevant information, training and instruction.</li> <li>Observe load charts in machine.</li> <li>Attachments correctly sized for demolition plant.</li> <li>Check for ground voids and stability of the ground surface prior to commencing works.</li> </ul>	M

MS - RAMS-IB/14180/22-11-2023 Former Chanson Foods Demolition

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>Ensure working pad and ramps are constructed in a safe manner following Industry standards and CPCS training information.</li> <li>Competent and certified operators.</li> </ul>	
Demolition area	Failure of demolition plant – Mechanical failure	Demolition plant operator, site operatives, public:- Death, serious injury, crush injury, , broken bones, lacerations, damage to property.	M	<ul style="list-style-type: none"> <li>Regular maintenance regime.</li> <li>Operator checks completed prior to each shift.</li> <li>LOLER equipment inspected annually / 6 monthly as per legislation.</li> </ul>	L
Demolition area	Premature collapse of structure	All persons entering / working on site. Death, serious injury, broken bones, cuts, abrasions, damage to property.	M	<ul style="list-style-type: none"> <li>Structure assessed prior to commencing works. Drop zones extended if poor build quality is encountered.</li> <li>Operator experience.</li> <li>Minimise use of multiple working faces – one structural section to be demolished at any one time.</li> <li>Internal works will ensure following site investigations, that no structural elements are removed during the soft strip elements of work.</li> <li>Floors will not be overloaded with stored wastes during soft strip works.</li> </ul>	L
Demolition area	Demolition – Debris ejected from working area	Local residents, public.:- Death, serious injury	H	<ul style="list-style-type: none"> <li>Demolition processes designed to allow all materials to be brought inward into the footprint of the building/area during the demolition.</li> <li>Care to be taken when raking through reinforcement bar – concrete to be crushed where possible.</li> <li>Work areas to be secured and high risk areas where items may fall must be controlled primarily with a protection system such as demolition curtain or scaffold and sheeting, the site must also utilise a secondary protection system such as an exclusion zone.</li> <li>Maintain the exclusion zones, ensure correct space and configuration are adhered to.</li> </ul>	M
Demolition area	Incorrect working with vibrating tools. HAVs	Operative working with tools.:- Industrial white finger, carpal tunnel syndrome, loss of feeling, effected grip, pain.	M	<ul style="list-style-type: none"> <li>Information instruction and training.</li> <li>Ensure the tool is the correct tool for the job, before you start, is there another way to do the job that doesn't require a vibrating tool?</li> <li>If you have to use the tool make sure it is in good condition, blades / chisel points must be sharp and the correct item for what is to be cut / broken.</li> </ul>	L

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>• Read SOP for tool and discuss with Demolition Site Supervisor your trigger times for the tool and requirements for the tool.</li> <li>• Utilise wrist monitors to warn of completion of allocated trigger time where applicable.</li> <li>• Demolition site supervisor to monitor trigger times and ensure rotation of operatives is carried out where possible.</li> <li>• Record all exposure times.</li> </ul>	
All areas	Inhalation of respirable dusts	All persons entering the work area:- Respiratory complications, death	M	<ul style="list-style-type: none"> <li>• Follow a detailed plan of works.</li> <li>• Utilise dust suppression methods during manual and mechanical demolition operations.</li> <li>• Follow detail written in specific SOP for the task/tool you are using.</li> <li>• Task specific dust suppression such as spray bottle and water must be used during operations such as soft strip activities and minor manual demolition operations to control dust. If the spray bottle does not effectively control all dust ensure a face fitted half mask is used. Operative must be clean shave and have a face fit test relevant to the type of mask used.</li> <li>• Disposable coveralls during dusty works should be used but removed prior to leaving the works area at a decontamination area so that dusts are not transported to the welfare and other areas.</li> <li>• Motofog and jet wash use must be considered during mechanical and demolition and other dusty activities. Refer to SOP for these items.</li> <li>• Dust monitoring must be carried out regularly and details recorded in site diary. High readings must be communicated directly to the Project Manager and SHEQ Co-ordinator.</li> </ul>	L
All areas	Inhalation of Aspergillus	Persons with a weakened immune systems such as hospital patients. Respiratory complications, lung disease, death	M	<ul style="list-style-type: none"> <li>• Aspergillus fumigatus is a species of fungus.</li> <li>• It can be found throughout the environment, including in soil, plant matter, and household dust.</li> <li>• The fungus can also produce airborne spores called conidia. Most people can inhale many of these spores on a daily basis.</li> </ul>	L

MS - RAMS-IB/14180/22-11-2023 Former Chanson Foods Demolition

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>Aspergillus is not harmful to persons with a healthy immune system, however for those who have a weakened immune system spores can cause infection in the lungs or sinuses.</li> </ul>	
All areas	Exposure to noise	All persons entering / working on site. Hearing loss and hearing complications, tinnitus.	M	<ul style="list-style-type: none"> <li>Establish noise exclusion zones.</li> <li>Ear protection to be worn inside noise exclusion zone.</li> <li>Excavators CE marked, doors to be closed as required to minimise noise exposure.</li> <li>Demolition site supervisor to ensure noise monitoring is carried out and recorded through the Ipad App.</li> </ul>	L
Demolition area	Cuts and lacerations from handling sharp objects	Operatives:- Lacerations, cuts, puncture injuries	H	<ul style="list-style-type: none"> <li>Operatives to wear cut 5 gloves and arm protectors if handling sharp objects.</li> <li>Works must be planned to eliminate working with sharp objects.</li> <li>If working with sharp objects is unavoidable, ensure works are limited to a minimum.</li> <li>Sharp items must be cleared away immediately and disposed of in a safe area.</li> <li>Shards must not be left in windows or doors.</li> </ul>	L
All Areas	Adverse weather	Operatives Contractors and subcontractors Visitors Risk of illness or injury due to exposure (cold stress/hypothermia, heat stress/sun burn/dehydration). Increased risk of falls if working at height.	M	<ul style="list-style-type: none"> <li>Weather conditions considered when allocating work.</li> <li>Work scheduled and jobs rotated to enable operatives to take sufficient rest breaks.</li> <li>Awareness provided to all operatives in the hazards associated with adverse weather conditions and the necessary precautions to take.</li> <li>Advice provided on suitable PPE for range of anticipated weather conditions.</li> <li>PPE provided for range of anticipated weather conditions.</li> <li>Suitable resting facilities provided to allow adequate respite from weather conditions.</li> <li>Plentiful consumption of hot/cold fluids (according to weather conditions).</li> <li>Operation – on site</li> <li>Consult Site Supervisor if weather conditions unsuitable for task.</li> <li>PPE worn as provided, suitable for weather conditions.</li> <li>Work at height not undertaken in exceptionally windy conditions.</li> </ul>	L

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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>Extra care taken when working in wet, or slippery conditions.</li> <li>Works to cease in periods of high rainfall due to restricted visibility.</li> <li>Works to cease during periods of strong winds to prevent potential damage to stability and other structures.</li> <li>Weather to be monitored daily and to review weather forecast for up-and-coming tasks by Demolition Supervisor.</li> </ul>	
Demolition area	Explosion from flammable gases	Operators, Workforce, public Death, serious injury	H	<ul style="list-style-type: none"> <li>Ensure all documentation is in place</li> <li>DSEAR zoning - Details provided during the site induction. AREA TO BE ASSESSES AND DE-ZONED IF POSSIBLE PRIOR TO WORKS.</li> <li>Gas monitors to be worn at all times.</li> <li>No smoking on site.</li> <li>Hot works under client permit system, cold cutting techniques where possible.</li> <li>No mobile phones or smoking on site.</li> <li>Mandatory wearing of flame retardant clothing.</li> </ul>	M
Site	Incorrect Plant and equipment – loading / unloading	Operatives Contractors and subcontractors Visitors Public Loose equipment during plant and equipment movements. Death serious injury. Damage	H	<ul style="list-style-type: none"> <li>Plant and equipment to be unloaded by trained operator and operatives only.</li> <li>Ensure unloading is undertaken on a level area away from other plant and vehicle movements.</li> <li>Consider use of cones/barriers, banksman if unloading in trafficked areas.</li> <li>Check for overhead services and access with restrictions.</li> <li>Read in conjunction with SOP MEWP booms and scissors 013</li> <li>Read in conjunction with SOP Excavator &amp; Demo rigs 010</li> </ul>	L
All areas	Coming into contact with COSHH	Operatives, workforce, public Chemical burns. Inhalation of fumes. Contact with eyes and eye irritation. Death	M	<ul style="list-style-type: none"> <li>Hazardous chemicals are to be assessed for suitability under COSHH regulations.</li> <li>COSHH Risk Assessments are to be available on site, assessment received and reviewed for silo contents.</li> <li>Information on safe use will be given to operatives before they are used.</li> <li>Non-hazardous materials are to be used wherever possible.</li> <li>Appropriate gloves (BS EN 388) and eye protection (BS EN 166) are to be worn when handling hazardous chemicals.</li> </ul>	L

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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Demolition Area	Working near chemicals and chemically contaminated equipment	Operatives Toxic effects on health	H	<ul style="list-style-type: none"> <li>Ensure that the decontamination and waste disposal procedures are understood and that any equipment or materials required to safely contain and/or entrap spillage are available.</li> <li>Refer to the appropriate COSHH assessments for the materials and substances with which contact is likely.</li> </ul>	M
Plant	Incorrect re-fuelling of diesel plant/equipment	Operatives Diesel spillage contact with skin. Dermatitis	M	<ul style="list-style-type: none"> <li>The plant is to be refuelled away from the work area in a segregated area</li> <li>The fuel will be stored in a double bunded bowser.</li> <li>The responsibility of refuelling will be the plant operator.</li> <li>Environmental protection to be arranged and in place prior to refuelling.</li> <li>Limited quantities of fuel to be maintained on site.</li> <li>Suitable containers/funnel to be used when re-fuelling.</li> <li>Absorbent pads to be available in case of spillage.</li> <li>Operatives to wear rubber/plastic gloves at all times.</li> </ul>	L
Demolition area	Incorrect mobile plant operations	Operatives Contractors and subcontractors Visitors Injury/ death to operatives and outside personnel. Damage to plant and retained surrounding structure. Damage to underground services.	H	<ul style="list-style-type: none"> <li>Access to working area to be restricted.</li> <li>All plant operators to be trained in operation of specific types of plant to CPCS standard with relevant knowledge and experience of tasks and safe operation and limitations of equipment.</li> <li>Banksman to be in attendance when necessary.</li> <li>Plant to have a minimum of 600 mm clearance to surrounding structures.</li> <li>Survey for underground voids to be carried out prior to start of works. Works areas to be discussed and positioning of plant to be arranged away from service ducts where possible.</li> <li>Operatives to carry out and record daily inspections – notify any defects to Plant Manager and Project Manager.</li> <li>All equipment to be inspected and tested as required by PUWER (and LOLER where appropriate).</li> <li>All plant where required will have fully working cameras, clean and correctly adjusted mirrors, windows to be kept clean.</li> <li>Refuelling to be carried out away from work area, drains are to be protected and drip trays used. Operatives carrying out refuelling must wear disposable nitrile gloves to protect hands with good personal hygiene to be maintained.</li> </ul>	M



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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
			<b>H</b>	<ul style="list-style-type: none"> <li>Read in conjunction with SOP MEWP booms and scissors</li> </ul>	
Demolition area	Incorrect mechanical demolition techniques, including holding, lowering and loading of demolition arisings	<p>Operatives Contractors and subcontractors Visitors</p> <p><i>Injury to passers-by. Damage to surrounding property and machinery from debris falling from height Premature collapse of structure being demolished. Dust in air. Vibration.</i></p> <p><i>Death / serious injury</i></p>	<b>H</b>	<ul style="list-style-type: none"> <li>Exclusion zone to be established and enforced around structure and items of construction plant (to include full slew area of 360° machines).</li> <li>Methodical demolition sequence to be used in accordance with an approved Method Statement to ensure no damage is caused to adjacent River and Network Rail asset. EA FRAP to be adhered to when working in the ground and Network Rail BAPA/WPP when working within 5 metres of NR asset.</li> <li>Dust to be controlled by use of misting water spraying when necessary, and not to produce run off.</li> <li>Plant operators to use hearing protection when necessary.</li> <li>Consideration to be given to use of Hydraulic attachments such as shears and rotational grabs etc.</li> <li>All demolition rigs have FOPS as standard.</li> <li>Exclusion zones created and only demolition personnel to be allowed within under supervision, following demolition plan.</li> <li>All demolition operatives to be suitably qualified and competent with the correct CCDO/CPCS training qualifications</li> <li>All demolition rigs to be fitted with hydraulic cut off valves</li> <li>All demolition rigs to have load charts available</li> <li>Added controls</li> <li>Demolition rig operator to partake in daily briefings with Demolition supervisor to review task specific hazards and pinch points.</li> <li>Read in conjunction with SOP Excavator &amp; Demo rigs 002</li> </ul>	<b>L</b>
Site	Train strikes & demolition next to a live railway line.	All persons entering site, public, Network Rail asset	<b>H</b>	<ul style="list-style-type: none"> <li>RAMS/WPP approved.</li> <li>CEM/CRE appointed by WGL</li> <li>5m Network Rail exclusion zone to be defined by fencing.</li> <li>All Plant to be situated outside of the 5m exclusion zone and working at full reach guided by a banksman.</li> <li>Work in 5m zone to be supervised by NR supervisor.</li> <li>Dust and vibration monitoring.</li> </ul>	<b>L</b>
Site	Work next to a river in the ground	All persons entering site, public, river.	<b>H</b>	<ul style="list-style-type: none"> <li>Demolition method.</li> </ul>	<b>L</b>

MS - RAMS-IB/14180/22-11-2023 Former Chanson Foods Demolition

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>FRAP approved by EA</li> <li>Dust/vibration monitoring.</li> </ul>	
Site	Fall into river	All site personnel		<ul style="list-style-type: none"> <li>Heras fencing to be erected 5 metres from river edge.</li> <li>Buoyancy aid/throw rope to be available adjacent to river edge</li> </ul>	

8.2 Environmental Aspects and Impacts register						
<b>Site specific Environmental aspects and impacts must be read in conjunction with Wring Group Ltd Standard Operating Procedure (S.O.P) Environmental aspects and impacts information</b>						
Understanding this assessment : The initial hazard / risk has been classified as a High (H) Medium (M) or Low(L) in the risk rating column. The measures to control the hazard / risks should lower the hazard / risk rating to an acceptable level. If measure to lower the hazard and risk are detailed in this document they must be followed. If the controls are not sufficient or the hazard / risk changes you must contact your supervisor.						
When working in the ground within 16 metres of the river EA approved FRAP must be adhered to.						
Assessment carried out by :				Date:		
Relevant area	Source/item	Impact rating	Pathway	Receptor	Control	Residual rating
Site	Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Site	Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run of and contamination of ground/water courses)	M
Environment	Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.	M







<b>Author to sign and communicate this information with workforce</b>	





## **Licences**

- 1. FRAP**

## **Standard Operating Procedures (SOP's)**

- 1. Excavator & Demo rigs 002**
- 2. Manual Handling Hand Tools 003**
- 3. MEWPS 006**
- 4. Telehandler 009**
- 5. Petrol Cutters 011**
- 6. Hot Cutting 021**
- 7. Aluminium Scaffold Towers and Podiums 025**
- 8. Live services 031**
- 9. Recip saws 032**
- 10. Pressure washers 035**

## **COSHH Assessments**

- 1. Diesel**
- 2. Petrol**
- 3. Hydraulic Oil**
- 4. Engine Oil**
- 5. Grease**
- 6. Oxygen**
- 7. Propane**
- 8. Silica Dust**



**Flood Risk Activity Permit – Demolition**

Project Name:	Chanson Foods Demolition	Job Number:	14180
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Location:	Avon Street, Bristol, BS2 0PS
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Client:	
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Contact name:	Richard Williams	Number:	01752 876556
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Reference Documentation:	Drainage and Flood Desk Study – 10572-TCE-S-TN-0003 14180 - Flood Response Plan
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**Document Issue and Communication Log**

Document Ref	Issue	Revision	Status	Written By:	Checked by:	Approval Date:
14180.FRAP	01	-	Review	T. Child	Ian Barker	

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This document was created in accordance with the WGL quality management system.

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## 1. Introduction

1.1. How to use this document	
	<p>This Flood Risk Activity Permit (FRAP) details the proposed methodology to working within 16m of the Feeder Canal of 'The Former Chanson Foods, Avon Street, Bristol, BS2 0PS, (hereafter referred to as 'the Site'). It encompasses the mitigation measures to be implemented by the Principal Contractor (Wring Group Ltd) during the works, and ensure any sub-sequent sub-contractors adhere to the same protocols.</p> <p>This document refers only to the sub-terranean aspects of the works, including slab and foundations removals, obstruction removals and ground raising following completion.</p> <p>Works carried out will be to the Wring Group Ltd (WGL) standards of work as dictated by the Health, Safety, Environment and Quality Procedure (2022), as well as Standard Operating Procedures and Site Specific RAMS.</p> <p>All information in this document will be made available to site operatives and visitors, as well as a notice board at the site entrance.</p>
1.2. Location Plan	
	<p>The site is located in central Bristol, on the opposite side of the Feeder Canal to the Temple Quarter Enterprise Campus, located south of the rail way overpass just east of Temple Meads.</p> <p>Figure 1 shows the Site Location Plan that this FRAP relates to, Figure 2 denotes the Site Layout with FRAP area shown. The site Ordnance Survey Grid Reference is ST599725 (Easting 259962, Northing 172547).</p>
1.3. Site Setting	
	<p><u>North</u>                      To the north of site is the National Rail Way Overpass, this lies outside of the site boundary and approximately 3.8m AOD. Access from this direction is restricted due to the height of the rail way bridge and skips / plant deliveries can only be made from the south.</p> <p>There is an undercroft space beneath the railway and ground floor level, owned by Network Rail and managed externally, it is noted fly tipping has taken place in this area.</p> <p><u>East</u>                      The east of the site is bordered Avon Street, a 20mph road through the industrial area. On the opposite side of the road are several industrial facilities for storage and retail.</p> <p><u>South</u>                      The south of site is neighboured by a derelict industrial unit, formerly the Banister Charitable Trust.</p> <p><u>West</u>                      To the west is the Feeder Canal, a major body of water susceptible to flooding (see Appendix 1 – Flood Response Plan). Beyond the canal is Feeder Road, comprising a number of industrial units with mixed use.</p> <p><u>Topography</u>                      The site is relatively flat, shown in Figure 2 (Site Topography). The site varies between 8.7 and 8.95m AOD at ground level, dropping off slightly to Avon Street in the east at 8.6m AOD.</p>



	<p><u>Buildings Present</u></p> <p>The site currently contains a light industrial warehouse, occupied by Chanson Foods. This building is approximately 6.2m high with 55% site coverage.</p> <p>The lean too section of the building bordering the Feeder Canal has been removed prior to commencing, leaving a gap of circa 4m between the building edge and the river.</p>
<p><b>1.4. Associated Planning Application</b></p>	
	<p>This document is in relation to the proposed planning application 19/02664/F and should be used in conjunction with the document:</p> <ul style="list-style-type: none"> <li>• 14180.CPP.RAMS</li> </ul>
<p><b>1.5. Proposed Development</b></p>	
	<p>The development is planned to form student residences as part of a greater scheme encompassing servicing arrangements, public realm works and landscaping.</p>
<p><b>1.5. Pre-Commencement Information</b></p>	
	<p>Relevant information to Flood Response Plan (Appendix 1):</p> <ul style="list-style-type: none"> <li>• Drainage and Flood Desk Study – Ref: 10572-TCE-S-TN-0003</li> <li>• Structural Engineering - Canal Wall &amp; Interface with Rail – 10572-TCE-S-TN-0002</li> </ul> <p>Information provided to WGL prior to site commencement included:</p> <ul style="list-style-type: none"> <li>• CDM Pre-Construction Information (Sept 2022)</li> <li>• Surveys:             <ul style="list-style-type: none"> <li>○ Topographic Survey (TG-180152/201 (Sept 2018))</li> <li>○ Buried Services and Utilities (TG-180152/101 (Sept 2018))</li> <li>○ Ground Investigation Report – AS-ARP-XX-XX-RP-G-1010 (March 2020))</li> <li>○ Avon Street Measured Surveys (TG-180152/202 &amp; 203)</li> <li>○ Factual Investigation Report – 35480 (2020))</li> <li>○ Structural Engineering – Existing Building (10572-TCE-S-TN-0001))</li> </ul> </li> </ul>

## 2.0. Scope Review and Management Systems

### 2.1. Scope Review

Figure 2 below shows the Site Layout:



All sub-terranean activities beyond the dashed line identified on Figure 1 require careful planning and detailed methodology as these are within the FRAP area, including:

- Slab break out
- Footing / foundation removal
- Obstruction removals
- Proof dig to 2mbgl
- Backfilling and compacting materials to agreed levels for piling

All activities above ground activities, including demolition, are not included in this document as these do not form part of the Flood Risk Activities

### 2.2. Site Location / Access Plan

The Site Layout is shown in Figure 1.

The site comprises the Demolition Area, FRAP area and materials processing area.

All access is to be through the gates from Avon Street, banked and at the permissible times (07:00 – 18:00).

2.3. Working times

	Works Permitted		Days		Nights		Hours of work		
	YES	NO	YES	NO	YES	NO	FROM	TO	
Monday	✓		✓			✓	07:00	18:00	
Tuesday	✓		✓			✓	07:00	18:00	
Wednesday	✓		✓			✓	07:00	18:00	
Thursday	✓		✓			✓	07:00	18:00	
Friday	✓		✓			✓	07:00	18:00	
Saturday	✓		✓			✓	08:00	13:00	
Sunday		✓		✓		✓	N/A	N/A	
Bank holidays		✓		✓		✓	N/A	N/A	
Deviations to the above	No work is permitted without prior approval from:								
	✓	Site Manager			✓	Client			
	✓	Principal Contractor			✓	Client Rep			

2.4. Site Pack Information

A job specific site pack will be issued to site and will contain the following:

1. Visitor Register
2. Site Diary
3. F10 – Displayed in the Site Welfare
4. Scope of Works
5. Demolition
  - a. Construction Phase Plan
  - b. Method Statement / RA / COSHH
6. Asbestos – Notifiable Non Licensed Work
7. Services Information, Section 80 – Records kept and displayed
8. Site Drawings
9. Pre Start Check List / Site Induction Check List / Site Rules / Supervisor Hand Over Sheet(s)
10. LOLER, PUWER, HAVS, Noise
11. MEWP, PPE, Harness, RPE
12. Temporary Works
13. Tool Box Talk Form
14. Site Inspection Reports
15. Confirmation of Site Verbal Instructions / Day Work / Plant Hire Sheet
16. Company Documents - Insurance / EA / Carrier Licence / Waste sheets
17. Accident & Environmental Incident Forms / Emergency Information
18. Guidance Notes / Flow Charts
19. Machine/Equipment certificates
20. Personnel qualifications/certificates

2.5. Site Access	
	<p>The site is accessed from Avon Street, with HGV vehicles coming from the south from Feeder Road / Albert Road only due to height restrictions (3.93m (12.9ft)).</p> <p>The site is secure, with the Feeder Canal stopping entrance from the west, fencing to the north / east and a solid brick wall to the south. The eastern road access features two gates suitable for HGV access and plant deliveries.</p> <p>The gates are to be locked throughout the works and opened only when in use by a suitably qualified person.</p>
2.6. Enabling Plant and Plant Maintenance	
	<p>The site works are reliant upon plant on site, be it demolition rigs, excavators, crushers etc. It is the responsibility of the PC to maintain the plant as required in the CDM (2015) Regulations and provide certification of the machines service history. Particular care to ensure no leaks of hydrocarbons or oils occur potentially reaching the Feeder Canal. All servicing of plant to take place in the north of site away from the river.</p> <p>Only operators with valid in date training certificates are to operate the plant.</p> <p>Plant to be stored out of the flood risk areas at night.</p>
2.7. Site Maintenance and Housekeeping	
	<p>The site must adhere to good housekeeping standards, to be discussed during the site induction by the Principal Contractor.</p> <p>The principal contractor will include a site specific fire plan for the site, and actively look to reduce the risk of fire during works.</p> <p>Due to the proximity to the Feeder Canal the risk for flooding is increased, with the site located within Flood Zone 3 (see Appendix 1 – FRP), waste with fluid mobile properties such as COSHH items must be stored in a 'Dry Storage Area' and be collected as frequently as possible to minimise duration of Flood Potential.</p> <p>Site waste will be stored in the appropriate areas and collected regularly.</p> <p>Prioritisation of recycling materials where ever possible to minimise materials to landfill and increase sustainability.</p>
2.8. Welfare provision	
	<p>In conjunction with The Construction, Design and Management (2015) Regulations, all site-based welfare and toiletry facilities will be set up prior to the project commencing, for use by all site operatives &amp; visitors as necessary, this will include seating, clean water hot &amp; cold, a means to heat food, washing facilities and a drying room. If these are not in place works will not commence. This will be located outside of the FRAP area.</p> <p>Area will be fenced off and an allocated parking area created and fenced off from the public, in one of the highest available topographic positions on site to minimise flood risk potential.</p> <p>A safe area will be created directly outside the welfare areas with pedestrian fencing to ensure when persons exit the welfare there is potential for impact or collision with vehicles.</p> <p><u>Smoking/Vaping</u> Separate smoking area to be set up external to the welfare area, away from the FRAP area.</p>



2.9. COSHH and Re-Fuelling

All COSHH items will be stored on site on impermeable surfaces, where applicable items such as fuel will be stored in double skinned bowsers capable of storing 110% of their contents if spilled. This will be outside of the FRAP area in Figure 1.

Spill kits will be available in the refuelling area and placed in tactical positions across site to be able to quickly act in the event of a spill. Operatives will have suitable training in spill response.

All refuelling activities to take place in a designated area away from the Feeder Canal, and storage of fuels to be in the allocated 'Dry Storage Area'. Care must be taken to ensure spillages are not able to migrate to the River Taw.

COSHH items stored on site include:

Diesel	Diesel to be stored on site for plant use, kept in double skinned and bunded area capable of storing 110% of the capacity
Petrol	Required for tools on site, stored in safe location
Hydraulic oil	Required for plant, delivered when required
Engine oil	Required for plant, delivered when required
Grease	Required for plant, delivered when required

Any COSHH items for disposal will be stored in a safe location and fenced off with signage erected. Disposal to the correct licensed facility with documentation must be carried out as per Waste Management Regulation (2011)

See Appendix 2 for MSDS sheets.

2.10. Material Processing & Waste Management

Materials management on site is highly important due to the flood risk potential.

Materials arising from the slab, foundation and obstruction removals the arising hard core materials are to be stockpiled outside of the FRAP area, preferably on hard standing or crushed stone as opposed to the Made Ground Soils.

Excavations are to be backfilled promptly and compacted.

Materials are to be removed from site efficiently, as prolonged storage increases the opportunity for flood potential.

Arisings are to be inspected by a suitably qualified person to visually assess contamination. If suspected contamination is identified it must be tested to confirm it's classification and a suitable remedial process put in place to minimise the impacts on the environment / operatives / public.

2.11. Accident Plan

An accident plan has been created for the site specific risks associated with Former Chanson Foods Enabling Works, see Figure 4 for reference.

It relates to events or accidents that could put the site workers, surrounding environment and public at risk to flooding, pollution or harm. The plan addresses the risks involved, the likelihood and the prevention measures to limit the severity of each item on site.

This should be used in unison with the Site Inventory (see Appendix 1 – FRP) to maintain a good understanding of all the materials / plant / chemicals being stored on site.

### 2.12. Record Keeping

All works taking place on site will require permissions, which the Principal Contractor will keep records of throughout the operations, namely:

- Permits issued to site, including:
  - Permit to excavate
  - Permit to work

All activities working with 16m of the River Taw, namely:

- RAMS for the FRAP works
- Safe Operating Procedures
- Staff competency records
- Weather and forecast weather
- Material tracking, including:
  - Chemical analysis
  - Geotechnical analysis

All works are subject to dynamic review, and management of change is crucial to safe working. Any updates must be:

- Carefully designed
- Communicated
- Agreed
- Implemented
- Reviewed
- Reported

### 2.13. Waste Assessment and Review

**WMP for the project may alter due to unforeseen circumstances.**

The materials being removed and the possible environmental impact during their removal have been evaluated in the Site Waste Management Plan (see Appendix 3). The sub-terranean activities within the FRAP area are likely to generate hard core materials (brick, concrete and stone) which are suitable for recycling. At the time of writing the scope does not include the crushing of hardcore materials so these will be removed to a licensed facility for processing.

If, during operations, unexpected visual / olfactory contamination is encountered the below protocol will be employed:

- Materials to be assessed by a suitably qualified and competent person
- Materials will be stockpiled in positions on site away from the identified FRAP area to avoid the risk of cross contamination on top of polythene sheeting
- Where necessary chemical analysis of the materials will be taken to allow the material to go to the correct facility for disposal / treatment.
- Collections of materials being removed from site to be as frequent as possible to reduce the time the material is within the flood risk area on site
- Where practical to do so these materials will be separated into their individual waste streams then transported to their respective waste facility for further processing / recycling.
- This process reduces waste to landfill and ensures where reasonably practicable to do so materials are recycled and reused.
- A detailed record of waste away from site will be held in the site office. This will state where the individual waste streams have been taken to.
- At the completion of the project a full waste management pack will be completed.
- Care will be taken to protect the environment during the works, dust monitoring, dust suppression and noise monitoring will be carried out.
- Drains and water courses where applicable will be protected with 'witches' hat' type drain catchment system.
- Oil spills will be cleaned up immediately and reported through site documentation process.

- Machinery used will be well maintained to minimise fuel consumption, fumes and potential leaks.

The below waste hierarchy will be adhered to throughout the works.

## The Waste Hierarchy

Preferred Environmental Option



Least preferred Environmental Option

### 2.14. Areas to protect

	<b>Environment</b>	<ul style="list-style-type: none"> <li>• Measures must always be taken to protect the environment</li> <li>• The Feeder Canal is a major and vulnerable receptor and must be protected throughout the enabling phase through the measures described in Section 3</li> <li>• Items such as COSHH must be stored carefully and banded to 110%</li> <li>• Vigilance on spill response is high priority, with sufficient materials in spill kits to manage &gt;100% of stored fuels on sites.</li> <li>• The Feeder Canal is a conservation area and must be treated with care</li> </ul>
	<b>Foot paths</b>	<ul style="list-style-type: none"> <li>• The pavement on the west of Avon Street must be protected and remain open</li> <li>• Users of the pavement must be protected through the use of banksmen and signage</li> </ul>
	<b>Roads</b>	<ul style="list-style-type: none"> <li>• Roads to be protected throughout project</li> </ul>
	<b>Public</b>	<ul style="list-style-type: none"> <li>• Public must always be protected</li> <li>• Actions that involve public interface are to be properly managed and controlled</li> <li>• Any activities that could release emissions harmful to the public to be properly controlled and managed throughout</li> <li>• Signage to be erected to inform the public of the risks on site</li> <li>• Site must be made secure with fencing and locks</li> </ul>
	<b>Property</b>	<ul style="list-style-type: none"> <li>• Protection of the neighbouring property to the south must be considered</li> <li>• A BAPA agreement must be in place to work proximally to the network rail property to the north</li> </ul>
	<b>Services</b>	<ul style="list-style-type: none"> <li>• The building will be disconnected from live current prior to works commencing</li> <li>• Isolations to be carried out by licensed engineer and signed off</li> <li>• Flood Wall to the west is to be protected throughout the project</li> </ul>

### 2.15. Operative competence

- All operatives and visitors to site must hold CSCS certification.
- All operatives working on site will have relevant training and / or experience.
- All operatives using mobile plant hold the relevant CPCS operator certification, which will be checked prior to operating the plant.

Below are some of the basic requirements (This list is not exhaustive)

- Supervision – CCDO Gold Card, SMSTS, SSSTS
- Labour – CCDO Skilled Labourers or equivalent CSCS
- Demo Plant – CPCS Plant specific



- MEWP – IPAF – Labourers
- All operatives to have fitness to work certificates.
- All plant operatives to have Critical Work medical.
- First Aid / Mental Health First Aid – Demolition Supervisors.
- Manual Handling – All persons
- Working at Height – All persons
- PASMA – Demolition Site Supervisors / Labourer
- NNLW CAT B – Persons working with non-notifiable asbestos materials.
- Asbestos awareness – All persons (this is covered by NNLW CAT B also)
- Traffic marshal.

- Training records are stored on Demolition Site Supervisor IPADS and are updated regularly.
- Training meetings are held regularly to ensure training is kept up to date.
- Sub - contractors who visit site to carry out works will have training requirements checked prior to commencing works to ensure training is adequate for the tasks being undertaken.





## 3.0 Environmental information

3.1. Environmental Management	
	<p>The site is in an environmentally susceptible location, in Zone 3 Flood Risk Plan (see Figure 3), as well as identified as being a hunting ground for bats and noted protected species of flora and fauna.</p> <p>A Flood Risk Assessment and Drainage Strategy document has been Prepared for the site by Tobin Consulting Engineers Environmental (see Document 10572-TCE-S-TN-0003) outlining the potential for flooding in the area. Some areas of the Demolition Area is within 16m of the River Taw Flood Defences, and therefore require Flood Risk Activity Permit (FRAP). No works are to take place within this area without consent and agreement of method from the Environment Agency.</p> <p>Where working within 16m of the River Taw WGL will operate under a Flood Risk Activity Permit issued by the Environment Agency. These works will have higher levels of controls to mitigate the potential for contaminate / environmental emission release.</p> <p>Throughout works mitigation protocols will be in place to protect the environment. Firstly base line controls will be taken at agreed locations and environmental samples taken, these will be repeated through-out the works at an agreed frequency to ensure no environmental impact is being caused through the works.</p> <p>All works are carried out to the Wring Group Environmental Policy Statement – ISO013 (2022 – 2023). A specific Environmental Risk Assessment is shown in Section 6.1.</p>
3.2. Dust	
	<ul style="list-style-type: none"> <li>• The excavation and backfilling of the area is inherently prone to dust creation, particularly through the drier moths in summer.</li> <li>• Dust can create hazards both to those working in close proximity and those who live / work nearby.</li> <li>• During operations one of the key concerns is dust with every emphasis put on minimizing dust emissions.</li> <li>• To ensure good dust emission release all material stockpiles, haul roads and tipping activities must be, where reasonably practicable, regularly wetted and misting / atomising units used to assist in the restriction of dust release to the atmosphere / environment.</li> <li>• To assist with the wetting the Wring Group maintains a fleet of specialist plant, machinery, and equipment. <b>Refer to section 6.8 for further information on the equipment and usage below.</b></li> <li>• <b>Motofog</b> units are used to give good wetting directly at the point of demolition, this minimizes water run off whilst still ensuring dust is contained at the point of emission.</li> <li>• <b>Diesel Powered Pressure Washers</b> are used as an effective tool to carry out sporadic short burst dust suppression where a Motofog is not required.</li> <li>• This equipment can be used in two ways:             <ul style="list-style-type: none"> <li>• Standard use. This requires an operator to stand in a safe location following the principals of safe working zone and manually directing the mist jet towards a specific working area. This method is generally used when working for short duration on materials which don't produce large amounts of dust. <b>N.B – A full assessment of this practice has been carried out with regards HAVs; the data reviewed from HSE has proven use of a pressure washer lance with a single jet nozzle will not expose the user to elevated levels of vibration. A further calculation is required if a rotary or multi jet system is used.</b></li> <li>• Remote use. This involves a discussion with the demolition rig operator as to the location of the work, the lance is then positioned on a framework or using site gained material to hold the lance in place to direct the mist jet towards this area, the trigger is then held in place meaning an operative does not need to hold the lance.</li> </ul> </li> <li>• <b>Hoses</b> will only be used where absolutely necessary and where high volumes of dust are present and stockpiles are prone to dust lift by the wind, this is due to the amount of water that is used and at times significant run off which must be controlled and contained.</li> </ul>

	<ul style="list-style-type: none"> <li>• Wring Group are responsible for ensuring that sufficient dust control measures are implemented to minimise the impact of the works on neighbouring residential properties and businesses.</li> <li>• The Demolition Site Supervisor is responsible for ensuring that the emissions of dust are adequately controlled, equipment is in place for the control of dust and the recording of any key events which may give rise to a complaint / logging any complaints received.</li> </ul>
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**3.3. Noise**

	<ul style="list-style-type: none"> <li>• Although noise levels emitted from site will be higher than those normally experienced by neighbours, they will remain relatively low during the main demolition process due to the building being primarily reduced using hydraulic attachments where possible.                  Throughout our works we comply fully with HSE control of noise regulations and local environmental health requirements.</li> <li>• We carry out frequent noise monitoring on site with our own decibel meter readers to ensure noise levels do not exceed the relevant levels depending on the operation, time, and location.</li> <li>• These readings are recorded on site and reviewed during site visits by management.</li> <li>• The methods set in our RAMS have been compiled using ‘best practical means’ to ensure nuisance noise levels do not exceed required levels. Daily monitoring from the Demolition Site Supervisor may suggest a change in sequence or process depending on the weather, structural state (rebound of noise) and location of the works.</li> <li>• Background monitoring, as a baseline, will be carried out before structural demolition works commence.</li> <li>• Noise will be monitored frequently as stated above, by Demolition Site Supervisor who will utilise the Decibel Meter Reader on their Ipad. This app gives a very good representation of the noise level and has been tested against a calibrated decibel reader to ensure accuracy.</li> <li>• A photograph will be taken of the test area and the outcome will be as follows.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <ul style="list-style-type: none"> <li>• When carrying out manual works the Demolition Site Supervisor will monitor noise levels and where required implement hearing protection zones.</li> <li>• These zones will be communicated to all persons who may be affected by the elevated noise levels in the area.</li> <li>• Works will be carried out in such a way as to reduce exposure to noise as far as is reasonably practicable.</li> <li>• Where manual work is being carried out follow requirements set down in SOP for the specific piece of equipment being used.</li> <li>• Checks of PPE will be carried out prior to works commencing to ensure it is suitable for the application.</li> </ul>
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**3.4. Vibration**

	<ul style="list-style-type: none"> <li>• Vibration will be monitored as required to ensure the works to not have any adverse effect on surrounding buildings or features that are to remain.</li> </ul>
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	<ul style="list-style-type: none"> <li>• There will inevitable be some vibration caused by the mechanical plant during the demolition processes, however this will be minimal due to the methods stated in this document.</li> <li>• Vibration monitoring will be utilised on the Flood Wall to ensure it is not over-exposed leading to damage</li> <li>• As part of the task briefing between the Demolition Site Supervisor, the SOP relevant to the task will be reviewed and accepted.</li> </ul> <p style="color: red;">Any breaches of trigger time must be reported to SHEQ Co-ordinator and higher management immediately.</p> <ul style="list-style-type: none"> <li>• Whole body vibration can occur when operating plant on hard concrete surfaces, this will be alleviated by where possible and safe to do so, creating a hardcore pad between the slab and machine.</li> <li>• Equipment maintenance and frequently renewed equipment will also assist in reducing vibration transference.</li> </ul>
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3.5. Drainage on site

	<ul style="list-style-type: none"> <li>• Removal of sub-terranean structures will impact drainage below ground</li> <li>• The fall of the site naturally drops toward the River Taw</li> <li>• Headwalls are to be bunged and retained prior to any works taking place</li> <li>• Drainage is to be removed</li> <li>• If surface pooling is experienced due to rain sufficient containment protocols must be in place to restrict direct access to the river receptor</li> <li>• Care must be taken to ensure any potential harmful liquids are not allowed to drain to the river</li> </ul>
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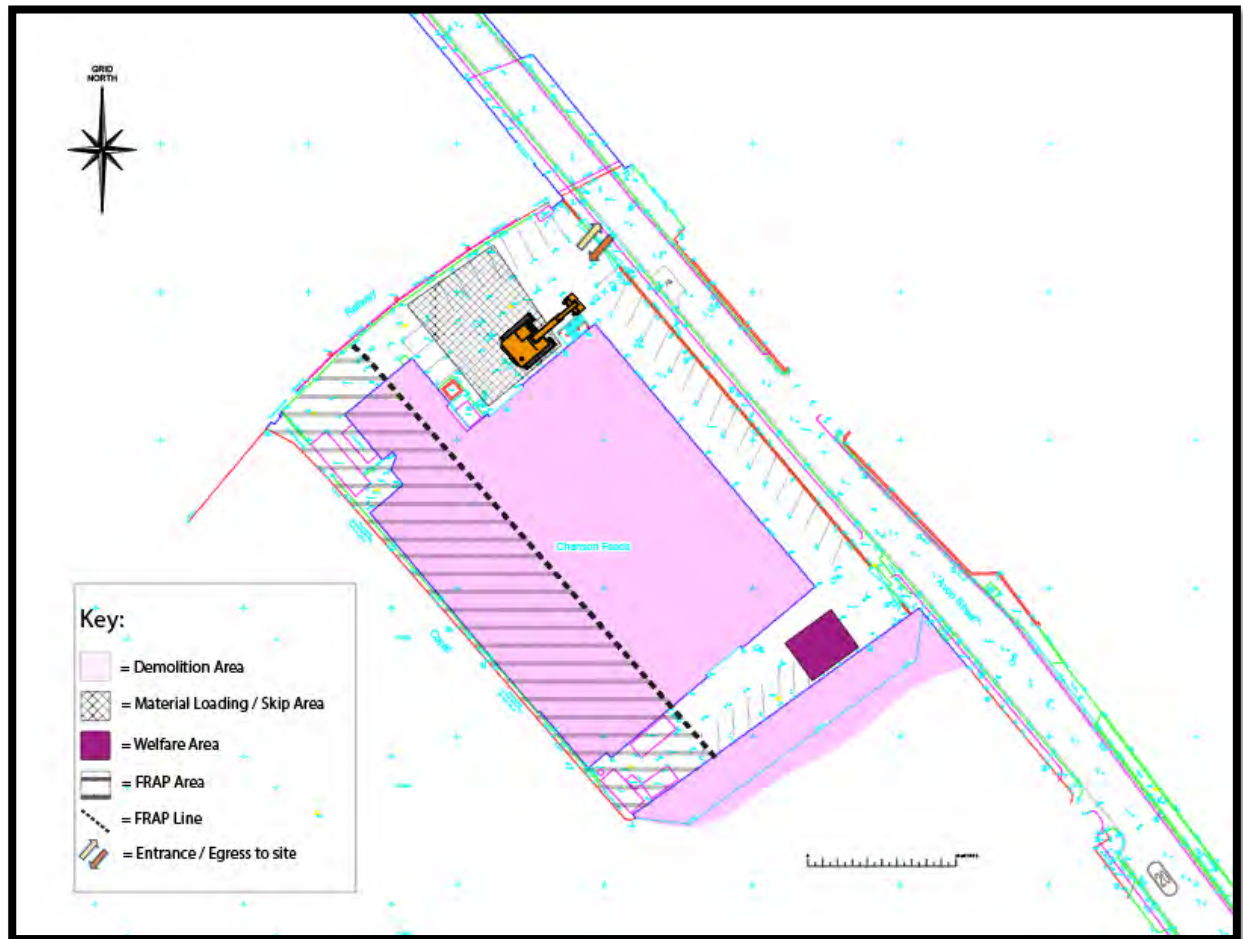
3.6. Ecology and Arborology

	<p>There are not trees on site.</p> <p>There are no ecological restrictions applicable to the site associated with the FRAP activities.</p>
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## 4. Site Specific Methodology

4.1. Sequence of FRAP Works	
	<ol style="list-style-type: none"> <li>1. Following completion of the demolition of the structure to slab level the FRAP line will be set out and marked</li> <li>2. Install vibration monitoring equipment on Flood Wall</li> <li>3. The hardstanding outside of the FRAP area will be left in situ to enable a hardstanding to stockpile the materials on</li> <li>4. Break out the hardstanding of the FRAP Area in Sections</li> <li>5. Remove foundations and obstructions to 2mbgl</li> <li>6. Re-instate soil and compact</li> <li>7. Work along length of Flood Wall in 5m sections until all obstructions removed and soils reinstated and compacted</li> <li>8. Remove materials from site</li> <li>9. Fence of FRAP Area until future enabling works take place including Pile Mat installation and site raise (detail to be confirmed)</li> </ol>
4.2. Site Set Up and Security Arrangements	
	<p>In conjunction with The Construction and Management (2015) Regulations, all site-based welfare and toiletry facilities will be set up prior to the project commencing, for use by all site operatives &amp; visitors as necessary, this will include seating, clean water hot &amp; cold, a means to heat food, washing facilities and a drying room. If these are not in place works will not commence.</p> <ul style="list-style-type: none"> <li>• Area will be fenced off and allocated parking area created and fenced off from the public.</li> <li>• A safe area will be created directly outside the welfare areas with pedestrian fencing to ensure when persons exit the welfare there is potential for impact or collision with vehicles.</li> <li>• Any fencing removed as part of the scope of works will be replaced with Heras panels at the minimum.</li> <li>• Welfare will be established in agreed location (see Figure 1)</li> <li>• A materials 'Dry Storage Area' is to be established for items such as COSHH, equipment and plant which must be accessible at all times</li> <li>• Strict restrictions on access and egress into the FRAP area will be maintained and only essential plant / operators / personnel will have access</li> </ul> <p><u>Smoking/Vaping</u></p> <ul style="list-style-type: none"> <li>• Separate smoking area to be set up external to the welfare area.</li> </ul>
4.3. Emergency Set Up	
	<ul style="list-style-type: none"> <li>• Site set up is to be in accordance with the Flood Response Plan (Appendix 1)</li> <li>• Prior to works commencing the following items must be on site and ready for use:                         <ul style="list-style-type: none"> <li>- Life Bouy Rings, in accessible locations along the river edge</li> <li>- Fencing in position</li> <li>- Dry storage area</li> <li>- Registering to the EA flood warning system</li> <li>- Appointing a Flood Risk Site Manager</li> </ul> </li> </ul>
4.4. Enabling Works	
	<p>All main enabling works for the greater project will be complete and can be observed in document: 14 180.CPP.RAMS – Construction and Environment Management Plan and the Risk Assessment and Method Statement for the wider site.</p> <p>This document specifically refers to the methodology for works within the FRAP area, see below (see Figure 1):</p>





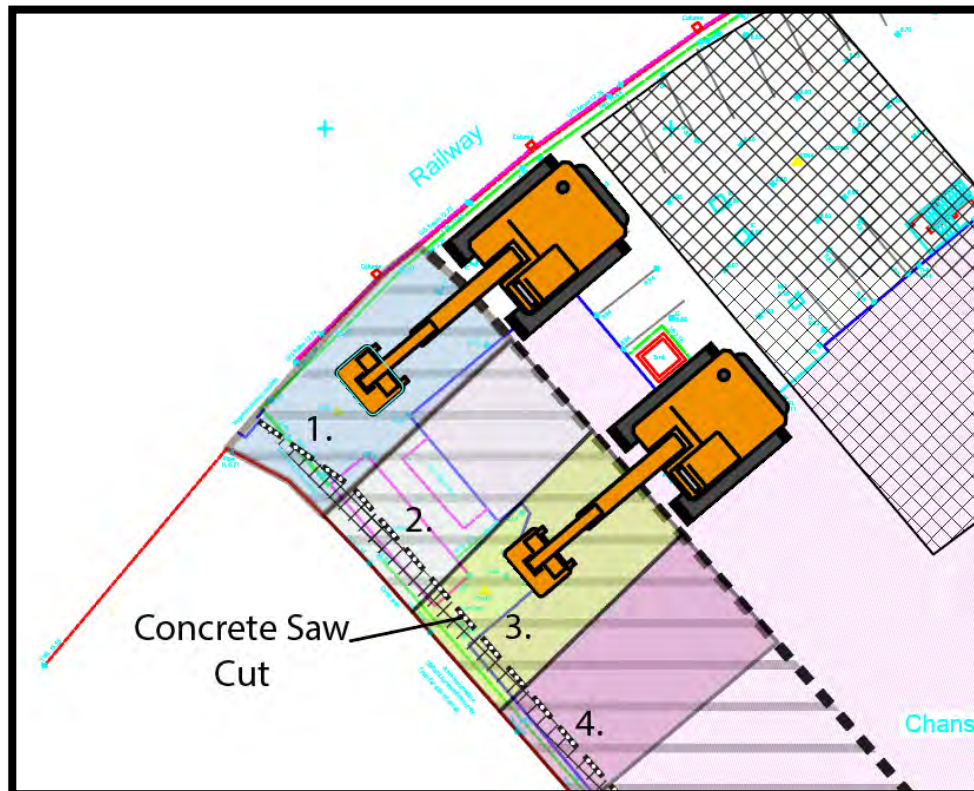
Initial enabling works on site include:

- Completion of demolition to slab level
- Ensure all paper work is signed on to and understood
- Ensure fencing erected along Feeder Canal with debris netting fixed
- Ensure vibration monitors are in place on Flood Wall
- Setting out of the FRAP area

#### 4.5. Excavations

##### Slab Break Out

- The entire ground slab will be left clean and tidy following demolition
- The FRAP line will be marked out using GPS to ensure it is correct over the slab
- Heras panels with debris netting will be lined along the Flood Wall and weighted down for additional stability
- A saw cut will be made in the concrete 1m from the flood wall to separate the slab from the retained feature the length of the flood wall to separate the wall from the slab and reduce vibration transfer
- The excavator will sit on the east side of the FRAP line and work facing the river to ensure the body of the rig is not within the FRAP area:



- Break out the slab at the surface using a mechanical breaker attachment, using the debris netting to capture any fragments that might escape the work area
- The entire FRAP area is to be broken initially to reduce the risk of hydraulic fluid release during changing attachments
- Following break out of the hardstanding the excavator will work in 5m sections as per the diagram above, removing the hard standing and then below ground obstructions to two meters, only progressing to the next on completion the previous
- The soils will be riddled out and left in situ while the hardcore transferred to the materials processing area behind ready for removals
- The riddled soils will be visually assessed by a qualified person for any visual contamination
- If suitable they will be reinstated in layers and compacted using a remote control roller
- This process will be repeated the length of the flood wall until all obstructions within the FRAP area are removed

Site Raise / Pile Mat





At the time of writing the final design levels for the development have not been confirmed, it is assumed the site will require a raise to the base of pile mat and then a pile mat installed ready for piling, the sequence for which should be as below:





- Import of suitable clean material, with certificates to demonstrate its suitability
- Demolition rig to spread the imported material in layers and compacting these with a remote control roller
- Installation of specified terram (geotextile 1,000g or similar)
- Import of suitable pile mat materials as per the design and spreading these in geotechnically defined layers
- Compacting using a roller
- CBR tests in allocated positions

De-Mobilising from FRAP Area

- All materials and plant to be removed from the FRAP area upon completion
- The area is to be fenced off and signs erected to warn of the risks
- Sign off of completed works to be agreed with the client

## 5. Plant, Materials and PPE

5.1. Plant, Materials and PPE Equipment	
<ul style="list-style-type: none"> <li>The Wring Group will utilise a wide range of plant and equipment during the demolition process these may include but not be limited to (all relevant SOPs are attached as Appendix 4):</li> </ul>	
<p><b>Primary Operations:</b></p>	<p style="color: red;">Read in conjunction with SOP High Reach Demolition 001 and SOP Excavators and Demo Rigs 010</p> <ul style="list-style-type: none"> <li>360° demolition rig for slab break out and material loading</li> <li>Manual techniques for carrying out soft stripping and structural separation works.</li> <li>The primary demolition rig used for this project will be a 21 tonne Hyundai / Kobelco</li> <li>A second smaller machine may be used specifically for materials loading into skips</li> </ul> <div style="display: flex; justify-content: space-around;">   </div>
<p><b>Materials Handling:</b></p>	<p style="color: red;">Read in conjunction with SOP Rear Tipping Articulated Dumper 034</p> <ul style="list-style-type: none"> <li>Forward Tipping Dump Truck</li> <li>Potential to relocate hard core materials to material transfer areas if required</li> <li>All personnel operating to be suitably qualified</li> <li>Do not refuel in the FRAP area</li> </ul> <div style="text-align: center;">  </div>
<p><b>Material Compaction:</b></p>	<p style="color: red;">Read in conjunction with SOP Articulated Roller 033</p> <ul style="list-style-type: none"> <li>Remote Control Roller – Compacting materials within the FRAP area to ensure geotechnical criteria met</li> <li>Transporting fill materials back to the works area</li> <li>All personnel operating to be suitably qualified</li> <li>Do not refuel in the FRAP area</li> </ul> <div style="text-align: center;">  </div>

<p><b>Demolition Rig Attachments:</b></p>	 <p><b>Digging / Bulking Bucket</b></p> <ul style="list-style-type: none"> <li>Fitted to the plant via direct pins or tested quick hitch system.</li> <li>Various sizes and construction, light weight – heavy weight depending on required task.</li> <li>For digging. Soil / hardcore material loading processing.</li> </ul> <p>Excessive leverage with this attachment can break teeth shanks and rupture welded seams.</p>  <p><b>Grading Bucket</b></p> <ul style="list-style-type: none"> <li>Fitted to the plant via direct pins or tested quick hitch system.</li> <li>Various sizes depending on base machine.</li> <li>For grading over ground, road construction, cleaning of slabs / roads, removing carpets floor coverings from concrete / screed.</li> </ul> <p>Caution with this attachment, catching a fixed object such as a stanchion pad or bolt can twist the bucket and cause a high velocity projected item such as a bolt head.</p>  <p><b>Riddle / Griddle Bucket</b></p> <ul style="list-style-type: none"> <li>Fitted to the plant via direct pins or tested quick hitch system.</li> <li>Size depending on base machine size.</li> <li>For removing smaller materials / material cleaning / processing.</li> </ul> <p>Excessive leverage with this attachment can break teeth shanks and rupture welded seams.</p>  <p><b>Hydraulic Hammer</b></p> <ul style="list-style-type: none"> <li>Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.</li> <li>For breaking concrete and hard materials.</li> </ul> <p>Caution with this attachment as it can produce high velocity projected materials and can produce high volume noise and vibration. Monitor. Refer to NFDC Exclusion Zones attached.</p> <p>Levering with this attachment can break the point easily.</p>
<p><b>Dust Management:</b></p>	<p><b>Read in conjunction with SOP Pressure Washer</b></p> <ul style="list-style-type: none"> <li>Moto fog/dust boss unit to be used where dust levels have been assessed as elevating by the Demolition Site Supervisor. Please note, the unit is not to be used if dust is not present to conserve water usage and fuel usage.</li> <li>Spray Bottles to be used for small soft stripping works during manual activities to reduce any dust potential.</li> <li>Pressure washers will be used for sporadic dust suppression during demolition activities as it uses less water than a motofog. The unit can be rigged to spray without manually being held. This is the preferred method to reduce exposure and remove operative from a demolition zone. If used in a demolition zone operatives must stand in an agreed safe location discussed with the Demolition Supervisor and Demolition rig operator</li> <li>Hoses will only be used as a last resort or during a fire watch scenario due to the high-water usage and run off.</li> </ul>



Dust Extraction

- The dust may also be controlled by use of an extraction unit or clean air circulation fan.
- The requirement for this piece of equipment will be at the discretion of the Demolition Site Supervisor on this particular project.
- An assessment will be made with all other control measures in place such as water mist sprays and low impact techniques as to whether dust extraction is needed.
- **If dust extraction is required ensure the exhaust location does not pose hazard to others.**

**Plant and Equipment Inspection Regime**

- The plant and equipment on this site will be inspected following a stringent set of requirements.
- Plant. (Excavators, Demolition Rigs, MEWPS, Dumpers etc)
- Plant is to be inspected every six or twelve months under statutory regulation depending on the exact piece of plant and whether it is a piece of lifting equipment.
- Plant will be inspected on delivery to site by the Demolition Site Supervisor or the certificated and trained operator of that piece of plant.
- A record of this check / inspection will be kept in the inspection and defect log held on site.
- The Demolition Site Supervisor will ensure all test and check certification is in place and in date for each piece of equipment delivered to site.
- Any defects at this stage will be reported to Head Office.
- Significant defect will result in the equipment being taken out of use until repaired.
- The operator of the plant will carry out visual checks before each use and complete the daily defect sheet / book on site.
- Complying with PUWER and LOLER requirements the supervisor will carry out a weekly check on plant on site.
- Equipment. (Tools, towers, fencing, welfare, chains/shackles)
- Equipment such as aluminium scaffold towers / podiums etc will be checked by PASMA or IPAF trained persons (generally the Demolition Site Supervisor/Operative) before first use, when disassembled and re-erected and not exceeding any seven-day period. This will be recorded using a SCAFF-TAG system.
- Other work tools and equipment will be inspected weekly under PUWER/LOLER depending on the tool/equipment and a record kept within the site documentation.
- Fencing is to be checked at the start and end of every shift and in some cases depending on the site arrangements more frequently.

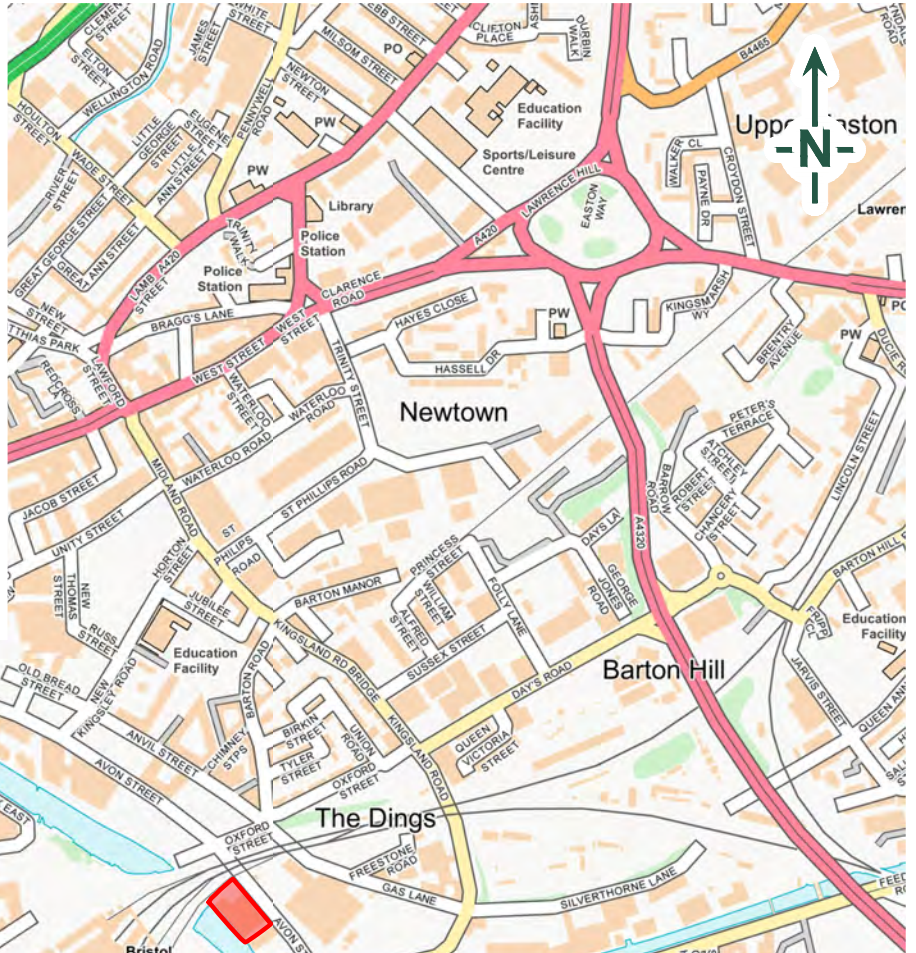


PPE / RPE					
SAFETY EQUIPMENT PPE / RPE					
Mandatory X			Task Specific X		
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves (CUT 5)		Safety harness	X	Fall arrest lanyard	X
Gloves (CUT 3)	X	Safety wellingtons		Arm protectors	
Fall restraint lanyard	X	Flame Retardant Overalls		Overalls (disposable)	
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders		Shaded cutting goggles		Life Jacket	



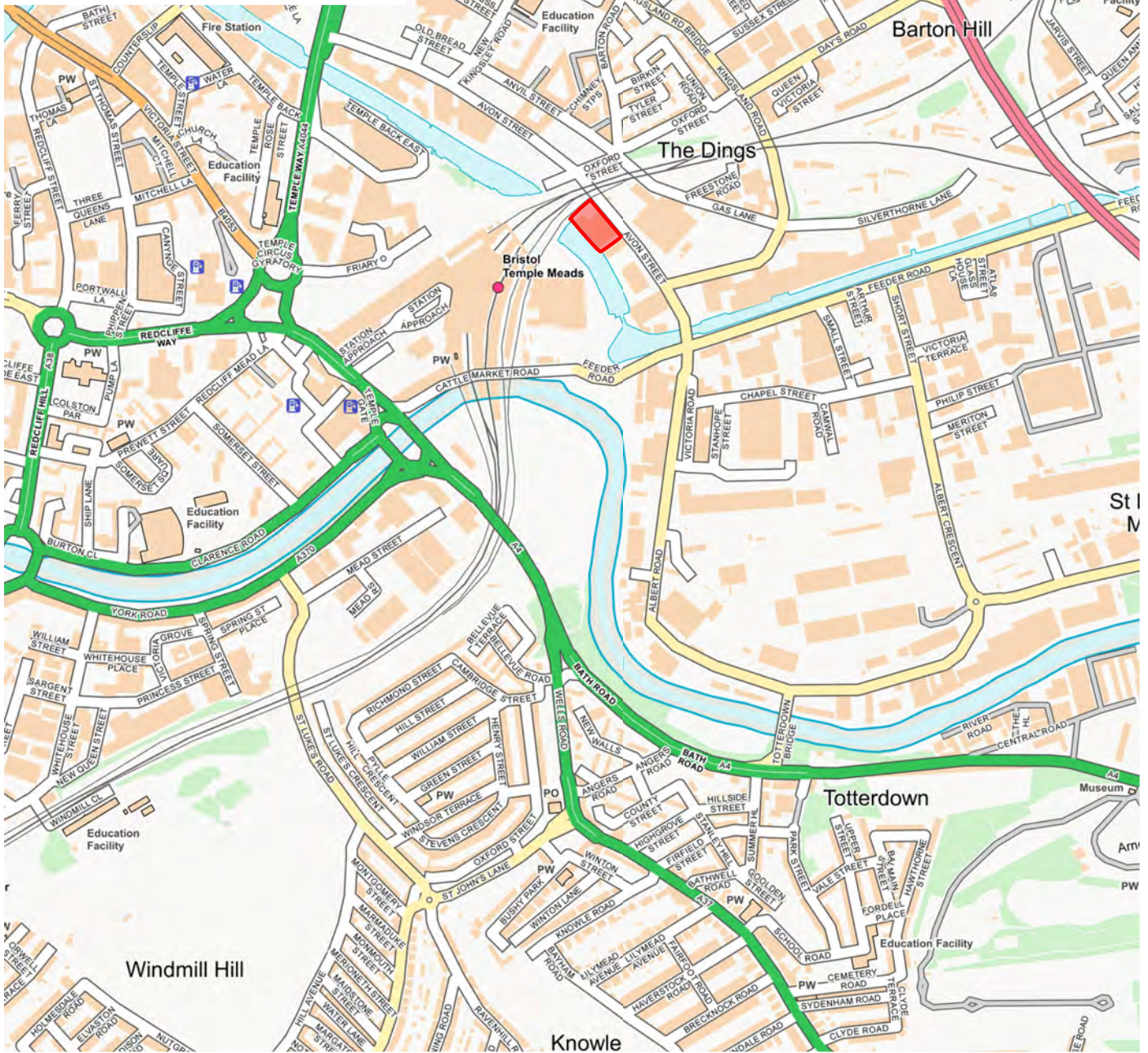
Figure 1 - Site Location Plan





**LEGEND**

Site Boundary



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Figure 2 - Site Lay Out





Figure 3 – Flood Risk Map



Extent of flooding from rivers or the sea

High
  Medium
  Low
  Very low
  Location you selected

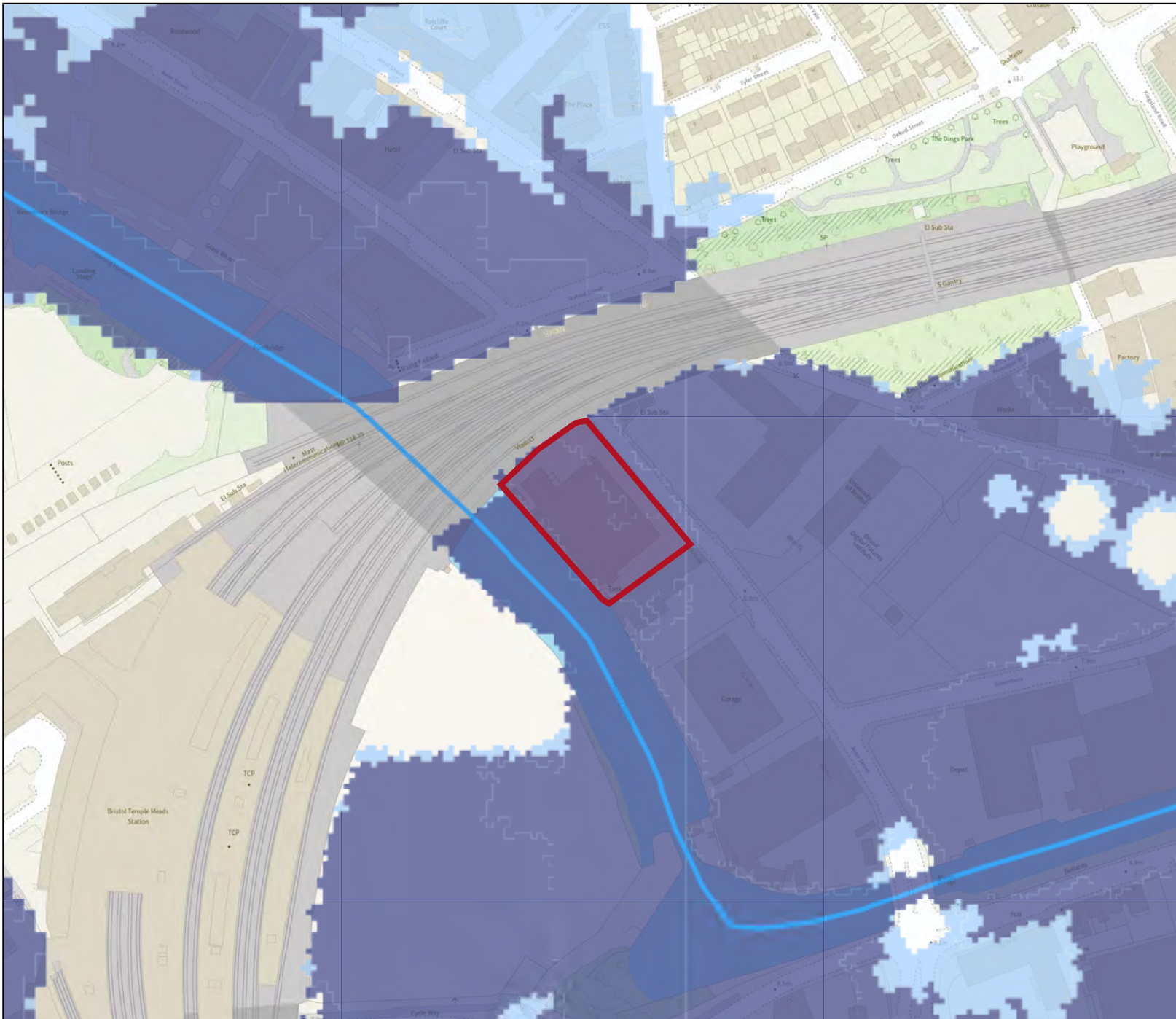
## Flood map for planning

Your reference  
**<Unspecified>**

Location (easting/northing)  
**359959/172550**

Scale  
**1:2500**

Created  
**15 Nov 2023 17:09**



-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

0 20 40 60m



Figure 4 – Accident Response Plan



## Chanson Foods, Avon Street

Event	Hazards Associated	What's at Risk?	Steps to Action
<b>Fue Leak</b>	<ul style="list-style-type: none"> <li>- Fuel migration down slope to the Feeder Canal</li> <li>- Fuel entering ground water</li> <li>- Contamination below ground</li> </ul>	<ul style="list-style-type: none"> <li>- Contamination of water body</li> <li>- Impacting the environment, including flora and fauna</li> <li>- Contamination of sub-soils</li> </ul>	<ul style="list-style-type: none"> <li>- Alert the site supervisor of the event</li> <li>- Control the spill using spill kits</li> <li>- Begin clean</li> <li>- Create bund down stream of spill</li> <li>- Repair leak / plant that has caused the spill</li> <li>- Ensure all residual materials are removed from site following contamination</li> </ul>
<b>Person falling into river</b>	<ul style="list-style-type: none"> <li>- Drowning</li> <li>- Hypothermia</li> </ul>	<ul style="list-style-type: none"> <li>- Operative</li> <li>- Environment</li> <li>- Public</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure fencing is erected before starting works</li> <li>- Ensure safety measures including lifejackets, life bouys and man-safe anchors in position</li> <li>- If operative falls in throw the life bouy</li> <li>- Attach to winch and secure the line</li> <li>- Winch back in</li> <li>- Call emergency number</li> <li>- Provide warm dry clothing and heated room</li> <li>- Await arrival of paramedics</li> </ul>
<b>Fire</b>	<ul style="list-style-type: none"> <li>- Fire</li> </ul>	<ul style="list-style-type: none"> <li>- Plant</li> <li>- Site personnel</li> <li>- Environment</li> </ul>	<ul style="list-style-type: none"> <li>- Alert the site of the risk</li> <li>- If trained to do so and capable with the equipment on site try to tackle the fire</li> <li>- Keep fuels in fire retardant bowser</li> <li>- Contact emergency services</li> <li>- Check inventory</li> </ul>
<b>Flood Event</b>	<ul style="list-style-type: none"> <li>- Flooding</li> </ul>	<ul style="list-style-type: none"> <li>- Plant</li> <li>- Materials</li> <li>- Personnel</li> </ul>	<ul style="list-style-type: none"> <li>- Follow Flood Response Plan</li> </ul>



## 6.0. Risk Assessments

### 6.1 – Environmental Impact Assessment

**Site specific risk assessments must be read in conjunction with Wring Group Ltd Standard Operating Procedure (S.O.P) Risk assessments**

Understanding this risk assessment : The initial hazard / risk has been classified as a High (H) Medium (M) or Low(L) in the risk rating column. The measures to control the hazard / risks should lower the hazard / risk rating to an acceptable level. If measure to lower the hazard and risk are detailed in this document they must be followed. If the controls are not sufficient or the hazard / risk changes you must contact your supervisor.

Using the following tables, the site identified hazards are calculated and rated on their hazard / effect and probability rating. The final tables show actions that must be taken following the identification of the residual risk rating.

#### Severity guide

		PROBABILITY		
		L	M	H
HAZARD EFFECT	L	L	M	M
	M	M	M	H
	H	M	H	H

Hazard / Effect Rating	Rating
H	Fatality / major injury, significant environmental incident / damage
M	Absence from work / significant pollution
L	First aid, no lost time, no significant pollution

Probability	Rating
H	Common / regular occurrence likely to occur.
M	Occasional occurrence
L	Unlikely occurrence

Residual Risk Rating	Rating
H	Discontinue work, review operations
M	Work may continue under immediate supervision – further controls to be considered.
L	Tolerable risk.

Risk Assessment carried out by : Tom Child

Date: 16/11/2023

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
COSHH Items Storage / Refuelling	<ul style="list-style-type: none"> <li>Leaks from the storage tanks / containers</li> <li>Spillage while re-fuelling</li> <li>Spillage while filling fuel tank</li> </ul>	<ul style="list-style-type: none"> <li>Environmental receptors including:                             <ul style="list-style-type: none"> <li>River Taw</li> <li>Local fauna / flora</li> <li>Ground Water</li> </ul> </li> </ul>	H	<ul style="list-style-type: none"> <li>Ensure all fuel bowsers are maintained and functional</li> <li>All bowsers to be double skinned and banded to 110% of the fuel capacity</li> <li>Spill kits suitable for the volume of fuel stored on site to treated in an emergency</li> <li>Bowser to be kept in the Dry Storage Area out of the flood risk area</li> <li>All COSHH items to be kept in dry storage area</li> <li>Keep a n inventory of materials and volumes on site and update regularly</li> </ul>	L
Fuel / Oil leak from machinery	<ul style="list-style-type: none"> <li>Leaking from machinery in event of break down</li> <li>Hydraulic fluid leaking</li> <li>Hose disconnection during demolition</li> </ul>	<ul style="list-style-type: none"> <li>Environmental receptors including:                             <ul style="list-style-type: none"> <li>River Taw</li> <li>Local fauna / flora</li> <li>Ground Water</li> </ul> </li> </ul>	H	<ul style="list-style-type: none"> <li>Keep all plant and equipment maintained</li> <li>Keep records of inspections and plant services</li> <li>Daily inspections of plant before shifts</li> <li>Spill kits to be kept close to act quickly if required</li> </ul>	L
Breaking out slab by River Taw	<ul style="list-style-type: none"> <li>Debris being released into the canal</li> <li>Slip of structures into the canal</li> <li>Tools being dropped into the canal</li> </ul>	<ul style="list-style-type: none"> <li>The canal will be detrimentally impacted by concrete entering the ecosystem</li> <li>Wildlife will be impacted</li> <li>pH levels of concrete unsafe for natural water bodies</li> </ul>	H	<ul style="list-style-type: none"> <li>Ensure all operatives and tools are connected to secure anchors fastened to the concrete by man-safe system and lanyards</li> <li>Heras panels to be positioned along water edge with debris netting to catch stray fragments</li> <li>Work facing away from the river where ever possible to manage debris spread direction</li> </ul>	L
Dust Emissions from enabling activities	<ul style="list-style-type: none"> <li>Dust release from breaking concrete</li> <li>Dust release from crushing activities</li> </ul>	<ul style="list-style-type: none"> <li>Public</li> <li>Environmental receptors including:                             <ul style="list-style-type: none"> <li>River Taw</li> <li>Local fauna / flora</li> </ul> </li> </ul>	H	<ul style="list-style-type: none"> <li>Water to be from clean source</li> <li>Ensure ample dust suppression is provided;                             <ul style="list-style-type: none"> <li>Pressure washers</li> <li>Mist canons</li> <li>Hose</li> </ul> </li> </ul>	L
Flood Risk	<ul style="list-style-type: none"> <li>Flood event occurring during enabling works</li> </ul>	<ul style="list-style-type: none"> <li>Operatives / visitors</li> <li>Fedder Canal through water egressing to plant storage / material storage areas</li> </ul>	H	<ul style="list-style-type: none"> <li>Work in line to the Flood Response Plan</li> <li>Keep materials away from the Flood Risk Activity Permit area (16m)</li> </ul>	L
Fire	<ul style="list-style-type: none"> <li>Electrical / Mechanical fire</li> </ul>	<ul style="list-style-type: none"> <li>Operators</li> <li>Personnel</li> <li>Visitors</li> <li>Flora / Fauna</li> </ul>	M	<ul style="list-style-type: none"> <li>All electrical isolations to be carried out by certified professional and signed off</li> <li>Fire extinguishers to be places at regular locations and the work area</li> <li>Site specific safety plan to be explained in induction</li> <li>Protect live below ground cables at all times</li> </ul>	L



**Site specific risk assessments must be read in conjunction with Wring Group Ltd Standard Operating Procedure (S.O.P) Risk assessments**

Understanding this risk assessment : The initial hazard / risk has been classified as a High (H) Medium (M) or Low(L) in the risk rating column. The measures to control the hazard / risks should lower the hazard / risk rating to an acceptable level. If measure to lower the hazard and risk are detailed in this document they must be followed. If the controls are not sufficient or the hazard / risk changes you must contact your supervisor.

Using the following tables, the site identified hazards are calculated and rated on their hazard / effect and probability rating. The final tables show actions that must be taken following the identification of the residual risk rating.

Severity guide

HAZARD EFFECT	PROBABILITY			
		L	M	H
	L	L	M	M
	M	M	M	H
H	M	H	H	

Hazard / Effect Rating	Rating
H	Fatality / major injury, significant environmental incident / damage
M	Absence from work / significant pollution
L	First aid, no lost time, no significant pollution

Probability	Rating
H	Common / regular occurrence likely to occur.
M	Occasional occurrence
L	Unlikely occurrence

Residual Risk Rating	Rating
H	Discontinue work, review operations
M	Work may continue under immediate supervision – further controls to be considered.
L	Tolerable risk.

Risk Assessment carried out by :	Tom Child	Date:	16/11/2023
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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Operatives	<ul style="list-style-type: none"> <li>Falling into the river</li> <li>Slips trips and falls</li> <li>Fall from height</li> </ul>	<ul style="list-style-type: none"> <li>Operatives falling into river</li> <li>Environment through dropped materials / tools</li> </ul>	H	<ul style="list-style-type: none"> <li>Emergency response action plan to be explained at induction</li> <li>Life Rings to be placed along the water edge to throw in case of falling in</li> <li>Sectional work and replacement with protective fencing as the works progress</li> <li>Inventory of all materials on site and check in system to ensure they're accounted for at the close of play</li> <li>Do not refuel any equipment at the water edge</li> <li>Materials to warm and dry operatives in case of fall</li> <li>Winch pully system available on site to pull people / operatives from the water</li> </ul>	L
Tools / Equipment	<ul style="list-style-type: none"> <li>Falling into water body</li> </ul>	<ul style="list-style-type: none"> <li>Environment, fauna and flora</li> </ul>	H	<ul style="list-style-type: none"> <li>All hand held tools to be attached to anchor point / tool tether to stop them falling into the river</li> <li>Power tools to be fastened to an anchor</li> <li>Fuelling to take place away from the river</li> </ul>	L



**Site specific risk assessments must be read in conjunction with Wring Group Ltd Standard Operating Procedure (S.O.P) Risk assessments**

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Using the following tables, the site identified hazards are calculated and rated on their hazard / effect and probability rating. The final tables show actions that must be taken following the identification of the residual risk rating.

Severity guide

		PROBABILITY		
		L	M	H
HAZARD EFFECT	L	L	M	M
	M	M	M	H
	H	M	H	H

Hazard / Effect Rating	Rating
H	Fatality / major injury, significant environmental incident / damage
M	Absence from work / significant pollution
L	First aid, no lost time, no significant pollution

Probability	Rating
H	Common / regular occurrence likely to occur.
M	Occasional occurrence
L	Unlikely occurrence

Residual Risk Rating	Rating
H	Discontinue work, review operations
M	Work may continue under immediate supervision – further controls to be considered.
L	Tolerable risk.

Risk Assessment carried out by :

Tom Child

Date:

09/12/22


Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Security	Trespass by unauthorised persons	Persons entering site without authority especially children. <i>Serious injury / death – coming into contact with hazards on site in live demolition / work areas.</i> Other persons on site. <i>Serious injury from failure of equipment if items to do with safety are tampered with by unauthorised persons</i>	<b>H</b>	<ul style="list-style-type: none"> <li>WGL are responsible for site boundary fencing and site operatives to ensure all fencing is maintained in secure and safe condition.</li> <li>Ensure all access points are kept clear and banksman assigned for movement of site vehicles/deliveries where necessary.</li> <li>Site fencing to be checked at beginning and end of each working day to ensure no unauthorized access possible – check clamps/secure fasteners fencing etc.</li> <li>Erect adequate signage to ensure all persons are warned of the works to include site contact details i.e. ‘activities in progress’, Construction Traffic, Hard Hat and Deep Excavations etc.</li> <li>Gates manned when used but kept closed and secure at all other times.</li> <li>All operatives’ details recorded via Staff and Visitor Register.</li> <li>Un-authorized third parties to be escorted to site office for details and then escorted off site. Repeat infringements to be reported to the police.</li> </ul>	<b>L</b>
Security	Breach of site boundary due to inadequate fencing / signage / locks	Persons entering site without authority especially children. <i>Serious injury / death – coming into contact with hazards on site in live demolition / work areas.</i>	<b>H</b>	<ul style="list-style-type: none"> <li>Before starting work: ensure all fencing is erected by competent persons.</li> <li>Ensure all access points are kept clear and banksman assigned for movement of site vehicles/deliveries of necessary.</li> <li>Safe working: site fencing to be checked at beginning and end of each working day to ensure no unauthorized access possible – check clamps on heras fencing etc. Erect adequate signage to ensure all persons are warned of the works i.e. parent warning signs, construction traffic, hard hat, deep excavations etc.</li> <li>Warning signs of flood risk are required</li> </ul>	<b>L</b>
Welfare	Incorrect use of site-based welfare facilities	All persons entering the welfare unit. <i>Bacterial infections / illness, damage to equipment, burns, scalds</i>	<b>M</b>	<ul style="list-style-type: none"> <li>Suitable site welfare facilities in accordance of HSE regulations are to be provided.</li> <li>No eating/drinking or smoking is allowed on site unless in designated areas.</li> <li>Welfare facilities to be regularly cleaned and inspected. Washing facilities to be well stocked and checked regularly. Toilet facilities to be cleaned at a minimum of weekly intervals. Welfare requirements and the safe/correct use of to be communicated to the workforce during induction.</li> </ul>	<b>L</b>
Site	Failure to use correct PPE/RPE or to use RPE/PPE incorrectly	All persons entering / working on site. <i>Death, serious injury, injury, cuts / abrasions / crush injury / eye</i>	<b>H</b>	<ul style="list-style-type: none"> <li>The following must be worn as a minimum at all times;</li> <li>Hard HAT</li> <li>High Viz vest / jacket</li> </ul>	<b>L</b>

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
		<a href="#">injury / respiratory illness / hearing damage</a>		<ul style="list-style-type: none"> <li>Industrial safety boots</li> <li>Suitable / task specific eye protection</li> <li>Suitable / task specific gloves</li> <li>Where required suitable RPE. (Sundstrom SR100 minimum)</li> <li>Failure to wear PPE / RPE will result in immediate removal from site.</li> </ul>	
Site	Contact with live electricity	All persons entering / working on site. <a href="#">Death, electrocution, serious injury, injury, burns, scalds, fire, explosion</a>	<b>H</b>	<ul style="list-style-type: none"> <li>All services to be isolated by WGL.</li> <li>Underground live cables staying in place to be protected with easement zone set out by CLIENT</li> <li>Whilst every effort will be made to isolate equipment and cables, all such equipment shall be treated as LIVE until certification of isolations/disconnections has been issued.</li> <li>Care will be taken and any suspected damage to cable and/or equipment will be reported to the site supervisor who will seek further advice from the client.</li> <li>All site electrical equipment will be powered by way of 110v supply.</li> <li>All electrical equipment in use to be PA tested and daily user check completed.</li> <li>All trailing cable to be kept clear of walkways in order to minimise the risk of damage.</li> <li>Any electrical equipment thought to be faulty shall be taken out of service and reported to the supervisor.</li> <li>Live services to remain must be marked and operatives made aware of locations. This must be covered in site documentation.</li> </ul>	<b>L</b>
All areas	Slips, trips and falls	All persons entering / working on site. <a href="#">Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.</a>	<b>H</b>	<ul style="list-style-type: none"> <li>Pathways to be kept clear of obstacles wherever possible.</li> <li>Safety harnesses to be worn where appropriate and advised during all work at height where access may not be controlled by MEWP or scaffolding. All work at height where harness and lanyard is required must be covered by separate Risk Assessment.</li> <li>All employees to be advised to maintain a safe environment.</li> <li>Keep all access points clear.</li> <li>Good housekeeping.</li> <li>Only use designated access points.</li> <li>Use designated pedestrian routes where available.</li> </ul>	<b>L</b>

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>• Supervisor to check primary and emergency access routes at the start of each shift.</li> <li>• Access routes included in team briefing.</li> <li>• Good lighting for all tasks and work activities. Ensure dark areas are correctly illuminated.</li> <li>• Ensure open edges / pits / voids are barriered off to protect workforce and visitors.</li> </ul>	
All areas	Incorrect manual handling – General.	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- <b>Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.</b>	<b>H</b>	<ul style="list-style-type: none"> <li>• Follow information in Wring Group S.O.P and in HSE INDG143</li> <li>• Avoid hazardous manual handling operations so far as is reasonably practicable.</li> <li>• Persons must only lift what they feel comfortable to do so.</li> <li>• All persons lift different at different capacity, the person making the lift must identify the weight that is suitable to them. (Please see drawing below for a guide)</li> <li>• Assess the risk posed from lifting operations and avoid it if possible.</li> <li>• Reduce the risk of injury by utilising control measures to lower the risk to as low as is reasonably practicable.</li> <li>• Operatives should follow systems and procedures set out for the works.</li> <li>• Utilise manual handling aids where required.</li> <li>• Ask for help is a load is too heavy.</li> <li>• Where possible always allow a lift to be carried out mechanically.</li> <li>• During manual demolition works, split the loads down to make them smaller.</li> <li>• If in doubt do not attempt a lift / move, ask for help first.</li> <li>• The team carrying out the works must review risk assessments and site procedures, if they see a better way to carry out lifts, they must communicate this to the Site Demolition Supervisor.</li> </ul>	<b>L</b>



Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk																																										
				<div> <table border="1"> <thead> <tr> <th></th> <th colspan="2">Women</th> <th colspan="2">Men</th> <th></th> </tr> </thead> <tbody> <tr> <td>Shoulder height</td> <td>3 kg</td> <td>7 kg</td> <td>10 kg</td> <td>5 kg</td> <td>Shoulder height</td> </tr> <tr> <td>Elbow height</td> <td>7 kg</td> <td>13 kg</td> <td>20 kg</td> <td>10 kg</td> <td>Elbow height</td> </tr> <tr> <td>Knuckle height</td> <td>10 kg</td> <td>16 kg</td> <td>25 kg</td> <td>15 kg</td> <td>Knuckle height</td> </tr> <tr> <td>Mid lower leg height</td> <td>7 kg</td> <td>13 kg</td> <td>20 kg</td> <td>10 kg</td> <td>Mid lower leg height</td> </tr> <tr> <td></td> <td>3 kg</td> <td>7 kg</td> <td>10 kg</td> <td>5 kg</td> <td></td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> <li>• Take into consideration how lifts are carried out.</li> <li>• What is the load? Liquid, solid and the size.</li> <li>• Follow training given.</li> <li>• Keep back straight and lift with the legs.</li> <li>• Ensure a good grip on item.</li> <li>• Keep the item close to your body as possible.</li> <li>• Ensure the load is stable and will not fall apart as the lift is undertaken.</li> <li>• What position are you lifting from? (Consider the drawings above and below)</li> </ul> <div> <table border="1"> <thead> <tr> <th></th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>Seated lift</td> <td>3 kg</td> <td>5 kg</td> </tr> </tbody> </table> </div>		Women		Men			Shoulder height	3 kg	7 kg	10 kg	5 kg	Shoulder height	Elbow height	7 kg	13 kg	20 kg	10 kg	Elbow height	Knuckle height	10 kg	16 kg	25 kg	15 kg	Knuckle height	Mid lower leg height	7 kg	13 kg	20 kg	10 kg	Mid lower leg height		3 kg	7 kg	10 kg	5 kg			Women	Men	Seated lift	3 kg	5 kg	
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Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
All areas	Incorrect manual handling – Task	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- <a href="#">Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.</a>	<b>H</b>	<ul style="list-style-type: none"> <li>• Can the task be carried out another way.</li> <li>• Utilise mechanical aids to move loads which are too heavy / awkward to manually move.</li> <li>• Where large volumes of materials are produced from soft strip / manual demolition, items will be placed in stockpiles / drop zones to minimise distances travelled. Items then will be moved with demolition rigs and hydraulic grapples.</li> <li>• If items have to be moved consider the method of movement, if it is too heavy / awkward to manually carry a lifting / movement aid must be used.</li> <li>• (Please see below for a guide)</li> </ul>  <ul style="list-style-type: none"> <li>• If pushing or pulling is required ensure the correct posture is used. Use the hands to push keeping the torso largely upright and do not twist. Hands should be kept between the hip and shoulder height.</li> <li>• The distance should be no more than 20 m without a break.</li> <li>• Does the lift require two people? If so the individuals carrying out the lift should be of similar height and capability. Discuss the lift prior to starting and communicate throughout the lift.</li> </ul>	<b>L</b>
All areas	Incorrect manual handling – Environment	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- <a href="#">Musculoskeletal injury, broken bones, cuts, abrasions, bruising, twists / sprains.</a>	<b>H</b>	<ul style="list-style-type: none"> <li>• Assess the environment before lift takes place, ensure the route is clear.</li> <li>• Is the route over rough uneven ground? If so can the load be moved mechanically, if not can the ground be levelled.</li> <li>• Is the ground dry, firm and level?</li> <li>• If the ground is wet and slippery can the lift be postponed until dry and not slippery? If not another method of lifting should be considered.</li> <li>• Check that the load you are to carry does not obstruct a clear view ahead.</li> </ul>	<b>L</b>

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
All areas	Collision between pedestrians and plant, vehicles, transport.	All persons entering / working on site. Dropping loads or incorrect moving / lifting can cause:- Musculoskeletal injury, broken bones, cuts, abrasions, bruising, Crush injury, death.	H	<ul style="list-style-type: none"> <li>Separate pedestrian and vehicle routes where reasonably practicable. Pedestrians to wear high visibility jackets and clothing.</li> <li>Working areas to be appropriately lit.</li> <li>Active demolition areas to be clearly designated with secure fencing and signage.</li> <li>Minimise un-necessary plant movements e.g. locate fuel bowsers as close to working area as safely possible.</li> <li>Follow principals of exclusion zones as per Wring Group S.O.P.</li> <li>Educate operatives with task briefings and information.</li> </ul>	L
Demolition area	Failure of demolition plant – overloading / roll over	Demolition plant operator, site operatives, public:- Death, serious injury, crush injury, cuts, broken bones, lacerations, damage to property.	H	<ul style="list-style-type: none"> <li>Follow Wring Group S.O.P. Demo Rigs.</li> <li>Follow all relevant information, training and instruction.</li> <li>Observe load charts in machine.</li> <li>Attachments correctly sized for demolition plant.</li> <li>Check for ground voids and stability of the ground surface prior to commencing works.</li> <li>Ensure working pad and ramps are constructed in a safe manner following Industry standards and CPCS training information.</li> <li>Competent and certified operators.</li> </ul>	L
Demolition area	Failure of demolition plant – Mechanical failure	Demolition plant operator, site operatives, public:- Death, serious injury, crush injury, , broken bones, lacerations, damage to property.		<ul style="list-style-type: none"> <li>Regular maintenance regime.</li> <li>Operator checks completed prior to each shift.</li> <li>LOLER equipment inspected annually / 6 monthly as per legislation.</li> </ul>	
Demolition area	Premature collapse of structure	All persons entering / working on site. Death, serious injury, broken bones, cuts, abrasions, damage to property.	M	<ul style="list-style-type: none"> <li>Structure assessed prior to commencing works. Drop zones extended if poor build quality is encountered.</li> <li>Operator experience.</li> <li>Minimise use of multiple working faces – one structural section to be demolished at any one time.</li> <li>Internal works will ensure following site investigations, that no structural elements are removed during the soft strip elements of work.</li> <li>Floors will not be overloaded with stored wastes during soft strip works.</li> </ul>	L

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
Site	Demolition – Debris ejected from working area	Local residents, public.: <b>Death, serious injury</b>	<b>H</b>	<ul style="list-style-type: none"> <li>Demolition processes designed to allow all materials to be brought inward into the footprint of the building during the demolition.</li> <li>Care to be taken when raking through reinforcement bar – concrete to be crushed where possible.</li> <li>Work areas to be secured and high risk areas where items may fall must be controlled primarily with a protection system such as demolition curtain or scaffold and sheeting, the site must also utilise a secondary protection system such as an exclusion zone.</li> <li>Maintain the exclusion zones, ensure correct space and configuration are adhered to.</li> </ul>	<b>L</b>
Site	Fire from stored fuels.	All persons entering the work area: <b>Burns, scalds, respiratory illness, death, explosion.</b>	<b>H</b>	<ul style="list-style-type: none"> <li>Store fuels in designated areas away from sources of ignition.</li> <li>Stores signed and fire extinguishers placed next to storage area.</li> <li>Use appropriate storage containers e.g. double banded fuel bowsers.</li> <li>Clean fuel spills as soon as practicably possible.</li> </ul>	<b>L</b>
site	Incorrect working with vibrating tools. HAVs	Operative working with tools.: <b>Industrial white finger, carpal tunnel syndrome, loss of feeling, effected grip, pain.</b>	<b>H</b>	<ul style="list-style-type: none"> <li>Information instruction and training.</li> <li>Ensure the tool is the correct tool for the job, before you start, is there another way to do the job that doesn't require a vibrating tool?</li> <li>If you have to use the tool make sure it is in good condition, blades / chisel points must be sharp and the correct item for what is to be cut / broken.</li> <li>Read SOP for tool and discuss with Demolition Site Supervisor your trigger times for the tool and requirements for the tool.</li> <li>Utilise wrist monitors to warn of completion of allocated trigger time where applicable.</li> <li>Demolition site supervisor to monitor trigger times and ensure rotation of operatives is carried out where possible.</li> <li>Record all exposure times.</li> </ul>	<b>L</b>
All areas	Inhalation of respirable dusts	All persons entering the work area:-	<b>M</b>	<ul style="list-style-type: none"> <li>Follow a detailed plan of works.</li> </ul>	<b>L</b>

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
		Respiratory complications, death		<ul style="list-style-type: none"> <li>Utilise dust suppression methods during manual and mechanical demolition operations.</li> <li>Follow detail written in specific SOP for the task/tool you are using.</li> <li>Task specific dust suppression such as spray bottle and water must be used during operations such as soft strip activities and minor manual demolition operations to control dust. If the spray bottle does not effectively control all dust ensure a face fitted half mask is used. Operative must be clean shave and have a face fit test relevant to the type of mask used.</li> <li>Disposable coveralls during dusty works should be used but removed prior to leaving the works area at a decontamination area so that dusts are not transported to the welfare and other areas.</li> <li>Motofog and jet wash use must be considered during mechanical and demolition and other dusty activities. Refer to SOP for these items.</li> <li>Dust monitoring must be carried out regularly and details recorded in site diary. High readings must be communicated directly to the Project Manager and SHEQ Co-ordinator.</li> </ul>	
All areas	Inhalation of Aspergillus	Persons with a weakened immune systems such as hospital patients. Respiratory complications, lung disease, death	<b>M</b>	<ul style="list-style-type: none"> <li>Aspergillus fumigatus is a species of fungus.</li> <li>It can be found throughout the environment, including in soil, plant matter, and household dust.</li> <li>The fungus can also produce airborne spores called conidia. Most people can inhale many of these spores on a daily basis.</li> <li>Aspergillus is not harmful to persons with a healthy immune system, however for those who have a weakened immune system spores can cause infection in the lungs or sinuses.</li> </ul>	<b>L</b>
All areas	Exposure to noise	All persons entering / working on site. Hearing loss and hearing complications, tinnitus.	<b>M</b>	<ul style="list-style-type: none"> <li>Establish noise exclusion zones.</li> <li>Ear protection to be worn inside noise exclusion zone.</li> <li>Excavators CE marked, doors to be closed as required to minimise noise exposure.</li> <li>Due to the nature of the site being in close proximity to a live hospital, no hydraulic hammer attachments are to be used.</li> </ul>	<b>L</b>

Relevant area	Hazard	Who can be harmed and how	Risk Rating	Measures to minimise risk	Residual risk
				<ul style="list-style-type: none"> <li>Demolition site supervisor to ensure noise monitoring is carried out and recorded through the Ipad App.</li> </ul>	
Site	Cuts and lacerations from handling glass	Operatives:- Lacerations, cuts, puncture injuries	<b>M</b>	<ul style="list-style-type: none"> <li>Operatives to wear cut 5 gloves and arm protectors if handling glass.</li> <li>Works must be planned to eliminate working with glass.</li> <li>If working with glass is unavoidable ensure works are limited to a minimum.</li> <li>Broken glass to be cleared away immediately and disposed of in a safe area.</li> <li>Broken shards of glass must not be left in windows or doors.</li> </ul>	<b>L</b>



## Appendix 1 – Flood Response Plan



Appendix 2 – MSDS / COSHH





# COSHH

## Risk Assessment No: 001



### CRYSTALLINE SILICA DUST

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	X	Contractors	X	Public	X
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**CRYSTALLINE SILICA DUST**  
Dust is created during various demolition activities

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
					X				X

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
				X		

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
X		X	X	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
Respirable Crystalline Silica 0.1mg- m3	None stated

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Prolonged inhalation of dust can lead to the development of respiratory ill health, in particularly silicosis.

Dust can cause irritation by abrasion to skin and eyes.

Dust can cause gastrointestinal irritation if ingested.

**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Workplace Exposure Limit (WEL) for respirable crystalline silica = 0.1 mg.m-3 (8hr time weighted average)

When crushing –conveying - loading, wet 'spray' systems or local exhaust ventilation should be used.

Respiratory protection equipment may be required in addition to engineering controls.

Eye protection should be used to prevent dust entering the eyes.

When manually handling blocks, bulk chips, the normal protective equipment for use on building sites should be used, in particular safety helmets, safety footwear with protective toe caps and abrasive resistant gloves.









Is health surveillance or monitoring required?

**YES**

**X**

**NO**

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask	<b>X</b>	Dust mask with protection levels P3 should be used.	 Visor		
 RPE			 Goggles	<b>X</b>	Should be suitable to prevent ingress of dust and have anti-mist protection.
 Gloves	<b>X</b>	Any suitable, should be removed after use to avoid dust contamination.	 Overalls	<b>X</b>	Should be suitable to prevent ingress of dust.
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation: If irritation occurs, remove the affected person to fresh air and seek medical attention if necessary.

Skin: wash with soap and water.

Eyes: irrigate with copious amounts of water and obtain medical attention if irritation persists.

Ingestion: Swallowing small amounts of dust is unlikely to cause significant reaction. Do not induce vomiting. Give plenty of water to drink and seek medical attention if necessary

**STORAGE**

Keep dusts damp at all times

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled

**YES**

**X**

**NO**

**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>	<b>MEDIUM</b>	<b>X</b>	<b>LOW</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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# COSHH / DSEAR

## Risk Assessment No: 001



**Diesel Fuel / Gas Oil (White and Red Diesel)**

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Diesel Fuel / Gas Oil (White and Red Diesel)**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		<b>X</b>

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
	<b>X</b>				<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : BP Automotive Diesel Fuel (May 2008)</b>	<b>See MSDS : BP Automotive Diesel Fuel (May 2008)</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – Harmful – may cause lung damage if swallowed.  
Secondary Risk – limited evidence of carcinogenic risk









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure filling of plant and machinery is carried out in a well-ventilated area. Clean spills as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).

If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
		<b>X</b>		

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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# COSHH / DSEAR

## Risk Assessment No: 001



**Engine Oil**

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Engine Oil**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		<b>X</b>

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
					<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : none shown</b>	<b>See MSDS : none shown</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

No ill effects shown on MSDS









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure filling of plant and machinery is carried out in a well-ventilated area. Clean spills as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).

If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water, if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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# COSHH / DSEAR

## Risk Assessment No: 001



### LITHIUM GREASE

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**LITHIUM GREASE**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
					<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : 600mg/m3</b>	<b>See MSDS : none shown</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Skin and respiratory issues  
Health Warnings  
This chemical can be hazardous when inhaled and/or touched. This chemical may cause skin/eye irritation and burns (corrosive). May cause severe internal injury. Vapour from this chemical can be hazardous when inhaled.  
Route of entry  
Inhalation. Ingestion. Skin and/or eye contact. Skin absorption.

**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure greasing of plant and machinery is carried out in a well-ventilated area. Clean spills/drips as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).  
If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.









Is health surveillance or monitoring required?

**YES**

**NO**

**X**

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE	<b>X</b>	For prolonged or confined space use wear RPE	 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves. Nitrile Gloves	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
Skin Contact – Wash with soap and water, if skin irritation continues consult a doctor.  
Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled

**YES**

**X**

**NO**

**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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# COSHH / DSEAR

## Risk Assessment No: 001



### Hydraulic Oil – Type 46

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Hydraulic Oil – Type 46**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
		<b>X</b>			<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>5mg/m3</b>	<b>10mg/m3</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – May cause lung problems if a fine mist is inhaled.  
Secondary Risk – Hydraulic systems are normally operated at high pressure – care is to be taken not to be exposed to high speed jets of fluid.









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Clean spills as soon as practicably possible (spills are a potential slip hazard).

Care should be taken when servicing plant due to the high-pressure hydraulic systems. Ensure plant manufacturer recommendations are followed when servicing equipment, especially with respect to releasing pressures from the system

Is health surveillance or monitoring required? **YES** **NO** **X**

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

**Inhalation** – No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Skin Contact** – No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Eye Contact** – No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Swallowing** – No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**STORAGE**

Minimise on-site storage.  
Store in sealed secure containers with clear identification markings.  
Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
		<b>X</b>		<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled **YES** **X** **NO**

**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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# COSHH / DSEAR

## Risk Assessment No: 019



**Petrol**

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Petrol**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
<b>X</b>		<b>X</b>	<b>X</b>				<b>X</b>		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
		<b>X</b>			<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
See MSDS : 191mg/m3	See MSDS : 574mg/m3

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.  
Likely to cause skin irritation.  
Likely to result in chemical burns following prolonged wetting of the skin. (eg. after a road traffic accident).  
Aspiration hazard if swallowed- can enter lungs and cause damage.  
Likely to be irritating to the respiratory tract if high concentrations of mists or vapour are inhaled. May cause nausea, dizziness, headaches and drowsiness if high concentrations of vapour are inhaled.  
Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.  
Exposure to benzene may result in effects to the hematopoietic system causing blood disorders including anaemia and leukaemia.









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

Ensure that eyewash stations and safety showers are close to the workstation location.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE	<b>X</b>	For prolonged use	 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other	<b>X</b>	Local exhaust ventilation

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.23	<b>REVIEW DATE</b>	01.11.26
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### Appendix 3 –Site Waste Management Plan



**SITE WASTE MANAGEMENT PLAN BREEM Assessment**

Project Title: Chansons Foods, Avon Street

Location: Avon Street, Bristol,



Client: WSP

Date: 25<sup>th</sup> September 2023

Disclaimer: This Site Waste Management Plan is produced as part of the Wring Group Demolition Safe System of Works and is intended to be used as a guide only for the Health & Safety of Wring Group Demolition site operatives, visitors and adjacent occupiers of the site in question, so far as can be reasonably expected with the actual knowledge and information available to Wring Group Demolition at the time of issue of this document. As such no reliance should be placed (and Wring Group Demolition accepts no responsibility whatsoever for the consequences of such reliance) on this Site Waste Management Plan by any person in any contractual arrangement. This does not affect the statutory rights of any party contracting with Wring Group Demolition under general health & safety law

## Chanson Foods – Demolition Works

### Site Waste Management Plan Incorporating BREEAM Requirements

**Wring Group Ltd Waste Carrier Licence No. CBDU89142**

**Hazardous Waste Premises Code: WRINGS**

#### 1. Authorisation:

Wring Group Ltd (“Wrings”) has been instructed by WSP (“the Client”), on behalf of Gardiner Haskins, to undertake a Site Waste Management Plan (SWMP) to be implemented during the proposed demolition / enabling works phase of the proposed Soap Works redevelopment at the Former Soap Works, Gardiner Haskins, Bristol, BS2 0HZ (hereafter referred to as the “Site”).

#### 2. Context & Purpose:

The SWMP is required to form part of the pre-demolition audit in support of the aim to deliver a sustainable approach to construction related activities. It should be noted that this SWMP only covers waste generated as a result of demolition and enabling activities (excavations) and, therefore, does not include waste generated as part of the construction phase of the project.

#### 3. Project Details:

The Client: **WSP**

The Principle Contractor: **Wring Group**

Document Drafted by: **Wring Group**

The location of the site: **Chanson Foods, Avon St, Bristol BS2 0PS**

The estimated cost of the project: **Circa £185,000.00**

#### 4. Nature of the Project:

Protect:	<ul style="list-style-type: none"><li>• Access roads</li><li>• Designated Façade Walls</li><li>• Flood Wall</li><li>• Pedestrians</li><li>• Environment</li><li>• Rail Way</li></ul>
Install:	<ul style="list-style-type: none"><li>• Not required</li></ul>
Retain:	<ul style="list-style-type: none"><li>• Party wall</li></ul>
Supply:	<ul style="list-style-type: none"><li>• Welfare facilities</li><li>• Plant</li><li>• Staff Personnel</li><li>• H&amp;S File including Waste Tracking</li></ul>
Asbestos Removal:	<ul style="list-style-type: none"><li>• As identified within the asbestos R and D survey ‘BESA18017v01’</li></ul>
Support:	<ul style="list-style-type: none"><li>• Maintain structural stability of neighbouring properties</li><li>• Ensure flood wall is undamaged and sound following completion</li></ul>
Soft Strip:	<ul style="list-style-type: none"><li>• Strip internal materials from industrial use</li><li>• Soft strip materials that have been fly tipped with in the structure</li></ul>
Demolish:	<ul style="list-style-type: none"><li>• Demolish main structures and all external structures except party wall</li></ul>



Excavate / Grub	<ul style="list-style-type: none"> <li>All hard standings and foundations</li> <li>Asphalt areas</li> </ul>
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5. SWMP Design:

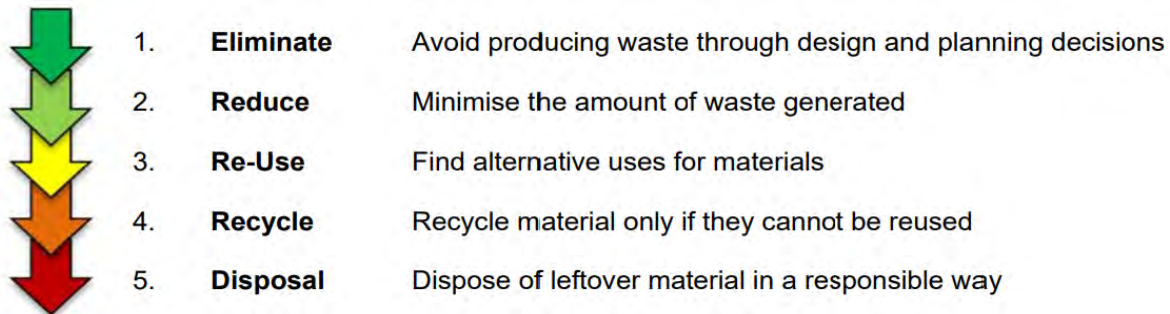
Wst01 Construction Waste Management:

To achieve a BREEAM score of ‘Outstanding’ Wring Group would seek to reduce, reuse and recycle greater than 85% of material generated during the enabling phase of works in accordance with the Waste Hierarchy (see Section 6 below). Achieving 85% diversion of waste away from landfill would generate two credits toward the BREEAM score for the development project.

BREEAM Credits	Amount of waste generated per 100m <sup>2</sup> (gross internal floor area)	
	m <sup>3</sup>	tonnes
One Credit	≤13.3	≤11.1
Two Credits	≤7.5	≤6.5
Three Credits	≤3.4	≤3.2

6. Waste Hierarchy:

The waste hierarchy (as detailed below) shall be followed, in accordance with the Waste (England and Wales) (Amendment) Regulations 2012, throughout all stages of the enabling works package.



1. Eliminate

WGL will look to eliminate the requirement to generate waste in the first place, for example surveying and retaining the Flood Wall as opposed to removing and replacing it.

It is not always possible to eliminate waste however it should be considered at each stage of the enabling works.

2. Reduce

Wring Group will carry out soft strip and waste removals prior to mechanical demolition which will reduce the volume of mixed waste going to landfill. Segregation of materials as they arise will ensure the maximum volume that





can be recycled is increased. Effort will be taken to segregate the fly tipped materials into individual waste streams which are more easily processed and sorted into recycling facilities.

### 3. Re-Use

Large volumes of hard core materials will be generated during the project which, subject to testing, are suitable for processing and re-use on site as a construction material.

Asphalt may be used in the same way if chemical concentrations allow under an agreed re-use plan.

### 4. Recycle

Wring group will look to segregate waste into different streams as per Section 8. These will be sent from site to licensed recycling facilities to stop the material going to landfill.

New legislations require testing of wood materials dated to pre-2007, which will dictate where these materials are able to go and their end of life use. It is still likely that they will be re-used in a number of ways including mulching, burning for bio-fuels or re-processing.

### 5. Disposal

It is unrealistic to assume 0% of arisings will be sent to landfill. Wring Group will look to ensure that those that are disposed of are materials that are unsuitable for re-use.

Examples of these materials are asbestos, drug paraphernalia and some COSHH items.

### 7. Construction method:

WGL will initially strip all 'soft' wastes from within the site, including those materials fly tipped within the structure (see Appendix 1 – Photographic Records). This will be carried out using small plant and mechanical attachments to separate the materials that have been fly tipped. Due to the nature of the waste WGL cannot separate by hand the materials due to risks concerning used needles and COSHH items. Asbestos identified within the survey 'BESA18017v01' will also be removed from site during this phase by certified asbestos technician and disposed of at licensed facilities.

Structural demolition and below ground works will follow on, and due to the scope of the works there is little option for the elimination of the material to be generated. To mitigate this the material will be diligently segregated into the waste streams identified in Section 8 and prepared for processing and recycling. This will include any steel frame work and rebar that can be recycled. All concrete, brick and hard core can remain on site to be crushed and used in construction.

### 8. Identification of Waste Streams:

Potential waste streams to be generated on the site (during the demolition and enabling works phase), proposed destinations and targets for diversion from landfill are detailed in Table 1 below. Potential options for re-use / reduction are included as foot notes to the table:

14180 – Site Waste Management Plan  
Chanson Foods



European Waste Catalogue	Material	Examples	Tonnage		Recycled %			Desired Waste Action	Likely facility
			Est	Act	Est	Est tonnage	Act		
170102	Bricks	Bricks	204		100	204		Process and crush on site	-
170101	Concrete	Pipes, kerb stones, paving slabs, concrete rubble, precast and in situ	2,644.50		100	2644.5		Recycle and re-use on site	-
170604	Insulation	Fiberglass, mineral wool, foamed plastic	10		90	9		Recycling facility	M J Church - Chippenham (30 miles)
1501	Packaging	Pallets, cardboard, cable drums, wrapping bands	5		100	5		Recycle	EMR -Sharpness (24 miles)
170201	Timber	Softwood, hardwood, board products such as plywood, chipboard, medium density fibreboard (MDF)	15		85	12.75		Composting / Wood Chip	M J Church - Chippenham (30 miles)
1602	Electrical and electronic equipment	Electrical and electronic TVs, fridges, air- conditioning units, lamps equipment	5		100	5		Recycling Facility	EMR -Sharpness (24 miles)
1301	Oils	Hydraulic oil, engine oil, lubricating oil, cooking	1		75	0.75 0		Bio-Plant	Safety Kleen, Severn Trent
170302 (coal tar – 170303*)	Asphalt and tar	Bitumen, coal tars, asphalt	220		100	220 0		Recycle	OCL Regeneration (Avonmouth - 10 miles)
170103	Tiles and ceramics	Ceramic tiles, clay roof tiles, ceramic, sanitary ware	5		100	5		Recycle and re-use on site	Not Applicable
170107	Inert	Mixed rubble or excavation material without hazardous substances	30		100	30		Recycle and re-use on site	Not Applicable
170106*	Mixed hardcore	Mixed rubble or excavation material with hazardous substances	10		0	0		Dispose in licensed facility	Viridor - Bridgewater (35 miles)
170407	Metals	columns, cables, wires, bars, sheet	50		100	50		Recycling	EMR -Sharpness (24 miles)
170802	Gypsum	Plasterboard, plaster, fiber cement sheets	10		100	10		Recycling	M J Church - Chippenham (30 miles)
170101	Binders	Render, cement, mortar	10		100	10		Recycle and re-use on site	Not Applicable
170203	Plastics	Pipes, cladding, frames, non-packaging sheet	20		100	20		Recycling Facility	ETM Waste Management (5 miles)
COSHH - Most relevant EWC	Liquids	Non-hazardous paints, thinners, timber treatments	1		50	0.5		TBC	TBC
170505	Asbestos Chrysotile (bonded)	Defined in the Hazardous Waste List (HWL) of the European Waste Catalogue (EWC)	4		0	0		Asbestos	Viridor - Bridgewater (35 miles)
200307	POPs	Waste domestic seating with fabrics, leathers and foam	5		100	5		Recycle	M J Church - Chippenham (30 miles)
170904 (Mixed)	Mixed or other	Efforts should be made to categorise waste into the above categories wherever possible.	60		75	45		Landfill – Non-Hazardous.	Viridor - Bridgewater (35 miles)
160211*	Fridges	Containing ozone-depleting substances as foam blowing agents or coolants	5		100	5		Recycling facility	Safety Kleen, Severn Trent
			3314.5			3281.5			



All waste which is to be recycled or recovered off-site shall be sent to dedicated and permitted recycling centers, materials recovery facility, waste transfer station or energy recovery facility. Any residual landfill material shall be sent to landfill sites licenses for the relevant waste types.

#### 9. Waste Reduction Measures:

The following measures shall be employed throughout the demolition and enabling works phase (as far as reasonably practicable):

- During technical design stages, opportunities to design-out waste shall be considered / explored;
- Over-ordering of materials shall be minimized, wherever possible;
- Effective scheduling of deliveries / collections to minimise the time materials are stored on-site;
- Appropriate storage of materials and plant on site to minimise damage, theft etc.
- Procurement of recycled materials shall be given priority over virgin materials, where practicable;
- On site plant / machinery will be switched off when not in operation to reduce unnecessary fuel consumption;
- Damaged to equipment (such as water supply pipework) will be reported and repaired/replaced in good time to reduce wastage through leaks / neglect;
- There shall be clearly-labelled designated areas provided for waste storage; and,
- Regular compliance checks conducted by the appointed individual (Wring Group Project Manager / SHEQ Co-Ordinator);

#### 10. Monitoring, Measurement and Recording;

All movements of waste within and from the Site shall be recorded including: the type of waste; the total volume and/or weight of waste; the name of the waste handler; and the destination of the waste.

Where possible, the following information shall be collected and monitored against pre-commencement targets:

- Volumes of waste generated (e.g. cubic metres, number of full skips etc.); and,
- Weight of waste generated (e.g. tonnes, weighbridge tickets etc.)

A materials tracking spreadsheet will be collated throughout the project enabling the management of volumes and Waste Transfer Notes of each waste stream throughout the program.

Volumes and/or weight of waste should be assessed against the following to provide appropriate metrics:

- Value of project (for example, m<sup>3</sup> per £); and,
- Building floor area (for example, tonnes per m<sup>2</sup>)

This SWMP shall be updated regularly with waste volumes, to reflect the progress of the project. Documentation (such as waste transfer notes, delivery notes, invoices etc.) shall be retained as an appendix to this SWMP.

#### 11. Communication of the SWMP:

This SWMP shall be kept on the Site at all times. Every worker, including sub-contractors, on the Site shall be informed of where to find the SWMP and have access to it. Training shall be provided to ensure that appropriate personnel are aware of:

- The objectives of the SWMP;
- How to record and report waste;
- The importance for accurate record-keeping and retention of paperwork; and,
- The need to minimise the mixing and contamination of waste streams.

This SWMP shall be reviewed periodically by the appropriate personnel to ensure that this document is still relevant as the project develops throughout design and construction phases.



## 12. Other BREEAM Considerations:

The Client and Principle Contractor will take all reasonable steps to ensure that:

- (a) All waste from the site is dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990() and the Environmental Protection (Duty of Care) Regulations 1991(4); and
- (b) Materials will be handled efficiently and waste managed appropriately.

### 12.1 Energy Usage (On completion)

Energy figures based on actual fuel used on site for plant equipment and transport figures based on waste loads against an average fuel consumption figure.

These equate to \*\*\*\*\* litres of diesel with an calorific value of 45MJ/Kg (SG=0.84)

These equals 38MJ/Litre = 10.555kwh/litre

Total energy usage \*\*\*\*\* x 10.555 = 34040kwh

### 12.2 Water Usage

An existing water supply is being used to supply site welfare facilities.

The water usage will be for used for supplying welfare facilities set up within the site. During the demolition process water may be used for dust suppression.

Due to the type of use for dust suppression and the low usage of water for welfare, recycling is not economically viable.

### 12.3 Ecology

All ecology issues will be highlighted in the pre-construction information and will have been included in the Demolition Plan.

The site is securely fenced using Timber Hoarding/HERAS fence panels.

### 12.4 Considerate Constructor Scheme

If the site is registered under the Considerate Constructor Scheme, it will be fully compliant and will aim to achieve a minimum very good rating.

### 12.5 Environment

Please see attached Wring Group Ltd Environmental Policy Statement. Full Wring Group Ltd Environmental Policy and Procedures Manual available if required.

### 12.6 Sustainably sourced timber

All timber used for hoarding will carry the FSC or equivalent trademark and will be from a sustainable source. See attached sustainable timber policy.

## 13. SWMP Summary:

### 13.1 Estimated Waste from the Demolition and Enabling Works Phase

Total tonnage: 3,314.5 Tonnes

Estimated tonnage recycled : 3,281.5 tonnes

14180 – Site Waste Management Plan  
Chanson Foods



Recycled/salvage: Tonnes

% Recycled/salvaged = 99%

13.2 Actual Waste from the Demolition and Enabling Works Phase (To be completed on completion of the work)

Total tonnage \*\*\*\* Tonnes

Recycled/salvage \*\*\*\* Tonnes

% Recycled/salvaged = \*\*%

13.3 Actual Waste tonnage per 100m<sup>2</sup> floor area (To be completed on completion of the work)

Floor Area = 3,640.94m<sup>2</sup>

Tonnage to land fill = \*\*\*\*\* Tonnes

Tonnage to landfill per 100m<sup>2</sup> floor area = \*\*\* Tonnes

Appendix 1 – Photographs



Photo 1 – External Waste



Photo 2 – External Area



Photo 3 – External Waste (b)



Photo 4 – Metal Storage Unit



Photo 5 – Plastic Pipes



Photo 6 – Fibre Glass Tanks



Photo 7 – Building Fabric Brick



Photo 8 – Glass Fronting to building



Photo 9 – Fly tipped mixed waste

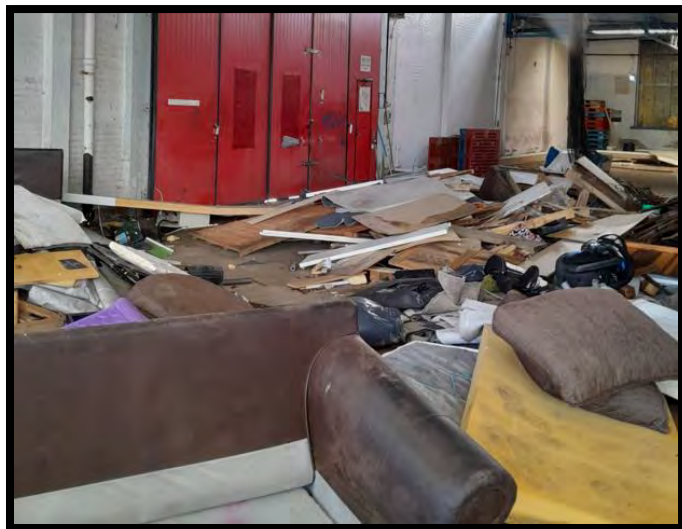


Photo 10 - POPs and Mixed Waste



Photo 11 – Mixed waste with ACM



Photo 12 – Fly Tipped Mattresses



Photo 13 – Examples of COSHH



Photo 14 – Refrigeration Units

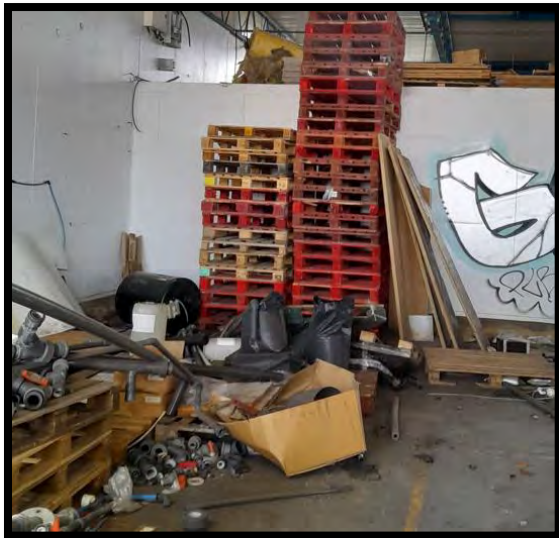


Photo 15 – Pallets and General Waste



Photo 16 – Container Tanks

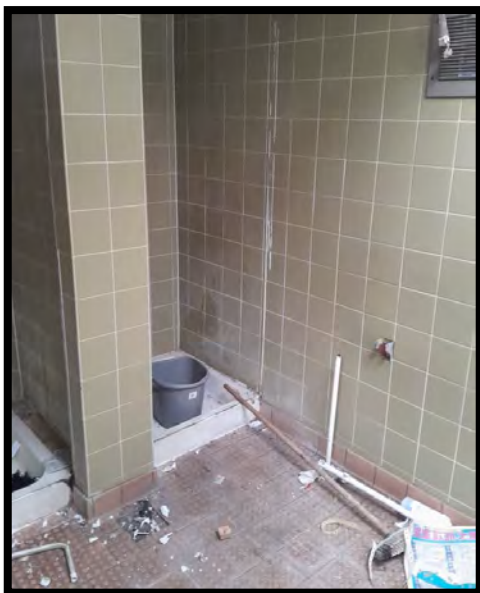


Photo 17 – Ceramics



Photo 18 – Further Ceramics





Photo 19 – Plant Room

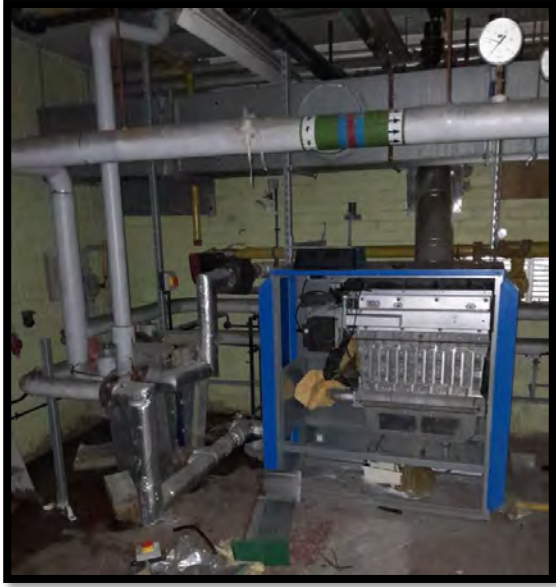


Photo 20 – Plant Room 2



Photo 21 – Numerous Fridges



Photo 22 – Various Plastics and wastes



## Appendix 4 – Standard Operating Procedures



## SAFE OPERATING PROCEDURE

### FOR

Excavators / Demolition rigs



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 002
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			D WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

#### ACTIVITY:

The Safe Use of a 360° tracked demolition rig / excavator,

By definition the term "Use" includes, Pre-use inspection, Operating, (un) loading procedures and maintenance. Excavating of material, loading of materials with buckets or grapples, shearing steels, pulverising concrete, using hydraulic hammer attachments to break concrete/rock, general demolition of structures, loading and clearing from mobile crusher.

#### AUTHORISATION:

No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

**READ IN CONJUNCTION WITH SITE SPECIFIC RAMS AND OTHER SITE SPECIFIC DOCUMENTATION.**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public	H	<p>Information, instruction and training.</p> <p>Ensure work area is secure and well segregated. Check ground conditions prior to accessing with excavator. Establish the possibility of floor voids and soft ground. When working on concrete reinforced floors ensure correct floor loadings are suitable for weight of plant being used or that appropriate prop work has been installed. Do not access floors with machinery unless instructed by management. Do not tract alongside open trenches or voids, keep at least the depth of the trench/void back from the edge. When accessing stockpiles of material, ensure stockpile is stable and that access ramps are suitably wide and or a suitable gradient.</p>	M
Entrapment/crush in moving parts	Workforce	H	<p>Information, instruction and training.</p> <p>Ensure workforce are clear of the machinery when in operation, utilise movement cameras and mirrors when positioning machinery. Do not track backwards blind. Ensure machinery is switched off and immobilised before persons approach to talk (i.e. stand on track to discuss things) Before operating hydraulic attachments all persons should be clear of moving parts.</p>	M
Falls from height	Operator, maintenance	H	<p>Information, instruction and training.</p> <p>When accessing machinery to commence operation or exiting the machine following operation, always ensure you are facing the machine and have three points of contact at all times. Never jump from the machine or jump and while holding the grab rail. When maintenance is being carried out ensure anti-slip coatings around the engine access panels are clean and in good order. Never work with your back to the open edge.</p>	M
Slips, trips	Operator	M	<p>Information, instruction and training.</p> <p>Park machinery in a suitable and safe area where possible away from uneven, soft/wet/slippery ground. Ensure access to the machinery is clear and trip/slip hazard free. Take care when exiting the machinery when working on soft/muddy/clay/chalk ground as tracks can become slippery.</p>	L
Manual handling	Operator	M	<p>Information, instruction and training.</p> <p>When greasing machinery, carrying out maintenance, changing attachments, cleaning machinery ensure your work area and transit routes are clear and free of obstacles. Make sure the correct PPE is worn and suitable gloves are worn. When changing attachments and hydraulic hoses wear gloves with grip to prevent sliding or slipping which can cause musculoskeletal injuries. If sledge hammers or pry bars are to be used check your footing first, do not over stretch, swing hammers using knees, hips and shoulders keeping the spine in line and straight. When using a pry bar check the pivot point being used to ensure bar cannot slip off.</p>	L
Fire/explosion/ electrocution/electrical explosion	Operator, workforce	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with underground or overhead live services. Ensure all services have been terminated and certified dead prior to works commencing. When excavating C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not excavate within 1 meter of a live service with an excavator/ machinery. When working near overhead lines follow BS 6187 and HSE guidance. If you see and sparks or smell gas, stop immediately and isolate machinery, warn others and exit the area.</p>	M

Collision with pedestrians/plant/buildings/structure	Workforce, visitors, public	H	<p>Information, instruction and training.</p> <p>Check that work areas are segregated sufficiently and where applicable physical separation barriers are in place. Pedestrian and plant work areas must be separated. Inductions and tool box talks are to be used to ensure safety message regarding separation of plant and machinery is conveyed to all persons. Ensure safe working distances within the 'swing area' of plant are complied with (See BS 6187 and HSE Guidance). As part of pre-start checks mirrors and cameras must be cleaned and working correctly. If workforce approach from the blind side of machinery, stop and advise firstly the individual of this and then the site supervisor/manager.</p>	M
Equipment failure	Workforce, public	M	<p>Information, instruction and training.</p> <p>Prestart checks must be carried out on equipment prior to use. Ensure an in-date inspection certificate is available for the machinery. Fixing bolts, lock pins, hydraulic fittings must be inspected and regularly serviced/maintained. Defect logs must be completed, and defects reported immediately. Once defects have been identified equipment and machinery must not be used until the defect is corrected. Workforce not to work under raised boom/attachment of machinery. When loading lorries and crusher the boom must not be swung over the cab of lorries or over the operator of the crusher. When working near public area, boom of the machine is not to be swung outside the working area over public area unless public area has been cleared and controlled by bank men. Only use attachments for what they were designed for.</p>	L
Falling/flying objects	Workforce, public	H	<p>Information, instruction and training.</p> <p>At all times works must be undertaken to prevent flying objects. Create secure drop and exclusion zones to control works and areas. When demolishing steel framed structures utilise shear attachments or hot cut to prevent over stressing bolt/weld fixing. Do not use hammer attachments at high level unless screening is in place. Carefully disassemble structures to prevent stress on other materials within the structure. When carrying out demolition sequences ensure a designated drop zone is created and not entered by machinery or personnel. Ensure structures are not 'undercut' in a way which will endanger the machinery or personnel. At the end of each shift or section ensure all overhanging or loose items are removed. During shearing operations of rebar type materials where possible cut with the back of the jaw rather than the tip of the beak to prevent projection of rebar shards. When excavating, clean edges of trenches to remove loose items. During loading of skips, crusher units and lorries work area must be clear with restricted access to personnel. Care must be taken when loading skips with long timber that when compacting the load timber is not projected from the skip. Ease the load down rather than ramming. This list is not exhaustive, care must be taken during all operations to prevent flying/falling debris.</p>	M
Contact with hazardous substances	Operator	H	<p>Information, instruction and training.</p> <p>During mechanical demolition of asbestos roofing sheets ('balling in'), keep the cab door shut, ensure sufficient water mist sprays are being used. Reduce breakage of materials where possible. Do not tract over asbestos sheets on the ground. Ensure materials are wetted prior to loading debris into skips. Do not exit machinery during or directly after the collapsing of asbestos materials, track away from the work area and ensure the machinery has been washed down adequately. When changing attachments ensure correct gloves are worn to prevent contact with oils whether hot or cold.</p>	M

Excessive/nuisance noise	Operator, workforce, visitors, public	M	Information, instruction and training. Maintenance regime to ensure any defects within the noise reducing systems of machinery. Utilise hydraulic pulverisers/crackers/munchers where possible to minimise hydraulic hammer attachments. Where possible limit hammer usage and consider work area and deflection of noise (i.e the noise of a machine will sound louder within a built-up area as opposed to open ground) Consider working hours in built up populated areas. Where noisy operations are to be undertake ensure correct ear protection is used and periodic breaks in noisy activities. If working near public areas follow specific risk assessments and ensure controls are in place (possibly acoustic screening). Repetitive low volume noise can be a nuisance, where possible alternate works to minimise.	L
Excessive/nuisance dust	Operator, workforce, public	H	Information, instruction and training. Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	M
Vibration	Operator	M	Information, instruction and training. Working on concrete slabs with steel tracked excavators and crushing units can create high levels of full body vibration, limit time exposure and where possible create a 'mat' of loose/crushed material to reduce vibration.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Exhaust mufflers, limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	Air	Localised public and workforce, flora, fauna,	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) utilise exhaust CATs to reduce fumes	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	M	Air	Localised public and workforce, flora, fauna, aquatic life	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) Select the right attachments to ensure energy usage is minimised.	L

SAFETY EQUIPMENT					
Mandatory X			Task Specific X		
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	X
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	

## PROCEDURE

**To be read in conjunction with site specific RAMs and relevant site information**  
**Operators to follow all training, RAMs and S.O.Ps**

### CHECKS:

Regardless of the size of the equipment it must have the following as standard,

Clearly defined Operating controls.

Flashing orange beacon located on the cab and that it is working.

Reversing camera or mirrors are clear and in good working order.

Always ensure pre-use checks are carried out and recorded on the checklist provided. Report all defects to your supervisor.

Ensure you have all the relevant PPE on (as above) and check that it is in good working condition. Obtain replacements from your supervisor/Manager immediately if required.

If prescription or condition requires operative to wear glasses for driving or hearing aids, then they MUST be worn and kept in good working order.

The equipment must only to be used on firm ground.

Check for voids, trenches and changing ground conditions due to weather or site conditions.

The working limits of the demo rig / excavator / attachment is NOT to be exceeded.

Check the equipment being used and ensure up to date certificates are in place.

The demo rig / excavator is not to be used in the vicinity of overhead power lines.

Operators to check exclusion zones are in place and secure. **Refer to NFDC Exclusion Zones attached.**

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

**RESTRICT ACCESS** when carrying out demolition works and loading of skips / bins / lorries, ensure access is restricted and no operatives can approach the machine / area. Communicate your operations with others.

## **TRAVELLING:**

Stop and remove all objects in your path where safe to do so, never track over them.

Before moving always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Always ensure that you stay within the confines of the operating cab during operations

Never approach any pedestrian or allow them to approach you closer than two metres. Stop work if they do.

Never track blindly if the bucket or attachment obscures your vision.

Never track onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the demolition rig / excavator, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched of, the key is removed.

## **GENERAL OPERATION:**

**Follow all training undertaken through CPCS.**

**Ensure the operations to be undertaken have been communicated with the workforce and the work area is secure.**

Only use the demolition rig / excavator / attachment for its intended purpose. (See attachment chart below)

Ensure the direction facing of tracks is known so that direction of travel when starting a move is known. This can be ascertained by looking at the tracks to see if the idler or sprocket is visible.

Always give way to pedestrians.

NEVER use mobile phones whilst operating or tracking the excavator. Hands free kits are **not** acceptable. Vehicle must be parked before using the phone.

NEVER exceed the lifting capacity of the equipment.

**Before carrying out any operation, check the ground conditions, ensure that the ground is suitable for the task to be undertaken.**

Ensure a suitable exclusion zone is created around the working area following NFDC guidance and site-specific RAMs and information.

Ensure that during any loading / demolition activities no persons are in the working area. **Refer to NFDC Exclusion Zones attached.**

Always 'test' the load you are lifting with hydraulic attachments before undertaking loading operations and check the release speed of attachment jaws to ensure loads can be released easily.

## **STOPPING/PARKING:**

When stopping for any reason, stop, ensure tracks are aligned with vehicle, switch off the engine this applies even if approached by a pedestrian before communicating with them.

End of working day security: Do NOT leave the keys in the demolition rig / excavator and allow the opportunity for unauthorised use.

## **MAINTENANCE:**

Keep machine clean and tidy.

Maintain anti-slip protection.

Ensure engine covers are in place.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Never allow any person to climb underneath the demolition rig / excavator for ANY REASON

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels. Ensure caps are cool prior to removal



**ENSURE ATTACHMENTS ARE CHECKED UNDER POWER AND DETAILS RECORDED.**

**ATTACHMENT CHART**



**Digging / Bulking Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For digging. Soil / hardcore material loading processing.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Riddle / Griddle Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Size depending on base machine size.
- For removing smaller materials / material cleaning / processing.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Grading Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes depending on base machine.
- For grading over ground, road construction, cleaning of slabs / roads, removing carpets floor coverings from concrete / screed.

Caution with this attachment, catching a fixed object such as a station pad or bolt can twist the bucket and cause a high velocity projected item such as a bolt head.



**Narrow / 2' Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For excavating trenches / removing large concrete footings / slabs.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Ripping Tooth**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For ripping concrete / hard ground.
- Can be used to rip steel tanks along welds.
- Can be used for careful demolition of walls where space is restricted.



**Fixed Finger Grapple / Grab**

- Fitted to the plant via direct pins or tested quick hitch system and 'lazy arm' brace.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For demolition where pulling is required.
- For loading of awkward / heavy items such as steel or logs

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



**Hydraulic Hammer**

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- For breaking concrete and hard materials.

Caution with this attachment as it can produce high velocity projected materials and can produce high volume noise and vibration. Monitor. Refer to NFDC Exclusion Zones attached.

Levering with this attachment can break the point easily.



### Hydraulic Rotating Selector Grapple / Grab

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- Various sizes and construction, light weight – heavy weight depending on required task and base machine.
- For light weight demolition such as timber roof structures walls where material separation is required.
- For material handing / separation / processing / loading.

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear especially when loading of bins / skips. Refer to NFDC Exclusion Zones attached.



### Hydraulic Rotating Demolition Shear

- Fitted to the plant via direct pins either boom or dipper mounted or tested quick hitch system.
- Various sizes and construction depending on task and size base machine.
- For demolition of steel structures.
- For cutting of steel materials such as RSJ's. Size of cut depending on size of shear and base machine.

Caution with this attachment as it can leave sharp edges and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Hydraulic Rotating Demolition Multi Processor.

#### (Cracker, Pulveriser, demolition Shear)

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction depending on task and size base machine.
- For demolition of concrete structures.
- For cutting / pulverising of reinforced concrete materials such as beams and floor slabs. Size of cut depending on size of shear and base machine.
- Jaws are interchangeable via fixed pins.

Caution with this attachment as it can leave sharp edges on rebar and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Fixed Pulveriser / Muncher

- Fitted to the plant via direct pins and 'lazy arm' brace.
- Various sizes and construction, depending on required task and base machine size.
- For demolition of heavily reinforced concrete.
- For processing on concrete prior to crushing.

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Crusher OR Screener Bucket

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- Various sizes depending on the base machine size.
- Screener for removing fines from material / concrete / brickwork.
- Crusher for crushing demolition hard waste such as concrete and brickwork to produce a usable product.

Caution, these attachments can produce high level noise and dust.

Ensure water mist sprays are in operation and noise monitoring carried out.

These items have limitations, use must be kept to small operations.



### Hydraulic Magnet

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses. (Some magnets are connected via chains, these require a specific risk assessment and plan prior to use and are subject to specific inspections)
- Various sizes depending on the base machine size.
- For collecting and loading small metal materials following primary demolition or processing.

Caution, these attachments have limitations and are not suitable for loading large awkward items.

Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.

## OTHER CONSIDERATION

Always consider other plant working around you and personnel especially those that may be hidden out of site.

Before starting a task, check that the exclusion zones are clearly defined, secure and that your operations are communicated to all persons relevant to or who may be impacted by the task.

Review and implement NFDC document ( Demolition Exclusion Zones DRG 110:2014 ) attached, and  
NFDC document ( Demolition Attachments Guidance Notes DRG 118:2018 ) attached.



### **NFDC** Demolition Exclusion Zones

**DRG 110:2014**





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## SAFE OPERATING PROCEDURE

FOR

Forward Tipping Dumper



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 010
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> Movement of materials on site			
<b>AUTHORISATION:</b> No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have this document along with relevant site-specific method statements and risk assessments communicated to them.  As part of your ongoing training and safe use of plant assessments you are obliged to read and sign the following safe operating procedures.  <b>YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public. Serious injury, broken bones, death	H	<p>Check machine tyres and ground stability,</p> <p>Check for any voids seen or unseen. Only work from a solid level surface. Do not move machinery while butt is elevated and loaded.</p> <p>Ensure when positioned and while in transit, the ground is stable with no voids/soft ground/drains below</p> <p>Know and understand safe working procedures of the individual piece of equipment and do not exceed it. Create safe working area and minimise authorised personnel to access the area. Be aware of wind and movement of dusts.</p> <p>Communicate movements and working areas with other plant working in the same area. Where possible erect fix barriers to secure the work area, if this cannot be done ensure a banks man or ground man is used to direct movements, ensure he/she is working from a safe location.</p> <p>Never start tipping a loaded dumper while the dumper is still in forward or reverse motion. Always apply the parking brake before tipping.</p> <p>Only reverse down a gradient when the dumper is loaded DO NOT drive down a gradient when loaded.</p>	M
Entrapment/crush in moving parts	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work areas are secure to prevent unauthorised persons approaching machine. Ensure all relevant guards are in place and secure. Communicate operations and movements with others who may be working near. Where working area is restricted ensure banks men are used to manage movements and operations. If using a banks man, they must only work from a safe location.</p> <p>Ensure the pivot point is open and sufficient room is available to access.</p>	M
Falls from height	Operator, workforce, public Serious injury, broken bones, death	H	<p>Wear seat belts at all times when operating the dumper.</p> <p style="text-align: center;"><b>ALWAYS APPLY THE PARKING BRAKE AND EXIT MACHINE BEFORE LOADING COMMENCES. STAND IN A SAFE LOCATION AWAY FROM THE LOADING OPERATION.</b></p>	M
Slips, trips	Operator, workforce, public Serious injury, broken bones, death	H	<p>Any spillage of fluids from the machine must be cleaned up immediately.</p> <p>Check that when machine is stopped and parked/left for a period, the access route to and from the machine is clear of slip/trip hazards.</p>	M
Manual handling (Maintenance purposes)	Operator, workforce, Serious injury, broken bones, musculoskeletal injury	H	<p>Ensure lifting operations follow manual handling training, use safe principals. Heavy items must be lifted by mechanical aids or utilising tandem lifting techniques.</p> <p>Use the correct tools for the project at hand.</p>	M
Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	<p>Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.</p>	L
Collision with pedestrians/plant/buildings/structure	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work area is secure, effective communication with other workers nearby is essential. Where work area is restricted utilise banks man assistance.</p> <p>Ensure mirrors, cameras and beacons are fully operational.</p>	M
Equipment failure	Operator, workforce, public Serious injury, broken bones, death	M	<p>Follow maintenance regime, check inspection certificates are in date prior to operation. Report any defects found immediately and do not use the item until repairs or replacement has been arranged.</p>	L

Impact by Falling/flying objects	Operator, workforce, public Serious injury, broken bones, death	H	Secure work area. When materials need to be dropped ensure a suitable drop zone is created and communicated to others prior to works commencing. Be aware of those working around to and do not allow materials to be projected in their direction.	M
Contact with hazardous substances	Operator, Skin damage	M	When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.  High pressure hydraulic oil leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.	L
Excessive/nuisance dust	Operator, workforce, public Respiratory system damage, eye injury	M	<b>DUST SUPPRESSION TO BE USED AT ALL TIMES</b>  Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	M
Vibration	H	GROUND	Localised public and workforce, flora, fauna, aquatic life	Ground assessment relevant to location must be carried out. Working on slabs or soft ground can produce high levels of vibration transference, slip trenching or location of operation must be used.	M
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M
Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M



SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves		Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E SR 100 (task specific)		Goggles EN166B (task specific)		Glasses (EN 166 F)	X
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	

## PROCEDURE

### CHECKS:

Check you have the correct training, information, instruction and supervision.

Check that the relevant inspection certificate is in place, in date and for the piece of equipment you have.

Check tyres, breaks, lights and beacons as well as standard engine checks.

Check ground conditions are acceptable.

Check you understand what is required of you for the task at hand.

Check you have communicated your intentions to other relevant persons.

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

### TRAVELLING:

Stop and remove all objects in your path where safe to do so, never drive over them.

Wear the seat belt and ensure beacons are working.

Always travel at a speed that is safe, observing the ground surface conditions.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Never approach any pedestrian or allow them to approach you. Stop work if they do.

Never drive blindly if items obscure your vision travel in reverse.

Never drive onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the dumper, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched of, the key is removed.

## **GENERAL OPERATION:**

Only use the dumper for its intended purpose.

NEVER use mobile phones whilst operating equipment.

### **Prior to Commencing Dumper Operations**

Ensure the following safety Control Measures are adhered to:

The Dumper is to be inspected to ensure that:

- All machine guards are in place & secure.
- All controls are in place & fully operational.
- All emergency stop buttons are operational & accessible.
- All defects identified above are reported to the workshop for rectification through the defect reporting process and recorded on the defect register. Defects which may affect the safe operation of the dumper are to be reported immediately. The Site Foreman is to be advised accordingly.

### **During Maintenance Tasks**

Ensure the following safety Control Measures are adhered to:

- The dumper & associated plant must be stopped & isolated (Lock-Off), all associated Operatives must be informed accordingly and signs prohibiting starting of the dumper displayed on relevant controls.
- All machine guards removed for maintenance purposes are replaced & secured prior to starting the Dumper.

**Should there be any malfunction or defect with the dumper, the machine MUST be stopped, isolated & the problem reported to the workshop for rectification through the defect reporting process and recorded on the defect register.**

**Defects which may affect the safe operation of the dumper are to be reported immediately. The Site Supervisor/Manager is to be advised accordingly.**

## **MAINTENANCE:**

Keep machine clean and tidy.

Ensure engine covers and guards are in place, if removed replace them prior to operations re-commencing.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

Never allow any person to climb underneath the dumper for ANY REASON

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels. Ensure caps are cool prior to removal

NEVER use your hand when checking for leaks ALWAYS use another item i.e. Piece of cardboard.

## **OTHER CONSIDERATION**

Always consider other plant working around you and personnel especially those that may be hidden out of site.

## **EMERGENCY**





## SAFE OPERATING PROCEDURE and ABRASIVE WHEELS POWER POINT

FOR

Petrol Disc Cutter (Quick Cut)



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 011
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> The safe use of petrol powered disc cutters or 'quick cuts' to cut metal and concrete/masonry in compliance with PUWER, Control of Noise Regulations 2005, Control of Vibration Regulations 2005, PPE Regulations 2002, DSEAR (The Petroleum (Consolidation) Regulations 2014.			
<b>VIBRATION:</b> left/right m/s 3.9/3.9			
<b>AUTHORISATION:</b> No person is permitted or authorised to use these pieces of equipment unless they competent and in some cases trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them. <b>YOU ARE NOT PERMITTED TO USE THESE ITEMS WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Incorrect Manual handling	Operative, workforce  Musculoskeletal injury, broken bones	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition.</p> <p style="color: red;">Wear appropriate PPE. EN166 B grade goggles must be used when operating a disc cutter. Glasses are not to be worn. Ear defenders with a minimum SNR of 32 must be worn</p> <p>Be aware of others around you.</p> <p>When using any type of disc cutter ensure that your work area is clear and safe to work. Ensure you have a good solid floor space to stand and work from.</p> <p>When using disc cutters and other heavy petrol-powered saws avoid twisting the back while working, lift with the knees not with the lower back. Follow the manual handling training. Avoid over work, allow the weight of the saw to produce the force required and do not over compensate with muscle power. Check that you are standing in a solid position so if the saw slips you will not jar your leg, back and arm muscles.</p> <p>When cutting at ground level keep aware of your cutting position. Avoid where possible stooping for long periods.</p>	M
Fire/explosion/ electrocution/electrical explosion	Operatives, workforce  Burns, scalds, death.	H	<p>During works the greatest risk comes from contact with underground or live services. Ensure all services have been terminated and certified dead prior to works commencing. When digging C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not cut near live services unless a specific plan has been created, a hot work permit system must be used.</p> <p>When carrying out cutting works do not cut any cables unless they have been confirmed and proved dead and you are instructed to carry out the works by a supervisor.</p> <p>Do not cut any container with hand tools.</p> <p>Following DSEAR- only small amounts of mixed petrol/oil to be stored / used on site, Refuel the disc cutter away from the work area in a ventilated location on a drip tray. Ensure spilled fuel is cleaned up straight away. Ensure the fuel cap is correctly fitted and tight. Roll the disc cutter from side to side to ensure there are no leaks.</p> <p>When cutting check, the projection of sparks, ensure sparks are not landing on fuel or combustible material.</p>	M
Sparks impacting other workers or public	Workforce, public.  Burns, scalds, death, blindness.	H	<p>Check that work areas are segregated sufficiently and where required added controls such as screens, warning tape, barriers are in place. Prior to works commencing in a confined area ensure you make yourself aware of where other operatives are working and make them aware of what you are intending to do.</p> <p>Check the projection of sparks created and do not allow sparks to land near other workers or into public areas.</p>	M
Impact by Falling/flying objects/ sparks	Workforce, public	H	<p>Eye protection (EN166 B), gloves, helmet to be worn at all times. At all times works must be undertaken to prevent flying objects such as sparks. Create secure work and exclusion zones to control works and areas. Avoid working directly overhead, utilise towers to ensure you can work safely away from items being cut. Ensure at all times the areas below when you are working are secure and access below is prevented. Check cutting discs are in date, free from damage, oil and water stains. Ensure diamond blades are fitted with the arrow on the disc facing the direction of spin. Adjust guards correctly before starting saw and cutting.</p> <p>Ensure items being cut are secure to prevent them flying out if the saw 'snaggs' on the item.</p> <p>Communicate your tasks and risks to those around you.</p>	M

Cuts/lacerations from contact with blade	Operator	H	<p>Never operate the saw with shorts on, always wear thick trousers and safety footwear. Do not walk around with saw running, if small adjustments in position are required hold saw by both the top handle and trigger grip with the blade facing downwards away from you. Never run with a saw.</p> <p>Starting of the saw must be as specified in the user manual. The saw must be placed on a hard level surface, one foot placed on the lower section of the trigger grip and one hand pressing down on the top grip. In one steady movement with the saw secured by your foot and hand pull the pull cord to start. Never hold the saw at waist height and push the saw away from you while pulling the pull cord. This can cause the saw to pivot and the blade to come in contact with your legs.</p>	
Contact with hazardous substances	Operatives	H	<p>During manual demolition ensure you use the correct tools for the tasks, never use power tools when removing asbestos products.</p> <p>Do not pierce or puncture containers.</p>	M
Excessive/nuisance dust	Operatives, workforce, public	H	<p>When carrying out cutting work, potentially dusty operations must be controlled with water mist sprays. Operative to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.</p>	M

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	<p>Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.</p> <p>Do not leave the saw idling. Start and stop the saw when required to conserve fuel.</p> <p>Training.</p>	M

### SAFETY EQUIPMENT

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E (SR 100)	X	Goggles (EN 166 B)	X	Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	X

## PROCEDURE

### CHECKS:

Equipment,

- It must be good working order with PUWER sheet completed.
- Free from damage.
- The right tool for the job.
- Full of the correct fuel and oil mix.
- The disc must be in date, free from cracks, oil and water staining.

Location,

- Good clear access and egress points.
- Ventilation.
- Plenty of light.
- No ground voids of fall/trip hazards.
- Other workers are aware of what you are doing and will not be put in danger and vice versa.

### ACCESS:

Know the easiest way to and from your work area and familiarise yourself with emergency routes. Do not walk to the work area with the saw running. Only start the saw when you have accessed the work area and are ready to start cutting.

### GENERAL OPERATION:

- Only use the tool for its intended purpose.
- Ensure the correct equipment is selected.
- Give way to pedestrians always
- NEVER use mobile phones whilst working.
- NEVER exceed your personal capacity.
- If in doubt, ask.
- Cut with your feet slightly apart, do not project sparks against your legs or body.
- Do not cut close to your feet.
- Do not hit a spinning blade into the work piece, place it gently against the piece and allow the weight of the saw to make the cut.
- At the end of your shift ensure all tools are put away.

### MAINTENANCE:

- Keep tools clean and tidy.
- Report any damage immediately and take out of use.
- Do not throw tools down onto the floor.
- Ensure all grips are in place.
- Do not tamper with the saw, return to the correct mechanic for regular maintenance and repairs.

## OTHER CONSIDERATION

Always consider other personnel especially those that may be hidden out of site.

Sparks generated from cutting steel can cause damage to glass, paintwork and plastic. Ensure sparks are not projected onto these items.





# Abrasive Wheels Setters

Presented by **Tim Whittle**

## Aims

- Provide information and practical instruction to delegates to comply with the requirements of the relevant legislation relating to the safe “use” of abrasive wheels on Petrol powered disc cutters, 9 & 5 in angle grinders.



## Objectives

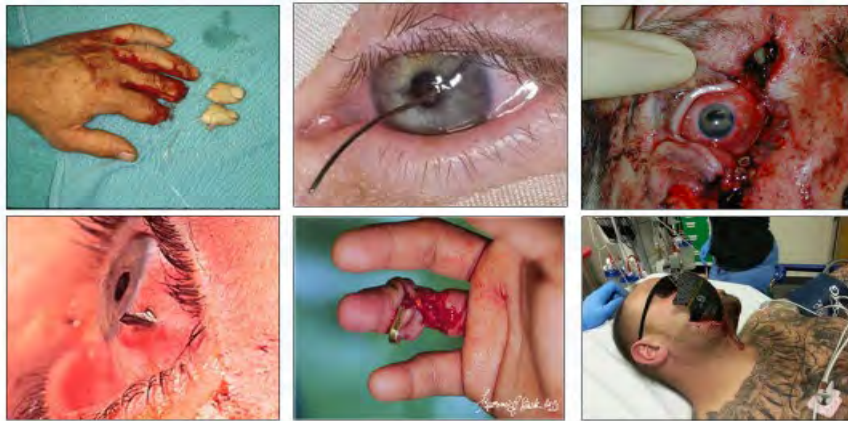
By the end of the session trainees will be able to:

- Identify abrasive wheel hazards
- Develop understanding of the EN12413 marking scheme
- Apply correct storage methods
- Select the appropriate wheels (discs)
- Inspect the wheels for damage
- Explain the functions of flanges

## Objectives

- Explain the need to select the correct RPM
- Correctly mount abrasive wheels
- Guards and adjustment
- Select and use suitable PPE
- Demonstrate an awareness of HS(G)17

To prevent this.....



## Health and Safety at Work Act 1974 EMPLOYEES DUTIES

### Section 7

#### Duty of the Employee

Every employee shall take *reasonable care* for the health and safety to *himself and others* who may be affected by his acts or omissions.

Every employee shall cooperate with his employer to enable him to carry out his lawful duties

## Health and Safety at Work Act 1974 EMPLOYERS DUTIES

So far as is reasonably practicable the EMPLOYER must provide:

- Safe plant, work equipment and systems of work
- Safe use of articles and substances
- Information, instruction, training and supervision
- Safe place of work
- Safe working environment

## Health and Safety at Work Act 1974 EMPLOYEES DUTIES

### SECTION 8

#### **Duty not to interfere**

No one shall *recklessly* interfere with or *misuse* anything provided in the interest of health, safety or welfare.

This duty extends to non employees also.

## Hazards when using abrasive wheels

- Flying particles
- Sources of ignition
- Dust
- Noise
- Vibration
- Imbalance
- Faulty parts
- Wheel abuse
- Improper mounting
- Inadequate guards
- Entanglement
- Ground conditions
- Insufficient power
- Improper storage
- Incorrect wheel
- Horse play

## Injury suffered due to various breaches of safety



### Operator Error?

Why?

- Guard removed
- Wrong wheel
- Over speeding
- Over sized wheel

Was he asked to do it?

Was he under pressure?

Was he trained?

Did he fit the wheel?

### Wheels you will require.

- Aluminium Oxide for cutting metal
- Silicon Carbide for cutting concrete
- Diamond Blade for cutting concrete/brick
  
- Many other discs are available, however these are the only wheels you will require during your day to day activities with Wring Group.

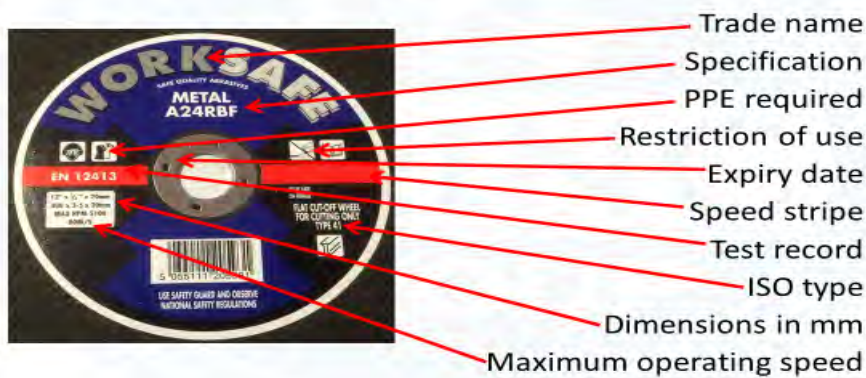
## Six Wheel Checks

- Correct wheel for task required
- In date
- It is not cracked or damaged
- It is not wet/has no oil/mud marks on it
- Has a speed the same or greater than the max rpm of the machine
- Has the correct bore size

### For Diamond Blades

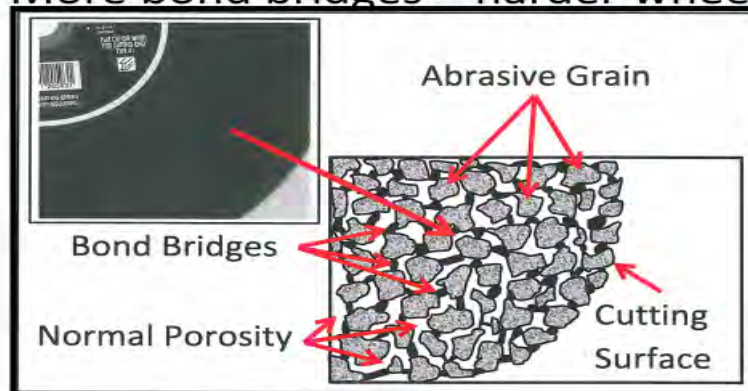
- The directional arrow is pointing the right way

## Abrasive wheel marking system



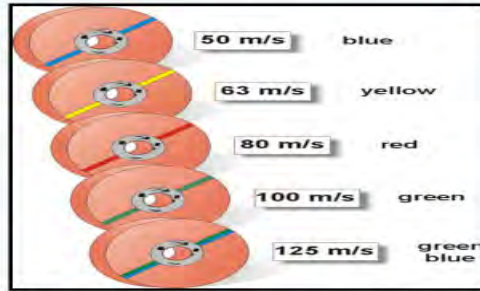
## Grade & Structure

More bond bridges = harder wheel



## Speed Stripes

These are marked on wheels rated at 50m/s and above



## International Marking System



Nature of Abrasive	Grain Size	Grade	Nature of Bond
A C	30 24	R R	BF BF
A-Aluminium Oxide C-Silicon Carbide Aluminium Oxide cuts Metal. Silicon Carbide cuts concrete/stone	Ranges from 8-600. The higher the number the finer the grain	Hardness of the wheel (A-Z) A = Softest Z = Hardest	There are a number of different bonds available, only BF is allowed on hand held Machines. <b>Resinoid Reinforced</b>
<p>ABRASIVE WHEEL MARKING SYSTEM</p> <p>THIS IS THE INTERNATIONAL MARKING SYSTEM FOR ALL WHEELS (DISCS)</p>			

## Matching The Wheel to The Machine



The speed marked on the wheel (disc) shown above must not be less than the max rpm of the machine. It can be the same rpm or a greater rpm.

For instance this wheels max rpm is 6650 and the machines max rpm is 4700

## Guards

It is a legal requirement that all machinery is suitably guarded

Can you identify all the guards on the following machines and how specific guards should be adjusted?

## Personal Protective Equipment (PPE)

It is important to wear the correct PPE

- Eye protection – Goggles not glasses to EN166 cat B
- Ear protection at the relevant rating to the machine and surrounding environment
- R.P.E correct filters depending on what and where you are cutting
- Suitable tight fitting gloves

## Points you must check

- You have selected the right wheel for the task required.
- The wheel is not damaged.
- The RPM of the wheel is not less than the RPM of the machine.
- The wheel is in date.
- The guards are in place and adjusted correctly.
- You are wearing the correct PPE.



## SAFE OPERATING PROCEDURE

FOR

Articulated Roller



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 033
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> Compaction of materials on site to create piling mats, hardstanding, tracks and hall roads			
<b>AUTHORISATION:</b> No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have this document along with relevant site-specific method statements and risk assessments communicated to them.  As part of your ongoing training and safe use of plant assessments you are obliged to read and sign the following safe operating procedures.  <b>YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			



## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public. Serious injury, broken bones, death	H	<p>Check machine tyres and ground stability, check for any voids seen or unseen. Only work from a solid level surface.</p> <p>Ensure when positioned and while in transit, the ground is stable with no voids/soft ground/drains below</p> <p>Know and understand safe working procedures of the individual piece of equipment and do not exceed it.</p> <p>Create safe working area and minimise authorised personnel access to the area to keep personnel away from the roller.</p> <p>Only reverse down a gradient DO NOT drive down a gradient or traverse a gradient sideways.</p>	M
Entrapment/crush in moving parts	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work areas are secure to prevent unauthorised persons approaching machine.</p> <p>Ensure all relevant guards are in place and secure.</p> <p>Communicate operations and movements with others who may be working near.</p> <p>Where working area is restricted ensure banks men are used to manage movements and operations.</p> <p>If using a banks man, they must only work from a safe location.</p> <p>Ensure the pivot point is open and sufficient room is available to access.</p> <p>Always switch off plant if personnel approach to communicate.</p>	M
Falls from height	Operator, workforce, public Serious injury, broken bones, death	H	<p>Wear seat belts at all times when operating the dumper.</p> <p style="text-align: center;"><b>ALWAYS APPLY THE PARKING BRAKE AND EXIT MACHINE USING THREE POINTS OF CONTACT AT ALL TIMES</b></p>	M
Slips, trips	Operator, workforce, public Serious injury, broken bones, death	H	<p>Any spillage of fluids from the machine must be cleaned up immediately.</p> <p>Check that when machine is stopped and parked/left for a period, the access route to and from the machine is clear of slip/trip hazards.</p>	M
Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	<p>Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.</p>	L
Collision with pedestrians/plant/buildings/structure	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work area is secure, effective communication with other workers nearby is essential.</p> <p>Where work area is restricted utilise banks man assistance.</p> <p>Ensure mirrors, cameras and beacons are fully operational.</p>	M
Equipment failure	Operator, workforce, public Serious injury, broken bones, death	M	<p>Follow maintenance regime, check inspections are in date prior to operation.</p> <p>Report any defects found immediately and do not use the item until repairs or replacement has been arranged.</p>	L
Contact with hazardous substances	Operator, Skin damage	M	<p>When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.</p> <p>High pressure hydraulic oil leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.</p>	L

Excessive/nuisance dust	Operator, workforce, public Respiratory system damage, eye injury	M	<b>DUST SUPPRESSION TO BE USED WHEN REQUIRED</b>  When carrying out compaction of materials during dry and windy conditions, ensure water mist sprays are used to prevent nuisance dusts developing  Ensure water delivery compartments are full and in use	L
Whole body vibration	Operator.  Back injury and injury / pain associated with whole body vibration.  Whole body vibration could exacerbate other conditions.	M	Follow all training provided for use of equipment. Ensure the machine is well maintained and seats are not damaged. Ensure your seat is correctly adjusted. Minimise use of vibrating function, only use when necessary ensuring vibration function is disengaged when not needed. Ensure regular breaks are taken, get out of the machine in a safe area and move around.  If you have any existing / ongoing back issues discuss reduced workload with your manager.  Should you experience any discomfort or pain during works, stop and discuss with your manager and doctor before continuing.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	M
Vibration	H	GROUND	Localised public and workforce, flora, fauna, aquatic life	Ground assessment relevant to location must be carried out. Working on slabs or soft ground can produce high levels of vibration transference, slip trenching or location of operation must be used.	M
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M
Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves		Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E SR 100 (task specific)		Goggles EN166B (task specific)		Glasses (EN 166 F)	X
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	

## PROCEDURE

### CHECKS:

Check you have the correct training, information, instruction and supervision.

Check that the relevant inspections (PDI) (PUWER) are in place, in date and for the piece of equipment you have.

Check tyres (if applicable), breaks, lights and beacons as well as standard engine checks.

Check ground conditions are acceptable.

Check you understand what is required of you for the task at hand.

Check you have communicated your intentions to other relevant persons.

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

### TRAVELLING:

Stop and remove all objects in your path where safe to do so, never drive over them.

Wear the seat belt and ensure beacons are working.

Always travel at a speed that is safe, observing the ground surface conditions.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Never approach any pedestrian or allow them to approach you. Stop work if they do.

Never drive blindly if items obscure your vision travel in reverse.

When loading for transportation, never drive onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the roller, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched off, the key is removed.

## **GENERAL OPERATION:**

Only use the roller for its intended purpose.

NEVER use mobile phones whilst operating equipment.

### **Prior to Commencing Roller Operations**

Ensure the following safety Control Measures are adhered to:

The Roller is to be inspected to ensure that:

- All machine guards are in place & secure.
- All controls are in place & fully operational.
- All emergency stop buttons are operational & accessible.
- All defects identified above are reported to the workshop for rectification through the defect reporting process and recorded on the defect register. Defects which may affect the safe operation of the roller are to be reported immediately. The Site Supervisor is to be advised accordingly.

### **During Operation**

- Follow all training and specific RAMS for the project
- Ensure the roller is not stationary when vibrator is in operation
- Do not traverse gradients sideways
- Do not attempt to drive over obstacles

### **During Maintenance Tasks**

Ensure the following safety Control Measures are adhered to:

- The Roller & associated plant must be stopped & isolated (Lock-Off), all associated Operatives must be informed accordingly and signs prohibiting starting of the roller displayed on relevant controls.
- All machine guards removed for maintenance purposes are replaced & secured prior to starting the Roller.

**Should there be any malfunction or defect with the roller, the machine MUST be stopped, isolated & the problem reported to the workshop for rectification through the defect reporting process and recorded on the defect register.**

**Defects which may affect the safe operation of the roller are to be reported immediately. The Site Supervisor/Manager is to be advised accordingly.**

## **MAINTENANCE:**

Keep machine clean and tidy.

Ensure engine covers and guards are in place, if removed replace them prior to operations re-commencing.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

Never allow any person to climb underneath the roller for ANY REASON when it is running

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels. Ensure caps are cool prior to removal

NEVER use your hand when checking for leaks ALWAYS use another item i.e. Piece of cardboard.





**SAFE OPERATING PROCEDURE  
FOR**

Pressure Washer



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 035
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> Dust control and cleaning			
<b>AUTHORISATION:</b> No person is permitted or authorised to operate this piece of equipment unless they are deemed competent. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have this document along with relevant site-specific method statements and risk assessments communicated to them. As part of your ongoing training and safe use of plant assessments you are obliged to read and sign the following safe operating procedures. <b>YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

RISK ASSESSMENT				
HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Slips, trips	Operator, workforce, public Serious injury, broken bones, death	H	Any spillage of fluids from the machine must be cleaned up immediately.  Check that when the is stopped and left for a period, the access route to and from the machine is clear of slip/trip hazards.	M
Manual handling (Maintenance purposes)	Operator, workforce, Serious injury, broken bones, musculoskeletal injury	H	Ensure lifting operations follow manual handling training, use safe principals. Heavy items must be lifted by mechanical aids or utilising tandem lifting techniques.  Use the correct tools for the project at hand.	M
Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.	L
Contact with hazardous substances	Operator, Skin damage	M	When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.  High pressure leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.	L
Exposure to hand arm vibration through lance	Operator Vibration white finger and other associated issues	H	Short duration use, Ensure equipment is well maintained and in good condition. Ensure pump and flow rates are working as vibration can occur with reduced flow rates	M
Injury to eyes from stones dirt and other material	Operator Eye injury	H	Never direct the spray towards persons on site.  Wear impact rated eye protection in the form of goggles	M

ENVIRONMENTAL ASSESSMENT					
Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	M
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repared.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

### SAFETY EQUIPMENT

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves		Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E SR 100 (task specific)		Goggles EN166B (task specific)	X	Glasses (EN 166 F)	
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	

### PROCEDURE

#### CHECKS:

- Check you have the correct training, information, instruction and supervision.
- Check that the relevant inspection is in place, in date and for the piece of equipment you have.
- Check tyres, breaks, as well as standard engine checks.
- Check ground conditions are acceptable.
- Check you understand what is required of you for the task at hand.
- Check you have communicated your intentions to other relevant persons.

#### ACCESS:

Place the pressure washer in a suitable safe location. Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** Keep the machine clean and tidy.

#### TRAVELLING:

- When moving the pressure washer using a vehicle or dumper, stop and remove all objects in your path where safe to do so, never drive over them.
- Wear the seat belt and ensure beacons are working on the item being used.
- Always travel at a speed that is safe, observing the ground surface conditions.
- Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.
- Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).
- Never approach any pedestrian or allow them to approach you. Stop work if they do.



## **GENERAL OPERATION:**

Only use the pressure washer for its intended purpose.  
NEVER use mobile phones whilst operating equipment.

### **Prior to Commencing Pressure Washer Operations**

Ensure the following safety Control Measures are adhered to:

The Pressure washer is to be inspected to ensure that:

- All controls are in place & fully operational.
- All emergency stop buttons are operational & accessible.
- Communicate operations with others.
- All defects identified are reported to the workshop for rectification through the defect reporting process and recorded on the defect register.
- Defects which may affect the safe operation of the pressure washer are to be reported immediately. The Site Supervisor is to be advised accordingly.
- Ensure water tank is full
- Ensure correct and sufficient fuel for the task is available
- Check wash off area when cleaning oily or greasy items from plant that the correct catchment is available to deal with the COSHH items (DO NOT WASH THIS MATERIAL DOWN LAND DRAINS OR INTO WATER WAYS)

### **Commencing Pressure Washer Operations**

- Ensure pressure washer is correctly placed
- Don PPE
- Start machine following the correct starting procedures
- Direct spray away from yourself
- Do not spray towards other persons
- Take care when cleaning painted surfaces or areas with logos / screen printing as jet may remove items
- Do not use pressure washer to wash clothes or foot-wear off
- Consider run off from work area

## **MAINTENANCE:**

Keep machine clean and tidy.

Ensure engine covers and guards are in place, if removed replace them prior to operations re-commencing.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels.

Ensure caps are cool prior to removal

NEVER use your hand when checking for leaks ALWAYS use another item i.e. Piece of cardboard.

## **OTHER CONSIDERATION**

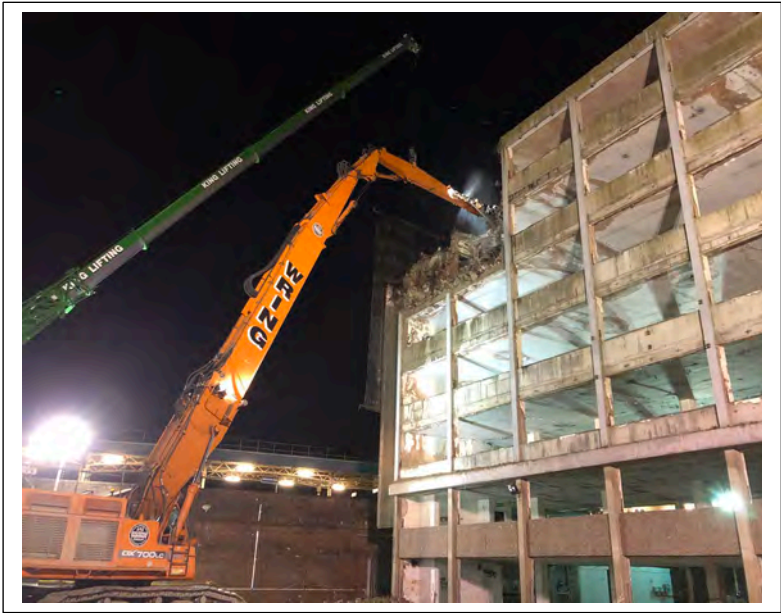
Always consider other plant working around you and personnel especially those that may be hidden out of site.





**SAFE OPERATING PROCEDURE  
FOR**

High Reach Demolition



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 001
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE/IAN BARKER
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			D WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

**ACTIVITY:**  
 The Safe Use of a 360° High Reach Demolition spec tracked excavator,  
 By definition the term “Use” includes, Pre-use inspection, Operating, (un) loading procedures and maintenance. Excavating of material, loading of materials with buckets or grapples, shearing steels, pulverising concrete, using hydraulic hammer attachments to break concrete, general demolition of structures.

**AUTHORISATION:**  
 No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public	H	<p>Information, instruction and training.</p> <p>Ensure work area is secure and well segregated. Check ground conditions prior to accessing with excavator. Establish the possibility of floor voids and soft ground. When working on concrete reinforced floors ensure correct floor loadings are suitable for weight of plant being used or that appropriate prop work has been installed. Do not access floors with machinery unless instructed by management. Do not tract alongside open trenches or voids, keep at least the depth of the trench/void back from the edge. When accessing stockpiles of material, ensure stockpile is stable and that access ramps are suitably wide and or a suitable gradient.</p>	M
Entrapment/crush in moving parts	Workforce	H	<p>Information, instruction and training.</p> <p>Ensure workforce are clear of the machinery when in operation, utilise movement cameras and mirrors when positioning machinery. Do not track backwards blind. Ensure machinery is switched off and immobilised before persons approach to talk (i.e. stand on track to discuss things) Before operating hydraulic attachments all persons should be clear of moving parts.</p>	M
Falls from height	Operator, maintenance	H	<p>Information, instruction and training.</p> <p>When accessing machinery to commence operation or exiting the machine following operation, always ensure you are facing the machine and have three points of contact at all times. Never jump from the machine or jump and while holding the grab rail. When maintenance is being carried out ensure anti-slip coatings around the engine access panels are clean and in good order. Never work with your back to the open edge.</p>	M
Slips, trips	Operator	M	<p>Information, instruction and training.</p> <p>Park machinery in a suitable and safe area where possible away from uneven, soft/wet/slippy ground. Ensure access to the machinery is clear and trip/slip hazard free. Take care when exiting the machinery when working on soft/muddy/clay/chalk ground as tracks can become slippy.</p>	L
Manual handling	Operator	M	<p>Information, instruction and training.</p> <p>When greasing machinery, carrying out maintenance, changing attachments, cleaning machinery ensure your work area and transit routes are clear and free of obstacles. Make sure the correct PPE is worn and suitable gloves are worn. When changing attachments and hydraulic hoses wear gloves with grip to prevent sliding or slipping which can cause musculoskeletal injuries. If sledge hammers or pry bars are to be used check your footing first, do not over stretch, swing hammers using knees, hips and shoulders keeping the spine in line and straight. When using a pry bar check the pivot point being used to ensure bar cannot slip off.</p>	L
Fire/explosion/ electrocution/electrical explosion	Operator, workforce	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with underground or overhead live services. Ensure all services have been terminated and certified dead prior to works commencing. When excavating C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not excavate within 1 meter of a live service with an excavator/ machinery. When working near overhead lines follow BS 6187 and HSE guidance. If you see and sparks or smell gas, stop immediately and isolate machinery, warn others and exit the area.</p>	M

Collision with pedestrians/plant/buildings/structure	Workforce, visitors, public	H	<p>Information, instruction and training.</p> <p>Check that work areas are segregated sufficiently and where applicable physical separation barriers are in place. Pedestrian and plant work areas must be separated. Inductions and tool box talks are to be used to ensure safety message regarding separation of plant and machinery is conveyed to all persons. Ensure safe working distances within the 'swing area' of plant are complied with (See BS 6187 and HSE Guidance). As part of pre-start checks mirrors and cameras must be cleaned and working correctly. If workforce approach from the blind side of machinery, stop and advise firstly the individual of this and then the site supervisor/manager.</p>	M
Equipment failure	Workforce, public	M	<p>Information, instruction and training.</p> <p>Prestart checks must be carried out on equipment prior to use. Ensure an in-date inspection certificate is available for the machinery. Fixing bolts, lock pins, hydraulic fittings must be inspected and regularly serviced/maintained. Defect logs must be completed, and defects reported immediately. Once defects have been identified equipment and machinery must not be used until the defect is corrected. Workforce not to work under raised boom/attachment of machinery. When loading lorries and crusher the boom must not be swung over the cab of lorries or over the operator of the crusher. When working near public area, boom of the machine is not to be swung outside the working area over public area unless public area has been cleared and controlled by bank men. Only use attachments for what they were designed for.</p>	L
Falling/flying objects	Workforce, public	H	<p>Information, instruction and training.</p> <p>At all times works must be undertaken to prevent flying objects. Create secure drop and exclusion zones to control works and areas. When demolishing steel framed structures utilise shear attachments or hot cut to prevent over stressing bolt/weld fixing. Do not use hammer attachments at high level unless screening is in place. Carefully disassemble structures to prevent stress on other materials within the structure. When carrying out demolition sequences ensure a designated drop zone is created and not entered by machinery or personnel. Ensure structures are not 'undercut' in a way which will endanger the machinery or personnel. At the end of each shift or section ensure all overhanging or loose items are removed. During shearing operations of rebar type materials where possible cut with the back of the jaw rather than the tip of the beak to prevent projection of rebar shards. When excavating, clean edges of trenches to remove loose items. During loading of skips, crusher units and lorries work area must be clear with restricted access to personnel. Care must be taken when loading skips with long timber that when compacting the load timber is not projected from the skip. Ease the load down rather than ramming. This list is not exhaustive, care must be taken during all operations to prevent flying/falling debris.</p> <p>When loading all personnel must be in a safe area away from the loading operations, for RO-RO skips, driver can remain in cab, for steel bulker wagons driver must move away from the loading area to a safe area as designated by the site supervisor.</p>	M
Contact with hazardous substances	Operator	H	<p>Information, instruction and training.</p> <p>During mechanical demolition of asbestos roofing sheets ('balling in'), keep the cab door shut, ensure sufficient water mist sprays are being used. Reduce breakage of materials where possible. Do not tract over asbestos sheets on the ground. Ensure materials are wetted prior to loading debris into skips. Do not exit machinery during or directly after the collapsing of asbestos materials, track away from the work area and ensure the machinery has been washed down adequately. When changing attachments ensure correct gloves are worn to prevent contact with oils whether hot or cold.</p>	M

Excessive/nuisance noise	Operator, workforce, visitors, public	M	Information, instruction and training. Maintenance regime to ensure any defects within the noise reducing systems of machinery. Utilise hydraulic pulverisers/crackers/munchers where possible to minimise hydraulic hammer attachments. Where possible limit hammer usage and consider work area and deflection of noise (i.e the noise of a machine will sound louder within a built-up area as opposed to open ground) Consider working hours in built up populated areas. Where noisy operations are to be undertake ensure correct ear protection is used and periodic breaks in noisy activities. If working near public areas follow specific risk assessments and ensure controls are in place (possibly acoustic screening). Repetitive low volume noise can be a nuisance, where possible alternate works to minimise.	L
Excessive/nuisance dust	Operator, workforce, public	H	Information, instruction and training. Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	M
Vibration	Operator	M	Information, instruction and training. Working on concrete slabs with steel tracked excavators and crushing units can create high levels of full body vibration, limit time exposure and where possible create a 'mat' of loose/crushed material to reduce vibration.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Exhaust mufflers, limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	Air	Localised public and workforce, flora, fauna,	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) utilise exhaust CATs to reduce fumes	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	M	Air	Localised public and workforce, flora, fauna, aquatic life	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) Select the right attachments to ensure energy usage is minimised.	L

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	X
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	

## PROCEDURE

### CHECKS:

Regardless of the size of the equipment it must have the following as standard,

Clearly defined Operating controls.

Flashing orange beacon located on the cab.

Reversing camera or mirrors.

Always ensure pre-use checks are carried out and recorded on the checklist provided. Report all defects to your supervisor.

Ensure you have all the relevant PPE on (as above) and check that it is in good working condition. Obtain replacements from your supervisor/Manager immediately if required.

If prescription or condition requires operative to wear glasses for driving or hearing aids, then they MUST be worn and kept in good working order.

The equipment is only to be used on firm level ground.

The Safe Working Limit is NOT to be exceeded

The excavator is not to be used in the vicinity of Overhead power lines (unless otherwise covered by a detailed risk assessment and method detail)

Check booms for cracks / distortion daily or following any unforeseen event during operation.

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment.

**ALWAYS** Keep your machine clean and tidy.

### High Reach Demo Rig: Delivery and set up

The machine will be delivered in two sections on two low loaders.

1. The base unit (machine)
2. Telescopic boom (arm)

The base unit (machine) will be brought to site and unloaded under strict control of banksmen and positioned by the operator to suit his needs.

A mobile crane will now be positioned in a manner to enable it to unload the remaining low loader and place the loads where the machine operator dictates.

Once in place and assembled the operator will position the machine on the mat and “offer it to the structure” e.g. the boom will be raised and extended to check the reach and working radius.

## TRAVELLING:

Stop and remove all objects in your path where safe to do so, never drive over them.

Always travel at a speed that is safe, observing the type of load and the ground surface conditions. All sites have a maximum speed limit of 5 mph or walking pace if there is no speedometer.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Always ensure that you stay within the confines of the operating cab during operations

Never approach any pedestrian or allow them to approach you closer than two metres. Stop work if they do.

Never drive directly up to anyone, your brakes may fail.

Never drive blindly if a load obscures your vision travel in reverse.

Never drive onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the excavator, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched off, the key is removed.

## GENERAL OPERATION:

Only use the excavator for its intended purpose.

Ensure the correct gear is selected for the required direction of travel.

Give way to pedestrians at all times

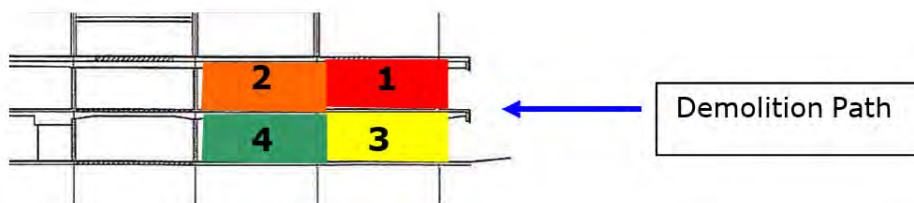
NEVER use mobile phones whilst operating or driving the excavator. Hands free kits are **not** acceptable. Vehicle must be parked before using the phone.

NEVER exceed the lifting capacity of the equipment

## GENERAL DEMOLITION (IN ACCORDANCE WITH BS 6187) HIGH REACH

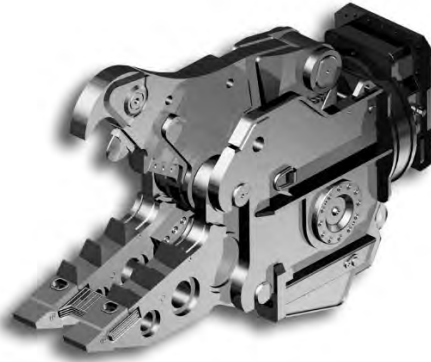
High Reach demolition rigs are the key to the safe demolition of tall buildings and have now greatly reduced the need for other forms of demolition e.g. explosives/controlled collapse. They are however a specialist tool and must follow strict rules to operate safely and effectively.

Whilst demolishing a building it is essential to keep the machine carriage away from the immediate demolition area, typically the machine will work at a ratio of 2:1 i.e. if the working height is 30m the machine will be 15m away from the base of the building. In addition, it is normal practice to ‘step’ the building profile so that demolition materials fall only 1 to 2 stories at a time thus reducing the risk of damage from falling debris while also allowing any dust emissions to be controlled.



Though demolition rigs have a good working height, the operative must be careful not to stress the arm of the machine, thus a series of specialist tools are used to complete the task without requiring large pushing and pulling forces. Typical long reach attachments:





A banksman will be positioned to assist the long reach operator and will provide guidance for any blind spots. Communication will be via 2-way radios to stop the machine/works if required.

At the start of each and at various points during the shift the site supervisor and machine operator will assess weather conditions

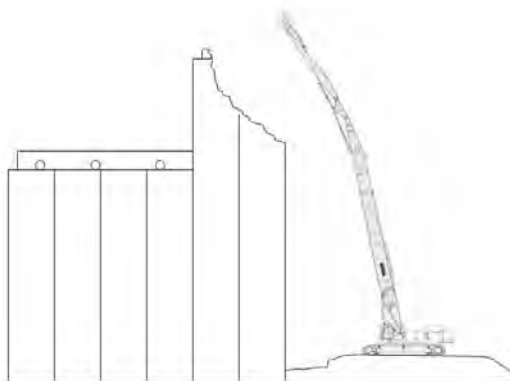
Positioned on the mat the machine will raise the boom raising the attachment to working height.

Using the attachment "cracker" the machine will commence demolition.

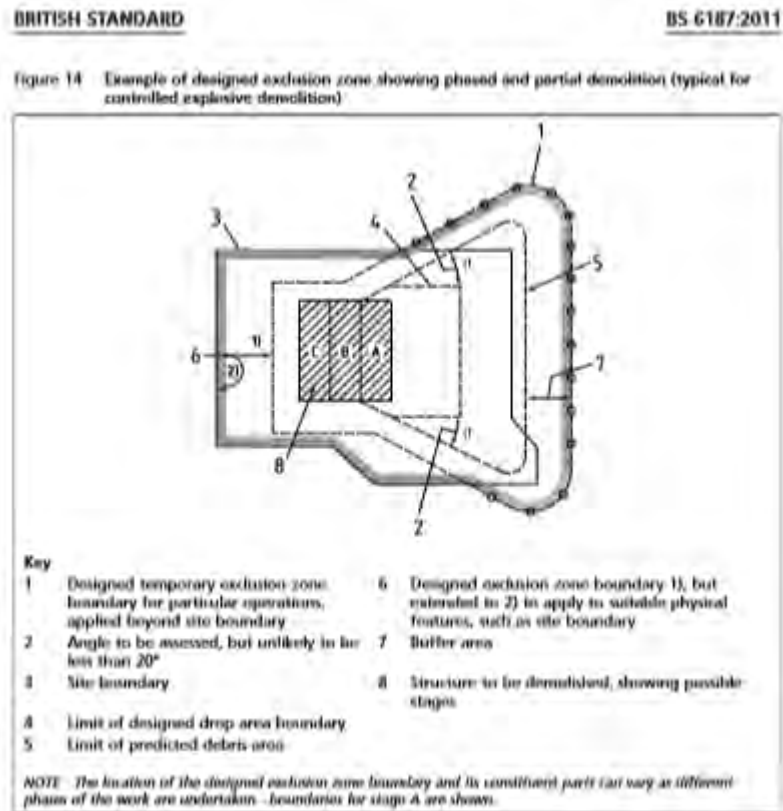
The façade and side walling will be reduced in height by the attachment working top down fracturing / breaking the concrete / steel from its position allowing it to fall to ground.

As the walling is reduced the roof structure will be exposed which will be broken out in a similar manner however working toward the rear wall.

Now a large section of the front or façade has been reduced and roof section mostly removed the machine can reach in and break out the floor landings and the rear walls which will be removed as the front.



During any demolition process exclusion and drop zone principals must be adhered to



During certain operations alterations may be required to the exclusion and drop zones. This will be planned for and covered in site-based RAMs documents.

## LOADING OF BINS / WAGONS:

Ensure all other personnel are in a safe area away from the skip/lorry.

If the load needs to be inspected at any time during the loading process, the machine must stop operation and the driver/banksman can then inspect the load. Once the inspection is complete the driver/banksman must move away from the skip/lorry to a safe area.

Safe area is as follows;

Driver of RO-RO skip lorry – Cab of the lorry or safe area as designated by the site supervisor

Driver of steel bulker lorry – Safe area as designated by the site supervisor, NOT THE CAB OF THE LORRY

Banksmen/other operational personnel – Safe area as designated by the site supervisor

## STOPPING/PARKING:

When stopping for any reason, stop, ensure tracks are aligned with vehicle, switch off the engine this applies even if approached by a pedestrian before communicating with them.

End of working day security: Do NOT leave the keys in the excavator and allow the opportunity for unauthorised use

## **MAINTENANCE:**

Keep machine clean and tidy.

Maintain anti-slip protection.

Ensure engine covers are in place.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

Never allow any person to climb underneath the excavator for ANY REASON

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels.

Ensure caps are cool prior to removal

Remember take the excavator to the fuel not the other way around

NEVER use your hand when checking for leaks ALWAYS use another item i.e. Piece of cardboard.

Check the arm at the end of every shift for cracks / distortion

Check the hydraulic hoses at the end of the shift for damage

Check hose couplers at the end of the shift for damage

## **OTHER CONSIDERATION**

### **GROUND VOIDS, OVERHEAD CABLES**

Always consider other plant working around you and personnel especially those that may be hidden out of site.

## **EMERGENCY**

In the event of an emergency/incident contact your Site Manager/Supervisor and inform them of the situation IMMEDIATELY.

Ensure the equipment is isolated and secure

In the event of a catastrophic failure contact the emergency services immediately.





## SAFE OPERATING PROCEDURE

### FOR

Excavators / Demolition rigs



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 002
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			D WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

#### ACTIVITY:

The Safe Use of a 360° tracked demolition rig / excavator,

By definition the term "Use" includes, Pre-use inspection, Operating, (un) loading procedures and maintenance. Excavating of material, loading of materials with buckets or grapples, shearing steels, pulverising concrete, using hydraulic hammer attachments to break concrete/rock, general demolition of structures, loading and clearing from mobile crusher.

#### AUTHORISATION:

No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

**READ IN CONJUNCTION WITH SITE SPECIFIC RAMS AND OTHER SITE SPECIFIC DOCUMENTATION.**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public	H	<p>Information, instruction and training.</p> <p>Ensure work area is secure and well segregated. Check ground conditions prior to accessing with excavator. Establish the possibility of floor voids and soft ground. When working on concrete reinforced floors ensure correct floor loadings are suitable for weight of plant being used or that appropriate prop work has been installed. Do not access floors with machinery unless instructed by management. Do not tract alongside open trenches or voids, keep at least the depth of the trench/void back from the edge. When accessing stockpiles of material, ensure stockpile is stable and that access ramps are suitably wide and or a suitable gradient.</p>	M
Entrapment/crush in moving parts	Workforce	H	<p>Information, instruction and training.</p> <p>Ensure workforce are clear of the machinery when in operation, utilise movement cameras and mirrors when positioning machinery. Do not track backwards blind. Ensure machinery is switched off and immobilised before persons approach to talk (i.e. stand on track to discuss things) Before operating hydraulic attachments all persons should be clear of moving parts.</p>	M
Falls from height	Operator, maintenance	H	<p>Information, instruction and training.</p> <p>When accessing machinery to commence operation or exiting the machine following operation, always ensure you are facing the machine and have three points of contact at all times. Never jump from the machine or jump and while holding the grab rail. When maintenance is being carried out ensure anti-slip coatings around the engine access panels are clean and in good order. Never work with your back to the open edge.</p>	M
Slips, trips	Operator	M	<p>Information, instruction and training.</p> <p>Park machinery in a suitable and safe area where possible away from uneven, soft/wet/slippery ground. Ensure access to the machinery is clear and trip/slip hazard free. Take care when exiting the machinery when working on soft/muddy/clay/chalk ground as tracks can become slippery.</p>	L
Manual handling	Operator	M	<p>Information, instruction and training.</p> <p>When greasing machinery, carrying out maintenance, changing attachments, cleaning machinery ensure your work area and transit routes are clear and free of obstacles. Make sure the correct PPE is worn and suitable gloves are worn. When changing attachments and hydraulic hoses wear gloves with grip to prevent sliding or slipping which can cause musculoskeletal injuries. If sledge hammers or pry bars are to be used check your footing first, do not over stretch, swing hammers using knees, hips and shoulders keeping the spine in line and straight. When using a pry bar check the pivot point being used to ensure bar cannot slip off.</p>	L
Fire/explosion/ electrocution/electrical explosion	Operator, workforce	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with underground or overhead live services. Ensure all services have been terminated and certified dead prior to works commencing. When excavating C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not excavate within 1 meter of a live service with an excavator/ machinery. When working near overhead lines follow BS 6187 and HSE guidance. If you see and sparks or smell gas, stop immediately and isolate machinery, warn others and exit the area.</p>	M

Collision with pedestrians/plant/buildings/structure	Workforce, visitors, public	H	<p>Information, instruction and training.</p> <p>Check that work areas are segregated sufficiently and where applicable physical separation barriers are in place. Pedestrian and plant work areas must be separated. Inductions and tool box talks are to be used to ensure safety message regarding separation of plant and machinery is conveyed to all persons. Ensure safe working distances within the 'swing area' of plant are complied with (See BS 6187 and HSE Guidance). As part of pre-start checks mirrors and cameras must be cleaned and working correctly. If workforce approach from the blind side of machinery, stop and advise firstly the individual of this and then the site supervisor/manager.</p>	M
Equipment failure	Workforce, public	M	<p>Information, instruction and training.</p> <p>Prestart checks must be carried out on equipment prior to use. Ensure an in-date inspection certificate is available for the machinery. Fixing bolts, lock pins, hydraulic fittings must be inspected and regularly serviced/maintained. Defect logs must be completed, and defects reported immediately. Once defects have been identified equipment and machinery must not be used until the defect is corrected. Workforce not to work under raised boom/attachment of machinery. When loading lorries and crusher the boom must not be swung over the cab of lorries or over the operator of the crusher. When working near public area, boom of the machine is not to be swung outside the working area over public area unless public area has been cleared and controlled by bank men. Only use attachments for what they were designed for.</p>	L
Falling/flying objects	Workforce, public	H	<p>Information, instruction and training.</p> <p>At all times works must be undertaken to prevent flying objects. Create secure drop and exclusion zones to control works and areas. When demolishing steel framed structures utilise shear attachments or hot cut to prevent over stressing bolt/weld fixing. Do not use hammer attachments at high level unless screening is in place. Carefully disassemble structures to prevent stress on other materials within the structure. When carrying out demolition sequences ensure a designated drop zone is created and not entered by machinery or personnel. Ensure structures are not 'undercut' in a way which will endanger the machinery or personnel. At the end of each shift or section ensure all overhanging or loose items are removed. During shearing operations of rebar type materials where possible cut with the back of the jaw rather than the tip of the beak to prevent projection of rebar shards. When excavating, clean edges of trenches to remove loose items. During loading of skips, crusher units and lorries work area must be clear with restricted access to personnel. Care must be taken when loading skips with long timber that when compacting the load timber is not projected from the skip. Ease the load down rather than ramming. This list is not exhaustive, care must be taken during all operations to prevent flying/falling debris.</p>	M
Contact with hazardous substances	Operator	H	<p>Information, instruction and training.</p> <p>During mechanical demolition of asbestos roofing sheets ('balling in'), keep the cab door shut, ensure sufficient water mist sprays are being used. Reduce breakage of materials where possible. Do not tract over asbestos sheets on the ground. Ensure materials are wetted prior to loading debris into skips. Do not exit machinery during or directly after the collapsing of asbestos materials, track away from the work area and ensure the machinery has been washed down adequately. When changing attachments ensure correct gloves are worn to prevent contact with oils whether hot or cold.</p>	M

Excessive/nuisance noise	Operator, workforce, visitors, public	M	Information, instruction and training. Maintenance regime to ensure any defects within the noise reducing systems of machinery. Utilise hydraulic pulverisers/crackers/munchers where possible to minimise hydraulic hammer attachments. Where possible limit hammer usage and consider work area and deflection of noise (i.e the noise of a machine will sound louder within a built-up area as opposed to open ground) Consider working hours in built up populated areas. Where noisy operations are to be undertake ensure correct ear protection is used and periodic breaks in noisy activities. If working near public areas follow specific risk assessments and ensure controls are in place (possibly acoustic screening). Repetitive low volume noise can be a nuisance, where possible alternate works to minimise.	L
Excessive/nuisance dust	Operator, workforce, public	H	Information, instruction and training. Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	M
Vibration	Operator	M	Information, instruction and training. Working on concrete slabs with steel tracked excavators and crushing units can create high levels of full body vibration, limit time exposure and where possible create a 'mat' of loose/crushed material to reduce vibration.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Exhaust mufflers, limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	Air	Localised public and workforce, flora, fauna,	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) utilise exhaust CATs to reduce fumes	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	M	Air	Localised public and workforce, flora, fauna, aquatic life	Maintenance regime for machinery to ensure efficiency of engines. Select correct working revs to reduce excessive fuel usage, turn off machinery when not in use (prevent over idling) Select the right attachments to ensure energy usage is minimised.	L



SAFETY EQUIPMENT					
Mandatory X			Task Specific X		
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	X
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	

## PROCEDURE

**To be read in conjunction with site specific RAMs and relevant site information**

**Operators to follow all training, RAMs and S.O.Ps**

### CHECKS:

Regardless of the size of the equipment it must have the following as standard,

Clearly defined Operating controls.

Flashing orange beacon located on the cab and that it is working.

Reversing camera or mirrors are clear and in good working order.

Always ensure pre-use checks are carried out and recorded on the checklist provided. Report all defects to your supervisor.

Ensure you have all the relevant PPE on (as above) and check that it is in good working condition. Obtain replacements from your supervisor/Manager immediately if required.

If prescription or condition requires operative to wear glasses for driving or hearing aids, then they MUST be worn and kept in good working order.

The equipment must only to be used on firm ground.

Check for voids, trenches and changing ground conditions due to weather or site conditions.

The working limits of the demo rig / excavator / attachment is NOT to be exceeded.

Check the equipment being used and ensure up to date certificates are in place.

The demo rig / excavator is not to be used in the vicinity of overhead power lines.

Operators to check exclusion zones are in place and secure. **Refer to NFDC Exclusion Zones attached.**

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

**RESTRICT ACCESS** when carrying out demolition works and loading of skips / bins / lorries, ensure access is restricted and no operatives can approach the machine / area. Communicate your operations with others.

## **TRAVELLING:**

Stop and remove all objects in your path where safe to do so, never track over them.

Before moving always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Always ensure that you stay within the confines of the operating cab during operations

Never approach any pedestrian or allow them to approach you closer than two metres. Stop work if they do.

Never track blindly if the bucket or attachment obscures your vision.

Never track onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the demolition rig / excavator, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched of, the key is removed.

## **GENERAL OPERATION:**

**Follow all training undertaken through CPCS.**

**Ensure the operations to be undertaken have been communicated with the workforce and the work area is secure.**

Only use the demolition rig / excavator / attachment for its intended purpose. (See attachment chart below)

Ensure the direction facing of tracks is known so that direction of travel when starting a move is known. This can be ascertained by looking at the tracks to see if the idler or sprocket is visible.

Always give way to pedestrians.

NEVER use mobile phones whilst operating or tracking the excavator. Hands free kits are **not** acceptable. Vehicle must be parked before using the phone.

NEVER exceed the lifting capacity of the equipment.

**Before carrying out any operation, check the ground conditions, ensure that the ground is suitable for the task to be undertaken.**

Ensure a suitable exclusion zone is created around the working area following NFDC guidance and site-specific RAMs and information.

Ensure that during any loading / demolition activities no persons are in the working area. **Refer to NFDC Exclusion Zones attached.**

Always 'test' the load you are lifting with hydraulic attachments before undertaking loading operations and check the release speed of attachment jaws to ensure loads can be released easily.

## **STOPPING/PARKING:**

When stopping for any reason, stop, ensure tracks are aligned with vehicle, switch off the engine this applies even if approached by a pedestrian before communicating with them.

End of working day security: Do NOT leave the keys in the demolition rig / excavator and allow the opportunity for unauthorised use.

## **MAINTENANCE:**

Keep machine clean and tidy.

Maintain anti-slip protection.

Ensure engine covers are in place.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Never allow any person to climb underneath the demolition rig / excavator for ANY REASON

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels. Ensure caps are cool prior to removal

**ENSURE ATTACHMENTS ARE CHECKED UNDER POWER AND DETAILS RECORDED.**

**ATTACHMENT CHART**



**Digging / Bulking Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For digging. Soil / hardcore material loading processing.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Riddle / Griddle Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Size depending on base machine size.
- For removing smaller materials / material cleaning / processing.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Grading Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes depending on base machine.
- For grading over ground, road construction, cleaning of slabs / roads, removing carpets floor coverings from concrete / screed.

Caution with this attachment, catching a fixed object such as a station pad or bolt can twist the bucket and cause a high velocity projected item such as a bolt head.



**Narrow / 2' Bucket**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For excavating trenches / removing large concrete footings / slabs.

Excessive leverage with this attachment can break teeth shanks and rupture welded seams.



**Ripping Tooth**

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For ripping concrete / hard ground.
- Can be used to rip steel tanks along welds.
- Can be used for careful demolition of walls where space is restricted.



**Fixed Finger Grapple / Grab**

- Fitted to the plant via direct pins or tested quick hitch system and 'lazy arm' brace.
- Various sizes and construction, light weight – heavy weight depending on required task.
- For demolition where pulling is required.
- For loading of awkward / heavy items such as steel or logs

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



**Hydraulic Hammer**

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- For breaking concrete and hard materials.

Caution with this attachment as it can produce high velocity projected materials and can produce high volume noise and vibration. Monitor. Refer to NFDC Exclusion Zones attached.

Levering with this attachment can break the point easily.



### Hydraulic Rotating Selector Grapple / Grab

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- Various sizes and construction, light weight – heavy weight depending on required task and base machine.
- For light weight demolition such as timber roof structures walls where material separation is required.
- For material handing / separation / processing / loading.

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear especially when loading of bins / skips. Refer to NFDC Exclusion Zones attached.



### Hydraulic Rotating Demolition Shear

- Fitted to the plant via direct pins either boom or dipper mounted or tested quick hitch system.
- Various sizes and construction depending on task and size base machine.
- For demolition of steel structures.
- For cutting of steel materials such as RSJ's. Size of cut depending on size of shear and base machine.

Caution with this attachment as it can leave sharp edges and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Hydraulic Rotating Demolition Multi Processor.

#### (Cracker, Pulveriser, demolition Shear)

- Fitted to the plant via direct pins or tested quick hitch system.
- Various sizes and construction depending on task and size base machine.
- For demolition of concrete structures.
- For cutting / pulverising of reinforced concrete materials such as beams and floor slabs. Size of cut depending on size of shear and base machine.
- Jaws are interchangeable via fixed pins.

Caution with this attachment as it can leave sharp edges on rebar and items to fall once cut. Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Fixed Pulveriser / Muncher

- Fitted to the plant via direct pins and 'lazy arm' brace.
- Various sizes and construction, depending on required task and base machine size.
- For demolition of heavily reinforced concrete.
- For processing on concrete prior to crushing.

Caution with this attachment as it can cause items to be projected under pressure, ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.



### Crusher OR Screener Bucket

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses.
- Various sizes depending on the base machine size.
- Screener for removing fines from material / concrete / brickwork.
- Crusher for crushing demolition hard waste such as concrete and brickwork to produce a usable product.

Caution, these attachments can produce high level noise and dust.

Ensure water mist sprays are in operation and noise monitoring carried out.

These items have limitations, use must be kept to small operations.



### Hydraulic Magnet

- Fitted to the plant via direct pins or tested quick hitch system and hydraulic hoses. (Some magnets are connected via chains, these require a specific risk assessment and plan prior to use and are subject to specific inspections)
- Various sizes depending on the base machine size.
- For collecting and loading small metal materials following primary demolition or processing.

Caution, these attachments have limitations and are not suitable for loading large awkward items.

Ensure exclusion zone is clear. Refer to NFDC Exclusion Zones attached.

## OTHER CONSIDERATION

Always consider other plant working around you and personnel especially those that may be hidden out of site.

Before starting a task, check that the exclusion zones are clearly defined, secure and that your operations are communicated to all persons relevant to or who may be impacted by the task.

Review and implement NFDC document ( Demolition Exclusion Zones DRG 110:2014 ) attached, and  
NFDC document ( Demolition Attachments Guidance Notes DRG 118:2018 ) attached.



### **NFDC** Demolition Exclusion Zones

**DRG 110:2014**





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**SAFE OPERATING PROCEDURE  
FOR**

Manual Handling / Manual Tools



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>		SOP 003	
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>		TIM WHITTLE	
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>		DEAN WRING	
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

**ACTIVITY:**

The safe use of manual tools within the working environment.

The term “manual tool” describes any piece of equipment which is manually worked by hand, items such as pry bars, sledge hammers, brooms, hammers, mattocks, picks, bolt cutters, wire cutters, spanners, socket wrenches, chisels, and grease guns.

**AUTHORISATION:**

No person is permitted or authorised to use these pieces of equipment unless they are competent and in some cases trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO USE THESE ITEMS WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**



## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Incorrect Manual handling	Operative, workforce  Musculoskeletal injury, broken bones	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition and where needed, sharp.</p> <p>Wear appropriate PPE.</p> <p>Be aware of others around you.</p> <p>When using any manual tools ensure that your work area is clear and safe to work. Ensure you have a good solid floor space to stand and work from.</p> <p>When using tools such as sledge hammers, mattocks and bars avoid twisting the back while working, swing with shoulders arms, hips and knees not with the lower back. Follow the manual handling training. Avoid over work, allow the weight of the tool head to produce the force required and do not over compensate with muscle power. Check that any follow through swings will not make contact with your shins, knees, feet or anyone else nearby.</p> <p>Take adequate time to 'line up' on the target point, a missed blow can cause un expected twists and strains.</p> <p>When digging do not ram shovel head into materials, place blade against the base of the material and slide in with presser from foot or thigh against the handle and shaft. When moving materials from concrete or hard surfaces always slide the shovel blade along f the surface, do not try and dig higher up, this removes excess force required.</p> <p>Brooms should be used keeping back as straight as possible to avoid back pain and injury.</p>	M
Fire/explosion/ electrocution/electrical explosion	Operatives, workforce	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with underground or live services. Ensure all services have been terminated and certified dead prior to works commencing. When digging C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not dig near live services unless a specific plan has been created, a permit to dig system must be used. Any excavation for services must be done with insulated tools appropriate for task.</p> <p>When carrying out soft strip works do not cut any cables with wire cutters, bolt cutters, bars or any other item unless they have been confirmed and proved dead and you are instructed to carry out the works by a supervisor.</p> <p>Do not pierce any container with hand tools.</p>	M
Collision with other workers	Workforce,	H	<p>Information, instruction and training.</p> <p>Check that work areas are segregated sufficiently and where required added controls such as tape warning barriers are in place.</p> <p>Prior to works commencing in a confined area ensure you make yourself aware of where other operatives are working and make them aware of what you are intending to do.</p> <p>When you are manually demolishing walls and structures with sledge hammers, ensure the area behind what you are demolishing is clear and segregated.</p> <p>Always work from the top down, do not undermine large elements of the structure.</p>	M

Impact by Falling/flying objects	Workforce, public	H	<p>Information, instruction and training.</p> <p>Eye protection, gloves, helmet to be worn at all times.</p> <p>At all times works must be undertaken to prevent flying objects. Create secure work and exclusion zones to control works and areas.</p> <p>When prying off timber (such as door frames, skirting etc) never start at the centre of the item, start and one end and work along the length of the item, this prevents added forces being exerted into the item which will cause it to 'flick' up as the last fixing is dislodged.</p> <p>Avoid working directly overhead, utilises towers to ensure you can work safely away from items being removed.</p> <p>Ensure at all times the areas below when you are working are secure and access below is prevented.</p> <p>When using hammer type tools to impact other metal objects such as chisels, bucket pins etc., ensure you and those in the close vicinity wear eye protection.</p> <p>Communicate your tasks and risks to those around you.</p>	M
Contact with hazardous substances	Operatives	H	<p>Information, instruction and training.</p> <p>During manual demolition ensure you use the correct tools for the tasks, never use power tools when removing asbestos products. When changing attachments using spanners ensure correct gloves are worn to prevent contact with oils whether hot or cold.</p> <p>Do not pierce or puncture containers.</p>	M
Excessive/nuisance dust	Operatives, workforce, public	H	<p>Information, instruction and training.</p> <p>When carrying out manual work with tools, potentially dusty operations must be controlled with water mist sprays. Ensure when using brooms try to avoid 'flick up' with over exaggerated brush strokes. When shovelling potentially dusty items do not throw the load off the shovel, place it rather. Operative to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.</p>	M

## ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	X
R.P.E (SR 100)	X	Goggles (EN 166 B)	X	Glasses (EN 166 F)	X
Ear defenders	X	Shaded cutting goggles		Face Shield	X

## PROCEDURE

### CHECKS:

Equipment,

- It must be good working order.
- Free from damage.
- The right tool for the job.
- Sharp.

Location,

- Good clear access and egress points.
- Ventilation.
- Plenty of light.
- No ground voids or fall/trip hazards.
- Other workers are aware of what you are doing and will not be put in danger and vice versa.

### ACCESS:

Know the easiest way to and from your work area and familiarise yourself with emergency routes.

### GENERAL OPERATION:

Only use the tool for its intended purpose.

Ensure the correct equipment is selected.

Give way to pedestrians at all times

NEVER use mobile phones whilst working.

NEVER exceed your personal capacity.

If in doubt, ask.

At the end of your shift ensure all tools are put away.

### MAINTENANCE:

Keep tools clean and tidy.

Report any damage immediately and take out of use.

Tools with cutting edges must be kept sharp.

Strike tools (chisels etc.) must not be used if they have burred heads.

Do not throw tools down onto the floor.

Ensure all pivot pins and grips are in place.





**SAFE OPERATING PROCEDURE  
FOR**

**MEWPS and MEWP BOOMS**



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 006
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

**ACTIVITY:**  
 Accessing high level items with the use of a powered access platform either in the configuration of straight or articulated boom or scissor platform.  
 These items are used to remove asbestos roofing sheets, carry out manual demolition works in localised areas where scaffolding is not appropriate or required, for vision purposes, for erecting wall/roof weather protection, hot cutting at high level.

**AUTHORISATION:**  
 No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.  
**YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public.  Serious injury, broken bones, death	H	<p>Check ground stability, check for any voids seen or unseen. Only work from a solid level surface. Do not move machinery while plant is elevated. If outriggers/stabilisers are installed on the machine, ensure they are deployed and used correctly and that where outriggers/stabilisers are positioned the ground is stable with no voids/soft ground/drains below</p> <p>Know and understand safe working loads of the individual piece of equipment and do not exceed it. Create safe working area and minimise authorised personnel to access the area. Be aware of maximum wind speed for operation and do not use in high winds. Avoid carrying any item which could create a 'sail' effect</p> <p>Communicate movements and working areas with other plant working in the same area. Where possible erect fix barriers to secure the work area, if this can not be done ensure a banks man or ground man is used to direct movements, ensure he/she is working from a safe location.</p>	M
Entrapment/crush in moving parts	Operator, workforce, public  Serious injury, broken bones, death	H	<p>Ensure work areas are secure to prevent unauthorised persons approaching machine. Ensure all relevant guards are in place and secure. Communicate operations and movements with others who may be working near. Where working area is restricted ensure banks men are used to manage movements and operations. If using a banks man, they must only work from a safe location.</p>	M
Falls from height	Operator, workforce, public  Serious injury, broken bones, death	H	<p>Operators to wear a suitable full body harness and fall restraint lanyard appropriate to the size of the man cage/basket of the machine.</p> <p><b>FALL ARREST LANYARD NOT TO BE USED IN MEWPS</b></p> <p>When operating any type of MEWP boom harnesses and lanyards must be used for ALL operations even if just moving the position of the unit at low levels. The work areas directly below the MEWPS must be secure to prevent access and items falling from height and impacting persons below.</p> <p><b>Tools must be tethered always when working from MEWPS</b></p>	M
Slips, trips	Operator, workforce, public  Serious injury, broken bones, death	M	<p>Always clean the floor/deck of the MEWPS during operations to remove trip/slip hazards.</p> <p>Any spillage of fluids from the machine must be cleaned up immediately.</p> <p>Check that when machine is stopped and parked/left for a period, the access route to and from the machine is clear of slip/trip hazards.</p>	L
Manual handling	Operator, workforce,  Serious injury, broken bones, musculoskeletal injury	H	<p>The machine must be set up correctly to reduce the need for overreaching/stretching and cramped operation against roof structures to prevent hunched over works.</p> <p>Ensure lifting operations follow manual handling training, use the same principals from a MEWP as you would at ground level. Heavy items must be lifted by mechanical aids or utilising tandem lifting techniques.</p> <p>Use the correct tools for the project at hand.</p> <p>When loading/unloading tools/equipment/materials ensure that you do not over stretch, lift something too heavy or allow items to fall on you. Utilises mechanical lifting aids or tandem lifting techniques.</p>	M

Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	<p>When Hot Cutting from a MEWP, check that all combustible materials have been removed from within the MEWP, blow and around the cutting area. Check the projected direction of sparks when cutting and ensure the sparks are not being projected towards combustible/flammable materials or the public.</p> <p>Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.</p> <p>If using an Oxy-Propane cutting set from a Scissor MEWP, ensure the bottles are well strapped within the cage opposite the exit ladder and that the gages have sufficient protection to prevent gages getting 'knocked off'. Keep all hoses neatly wrapped when not in use and not just laid in the floor area of the MEWP.</p> <p>When cutting from a MEWP boom hoses must be tethered sufficiently to prevent the gun/torch being pulled out of the basket, bottles must be securely fastened to prevent them being pulled over. At least one wrap of Hose must be kept around bottle or secure point to prevent the gages being snapped off.</p>	L
Collision with pedestrians/plant/buildings/structure	Operator, workforce, public Serious injury, broken bones, death	H	Ensure work area is secure, effective communication with other workers near by is essential. Where work area is restricted utilise banks man assistance.	M
Equipment failure	Operator, workforce, public Serious injury, broken bones, death	M	Follow maintenance regime, check inspection certificates are in date prior to operation. Report any defects found immediately and do not use the item until repairs or replacement has been arranged.	L
Impact by Falling/flying objects	Operator, workforce, public Serious injury, broken bones, death	M	Secure work area. Tether all tools. When materials need to be dropped ensure a suitable drop zone is created and communicated to others prior to works commencing. Be aware of those working around to and do not allow materials to be projected in their direction.	L
Contact with hazardous substances	Operator, Skin damage	M	<p>When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.</p> <p>High pressure hydraulic oil leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.</p>	L
Excessive/nuisance noise	Operator, workforce, public Injury to hearing	M	Consider working hours in built up populated areas. Where noisy operations are to be undertake ensure correct ear protection is used and periodic breaks in noisy activities. If working near public areas follow specific risk assessments and ensure controls are in place (possibly acoustic screening).	L
Excessive/nuisance dust	Operator, workforce, public Respiratory system damage, eye injury	M	<p>Information, instruction and training.</p> <p>Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.</p>	L

ENVIRONMENTAL ASSESSMENT					
Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	L
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Where appropriate fit C.A.T to exhaust. For internal works where possible use battery operated equipment. Do not allow equipment to sit idling, turn off engine when not in use.	M
Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Where appropriate fit C.A.T to exhaust. For internal works, where possible use battery operated equipment. Do not allow equipment to sit idling, turn off engine when not in use.	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness for MEWP booms not scissors	X	Fall arrest lanyard	
Fall restraint lanyard for MEWP booms not scissors	X	Overalls (flame retardant)		Overalls (disposable)	X
R.P.E SR 100 (task specific)	X	Goggles EN166B (task specific)	X	Glasses (EN 166 F)	
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	



## PROCEDURE

### CHECKS:

Check that the relevant inspection certificate is in place, in date and for the piece of equipment you have.

Check ground conditions are firm, level and void free.

Check for overhead power lines.

Check you have the correct training, information, instruction and supervision.

Check you understand what is required of you for the task at hand.

Check you have communicated your intentions to other relevant persons.

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

### TRAVELLING:

Stop and remove all objects in your path where safe to do so, never drive over them.

Always travel at a speed that is safe, observing the type of load and the ground surface conditions. All sites have a maximum speed limit of 5 mph or walking pace if there is no speedometer.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Always ensure that you stay within the confines of the cage or basket during operations

Never approach any pedestrian or allow them to approach you. Stop work if they do.

Never drive directly up to anyone, your brakes may fail.

Never drive blindly if a load obscures your vision travel in reverse.

Never drive onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the excavator, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched off, the key is removed.

### GENERAL OPERATION:

Only use the MEWP for its intended purpose.

Ensure the correct gear is selected for the required direction of travel.

Give way to pedestrians at all times

**NEVER** use mobile phones whilst operating or driving the MEWP. Vehicle must be parked before using the phone.

**NEVER** exceed the Safe Working Load capacity of the equipment





## SAFE OPERATING PROCEDURE

FOR

Telescopic Handlers



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 009a
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> Loading, unloading and movement of materials.			
<b>AUTHORISATION:</b> No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have this document along with relevant site specific method statements and risk assessments communicated to them.  As part of your ongoing training and safe use of plant assessments you are obliged to read and sign the following safe operating procedures.  <b>YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Overturn of plant	Operator, workforce, public. Serious injury, broken bones, death	H	<p>Check machine tyres and ground stability, check for any voids seen or unseen. Only work from a solid level surface. Do not move machinery while boom is elevated and loaded.</p> <p>Ensure when positioned and while in transit, the ground is stable with no voids/soft ground/drains below</p> <p>Know and understand safe working procedures of the individual piece of equipment and do not exceed it. Create safe working area and minimise authorised personnel to access the area. Be aware of wind and movement of dusts.</p> <p>Communicate movements and working areas with other plant working in the same area. Where possible erect fix barriers to secure the work area, if this cannot be done ensure a banks man or ground man is used to direct movements, ensure he/she is working from a safe location.</p> <p style="text-align: center;"><b>REVERSE DOWN A GRADIENT WHEN LOADED, NEVER DRIVE DOWN</b></p>	M
Entrapment/crush in moving parts/lost loads	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work areas are secure to prevent unauthorised persons approaching machine. Ensure all relevant guards are in place and secure. Communicate operations and movements with others who may be working near. Where working area is restricted ensure banks men are used to manage movements and operations. If using a banks man, they must only work from a safe location.</p> <p style="text-align: center;"><b>REVERSE DOWN A GRADIENT WHEN LOADED, NEVER DRIVE DOWN</b></p>	M
Falls from height	Operator, workforce, public Serious injury, broken bones, death	H	<p>Operators to wear a suitable full body harness and fall restraint lanyard appropriate to the size of the man when working carrying out maintenance at high level on the machine.</p> <p style="text-align: center;"><b>EXIT MACHINE USING THREE POINTS OF CONTACT AT ALL TIMES. DO NOT JUMP FROM MACHINE</b></p>	M
Slips, trips	Operator, workforce, public Serious injury, broken bones, death	H	<p>Any spillage of fluids from the machine must be cleaned up immediately.</p> <p>Check that when machine is stopped and parked/left for a period, the access route to and from the machine is clear of slip/trip hazards.</p>	M
Manual handling	Operator, workforce, Serious injury, broken bones, musculoskeletal injury	H	<p>Ensure lifting operations follow manual handling training, use safe principals. Heavy items must be lifted by mechanical aids or utilising tandem lifting techniques.</p> <p>Use the correct tools for the project at hand.</p>	M
Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	<p>Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.</p>	L
Collision with pedestrians/plant/buildings/structure	Operator, workforce, public Serious injury, broken bones, death	H	<p>Ensure work area is secure, effective communication with other workers nearby is essential. Where work area is restricted utilise banks man assistance.</p> <p>Ensure mirrors, cameras and beacons are fully operational.</p>	M
Equipment failure	Operator, workforce, public Serious injury, broken bones, death	M	<p>Follow maintenance regime, check inspection certificates are in date prior to operation. Report any defects found immediately and do not use the item until repairs or replacement has been arranged.</p>	L

Impact by Falling/flying objects	Operator, workforce, public Serious injury, broken bones, death	H	Secure work area. When materials need to be dropped ensure a suitable drop zone is created and communicated to others prior to works commencing. Be aware of those working around to and do not allow materials to be projected in their direction.  Operator must not approach the crusher below loading area. Magnet discharge belt drop zone must be segregated to prevent hazard of flying objects.  <b>REVERSE DOWN A GRADIENT WHEN LOADED, NEVER DRIVE DOWN</b>	M
Contact with hazardous substances	Operator, Skin damage	M	When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.  High pressure hydraulic oil leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.	L
Excessive/nuisance dust	Operator, workforce, public Respiratory system damage, eye injury	M	<b>DUST SUPPRESSION TO BE USED AT ALL TIMES</b>  Loads are not to be dropped from high level, place items rather than drop. Potentially dusty operations must be controlled with water mist sprays. Operator to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	L

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	M
Vibration	H	GROUND	Localised public and workforce, flora, fauna, aquatic life	Ground assessment relevant to location must be carried out. Working on slabs or soft ground can produce high levels of vibration transference, slip trenching or location of operation must be used.	M
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M
Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves		Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E SR 100 (task specific)		Goggles EN166B (task specific)		Glasses (EN 166 F)	
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	

## PROCEDURE

### CHECKS:

Relevant machine checks such as tyres, breaks and engine.

Check mirrors, cameras, beacons.

Check seat belt.

Check that the relevant inspection certificate is in place, in date and for the piece of equipment you have.

Check ground conditions are firm, level and void free.

Check you have the correct training, information, instruction and supervision.

Check you understand what is required of you for the task at hand.

Check you have communicated your intentions to other relevant persons.

Ground condition AND vibration transference potential.

### ACCESS:

Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** face the machine and use the handholds provided when mounting or dismounting. Maintain 3-point contact.

Surfaces may be slippery – take great care when mounting or dismounting.

**NEVER** Jump on or off equipment

**ALWAYS** Keep your machine clean and tidy.

### TRAVELLING:

Stop and remove all objects in your path where safe to do so, never drive over them.

Always travel at a speed that is safe, observing the ground surface conditions.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Never approach any pedestrian or allow them to approach you. Stop work if they do.

Never drive blindly if items obscure your vision travel in reverse.

Never drive onto the bed of a vehicle without management authorisation. There must be evidence that the vehicle will take the weight of the telehandler, if you do, always inform the vehicle driver of your intentions make certain that the hand brake is on, the engine is switched off, the key is removed.

**REVERSE DOWN A GRADIENT WHEN LOADED, NEVER DRIVE DOWN**

## **GENERAL OPERATION:**

Only use the telehandler for its intended purpose.

NEVER use mobile phones whilst operating equipment.

### **Prior to Commencing Telehandler Operation**

Ensure the following safety Control Measures are adhered to:

The Telehandler is to be inspected to ensure that:

- All machine guards are in place & secure.
- All controls are in place & fully operational.
- All emergency stop buttons are operational & accessible.
- All defects identified above are reported to the workshop for rectification through the defect reporting process and recorded on the defect register. Defects which may affect the safe operation of the telehandler are to be reported immediately. The Site Foreman is to be advised accordingly.

### **During Normal Telehandler Operation**

Ensure the following safety Control Measures are adhered to:

- The PPE detailed above is used & maintained.
- All relevant security fencing or barriers are in place to prevent unauthorised access to work area.
- All Emergency Stop buttons function.
- If out riggers or stabilisers are fitted to the machine they are to be used.
- Operatives **MUST NOT AT ANY TIME** approach the telehandler from the blind side of the machine.
- Loads must only be picked up and lowered using boom controls.
- **DO NOT** drive into the load using wheel movement to collect.
- **REVERSE DOWN A GRADIENT WHEN LOADED, NEVER DRIVE DOWN**

### **During Maintenance Tasks**

Ensure the following safety Control Measures are adhered to:

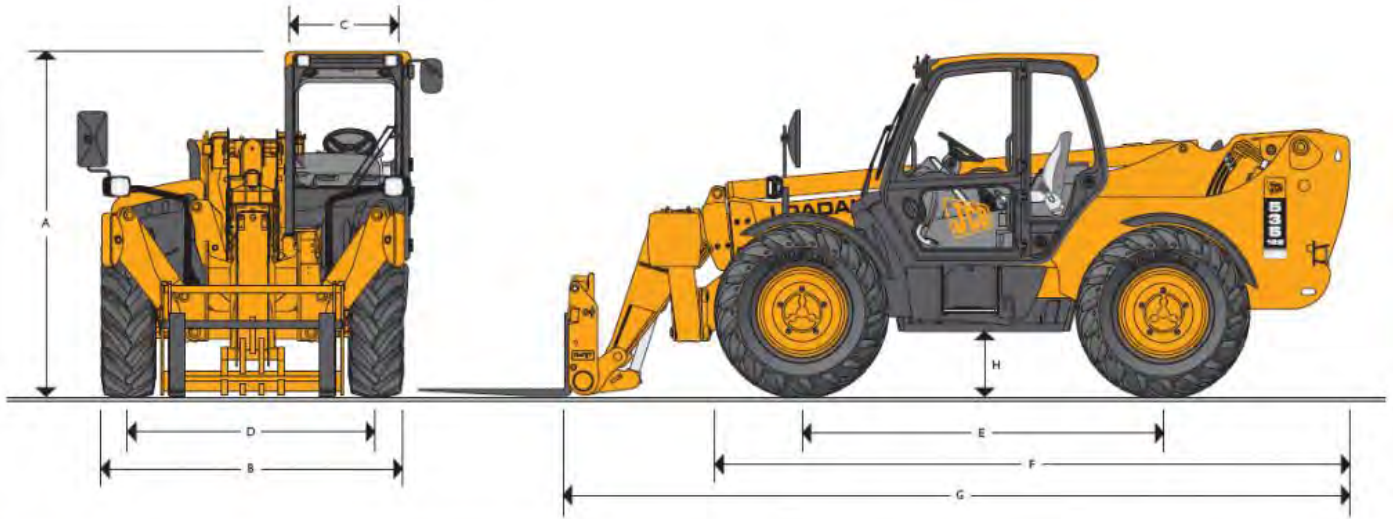
- The telehandler & associated plant must be stopped & isolated (Lock-Off), all associated Operatives must be informed accordingly and signs prohibiting starting of the telehandler displayed on relevant controls.
- All machine guards removed for maintenance purposes are replaced & secured prior to starting the Telehandler.

**Should there be any malfunction or defect with the Telehandler, the machine MUST be stopped, isolated & the problem reported to the workshop for rectification through the defect reporting process and recorded on the defect register.**

**Defects which may affect the safe operation of the crusher are to be reported immediately. The Site Supervisor/Manager is to be advised accordingly.**







#### STATIC DIMENSIONS

Machine model	535-125
	m (ft-in)
A Overall height	2.59 (8-6)
B Overall width (over tyres)*	2.35 (7-9)
C Inside width of cab	0.94 (3-1)
D Front track	1.90 (6-3)
E Wheelbase	2.75 (9-0)
F Overall length to front tyres	4.83 (15-10)

\*Dependant upon tyre specified.

Machine model	535-125
	m (ft-in)
G Overall length to front carriage	5.84 (19-2)
H Ground clearance	0.40 (1-4)
Outside turn radius (over tyres)	4.0 (13-2)
Weight	9140 (20150) kg (lb)
Tyres	15,5,80-24



## SAFE OPERATING PROCEDURE and ABRASIVE WHEELS POWER POINT

**FOR**

Petrol Disc Cutter (Quick Cut)



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 011
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b>			
<p>The safe use of petrol powered disc cutters or 'quick cuts' to cut metal and concrete/masonry in compliance with PUWER, Control of Noise Regulations 2005, Control of Vibration Regulations 2005, PPE Regulations 2002, DSEAR (The Petroleum (Consolidation) Regulations 2014.</p>			
<b>VIBRATION:</b> left/right m/s 3.9/3.9			
<b>AUTHORISATION:</b>			
<p>No person is permitted or authorised to use these pieces of equipment unless they competent and in some cases trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.</p> <p style="text-align: center; color: red;"><b>YOU ARE NOT PERMITTED TO USE THESE ITEMS WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b></p>			

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Incorrect Manual handling	Operative, workforce  Musculoskeletal injury, broken bones	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition.</p> <p style="color: red;">Wear appropriate PPE. EN166 B grade goggles must be used when operating a disc cutter. Glasses are not to be worn. Ear defenders with a minimum SNR of 32 must be worn</p> <p>Be aware of others around you.</p> <p>When using any type of disc cutter ensure that your work area is clear and safe to work. Ensure you have a good solid floor space to stand and work from.</p> <p>When using disc cutters and other heavy petrol-powered saws avoid twisting the back while working, lift with the knees not with the lower back. Follow the manual handling training. Avoid over work, allow the weight of the saw to produce the force required and do not over compensate with muscle power. Check that you are standing in a solid position so if the saw slips you will not jar your leg, back and arm muscles.</p> <p>When cutting at ground level keep aware of your cutting position. Avoid where possible stooping for long periods.</p>	M
Fire/explosion/ electrocution/electrical explosion	Operatives, workforce  Burns, scalds, death.	H	<p>During works the greatest risk comes from contact with underground or live services. Ensure all services have been terminated and certified dead prior to works commencing. When digging C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not cut near live services unless a specific plan has been created, a hot work permit system must be used.</p> <p>When carrying out cutting works do not cut any cables unless they have been confirmed and proved dead and you are instructed to carry out the works by a supervisor.</p> <p>Do not cut any container with hand tools.</p> <p>Following DSEAR- only small amounts of mixed petrol/oil to be stored / used on site, Refuel the disc cutter away from the work area in a ventilated location on a drip tray. Ensure spilled fuel is cleaned up straight away. Ensure the fuel cap is correctly fitted and tight. Roll the disc cutter from side to side to ensure there are no leaks.</p> <p>When cutting check, the projection of sparks, ensure sparks are not landing on fuel or combustible material.</p>	M
Sparks impacting other workers or public	Workforce, public.  Burns, scalds, death, blindness.	H	<p>Check that work areas are segregated sufficiently and where required added controls such as screens, warning tape, barriers are in place. Prior to works commencing in a confined area ensure you make yourself aware of where other operatives are working and make them aware of what you are intending to do.</p> <p>Check the projection of sparks created and do not allow sparks to land near other workers or into public areas.</p>	M
Impact by Falling/flying objects/ sparks	Workforce, public	H	<p>Eye protection (EN166 B), gloves, helmet to be worn at all times. At all times works must be undertaken to prevent flying objects such as sparks. Create secure work and exclusion zones to control works and areas. Avoid working directly overhead, utilise towers to ensure you can work safely away from items being cut. Ensure at all times the areas below when you are working are secure and access below is prevented. Check cutting discs are in date, free from damage, oil and water stains. Ensure diamond blades are fitted with the arrow on the disc facing the direction of spin. Adjust guards correctly before starting saw and cutting.</p> <p>Ensure items being cut are secure to prevent them flying out if the saw 'snaggs' on the item.</p> <p>Communicate your tasks and risks to those around you.</p>	M

Cuts/lacerations from contact with blade	Operator	H	<p>Never operate the saw with shorts on, always wear thick trousers and safety footwear. Do not walk around with saw running, if small adjustments in position are required hold saw by both the top handle and trigger grip with the blade facing downwards away from you. Never run with a saw.</p> <p>Starting of the saw must be as specified in the user manual. The saw must be placed on a hard level surface, one foot placed on the lower section of the trigger grip and one hand pressing down on the top grip. In one steady movement with the saw secured by your foot and hand pull the pull cord to start. Never hold the saw at waist height and push the saw away from you while pulling the pull cord. This can cause the saw to pivot and the blade to come in contact with your legs.</p>	
Contact with hazardous substances	Operatives	H	<p>During manual demolition ensure you use the correct tools for the tasks, never use power tools when removing asbestos products.</p> <p>Do not pierce or puncture containers.</p>	M
Excessive/nuisance dust	Operatives, workforce, public	H	<p>When carrying out cutting work, potentially dusty operations must be controlled with water mist sprays. Operative to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.</p>	M

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fuel/oil spills	H	Air, water	Localised public and workforce, flora, fauna, aquatic life, soil/ground	<p>Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.</p> <p>Do not leave the saw idling. Start and stop the saw when required to conserve fuel.</p> <p>Training.</p>	M

### SAFETY EQUIPMENT

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E (SR 100)	X	Goggles (EN 166 B)	X	Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	X

## PROCEDURE

### CHECKS:

Equipment,

- It must be good working order with PUWER sheet completed.
- Free from damage.
- The right tool for the job.
- Full of the correct fuel and oil mix.
- The disc must be in date, free from cracks, oil and water staining.

Location,

- Good clear access and egress points.
- Ventilation.
- Plenty of light.
- No ground voids of fall/trip hazards.
- Other workers are aware of what you are doing and will not be put in danger and vice versa.

### ACCESS:

Know the easiest way to and from your work area and familiarise yourself with emergency routes. Do not walk to the work area with the saw running. Only start the saw when you have accessed the work area and are ready to start cutting.

### GENERAL OPERATION:

- Only use the tool for its intended purpose.
- Ensure the correct equipment is selected.
- Give way to pedestrians always
- NEVER use mobile phones whilst working.
- NEVER exceed your personal capacity.
- If in doubt, ask.
- Cut with your feet slightly apart, do not project sparks against your legs or body.
- Do not cut close to your feet.
- Do not hit a spinning blade into the work piece, place it gently against the piece and allow the weight of the saw to make the cut.
- At the end of your shift ensure all tools are put away.

### MAINTENANCE:

- Keep tools clean and tidy.
- Report any damage immediately and take out of use.
- Do not throw tools down onto the floor.
- Ensure all grips are in place.
- Do not tamper with the saw, return to the correct mechanic for regular maintenance and repairs.

## OTHER CONSIDERATION

Always consider other personnel especially those that may be hidden out of site.

Sparks generated from cutting steel can cause damage to glass, paintwork and plastic. Ensure sparks are not projected onto these items.



# Abrasive Wheels Setters

Presented by **Tim Whittle**

## Aims

- Provide information and practical instruction to delegates to comply with the requirements of the relevant legislation relating to the safe “use” of abrasive wheels on Petrol powered disc cutters, 9 & 5 in angle grinders.



## Objectives

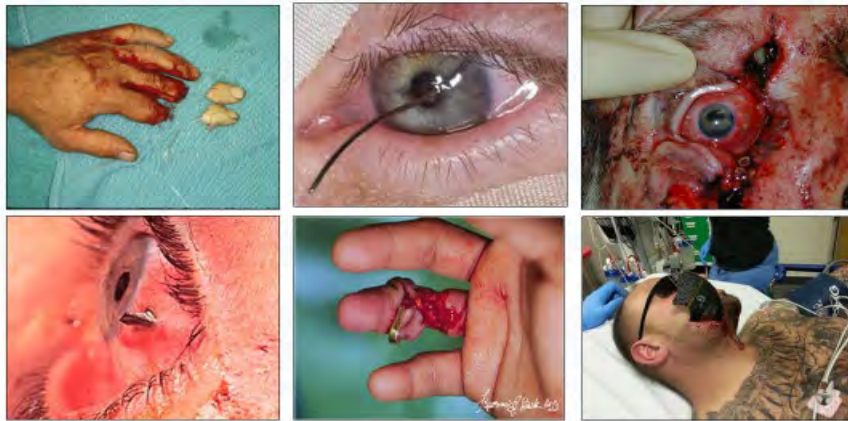
By the end of the session trainees will be able to:

- Identify abrasive wheel hazards
- Develop understanding of the EN12413 marking scheme
- Apply correct storage methods
- Select the appropriate wheels (discs)
- Inspect the wheels for damage
- Explain the functions of flanges

## Objectives

- Explain the need to select the correct RPM
- Correctly mount abrasive wheels
- Guards and adjustment
- Select and use suitable PPE
- Demonstrate an awareness of HS(G)17

To prevent this.....



## Health and Safety at Work Act 1974 EMPLOYEES DUTIES

### Section 7

#### **Duty of the Employee**

Every employee shall take *reasonable care* for the health and safety to *himself and others* who may be affected by his acts or omissions.

Every employee shall cooperate with his employer to enable him to carry out his lawful duties



## Health and Safety at Work Act 1974 EMPLOYERS DUTIES

So far as is reasonably practicable the EMPLOYER must provide:

- Safe plant, work equipment and systems of work
- Safe use of articles and substances
- Information, instruction, training and supervision
- Safe place of work
- Safe working environment

## Health and Safety at Work Act 1974 EMPLOYEES DUTIES

### SECTION 8

#### Duty not to interfere

No one shall *recklessly* interfere with or *misuse* anything provided in the interest of health, safety or welfare.

This duty extends to non employees also.

## Hazards when using abrasive wheels

- Flying particles
- Sources of ignition
- Dust
- Noise
- Vibration
- Imbalance
- Faulty parts
- Wheel abuse
- Improper mounting
- Inadequate guards
- Entanglement
- Ground conditions
- Insufficient power
- Improper storage
- Incorrect wheel
- Horse play

## Injury suffered due to various breaches of safety



### Operator Error?

Why?

- Guard removed
- Wrong wheel
- Over speeding
- Over sized wheel

Was he asked to do it?

Was he under pressure?

Was he trained?

Did he fit the wheel?

### Wheels you will require.

- Aluminium Oxide for cutting metal
- Silicon Carbide for cutting concrete
- Diamond Blade for cutting concrete/brick
- Many other discs are available, however these are the only wheels you will require during your day to day activities with Wring Group.

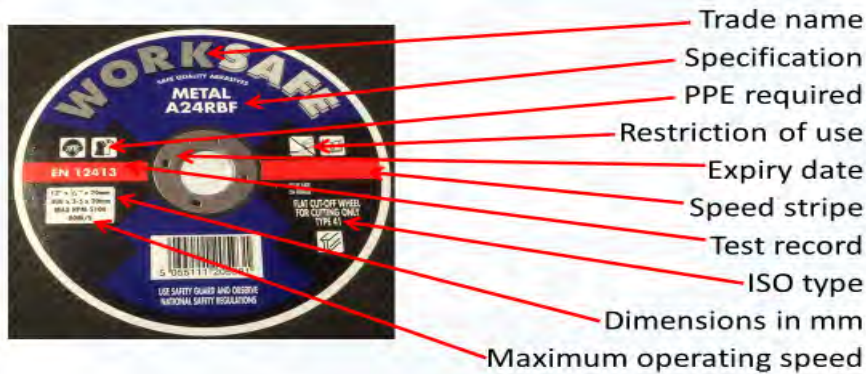
## Six Wheel Checks

- Correct wheel for task required
- In date
- It is not cracked or damaged
- It is not wet/has no oil/mud marks on it
- Has a speed the same or greater than the max rpm of the machine
- Has the correct bore size

### For Diamond Blades

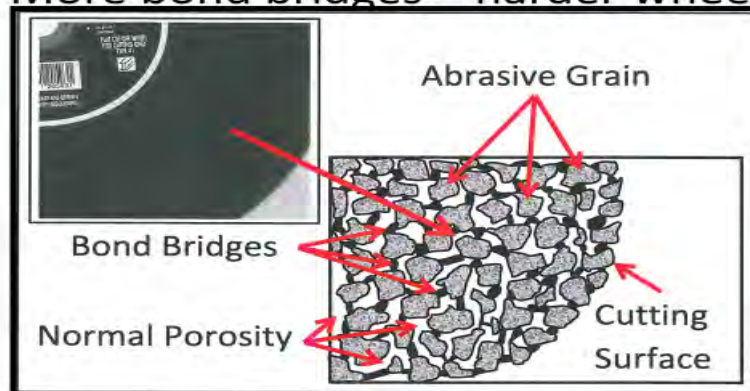
- The directional arrow is pointing the right way

## Abrasive wheel marking system



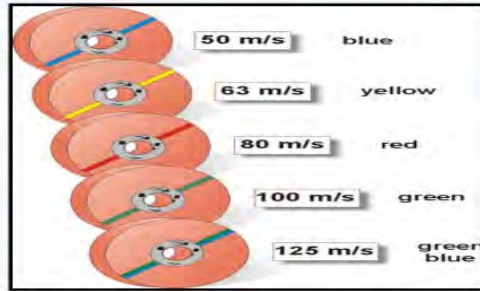
## Grade & Structure

More bond bridges = harder wheel



## Speed Stripes

These are marked on wheels rated at 50m/s and above



## International Marking System



Nature of Abrasive	Grain Size	Grade	Nature of Bond
A C	30 24	R R	BF BF
A-Aluminium Oxide C-Silicon Carbide Aluminium Oxide cuts Metal. Silicon Carbide cuts concrete/stone	Ranges from 8-600. The higher the number the finer the grain	Hardness of the wheel (A-Z) A = Softest Z = Hardest	There are a number of different bonds available, only BF is allowed on hand held Machines. <b>Resinoid Reinforced</b>
<p>ABRASIVE WHEEL MARKING SYSTEM</p> <p>THIS IS THE INTERNATIONAL MARKING SYSTEM FOR ALL WHEELS (DISCS)</p>			

## Matching The Wheel to The Machine



The speed marked on the wheel (disc) shown above must not be less than the max rpm of the machine. It can be the same rpm or a greater rpm.

For instance this wheels max rpm is 6650 and the machines max rpm is 4700

## Guards

It is a legal requirement that all machinery is suitably guarded

Can you identify all the guards on the following machines and how specific guards should be adjusted?

## Personal Protective Equipment (PPE)

It is important to wear the correct PPE

- Eye protection – Goggles not glasses to EN166 cat B
- Ear protection at the relevant rating to the machine and surrounding environment
- R.P.E correct filters depending on what and where you are cutting
- Suitable tight fitting gloves

## Points you must check

- You have selected the right wheel for the task required.
- The wheel is not damaged.
- The RPM of the wheel is not less than the RPM of the machine.
- The wheel is in date.
- The guards are in place and adjusted correctly.
- You are wearing the correct PPE.



**SAFE OPERATING PROCEDURE  
and ABRASIVE WHEELS POWER POINT**

**FOR**

Hot Cutting



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 021
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE/IAN BARKER
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> The safe use oxy-propane cutting equipment within demolition operations in compliance with DSEAR regulations 2002			
<b>AUTHORISATION:</b> No person is permitted or authorised to use this type of equipment unless they are competent and in some cases trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.			
<b>YOU ARE NOT PERMITTED TO USE THESE ITEMS WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Incorrect Manual handling	Operative, workforce  Musculoskeletal injury, broken bones	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition.</p> <p style="color: red;">Wear appropriate PPE. EN166 grade shade 3 goggles must be used when operating a disc cutter.</p> <p>Be aware of others around you.</p> <p>When using any type of cutting equipment ensure that your work area is clear and safe to work. Ensure you have a good solid floor space or MEWP working platform to stand and work from.</p> <p>When using oxy-propane cutting equipment it is sometimes necessary to move gas and oxygen bottles, when lifting avoid twisting the back while moving bottles and while working, lift with the knees not with the lower back.</p> <p>Use a bottle trolley to move bottles, never try and lift oxygen bottles on your own.</p> <p>Follow the manual handling training.</p> <p>Avoid over work and over stretching. Select the correct length torch for the operations.</p> <p>When cutting at ground level keep aware of your cutting position. Avoid where possible stooping for long periods.</p>	M
Fire/ explosion	Operatives, workforce  Burns, scalds, death.	H	<p>Check equipment prior to use for leaks and damage. Ensure flash back arrestors are situated correctly at the gauge end of the pipes and that the flow direction is correct.</p> <p>Do not cut any container unless it has been degassed correctly and certificated.</p> <p>Check gas bottles are not leaking, and any flammable materials are removed from the work are.</p> <p>Be aware that cutting near concrete can cause concrete to pop and explode, this send white hot concrete fragments into the air and they can burn when in contact with skin.</p> <p>Paint also becomes very hot, this can again pop and stick to the skin.</p> <p>Make sure skin is covered, cut lines are scraped clean of paint.</p> <p>Do not cut cables with burning gear.</p> <p>Be aware of 'cut off' pieces at these remain very hot for some time</p> <p style="color: red;">Do not use any type of grease near oxygen cylinders as when high pressure oxygen and grease is mixed it can cause an explosion.</p> <p style="color: red;">Sparks can stay hot for some period, ensure a fire watch is organised for the works and that a 1 hour cool down period is used to ensure no smouldering items are present before the end of the shift.</p> <p>Always have two in date fire extinguishers in place.</p> <p>Bottles must be secured to a trolley when in use and stored separately when not in use. Indoors oxygen and propane must be stored securely 10m apart, externally 3m apart.</p> <p style="color: red;">When cutting from a MEWP ensure sparks and slag is projected away from the machine as hot sparks can ignite oils, fuels, cables etc within the machine body.</p>	M

Sparks impacting other workers or public	Workforce, public.  Burns, scalds, death, blindness.	H	Check that work areas are segregated sufficiently and where required added controls such as screens, warning tape, barriers are in place. Prior to works commencing in a confined area ensure you make yourself aware of where other operatives are working and make them aware of what you are intending to do.  Check the projection of sparks created and do not allow sparks to land near other workers or into public areas.	M
Impact by Falling/flying objects/ sparks	Workforce, public	H	Eye protection (EN166 B), gloves, helmet to be worn at all times. At all times works must be undertaken to prevent flying objects such as sparks. Create secure work and exclusion zones to control works and areas. Avoid working directly overhead, utilise towers to ensure you can work safely away from items being cut. Ensure at all times the areas below when you are working are secure and access below is prevented.  When hinge cutting or drop cutting steel work, ensure as the final cuts are made the access/MEWP baskets is clear of the piece being cut.  Communicate your tasks and risks to those around you.	M
Impact by falling objects etc while loading waste bins	Operatives	H	While loading of sections of steel using a demolition rig, operatives will stand in a fenced segregation area. The area will be separated from the loading area by crowd barriers.	M
Cuts/lacerations from contact with sharp steel off cuts	Operator	H	Never use cutting equipment with shorts on, always wear thick trousers and safety footwear.  Be aware of protruding sharp edges	M
Contact with hazardous substances  Lead and Galvanise (inhiation)	Operatives	H	Ensure paint work is tested as some paints contain lead. Where cutting steel with painted surfaces ensure there is good ventilation primarily, if ventilation is not natural install task specific ventilation is used.  Remove paint where cuts are being carried out.  Wear RPE with the correct cartridge insert depending on the material being cut.	M
Excessive/nuisance dust	Operatives, workforce, public	H	When carrying out cutting work, potentially dusty operations must be controlled with water mist sprays. Operative to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.	M



## ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	Air, water, ground	Localised public and workforce, flora, fauna, aquatic life	Ensure correct ventilation is used. In some cases filtered ventilation may be required.	M

## SAFETY EQUIPMENT

### Mandatory X Task Specific X

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness	X	Fall arrest lanyard	
Fall restraint lanyard	X	Overalls (flame retardant)		Overalls (FIRE PROOF)	X
R.P.E (SR 100) (GAS)	X	Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders		Shaded cutting goggles/Welding Shaded cutting glasses (EN 166)	X	Face Shield	X

## PROCEDURE

### CHECKS:

Equipment,

- Hot Work Permit is completed.
- It must be good working order with PUWER sheet completed.
- Check hoses, torch, nozzle, flash back arrestors, hoses, bottles, connections. (see attached BOC document)
- Free from damage.
- The right tool for the job.
- Work area is free from flammable materials.
- Enough oxygen and propane is available to complete the project.
- Structural stability will not be compromised when removing steels.

Location,

- Good clear access and egress points.
- Ventilation.
- Plenty of light.
- No ground voids of fall/trip hazards.

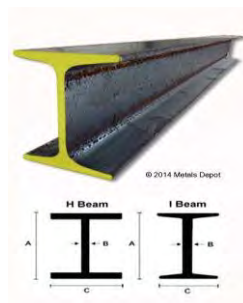
- Other workers are aware of what you are doing and will not be put in danger and vice versa.

### ACCESS:

- Know the easiest way to and from your work area and familiarise yourself with emergency routes.
- Check you have correct access to the work area.
- Check there is room available to move out of drop areas when items are cut free.
- Check access is restricted to others to prevent others accessing the cut area.

### GENERAL OPERATION:

- Only use the tool for its intended purpose.
- Ensure the correct equipment is selected.
- Give way to pedestrians always
- NEVER use mobile phones whilst working.
- NEVER exceed your personal capacity.
- If in doubt, ask.
- Cut with your feet slightly apart, do not project sparks against your legs or body.
- Do not cut close to your feet.
- Do not tap the nozzle of the torch against items to clear slag from the jets.
- Make sure a fire watch is in place and the required 1 hour cool down period is used at the end of the shift.
- At the end of your shift ensure all tools are put away.



### Sit Cuts and Drop Cut.

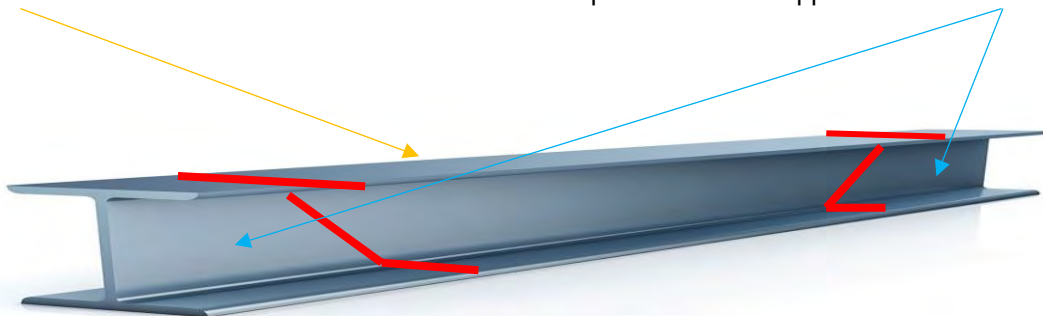
This is when an RSJ I beam or H beam is cut in a manner to free it from its fixings, but the beam does not drop to the floor, it will stay in situ until it is removed by way of crane or excavator.

Generally, the chains from the crane or jaws of the excavator attachment will be in place and secure prior to cutting.

**Caution! When chains or excavator attachments are in place this can cause a load to be imparted to the item being cut. Ensure you are away from the item when the last cut is made to prevent being impacted by the item.**

Steel is fixed securely at both ends

Angular cuts are made through the steel beam following the red cut lines shown below. Using this configuration, the centre section of the steel which is to be removed will not drop because it is supported but the two cut ends



Drop cuts are a reverse of sit cuts, the angles are cut in the opposite direction to allow steel to 'drop out' as the cut is made. Generally, for larger steels this is carried out by a set of tandem cutters who cut at the same speed at each end of the steel.

**Caution!** Ensure tandem cutters cut the steel free at the same time otherwise a hinge effect will happen. Ensure that drop area is clear and that if MEWPS are used they are clear of drop area. See image 001 below.

### **Hinge Cuts.**

A hinge cut is used to safely (fall) a steel I beam or H beam to the ground in a controlled manner. An angled cut is made into the steel at one end of the beam, then gradually from the other end the steel is cut through from the top flange. The cut is then progressed down the web of the steel slowly, this allows the steel to 'hinge' at this point. Consequently, the steel will gradually lower rather than dropping. The speed of the decent can be controlled in part to the speed the cut is made. This type of cut is generally made when no mechanical assistance is required and steel is to be dropped to the ground.

- Hinge cuts can also be used to 'fell' standing steel, an angled cut can be made leaving a 'hinge' of steel facing the direction of travel of the steel.

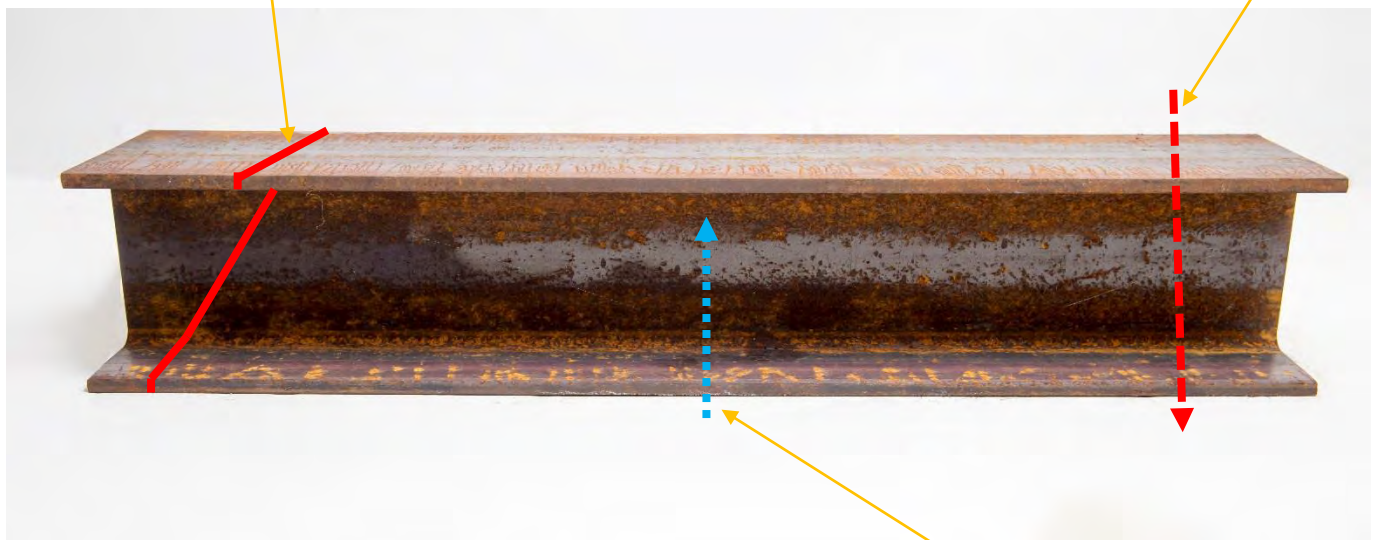
**Caution!** Heavy weight steels and long steels can hinge quickly as the weight of the steel takes over the speed of the cut. The steel will literally tear itself off, make sure you are cutting from a safe distance utilising a 1m+ torch/lance

In some cases, the impact from the 'drop' can be reduced by installing a 'back cut' from up and under the steel. This allows the steel to fold back on itself as the end of the steel contacts the ground.

Steel fixed

A sever cut is made in this location at an angle

A progressive cut is made top down in this location

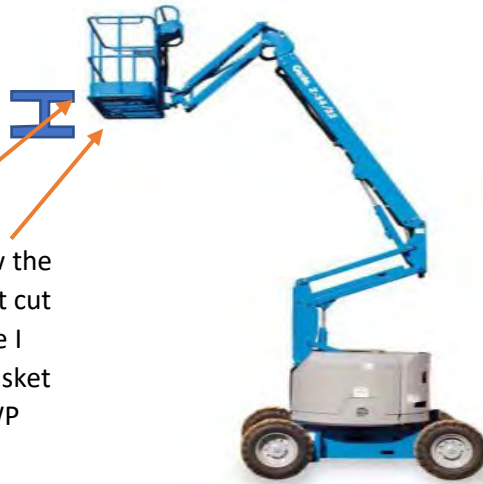


In some cases when steel is long or heavy a back cut can be made in this location to reduce impact

**When cutting from a MEWP boom ensure that the basket is a safe distance from the steel and that the base of the cage is at least parallel to the top of the steel as the final cut is made, this will ensure the steel does not catch the basket as it falls.**

I beam to be cut is below the level of the basket as last cut is made to prevent the I beam catching on the basket and overloading MEWP

Image 001



### **LOADING INTO WASTE BINS:**

- Waste bins to be loaded using a demolition rig fitted with a rotational grab attachment
- Separate safe area to be set up using crowd barriers for operatives to stand in to separate operatives from loading area during the loading of waste bins.

### **MAINTENANCE:**

- Keep tools clean and tidy.
- Report any damage immediately and take out of use.
- Do not throw tools down onto the floor or allow gauges to be dragged or dropped onto the floor.
- Store torch, hoses and gauges neatly wrapped up in coils. Preferably hang the hoses in a safe place.
- Do not mend hoses with jubilee clips, ensure the correct connectors are used or replace the hoses.
- Ensure nozzle jets are cleaned regularly to maximize life span of nozzle.

### **OTHER CONSIDERATION**

Always consider other personnel especially those that may be hidden out of site.

Sparks generated from cutting steel can cause damage to glass, paintwork and plastic. Ensure sparks are not projected onto these items.

### **EMERGENCY**

In the event of an emergency/incident contact your Site Manager/Supervisor and inform them of the situation IMMEDIATELY.

### **CONFIRMATION OF COMMUNICATION SHEET**

REMEMBER SAFE OPERATING PROCEDURES ARE THIER ENSURE YOUR SAFETY AND THAT OF OTHERS AND MUST BE FOLLOWED!!

**IF IN DOUBT ASK - DO NOT TAKE RISKS!!**

**'Failure to comply with / (or) breaches of this procedure may be treated as an offence under the Company's disciplinary rules'.**





## SAFE OPERATING PROCEDURE

### FOR

### Aluminium Scaffold Towers / Podiums



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 025
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			D WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

**ACTIVITY:**

The erection and use of aluminium scaffold towers for access to high areas. This piece of equipment allows safe access to carry out works for longer periods at high levels.

**AUTHORISATION:**

No person is permitted or authorised to operate this piece of equipment unless they are aged 18 or over, be competent and be trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the equipment, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Collapse/fall of tower	Operatives, workforce, public	H	<p>Information, instruction and training.</p> <p>Ensure work area is secure and well segregated. Check ground conditions prior to placing and erecting the tower. When working on concrete reinforced floors ensure correct floor loadings are suitable for weight of tower plus materials and persons being used or that appropriate prop work has been installed. Check timber floors are sound and free of 'rotten' spots.</p> <p>Ensure tower is erected as per user manual.</p> <p>Do not use aluminium towers as ladder support or propping.</p> <p>Do not climb up the outside of the tower, only use the integrated ladder and climb the inside of the tower.</p> <p>Do not drop items close to the tower, items may strike tower and cause the tower to become unstable.</p> <p>Do not use damaged sections or tubes to build the tower as this can cause weak areas.</p> <p>Ensure tower is erected upright and level at all times.</p> <p>Where required as per user manual ensure outriggers are used.</p>	M
Falls from height	Operative, workforce, public	H	<p>Information, instruction and training.</p> <p>Ensure the tower is the correct size for the task required</p> <p>Ensure the ground where the tower is to be placed is solid and level</p> <p>Ensure all the sections and elements of the tower are present</p> <p>Ensure the tower is erected as per the user manual for the type of tower supplied</p> <p>Ensure the feet or wheels are all making contact with the ground and all are level</p> <p>The tower must be signed off by a PASMA trained individual before the tower is used</p> <p>Only access the tower by the integrated ladder</p> <p>Never climb the outside of the tower</p> <p>When working from the tower, do not lean over the handrails, avoid dropping items which may impact the tower.</p> <p>Ensure there is an exclusion zone around the work area to prevent unauthorised access</p> <p>Never move a tower while persons are on the tower</p> <p>Do not 'scoot' the tower while working on it i.e while you are on the top lift do not pull yourself around on over head items to move the tower</p>	M
Slips, trips	Operative, workforce	H	<p>Information, instruction and training.</p> <p>Ensure work area is kept clean and access routes are tidy.</p> <p>Ensure the decks on the tower are kept clean and free from obstruction</p> <p>Any spills of any kind onto the tower decks must be cleaned up immediately</p> <p>Avoid hanging cables by fixing above head height and away from walkways</p> <p>Ensure footwear is in good order and laces are tied correctly</p>	M

Incorrect Manual handling	Operative Musculoskeletal injury, broken bones	M	Information, instruction and training. Use correct lifting techniques when erecting the tower. Utilise tandem lifting where necessary Never attempt to move the tower with people tool equipment or materials on the decks. Use correct push/pull motions to move the tower ensuring twist is avoided	L
electrocution/electrical explosion	Operator, workforce	H	Information, instruction and training. During works the greatest risk comes from contact with LIVE overhead live services. Ensure all services have been terminated and certified dead prior to works commencing. Keep tower the required distance from overhead power lines as electric can ark to the tower	M
Equipment failure	Workforce, public	M	Information, instruction and training. Prestart checks must be carried out on equipment prior to use. Ensure an in-date inspection certificate is available for the tower. Defect logs must be completed, and defects reported immediately. Once defects have been identified equipment must not be used until the defect is corrected.	L
Impact by Falling/flying objects	Workforce, public	H	Information, instruction and training. Eye protection, gloves, helmet to be worn at all times. At all times works must be undertaken to prevent flying objects. Create secure work and exclusion zones to control works and areas. When prying off timber (such as door frames, skirting etc) never start at the centre of the item, start and one end and work along the length of the item, this prevents added forces being exerted into the item which will cause it to 'flick' up as the last fixing is dislodged. Avoid working directly overhead, utilises towers to ensure you can work safely away from items being removed. Ensure at all times the areas below when you are working are secure and access below is prevented. When using hammer type tools to impact other metal objects such as chisels, bucket pins etc., ensure you and those in the close vicinity wear eye protection. Communicate your tasks and risks to those around you.	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders		Shaded cutting goggles		Face Shield	



## PROCEDURE

Tower scaffolds are widely used and are involved in numerous accidents each year. These usually happen because the tower is not properly erected or used. Aluminium towers are light and can easily overturn. Towers rely on all the parts being in place to ensure adequate strength. They can collapse if sections are left out.

### CHECKS:

- Check that the RAMs stipulate the use of a scaffold tower
- Check user manual is available for the specific tower being used
- Check that the tower is the correct size for the task required
- Check that you or a nominated person on site has PASMA training to sign tower off before it is used.
- Check that there are no power lines or other overhead obstructions
- Check that the ground is firm and level with no voids

### Erecting

The manufacturer or supplier should provide an adequate instruction manual which should give advice on the erection sequence and bracing requirements. If the tower has been hired, the hirer should provide this information. This information should be passed on to the erector.

The mixing of different components from different manufactures is not allowed.

The person erecting the tower should be competent.

### Stability

Make sure the tower / podium is resting on firm level ground with the wheels or feet properly supported.

Do not use bricks or building blocks to take the weight of any part of the tower.

The taller the tower, the more likely it is to become unstable.

The height of the working platform should be no more than three times the minimum base dimension; therefore, if the tower base is 2 m by 3 m, the maximum height would be 6 m.

Always check the safe height to base ratio in the instruction manual.

Remember, the stability of any tower will be affected if it is:

- sheeted and/or likely to be exposed to strong winds;
- loaded with heavy equipment or materials;
- used to hoist heavy materials or support rubbish chutes;
- used for operations involving heavy or awkward equipment;
- climbed from the outside;
- used as a support for ladders.

### Access

**NEVER ACCESS A PARTIALLY COMPLETE TOWER TO WORK**

**ENSURE THYE TOWER HAS BEEN ERECTED CORRECTLY COMPLYING WITH USER MANAUAL AND THAT TOWER HAS BEEN SIGNED OFF BEFORE ACCESSING THE TOWER TO WORK**

There must be a safe way to get to and from the work platform.

Only use the integrated ladder to climb the tower from THE INSIDE only

Never climb the outside of the tower

## **Moving the tower**

When moving a tower:

- Check that there are no power lines or other overhead obstructions;
- Check that the ground is firm and level;
- Push or pull only from the base - never use powered vehicles;
- Never move it while there are people or materials on the upper platforms;
- Never move it in windy conditions.

## **Protecting the public**

When towers are used in public places, extra precautions may be needed:

- Minimise the storage of materials and equipment on the working platform;
- Erect barriers at ground level to prevent people from walking into the tower or work area;
- Remove or board over access ladders to prevent unauthorised access if it is to remain in position unattended.
- Designated Banksman to assist with operations.

## **MAINTENANCE:**

Keep tower clean and tidy.

Maintain anti-slip protection.

Always use appropriate PPE when handling tower especially gloves as the aluminum section can have some sharp fragments from storage which can cause cuts.

Clear up any oil/fuel/substance spills on decks using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

Never allow any person to climb the outside of the tower for ANY REASON

Always clean the tower before storage, store in a safe location ensuring all elements of the tower are present and, in an area, where they cannot be damaged/lost.

## **OTHER CONSIDERATION**

Always consider other plant working around you and personnel especially those that may be hidden out of site.

Do not drop items close to the tower as the sections can be bent and damaged easily, items impacting the tower can also cause the tower to become unstable.

## **EMERGENCY**

In the event of an emergency/incident contact your Site Manager/Supervisor and inform them of the situation IMMEDIATELY.

## **CONFIRMATION OF COMMUNICATION SHEET**

REMEMBER SAFE OPERATING PROCEDURES ARE THEIR ENSURE YOUR SAFETY AND THAT OF OTHERS AND MUST BE FOLLOWED!!

**IF IN DOUBT ASK - DO NOT TAKE RISKS!!**





## SAFE OPERATING PROCEDURE

FOR

### LIVE SERVICES

*(Identifying, Marking, Exposing and Protecting)*



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 031
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TAYLER STEPHENSON
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	OCTOBER 2022	<b>REVIEW DATE</b>	OCTOBERE 2024

#### ACTIVITY:

The safe use when working with live services. All aspects of identifying, marking, exposing and protecting of services will be covered and what safe working procedures need to be adopted before attempting to carry out any works. All information should be read in conjunction with the relevant method statements and risk assessments.

#### AUTHORISATION:

No person is permitted or authorised to carry out this operation unless they competent and, in some cases, trained to the appropriate level or be under supervised training. Operatives must have knowledge of the system, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO CARRY OUT THIS TYPE OF WORK WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**

## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Coming into contact with live services	<p>Risk of electrocution</p> <p>Operative, workforce</p> <p>Electrocution</p> <p>Burns, scalds, death</p>	H	<p>Information, instruction and training.</p> <p>Ensure all live cables or connections are disconnected at the power source to minimise any risk of electrocution.</p> <p>Use all appropriate PPE.</p> <p>Avoid coming in to contact with exposed wires at all times as this could expose live electricity to the body.</p> <p>Always mark and identify live wires.</p> <p>Always identify wires that have been live but are now redundant to tell them away from others whilst working.</p> <p>Segregate area and attach signed to prevent others entering the work area when working with live services.</p> <p>Ensure all checks and certifications are in place prior to doing ANY work with services.</p> <p>Wear appropriate PPE at all times including: Boots, gloves, eye protection and safety hat. This is at the very the minimum requirements.</p> <p>Follow the correct method at all times indicated by the project manager or from direction of the client furthering information provided.</p>	M
Incorrect Manual handling	<p>Operative, workforce</p> <p>Musculoskeletal injury, broken bones</p>	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition and where needed, sharp.</p> <p>Wear appropriate PPE.</p> <p>Ensure all tools and equipment used are capable of carrying out the works at hand.</p> <p>When working with live services ensure all manual handling techniques are used.</p> <p>No demolition of soft stripping works is to be carried out without the certification documentation in regard to termination. <b>THIS is essential.</b></p>	M
Fire/explosion/ electrocution/electrical explosion	<p>Operatives, workforce</p> <p>Electrocution</p> <p>Burns, scalds, death</p>	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with underground or live services. Ensure all services have been terminated and certified dead prior to works commencing.</p> <p>When digging C.A.T scans of the works area must have been carried out and confirmed to the operator. Do not dig near live services unless a specific plan has been created, a permit to dig system must be used. Any excavation for services must be done with insulated tools appropriate for task.</p> <p>When carrying out soft strip works as part of soft stripping (separating materials or cutting trailing cables etc) do not cut any cables with wire cutters, bolt cutters, bars or any other item unless they have been confirmed and proved dead and you are instructed to carry out the works by a supervisor.</p> <p>Do not pierce any container with hand tools.</p>	M

SAFETY EQUIPMENT					
Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves ( <i>Rubber</i> )	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E (SR 100)		Goggles (EN 166 B)		Glasses (EN 166 F)	
Ear defenders		Shaded cutting goggles		Face Shield	X

## PROCEDURE

### CHECKS:

- All identification of live services is highlighted and identified. All documentation is to be held on site and overseen by the operatives carrying out the works required.
- Ensure all operatives carrying out the works have the correct information, instruction and training.
- Have a specific scope and work area of where the service in question needs attending to.
- All other persons have been restricted from accessing work area with heras fencing or other
- A toolbox talk has been carried out with all persons to communicate the hazard and signed for once understood.
- You have all the correct equipment, PPE and RPE to carry out the works
- No demolition or soft stripping works are to be carried out until the site manager is happy with the termination certification or that the live services are clearly identified and marked.

### LOCATION:

- Good clear access and egress points.
- Plenty of light.
- No unknown open ground voids of fall/trip hazards.
- Other workers are aware of what you are doing and will not be put in danger and vice versa.
- No overhanging/loose/dangerous structures.

### ACCESS:

- Know the easiest way to and from your work area and familiarise yourself with emergency routes.
- Ensure access to those not carrying out the works is clearly and adequately restricted.

### GENERAL OPERATION:

- Initial check of the status of the live/redundant services and any termination documentation to prove.
- Check all drawings and plans to locate all services on the site.
- Manually walk the site marking and identifying any live or redundant services with colored indicators.
- Gain the correct permit to dig.
- Once happy with the status and locations of services ensure all PPE is correct and in good working order.
- Commence excavation down the side of the service using insulated tools only. Do not excavate directly on top of the service
- **NO MECHANICAL EXCAVATIONS WITHIN 1 METER OF ALIVE SERVICE.**

### MAINTENANCE:

- Ensure RPE and PPE are correctly cleaned and stored
- Keep tools clean





## SAFE OPERATING PROCEDURE

FOR

Reciprocating (recip) Saw  
Battery Operated



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 032
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024

### ACTIVITY:

The safe use of reciprocating saws within the working environment.

The term reciprocating saw refers to a power assisted vibrating oscillating tool with a serrated blade that operates via a trigger system causing a cutting edge to repeatedly cross a surface rapidly when under pressure (pressure coming from manual force)

### AUTHORISATION:

No person is permitted or authorised to use these pieces of equipment unless they competent and in some cases trained to the appropriate level for the item or be under supervised training. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have had this document along with relevant site/task specific method statements and risk assessments communicated to them.

**YOU ARE NOT PERMITTED TO USE THESE ITEMS WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL**



## RISK ASSESSMENT

HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Incorrect Manual handling. Exceeding trigger times	Operative,  White knuckle/finger.  Musculoskeletal injury, broken bones	H	<p>Information, instruction and training.</p> <p>Select the correct tool for the task at hand. Ensure it is good condition and where needed, sharp.</p> <p>Wear appropriate PPE. Most importantly impact eye protection to EN166 B, Goggles not glasses.</p> <p>Be aware of others around you.</p> <p>When using any these tools ensure that your work area is clear and safe to work. Ensure you have a good solid floor space to stand and work from.</p> <p>When using tools avoid twisting the back while working, Follow the manual handling training. Avoid over work, allow the weight of the tool to produce the force required and do not overcompensate with muscle power. In saying this do not under compensate for the weight of the tool as this can cause the tool to slip.</p> <p>Follow user guide for each individual tool for the correct 'trigger time'. Do not exceed the exposure limits for the tool.</p>	M
Fire/explosion/ electrocution/electrical explosion	Operatives, workforce  Burns, death	H	<p>Information, instruction and training.</p> <p>During works the greatest risk comes from contact with live services. Ensure all services have been terminated and certified dead prior to works commencing.</p> <p>Do not use the tools near live services.</p> <p>Do not pierce any container, cable or sealed pipe with reciprocating saw unless you are sure there is no hazardous materials or pressurised /vacuumed elements within.</p> <p>Ensure charger and batteries are in good condition before charging and that power sources are safe.</p>	M
Collision with other workers	Workforce,  Broken bones, cuts, grazes, crush injuries, death	H	<p>Information, instruction and training.</p> <p>Check that work areas are segregated sufficiently and where required added controls such as tape warning barriers are in place.</p> <p>Prior to works commencing in a confined area ensure you make yourself aware of where other operatives are working and make them aware of what you are intending to do.</p> <p>Always work from the top down, do not undermine large elements of the structure.</p> <p>When working at high level ensure full exclusion zone is in place.</p>	M
Impact by Falling/flying objects	Workforce, public  Broken bones, cuts, grazes, crush injuries, death	H	<p>Information, instruction and training.</p> <p>Eye protection, EN 166 B Goggles not glasses. Wear safety helmets.</p> <p>At all times works must be undertaken to prevent flying objects. Create secure work and exclusion zones to control works and areas.</p> <p>Avoid working directly overhead, utilises towers to ensure you can work safely away from items being removed.</p> <p>Ensure at all times the areas below when you are working are secure and access below is prevented.</p> <p>Communicate your tasks and risks to those around you.</p>	M

Exposure to excess noise	Operatives, workforce, public	H	<p>Information, instruction and training.</p> <p>Wear ear defenders with an SNR enough to lower decibel level to acceptable level. See user guide for the tool. Consider the surrounding areas (noise will be louder in confined spaces and with metal clad walls). Limit working times near public areas.</p> <p>Communicate your tasks with others and ensure those around you are using ear protection.</p> <p>Ensure regular breaks are taken to limit exposure time.</p>	M
Excessive/nuisance dust	Operatives, workforce, public  Respiratory injury	H	<p>Information, instruction and training.</p> <p>When carrying out manual work with tools, potentially dusty operations must be controlled with water mist sprays. Operative to be vigilant with regards sporadic dusts. Where high levels of dust are produced, and control measures do not prevent dust stop operations and seek advice from the site supervisor. Also, be vigilant on wind direction and where dust is being carried.</p> <p>If dust is expected operatives must wear Sundstrom Half Mask SR100 with a P3 filter.</p>	M

### ENVIRONMENTAL ASSESSMENT

Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	M	Air	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Frequent monitoring regime.	L
Dust	H	Air, water	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M

### SAFETY EQUIPMENT

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves	X	Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E (SR 100)	X	Goggles (EN 166 B)	X	Glasses (EN 166 F)	
Ear defenders	X	Shaded cutting goggles		Face Shield	

## PROCEDURE

### CHECKS:

Equipment,

- The electrical items such as battery chargers must have a valid P.A test and certificate.
- Recip saws must be inspected correctly under PUWER.
- It must be good working order.
- All leads and plugs, and connectors and batteries are free from damage.
- The right tool for the job with the coinciding correct cutting blades or sufficient number for the material being cut.

Location,

- Good clear access and egress points.
- Ventilation.
- Plenty of light.
- No ground voids of fall/trip hazards.
- Other workers are aware of what you are doing and will not be put in danger and vice versa.

### ACCESS:

- Know the easiest way to and from your work area and familiarise yourself with emergency routes.
- Ensure where necessary the access is full restricted to others. i.e when exclusion zones are being created.

### GENERAL OPERATION:

- Only use the tool for its intended purpose.
- Ensure the correct equipment is selected.
- Ensure generator packs, for battery charging if used are situated on drip trays.
- Install the correct cutting blade for the material being cut.
- When cutting, place the blade gently against the surface do not ram it against the piece.
- Be sure there is nothing behind the item being cut which could be damaged.
- Ensure two points of contact are kept with the tool when it is in use.
- Be aware of blade 'snagging' which could damage the tool.
- NEVER use mobile phones whilst working.
- NEVER exceed your personal capacity.
- NEVER exceed the designated trigger time for the tool.
- If in doubt, ask.
- At the end of your shift ensure all tools are put away.
- Complete the hand arm vibration form attached

### MAINTENANCE:

- Keep tools clean and tidy.
- Report any damage immediately and take out of use.
- Do not throw tools down onto the floor.
- Ensure batteries are fully charged.

## OTHER CONSIDERATION

Always consider other personnel especially those that may be hidden out of site.

## EMERGENCY

In the event of an emergency/incident contact your Site Manager/Supervisor and inform them of the situation IMMEDIATELY.





**SAFE OPERATING PROCEDURE  
FOR**

Pressure Washer



<b>SAFE OPERATING PROCEDURE REFERENCE NUMBER</b>			SOP 035
<b>SAFE OPERATING PROCEDURE DEVELOPED BY</b>			TIM WHITTLE
<b>SAFE OPERATING PROCEDURE APPROVED BY</b>			DEAN WRING
<b>DATE</b>	October 2022	<b>REVIEW DATE</b>	October 2024
<b>ACTIVITY:</b> Dust control and cleaning			
<b>AUTHORISATION:</b> No person is permitted or authorised to operate this piece of equipment unless they are deemed competent. Operatives must have knowledge of the item, its functions, limitations and emergency procedures and have this document along with relevant site-specific method statements and risk assessments communicated to them. As part of your ongoing training and safe use of plant assessments you are obliged to read and sign the following safe operating procedures. <b>YOU ARE NOT PERMITTED TO OPERATE OR USE THIS EQUIPMENT WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL</b>			

RISK ASSESSMENT				
HAZARD	WHO CAN BE HARMED AND HOW	RISK RATING H/M/L	MEASURES TO MINIMISE RISK	RESIDUAL RISK H/M/L
Slips, trips	Operator, workforce, public Serious injury, broken bones, death	H	Any spillage of fluids from the machine must be cleaned up immediately.  Check that when the is stopped and left for a period, the access route to and from the machine is clear of slip/trip hazards.	M
Manual handling (Maintenance purposes)	Operator, workforce, Serious injury, broken bones, musculoskeletal injury	H	Ensure lifting operations follow manual handling training, use safe principals. Heavy items must be lifted by mechanical aids or utilising tandem lifting techniques.  Use the correct tools for the project at hand.	M
Fire	Operator, workforce, public Serious injury, burns, scalds, death	M	Before works commence check the machine being used does not have any fuel/oil leaks which could ignite if a spark was to come into contact with it.	L
Contact with hazardous substances	Operator, Skin damage	M	When refuelling or carrying out maintenance on machinery wear gloves with suitable protection against oils and fuels.  High pressure leaks can penetrate bare skin and cause severe injury, if a high-pressure leak should occur immediately turn off the machine and do not approach leak until pressurised leak flow stops.	L
Exposure to hand arm vibration through lance	Operator Vibration white finger and other associated issues	H	Short duration use, Ensure equipment is well maintained and in good condition. Ensure pump and flow rates are working as vibration can occur with reduced flow rates	M
Injury to eyes from stones dirt and other material	Operator Eye injury	H	Never direct the spray towards persons on site.  Wear impact rated eye protection in the form of goggles	M

ENVIRONMENTAL ASSESSMENT					
Source/item	Impact rating H/M/L	Pathway	Receptor	Control	Residual rating H/M/L
Noise	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Limit working hours depending on location, ear protection for close proximity work. Utilise acoustic screening. Frequent monitoring regime.	M
Dust	H	AIR, WATER	Localised public and workforce, flora, fauna, aquatic life	Reduce dropping of materials, utilise fine water mist sprays to contain dust (caution with mist spray run off and contamination of ground/water courses)	M
Fumes	H	AIR	Localised public and workforce, flora, fauna, aquatic life	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

Fuel/oil spills	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Utilise drip trays and spill kits efficiently. Clean up spills immediately, ensure defect hydraulic/fuel/oil hoses are replaced/repaired.  Training.	M
Fuel usage	H	AIR, WATER, GROUND	Localised public and workforce, flora, fauna, aquatic life, soil/ground	Minimise usage of equipment, ensure a rigorous maintenance regime is in place and followed. Do not allow equipment to sit idling, turn off engine when not in use.	M

### SAFETY EQUIPMENT

Safety helmet	X	Safety footwear (EN 345)	X	Hi-viz clothing	X
Gloves		Safety harness		Fall arrest lanyard	
Fall restraint lanyard		Overalls (flame retardant)		Overalls (disposable)	
R.P.E SR 100 (task specific)		Goggles EN166B (task specific)	X	Glasses (EN 166 F)	
Ear defenders (task specific)	X	Shaded cutting goggles		Face shield	

### PROCEDURE

#### CHECKS:

- Check you have the correct training, information, instruction and supervision.
- Check that the relevant inspection is in place, in date and for the piece of equipment you have.
- Check tyres, breaks, as well as standard engine checks.
- Check ground conditions are acceptable.
- Check you understand what is required of you for the task at hand.
- Check you have communicated your intentions to other relevant persons.

#### ACCESS:

Place the pressure washer in a suitable safe location. Proceed with caution to machine. Use designated walkways where possible. Be aware of moving vehicles and mobile plant

**ALWAYS** Keep the machine clean and tidy.

#### TRAVELLING:

When moving the pressure washer using a vehicle or dumper, stop and remove all objects in your path where safe to do so, never drive over them.

Wear the seat belt and ensure beacons are working on the item being used.

Always travel at a speed that is safe, observing the ground surface conditions.

Before moving off always double check that it is safe to do so, having made all round observation for pedestrians or other obstacles.

Always slow down when approaching corners, parked vehicles, doorways etc. and sound your horn and be prepared to stop (a few short blasts attracts the most attention).

Never approach any pedestrian or allow them to approach you. Stop work if they do.

## **GENERAL OPERATION:**

Only use the pressure washer for its intended purpose.

NEVER use mobile phones whilst operating equipment.

### **Prior to Commencing Pressure Washer Operations**

Ensure the following safety Control Measures are adhered to:

The Pressure washer is to be inspected to ensure that:

- All controls are in place & fully operational.
- All emergency stop buttons are operational & accessible.
- Communicate operations with others.
- All defects identified are reported to the workshop for rectification through the defect reporting process and recorded on the defect register.
- Defects which may affect the safe operation of the pressure washer are to be reported immediately. The Site Supervisor is to be advised accordingly.
- Ensure water tank is full
- Ensure correct and sufficient fuel for the task is available
- Check wash off area when cleaning oily or greasy items from plant that the correct catchment is available to deal with the COSHH items (DO NOT WASH THIS MATERIAL DOWN LAND DRAINS OR INTO WATER WAYS)

### **Commencing Pressure Washer Operations**

- Ensure pressure washer is correctly placed
- Don PPE
- Start machine following the correct starting procedures
- Direct spray away from yourself
- Do not spray towards other persons
- Take care when cleaning painted surfaces or areas with logos / screen printing as jet may remove items
- Do not use pressure washer to wash clothes or foot-wear off
- Consider run off from work area

## **MAINTENANCE:**

Keep machine clean and tidy.

Ensure engine covers and guards are in place, if removed replace them prior to operations re-commencing.

Always use appropriate PPE when handling oils, grease etc

Clear up any oil spills using granules available, any large oil spills report immediately.

Monitor the performance of the equipment and report any faults that develop

DO NOT smoke or allow naked lights when re-fueling or checking fluid levels.

Ensure caps are cool prior to removal

NEVER use your hand when checking for leaks ALWAYS use another item i.e. Piece of cardboard.

## **OTHER CONSIDERATION**

Always consider other plant working around you and personnel especially those that may be hidden out of site.







# COSHH / DSEAR

## Risk Assessment No: 001



**Diesel Fuel / Gas Oil (White and Red Diesel)**

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Diesel Fuel / Gas Oil (White and Red Diesel)**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		<b>X</b>

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
	<b>X</b>				<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : BP Automotive Diesel Fuel (May 2008)</b>	<b>See MSDS : BP Automotive Diesel Fuel (May 2008)</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – Harmful – may cause lung damage if swallowed.  
Secondary Risk – limited evidence of carcinogenic risk









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure filling of plant and machinery is carried out in a well-ventilated area. Clean spills as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).

If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
		<b>X</b>		

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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## 1. Identification of the material and supplier

<b>Product name</b>	<b>BP Automotive Diesel Fuel</b>
<b>SDS no.</b>	0000002718
<b>Historic SDS no.</b>	AD0K1
<b>Product use</b>	Fuel for compression ignition diesel engines.
<b>Synonyms</b>	G10, BP 10ppm Diesel, Ultra Low Sulphur Diesel G50, BP Diesel G50, G21, Low Sulphur Diesel, G32, Automotive Diesel Fuel – PNG, Automotive Diesel Fuel SWP & American Samoa, R5
<b>Supplier</b>	BP Australia Pty Ltd (ABN 53 004 085 616) Melbourne Central, 360 Elizabeth Street, Melbourne, Victoria 3000, Australia Tel: +61 (03) 9268 4111 Fax: +61 (03) 9268 3321
<b>EMERGENCY TELEPHONE NUMBER</b>	1800 638 556
<b>Product code</b>	0000002718

## 2. Hazards identification

<b>Statement of hazardous/dangerous nature</b>	HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.
<b>Risk phrases</b>	R40- Limited evidence of a carcinogenic effect. R65- Harmful: may cause lung damage if swallowed.
<b>Safety phrases</b>	S2- Keep out of the reach of children. S24- Avoid contact with skin. S36/37- Wear suitable protective clothing and gloves. S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

## 3. Composition/information on ingredients

May also contain small quantities of proprietary performance additives.

<b>Ingredient name</b>	<b>CAS no.</b>	<b>%</b>
Fuels, diesel	68334-30-5	50 - 100

Contains small quantities of polycyclic aromatic hydrocarbons (PAHs).

## 4. First-aid measures

<b>Eye contact</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
<b>Skin contact</b>	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
<b>Ingestion</b>	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention.

---

## 5 . Fire-fighting measures

### Extinguishing media

#### Suitable

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

#### Not suitable

Do not use water jet.

### Hazardous decomposition products

Decomposition products may include the following materials: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide) . Other hazardous substances.

### Unusual fire/explosion hazards

Combustible liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

### Special fire-fighting procedures

DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. Withdraw from fire and let it burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. Do not use water jet.

### Protection of fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

---

## 6 . Accidental release measures

### Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

### Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Large spill

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

### Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

---

## 7 . Handling and storage

### Handling

Avoid breathing vapours, spray or mists. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Avoid contact of spilt material and runoff with soil and surface waterways. Wash thoroughly after handling. Never siphon by mouth. When using do not eat, drink or smoke.

### Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Store and use only in equipment/containers designed for use with this product. Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed. Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations of less than 1% of the lower flammability limit and an oxygen concentration of at least 20% volume. Always have sufficient people standing by outside the tank with appropriate breathing apparatus and equipment to effect a quick rescue.

### Combustibility Classification

Combustible liquid Class C1 (AS 1940).

### Additional information-Storage

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Will present a flammability hazard if heated above flash point but bulk liquids at normal storage temperatures will present virtually no fire hazard. If fuel contacts hot surfaces, or leaks from high pressure fuel pipes, the vapour and/or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. To avoid fire, eliminate ignition sources.

## 8 . Exposure controls/personal protection

### Ingredient name

Fuels, diesel

### Occupational exposure limits

**ACGIH TLV (United States). Absorbed through skin.**

TWA: 100 mg/m<sup>3</sup>, (measured as total hydrocarbons) 8 hour(s). Form: Total hydrocarbons

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

### Biological Limit Values

No biological limit allocated.

### Exposure controls

#### Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

### Personal protective equipment

#### Respiratory protection

Use only with adequate ventilation. Do not breathe vapour or mist.

#### Skin and body

Avoid prolonged or repeated contact with skin. Wear protective clothing if prolonged or repeated contact is likely.

#### Hand protection

Wear protective gloves if prolonged or repeated contact is likely.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

#### Eye protection

Safety glasses with side shields.

## 9 . Physical and chemical properties

### Physical state

Liquid.

### Colour

Water white to straw including fluorescent green, blue or yellow.

### Odour

Mild

### Flash point

>61.5 °C (Closed cup) Pensky-Martens.

### Auto-ignition temperature

240°C (464°F)

### Explosive properties

Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

### Explosion limits

Lower: 0.7%  
Upper: 5%

### Vapour pressure

0.1 kPa (0.755 mm Hg)

### Vapour density

Not available.

### Viscosity

Kinematic: 2.1 to 5.5 mm<sup>2</sup>/s (2.1 to 5.5 cSt) at 40°C

### pH

Not available.

### Boiling point / range

180 to 380°C (356 to 716°F)

### Melting point / range

Not available.

### Relative density/Specific gravity

0.84

### Density

810 to 850 kg/m<sup>3</sup> (0.81 to 0.85 g/cm<sup>3</sup>) at 15°C

### Solubility

Not available.

## 10 . Stability and reactivity

### Stability

The product is stable. (Ambient Temperatures)

### Conditions to avoid

Avoid all possible sources of ignition (spark or flame).

### Incompatibility with various substances/Hazardous Reactions

Avoid strong oxidisers.

### Hazardous decomposition products

Decomposition products may include the following materials: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide) . Other hazardous substances.

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## 11 . Toxicological information

### Effects and symptoms

<b>Eyes</b>	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
<b>Skin</b>	Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.
<b>Inhalation</b>	May cause irritation of respiratory tract, coughing, shortness of breath.
<b>Ingestion</b>	Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.

### Chronic toxicity

<b>Carcinogenic effects</b>	Carcinogenic Category 3
<b>Mutagenic effects</b>	No known significant effects or critical hazards.

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## 12 . Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Biodegradability</b>	
<b>Persistence/degradability</b>	This product is inherently biodegradable.
<b>Mobility</b>	Spillages may penetrate the soil causing ground water contamination. This material may accumulate in sediments.
<b>Bioaccumulative potential</b>	This product is not expected to bioaccumulate through food chains in the environment.
<b>Other ecological information</b>	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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## 13 . Disposal considerations

<b>Disposal considerations / Waste information</b>	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
<b>Special Precautions for Landfill or Incineration</b>	Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

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## 14 . Transport information

### International transport regulations

Not classified as dangerous for transport (ADG, IMDG, ICAO/IATA).

<b>Special precautions for user</b>	No known special precautions required. See Section: "Handling and storage" for additional information.
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## 15 . Regulatory information

### Standard for the Uniform Scheduling of Drugs and Poisons

5

### Control of Scheduled Carcinogenic Substances

#### Ingredient name

Fuels, diesel

#### Schedule

Scheduled

#### Australia Regulations

Labelling requirements for SUSDP do not apply to a poison that is packed and sold solely for industrial, laboratory or manufacturing use. However, this product is labelled in accordance with NOSHC National Code of Practice for labelling of workplace substances.

#### Other regulations

**Europe inventory** All components are listed or exempted.

**United States inventory (TSCA 8b)** All components are listed or exempted.

**Australia inventory (AICS)** All components are listed or exempted.

**Canada inventory** All components are listed or exempted.

**China inventory (IECSC)** All components are listed or exempted.

**Japan inventory (ENCS)** Not determined.

**Korea inventory (KECI)** All components are listed or exempted.

**Philippines inventory (PICCS)** All components are listed or exempted.

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**Product name** BP Automotive Diesel Fuel

**Product code** 0000002718

Page: 4/5

**Version** 3

**Date of issue** 29 May 2008

**Format Australia**  
(Australia)

**Language ENGLISH**  
(ENGLISH)

## 16 . Other information

### Key to abbreviations

AMP = Acceptable Maximum Peak  
ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards.  
ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail  
ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail  
CAS Number = Chemical Abstracts Service Registry Number  
HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk.  
ICAO = International Civil Aviation Organization.  
IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air.  
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.  
IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent.  
NOHSC = National Occupational Health & Safety Commission, Australia  
TWA = Time weighted average  
STEL = Short term exposure limit  
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

### History

**Date of issue** 29/05/2008.  
**Date of previous issue** 02/05/2007.  
**Prepared by** Product Stewardship

### Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.





# COSHH / DSEAR

## Risk Assessment No: 019



**Petrol**

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Petrol**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
X		X	X				X		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
		X			X	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
X	X	X	X	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
See MSDS : 191mg/m3	See MSDS : 574mg/m3

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.  
Likely to cause skin irritation.  
Likely to result in chemical burns following prolonged wetting of the skin. (eg. after a road traffic accident).  
Aspiration hazard if swallowed- can enter lungs and cause damage.  
Likely to be irritating to the respiratory tract if high concentrations of mists or vapour are inhaled. May cause nausea, dizziness, headaches and drowsiness if high concentrations of vapour are inhaled.  
Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.  
Exposure to benzene may result in effects to the hematopoietic system causing blood disorders including anaemia and leukaemia.









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

Ensure that eyewash stations and safety showers are close to the workstation location.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE	<b>X</b>	For prolonged use	 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other	<b>X</b>	Local exhaust ventilation

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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## 1. Identification of the material and supplier

<b>Product name</b>	<b>BP Premium Unleaded Petrol</b>
<b>SDS no.</b>	0000002734
<b>Historic SDS no.</b>	876
<b>Product use</b>	Fuel for spark ignition engines. NOT for aviation use. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Supplier</b>	BP Australia Pty Ltd (ABN 53 004 085 616) 717 Bourke Street Docklands VIC 3008 Australia Tel: +61 (03) 9268 4111 Fax: +61 (03) 9268 3321
<b>EMERGENCY TELEPHONE NUMBER</b>	1800 638 556
<b>Product code</b>	0000002734

## 2. Hazards identification

<b>Statement of hazardous/dangerous nature</b>	HAZARDOUS SUBSTANCE. DANGEROUS GOODS.
<b>Risk phrases</b>	R12- Extremely flammable. R45- May cause cancer. R46- May cause heritable genetic damage. R63- Possible risk of harm to the unborn child. R65- Also harmful: may cause lung damage if swallowed. R38- Irritating to skin. R67- Vapours may cause drowsiness and dizziness. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Safety phrases</b>	S2- Keep out of the reach of children. S16- Keep away from sources of ignition - No smoking. S23- Do not breathe gas/fumes/vapour/spray. S24- Avoid contact with skin. S29- Do not empty into drains. S36/37- Wear suitable protective clothing and gloves. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

## 3. Composition/information on ingredients

Ingredient name	CAS no.	%
Petrol	86290-81-5	>90
Contains:		
Benzene	71-43-2	<1
tert-butyl alcohol	75-65-0	<1
tert-butyl methyl ether	1634-04-4	<1
Polycyclic aromatic hydrocarbons (PAHs)	mixture	<1
diisopropyl ether	108-20-3	<1

## 4. First-aid measures

<b>Eye contact</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Skin contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather, particularly footwear, must be discarded. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.

## Inhalation

Get medical attention immediately. If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

If exposure to vapour, mists or fumes causes drowsiness, headache, blurred vision or irritation of the eyes, nose or throat, remove immediately to fresh air. Keep patient warm and at rest. If any symptoms persist obtain medical advice.

## Ingestion

Get medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage.

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## 5. Fire-fighting measures

### Extinguishing media

#### Suitable

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

#### Not suitable

Do not use water jet.

### Hazardous decomposition products

Decomposition products may include the following materials: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide)

### Unusual fire/explosion hazards

Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

### Special fire-fighting procedures

Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Move containers from fire area if this can be done without risk. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is toxic to aquatic organisms. Use water spray to keep fire-exposed containers cool.

### Protection of fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Hazchem code

3YE

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## 6. Accidental release measures

### Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

### Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

### Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

---

## 7. Handling and storage

### Handling

Put on appropriate personal protective equipment. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not swallow. Aspiration hazard. Can enter lungs and cause damage. Never siphon by mouth. Avoid breathing vapour or mist. Avoid contact of spilt material and runoff with soil and surface waterways. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Do not reuse container. Empty containers retain product residue and can be hazardous.

### Storage

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Store and use only in equipment/containers designed for use with this product. Do not remove warning labels from containers.

Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations of less than 1% of the lower flammability limit and an oxygen concentration of at least 20% volume.

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks.

When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure.

If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard.

Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

This product must be handled in compliance with Australian Standard: The storage and handling of flammable and combustible liquids [Standard 1940-2004 as amended and adapted].

#### Additional information- Storage

## 8 . Exposure controls/personal protection

### Ingredient name

Gasoline

### Occupational exposure limits

**ACGIH TLV (United States, 5/2004).**

STEL: 1480 mg/m<sup>3</sup> 15 minute(s). Form: All forms

STEL: 500 ppm 15 minute(s). Form: All forms

TWA: 890 mg/m<sup>3</sup> 8 hour(s). Form: All forms

TWA: 300 ppm 8 hour(s). Form: All forms

Benzene

**NOHSC (Australia, 8/2005).**

TWA: 3.2 mg/m<sup>3</sup> 8 hour(s).

TWA: 1 ppm 8 hour(s).

tert-butyl methyl ether

**NOHSC (Australia, 8/2005).**

STEL: 275 mg/m<sup>3</sup> 15 minute(s).

STEL: 75 ppm 15 minute(s).

TWA: 92 mg/m<sup>3</sup> 8 hour(s).

TWA: 25 ppm 8 hour(s).

2-Methylpropan-2-ol

**NOHSC (Australia, 1995).**

STEL: 455 mg/m<sup>3</sup> 15 minute(s).

STEL: 150 ppm 15 minute(s).

TWA: 303 mg/m<sup>3</sup> 8 hour(s).

TWA: 100 ppm 8 hour(s).

Polycyclic aromatic hydrocarbons (PAHs)

**NOHSC (Australia).**

TWA: 0.2 mg/m<sup>3</sup> 8 hour(s).

diisopropyl ether

**NOHSC (Australia, 8/2005).**

STEL: 1300 mg/m<sup>3</sup> 15 minute(s).

STEL: 310 ppm 15 minute(s).

TWA: 1040 mg/m<sup>3</sup> 8 hour(s).

TWA: 250 ppm 8 hour(s).

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components are included in this SDS, it should be noted that other components of the preparation will be present in any mist, vapour or dust produced. For this reason, the specific OELs may not be applicable to the product and are provided for guidance purposes.

### Biological Limit Values

Benzene: S-Phenylmercapturic acid in urine - End of shift: 25 µg/g creatinine (ACGIH)  
t,t-Muconic acid in urine - End of shift: 500 µg/g creatinine (ACGIH)

### Exposure controls

#### Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

Ensure that eyewash station and safety shower is proximal to the workstation location. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible. The above information is provided to assist the customer in conducting its own assessment of risk to the health and safety of workers for the substance or preparation, and protection of the environment.

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

#### Respiratory protection

Use only with adequate ventilation. Do not breathe vapour or mist. Avoid breathing of vapours, mists or spray. Select and use respirators in accordance with AS/NZS 1715/1716. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure level.

### Skin and body

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil. Wear face shield.

### Hand protection

Wear gloves that cannot be penetrated by chemicals or oil.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

### Eye protection

Safety glasses with side shields.

## 9 . Physical and chemical properties

<b>Physical state</b>	Liquid.
<b>Colour</b>	Light Yellow. to Yellow.
<b>Odour</b>	Gasoline [Strong]
<b>Flash point</b>	<-40 °C (Closed cup) Pensky-Martens.
<b>Auto-ignition temperature</b>	>350°C (>662°F)
<b>Explosion limits</b>	Lower: 1.4% Upper: 7.6%
<b>Vapour pressure</b>	29.92 to 99.734 kPa (225 to 750 mm Hg)
<b>Vapour density</b>	Not available.
<b>Viscosity</b>	Kinematic: 0.4 to 0.55 mm <sup>2</sup> /s (0.4 to 0.55 cSt) at 40°C
<b>pH</b>	Not available.
<b>Boiling point / range</b>	30 to 210°C (86 to 410°F)
<b>Melting point / range</b>	Not available.
<b>Relative density/Specific gravity</b>	Not available.
<b>Density</b>	740 to 760 kg/m <sup>3</sup> (0.74 to 0.76 g/cm <sup>3</sup> )
<b>Solubility</b>	Not available.

## 10 . Stability and reactivity

<b>Stability</b>	The product is stable.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame). Avoid excessive heat.
<b>Incompatibility with various substances/Hazardous Reactions</b>	Reactive or incompatible with the following materials: oxidising materials.
<b>Hazardous decomposition products</b>	Decomposition products may include the following materials: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)

## 11 . Toxicological information

### Effects and symptoms

<b>Eyes</b>	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
<b>Skin</b>	Likely to cause skin irritation. Likely to result in chemical burns following prolonged wetting of the skin. (eg. after a road traffic accident).
<b>Inhalation</b>	Aspiration hazard if swallowed. Can enter lungs and cause damage.
<b>Ingestion</b>	Likely to be irritating to the respiratory tract if high concentrations of mists or vapour are inhaled. May cause nausea, dizziness, headaches and drowsiness if high concentrations of vapour are inhaled. Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.

### Chronic toxicity

<b>Carcinogenic effects</b>	Exposure to benzene may result in effects to the hematopoietic system causing blood disorders including anaemia and leukaemia. Benzene is classified by EEC as a category 1 carcinogen - substances known to be carcinogenic to man. IARC assessment: benzene - carcinogenic to humans (Group 1)
<b>Mutagenic effects</b>	Contains material which may cause heritable genetic effects. Benzene

## 12 . Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Biodegradability</b>	
<b>Persistence/degradability</b>	The biodegradability of this material has not been determined.
<b>Mobility</b>	Spillages may penetrate the soil causing ground water contamination.
<b>Bioaccumulative potential</b>	This product is not expected to bioaccumulate through food chains in the environment.
<b>Other ecological information</b>	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## 13 . Disposal considerations

### Disposal considerations / Waste information






The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

### Special Precautions for Landfill or Incineration

No additional special precautions identified.

## 14 . Transport information

### International transport regulations

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
<b>ADG Classification</b>	UN1203	Gasoline or Motor Spirit (Gasoline)	3	II		<b>Hazchem code</b> 3YE
<b>IMDG Classification</b>	UN1203	Gasoline or Motor Spirit (Gasoline). Marine pollutant (Benzene)	3	II	 	<b>Emergency schedules (EmS)</b> F-E; S-E
<b>IATA/ICAO Classification</b>	UN1203	Gasoline or Motor Spirit (Gasoline)	3	II	 	-

PG\* : Packing group

### Special precautions for user

No known special precautions required. See Section: "Handling and storage" for additional information.

## 15 . Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Not scheduled

Consumer products - This product is exempt per Appendix A of the SUSMP.

Industrial Products - Labelling requirements for SUSMP do not apply to a poison that is packed and sold solely for industrial, laboratory or manufacturing use. However, this product is labelled in accordance with NOSH National Code of Practice for labelling of workplace substances.

### Control of Scheduled Carcinogenic Substances

#### Ingredient name

Benzene

#### Schedule

Schedule: 2. when used as a feedstock containing more than 50% of benzene by volume

#### Other regulations

##### REACH Status

For the REACH status of this product please consult your company contact, as identified in Section 1.

##### United States inventory (TSCA 8b)

Not determined.

##### Australia inventory (AICS)

Contact local supplier or distributor.

##### Canada inventory

At least one component is not listed.

##### China inventory (IECSC)

At least one component is not listed.

##### Japan inventory (ENCS)

At least one component is not listed.

##### Korea inventory (KECI)

At least one component is not listed.

##### Philippines inventory (PICCS)

At least one component is not listed.

## 16 . Other information

### Key to abbreviations

AMP = Acceptable Maximum Peak  
ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards.  
ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail  
ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail  
CAS Number = Chemical Abstracts Service Registry Number  
HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk.  
ICAO = International Civil Aviation Organization.  
IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air.  
IMDG = International Maritime Organization Rules, rules governing shipment of goods by water.  
IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent.  
NOHSC = National Occupational Health & Safety Commission, Australia  
TWA = Time weighted average  
STEL = Short term exposure limit  
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

### History

**Date of issue** 26/04/2012.  
**Date of previous issue** 06/07/2007.  
**Prepared by** Product Stewardship

### Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.





# COSHH / DSEAR

## Risk Assessment No: 001



### Hydraulic Oil – Type 46

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Hydraulic Oil – Type 46**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
		<b>X</b>			<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>5mg/m3</b>	<b>10mg/m3</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – May cause lung problems if a fine mist is inhaled.  
Secondary Risk – Hydraulic systems are normally operated at high pressure – care is to be taken not to be exposed to high speed jets of fluid.









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Clean spills as soon as practicably possible (spills are a potential slip hazard).

Care should be taken when servicing plant due to the high-pressure hydraulic systems. Ensure plant manufacturer recommendations are followed when servicing equipment, especially with respect to releasing pressures from the system

Is health surveillance or monitoring required? **YES** **NO** **X**

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

**Inhalation** – No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Skin Contact** – No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Eye Contact** – No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Swallowing** – No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**STORAGE**

Minimise on-site storage.  
Store in sealed secure containers with clear identification markings.  
Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
		<b>X</b>		<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled **YES** **X** **NO**

**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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**ASSESSED BY** Tim Whittle **DATE** 01.11.20 **REVIEW DATE** 01.11.23

# Material Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### Chevron Hydraulic Oil AW

**Product Use:** Hydraulic Oil

**Product Number(s):** CPS255673, CPS255674, CPS255675

**Synonyms:** Chevron Hydraulic Oil AW ISO 32, Chevron Hydraulic Oil AW ISO 46, Chevron Hydraulic Oil AW ISO 68

**Company Identification**

Chevron Products Company

Global Lubricants

6001 Bollinger Canyon Rd.

San Ramon, CA 94583

United States of America

www.chevronlubricants.com

**Transportation Emergency Response**

CHEMTREC: (800) 424-9300 or (703) 527-3887

**Health Emergency**

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

**Product Information**

email : lubemsds@Chevron.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

## SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	90 - 100 %weight

## SECTION 3 HAZARDS IDENTIFICATION

**IMMEDIATE HEALTH EFFECTS**

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

**Ingestion:** Not expected to be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

## SECTION 4 FIRST AID MEASURES

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Note to Physicians:** In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into

a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

## SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

### FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

### FLAMMABLE PROPERTIES:

**Flashpoint:** (Cleveland Open Cup) 170 °C (338 °F) (Min)

**Autoignition:** No Data Available

**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

### PROTECTION OF FIRE FIGHTERS:

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

**Precautionary Measures:** DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### ENGINEERING CONTROLS:

Use in a well-ventilated area.

### PERSONAL PROTECTIVE EQUIPMENT

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

**Respiratory Protection:** No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

**Color:** Yellow

**Physical State:** Liquid

**Odor:** Petroleum odor

**pH:** Not Applicable

**Vapor Pressure:** <0.01 mmHg @ 37.8 °C (100 °F)

**Vapor Density (Air = 1):** >1

**Boiling Point:** >315°C (599°F)

**Solubility:** Soluble in hydrocarbon solvents; insoluble in water.

**Freezing Point:** Not Applicable

**Specific Gravity:** 0.86 - 0.9 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

**Density:** 0.86 kg/l - 0.9 kg/l @ 15°C (59°F)

**Volatile Organic**

**Compounds (VOC) :** <2.1 %weight

**Viscosity:** 28.8 cSt @ 40°C (104°F) (Min)

## SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Decomposition Products:** None known (None expected)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

### IMMEDIATE HEALTH EFFECTS

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** No product toxicology data available.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

### ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

## SECTION 12 ECOLOGICAL INFORMATION

**ECOTOXICITY**

48 hour(s) EC50: >1000 mg/l (Daphnia magna)

96 hour(s) LC50: >1000 mg/l (Oncorhynchus mykiss)

This material is not expected to be harmful to aquatic organisms.

**ENVIRONMENTAL FATE**

This material is not expected to be readily biodegradable.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

**Additional Information:** NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

**IMO/IMDG Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**SECTION 15 REGULATORY INFORMATION**

- EPCRA 311/312 CATEGORIES:** 1. Immediate (Acute) Health Effects: NO  
 2. Delayed (Chronic) Health Effects: NO  
 3. Fire Hazard: NO  
 4. Sudden Release of Pressure Hazard: NO  
 5. Reactivity Hazard: NO

**REGULATORY LISTS SEARCHED:**

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

**CHEMICAL INVENTORIES:**

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

**NEW JERSEY RTK CLASSIFICATION:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

**WHMIS CLASSIFICATION:**

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**LABEL RECOMMENDATION:**

Label Category : INDUSTRIAL OIL 1 - IND1

**REVISION STATEMENT:** This revision updates the following sections of this Material Safety Data Sheet: 2,15.

**Revision Date:** January 11, 2007

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**



# COSHH / DSEAR

## Risk Assessment No: 001



### Engine Oil

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**Engine Oil**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		<b>X</b>

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
					<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : none shown</b>	<b>See MSDS : none shown</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

No ill effects shown on MSDS











**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure filling of plant and machinery is carried out in a well-ventilated area. Clean spills as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).

If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
--	------------	--	-----------	----------

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
 Skin Contact – Wash with soap and water, if skin irritation continues consult a doctor.  
 Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
 Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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# COSHH / DSEAR

## Risk Assessment No: 001



### LITHIUM GREASE

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
-----------	-----------	-------------	----------	--------	----------

Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**LITHIUM GREASE**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>					<b>X</b>		

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
					<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>See MSDS : 600mg/m3</b>	<b>See MSDS : none shown</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**









Skin and respiratory issues  
Health Warnings  
This chemical can be hazardous when inhaled and/or touched. This chemical may cause skin/eye irritation and burns (corrosive). May cause severe internal injury. Vapour from this chemical can be hazardous when inhaled.  
Route of entry  
Inhalation. Ingestion. Skin and/or eye contact. Skin absorption.

**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Ensure greasing of plant and machinery is carried out in a well-ventilated area. Clean spills/drips as soon as practicably possible (spills are a potential slip hazard as well as posing a threat to the environment).  
If likely to be exposed to liquid for prolonged periods of time protective gloves should be worn.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE	<b>X</b>	For prolonged or confined space use wear RPE	 Goggles	<b>X</b>	Wear close fitting glasses to prevent product entering eyes.
 Gloves	<b>X</b>	For prolonged use wear protective gloves. Nitrile Gloves	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Take casualty to source of fresh air, seek medical advice if required.  
Skin Contact – Wash with soap and water, if skin irritation continues consult a doctor.  
Eye Contact – Rinse opened eye for at least 15 minutes under running water. Remove contact lenses prior to rinsing.  
Swallowing – Immediately wash mouth, do not induce vomiting, call for medical help immediately.

**STORAGE**

Minimise on-site storage. Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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## SAFETY DATA SHEET EP2 GREASE

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product name EP2 GREASE  
Product No. XGE003, XGE050, XGE125, XGE400, XGE500, YGE400, SLG400, SLG500, QHE500

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Grease

#### 1.3. Details of the supplier of the safety data sheet

Supplier TETROSYL LIMITED  
BEVIS GREEN WORKS  
WALMERSLEY  
BURY  
BL9 6RE  
0161 764 5981  
0161 797 5899  
info@tetrosyl.com  
Manufacturer TETROSYL LIMITED  
BEVIS GREEN WORKS  
WALMERSLEY  
BURY  
BL9 6RE  
0161 764 5981  
0161 797 5899  
info@tetrosyl.com

#### 1.4. Emergency telephone number

0161 764 5981

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

Classification (EC 1272/2008)  
Physical and Chemical Hazards Not classified.  
Human health Eye Irrit. 2 - H319  
Environment Not classified.

Classification (1999/45/EEC) Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

See section 11 for additional information on health hazards.

#### 2.2. Label elements

**EP2 GREASE**

Label In Accordance With (EC) No. 1272/2008



Signal Word	Warning	
Hazard Statements	H319	Causes serious eye irritation.
Precautionary Statements	P101	If medical advice is needed, have product container or label at hand.
	P102	Keep out of reach of children.
	P280	Wear eye and face protection.
	P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+313	If eye irritation persists: Get medical advice/attention.
Supplementary Precautionary Statements	P264	Wash contaminated skin thoroughly after handling.

**2.3. Other hazards****SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

HYDROCARBONS, C9-12, N-ALKANES, ISOALKANES, CYCLICS, (2-25%) AROMATICS		0.0001 - <0.1%
CAS-No.:	EC No.: 919-446-0	Registration Number: 01-2119458049-33-XXXX
Classification (EC 1272/2008)		Classification (67/548/EEC)
Flam. Liq. 3 - H226		Xn;R65.
EUH066		N;R51/53.
STOT SE 3 - H336		R10,R66,R67.
STOT RE 1 - H372		
Asp. Tox. 1 - H304		
Aquatic Chronic 2 - H411		
ZINC DIALKYLDITHIOPHOSPHATE		1.0 - <3.0%
CAS-No.: 68649-42-3	EC No.: 272-028-3	
Classification (EC 1272/2008)		Classification (67/548/EEC)
Skin Irrit. 2 - H315		Xi;R38,R41.
Eye Dam. 1 - H318		N;R51/53.
Aquatic Chronic 2 - H411		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

**EP2 GREASE****SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures**

## General information

Remove affected person from source of contamination. Get medical attention immediately!

## Inhalation

Move injured person into fresh air immediately. Call an ambulance. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Bring these instructions. Place unconscious person on the side in the recovery position and ensure breathing can take place.

## Ingestion

Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

## Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Consult a physician for specific advice. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

## Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Immediately transport to hospital or eye specialist.

**4.2. Most important symptoms and effects, both acute and delayed**

## General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. NOTE! Effects may be delayed. Keep affected person under observation.

## Inhalation

May cause an asthma-like shortness of breath. Vapours may cause headache, fatigue, dizziness and nausea.

## Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

## Skin contact

Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Allergic rash.

## Eye contact

May cause temporary eye irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media**

## Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

## Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

**5.2. Special hazards arising from the substance or mixture**

## Hazardous combustion products

During fire, toxic gases (CO, CO<sub>2</sub>) are formed.

## Unusual Fire &amp; Explosion Hazards

No unusual fire or explosion hazards noted.

**EP2 GREASE**

## Specific hazards

In case of fire, toxic and corrosive gases may be formed.

**5.3. Advice for firefighters**

Special Fire Fighting Procedures

Beware, risk of formation of toxic and corrosive gases.

Protective equipment for fire-fighters

Leave danger zone immediately.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective clothing as described in Section 8 of this safety data sheet. In case of spills, beware of slippery floors and surfaces.

**6.2. Environmental precautions**

The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

**6.3. Methods and material for containment and cleaning up**

For waste disposal, see section 13. When dealing with a spillage, please consult the section relating to suitable protective measures. Absorb spillage with non-combustible, absorbent material. Ventilate well. Prevent discharge of larger quantity to drain.

**6.4. Reference to other sections**

Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in section 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Read and follow manufacturer's recommendations. Always remove grease with soap and water or skin cleaning agent, never use organic solvents. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Do not eat, drink or smoke when using the product.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep away from heat, sparks and open flame. Store in tightly closed original container in a dry, cool and well-ventilated place.

**7.3. Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
HYDROCARBONS, C9-12, N-ALKANES, ISOALKANES, CYCLICS, (2-25%) AROMATICS	WEL		600 mg/m <sup>3</sup>			

WEL = Workplace Exposure Limit.

**8.2. Exposure controls**

Protective equipment

**EP2 GREASE****Process conditions**

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

**Engineering measures**

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

**Respiratory equipment**

Wear suitable respiratory protection. Check that mask fits tight and change filter regularly.

**Hand protection**

Nitrile gloves are recommended.

**Eye protection**

Wear tight-fitting goggles or face shield.

**Other Protection**

Provide eyewash station. **AVOID ALL SKIN AND RESPIRATORY CONTACT!**

**Hygiene measures**

Wash contaminated clothing before reuse. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

**Skin protection**

Protection suit must be worn.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance	Grease
Colour	Dark. Brown.
Odour	Oil smell.
Solubility	Insoluble in water
Initial boiling point and boiling range (°C)	>250°C
Melting point (°C)	Not determined.
Relative density	0.900g/cm <sup>3</sup> 20°C
Vapour density (air=1)	Not determined.
Vapour pressure	Not determined.
Evaporation rate	Not determined.
Viscosity	>30, 000 cP 20°C
Decomposition temperature (°C)	Not determined.
Odour Threshold, Lower	Not determined.
Odour Threshold, Upper	Not determined.
Flash point (°C)	>150°C
Auto Ignition Temperature (°C)	>250 Not determined.
Flammability Limit - Lower(%)	Not determined.



**EP2 GREASE**

Flammability Limit - Upper(%)  
Not determined.  
Partition Coefficient  
(N-Octanol/Water)  
Not determined.  
Oxidising properties  
Not available.

**9.2. Other information**

None.

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No specific reactivity hazards associated with this product.

**10.2. Chemical stability**

No particular stability concerns.

**10.3. Possibility of hazardous reactions**

Not applicable.

**10.4. Conditions to avoid**

No specific conditions are likely to result in a hazardous situation.

**10.5. Incompatible materials**

Materials To Avoid  
No incompatible groups noted.

**10.6. Hazardous decomposition products**

None under normal conditions.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Toxicological information  
No information available.

**Health Warnings**

This chemical can be hazardous when inhaled and/or touched. This chemical may cause skin/eye irritation and burns (corrosive). May cause severe internal injury. Vapour from this chemical can be hazardous when inhaled.

**Route of entry**

Inhalation. Ingestion. Skin and/or eye contact. Skin absorption.

**SECTION 12: ECOLOGICAL INFORMATION****Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**12.1. Toxicity**

Acute Toxicity - Fish  
Not available.

Acute Toxicity - Aquatic Invertebrates  
Not available.

**EP2 GREASE****12.2. Persistence and degradability**

Degradability

There are no data on the degradability of this product.

**12.3. Bioaccumulative potential**

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not determined.

**12.4. Mobility in soil**

Adsorption/Desorption Coefficient

Not available.

**12.5. Results of PBT and vPvB assessment**

Not Classified as PBT/vPvB by current EU criteria.

**12.6. Other adverse effects**

Not available.

**SECTION 13: DISPOSAL CONSIDERATIONS**

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Only experts should be permitted to carry out disposal of this material.

**13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements. Absorb spillage with non-combustible, absorbent material.

**SECTION 14: TRANSPORT INFORMATION**

General

Full protective clothing should be worn when handling this product.

**14.1. UN number****14.2. UN proper shipping name****14.3. Transport hazard class(es)****14.4. Packing group****14.5. Environmental hazards****14.6. Special precautions for user****14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EP2 GREASE**

## EU Legislation

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. System of specific information relating to Dangerous Preparations. 2001/58/EC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

**15.2. Chemical Safety Assessment**

No chemical safety assessment has been carried out.

**SECTION 16: OTHER INFORMATION**

## Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision Date 12/03/2015  
Revision 9  
Supersedes date 10/10/2013 V8  
Safety Data Sheet Status Approved.

## Risk Phrases In Full

R10 Flammable  
R65 Harmful: may cause lung damage if swallowed.  
R38 Irritating to skin.  
NC Not classified.  
R66 Repeated exposure may cause skin dryness or cracking.  
R41 Risk of serious damage to eyes.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R67 Vapours may cause drowsiness and dizziness.

## Hazard Statements In Full

H372 Causes damage to organs <<Organs>> through prolonged or repeated exposure.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H315 Causes skin irritation.  
H226 Flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H336 May cause drowsiness or dizziness.  
EUH066 Repeated exposure may cause skin dryness or cracking.  
H411 Toxic to aquatic life with long lasting effects.

## Disclaimer

The information provided in this document has been compiled on the basis of our current knowledge and is believed to be in accordance with the requirements of the Dangerous Substances Directive, Dangerous Preparations Directive and Safety Data Sheets Directive. The information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any particular conditions or process. The conditions and extent of storage and use of material are outside of our control and within the control of the possessor or user. Consequently it is the responsibility of the possessor or user to satisfy themselves as to the completeness of such information and the suitability of the material for their own particular circumstances, conditions or use.



# COSHH / DSEAR

## Risk Assessment No: 001



### OXYGEN

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**OXYGEN**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
				<b>X</b>				<b>X</b>	

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
<b>X</b>						

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>			

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>None assigned</b>	<b>None assigned</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – Strongly supports combustion, care to be taken when used in confined spaces.  
Secondary Risk – Compressed gasses can be extremely cold when released quickly, care to be taken when handling equipment and cylinders – wear gloves if required.

Can become explosive if mixed with grease type products









**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

All cutting and use of oxygen is to be carried out in well ventilated areas. Cutting torches and hoses should be leak tested prior to use.

**DO NOT ALLOW OXYGEN TO COME INTO CONTACT WITH GREASE, OILS AND FUELS. FITTINGS MUST NOT BE OILED / GREASED PRIOR TO ASSEMBLY**

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
--	------------	--	-----------	----------

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles		
 Gloves	<b>X</b>	Gloves may be required for handling extremely cold items e.g. cylinder exchanges.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – Not hazardous, but if exposed move person to well ventilated area as can cause nausea  
 Skin Contact – Can cause cold burn  
 Eye Contact – N/A  
 Swallowing – Ingestion is not considered a potential route of exposure.

**STORAGE**

Minimise on-site storage.  
 Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight.  
 Ensure bottles are stored upright and secured so bottles can not fall

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
			<b>X</b>	

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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# Oxygen (and High Purity Oxygen)

PRODUCT : OXYGEN (AND HIGH PURITY OXYGEN) MSDS NR : 301-00-0003 BOC VERSION:2.05 DATE : 02/04/08 PAGE : 1/2

## 1 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY

<b>Product name</b>	Oxygen
<b>Chemical formula</b>	O <sub>2</sub>
<b>Company identification</b>	See end of page 2.
<b>Emergency phone Nos</b>	See end of page 2.

## 2 COMPOSITION/INFORMATION ON INGREDIENTS

<b>Substance/Preparation</b>	Substance
<b>Components/Impurities</b>	Contains no other components or impurities which will influence the classification of the product.
<b>CAS Nr</b>	7782-44-7
<b>EEC Nr (from EINECS)</b>	231-956-9
<b>Specifications</b>	Oxygen 99.5% High Purity Oxygen 99.95% Conforms to BS 4364 : 1993

## 3 HAZARDS IDENTIFICATION

<b>Hazards identification</b>	Compressed gas Oxidant. Strongly supports combustion. May react violently with combustible materials.
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## 4 FIRST AID MEASURES

<b>Inhalation</b>	Not hazardous.
<b>Ingestion</b>	Ingestion is not considered a potential route of exposure.

## 5 FIRE FIGHTING MEASURES

<b>Specific hazards</b>	Supports combustion Non flammable Exposure to fire may cause containers to rupture/explode. Inform Fire Brigade
<b>Hazardous combustion products</b>	None
<b>Suitable extinguishing media</b>	All known extinguishants can be used.
<b>Specific methods</b>	If possible, stop flow of product. Move away from container and cool with water from a protected position.
<b>Special protective equipment for fire fighters</b>	None

## 6 ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources. Post warning notices (including no smoking).
<b>Environmental precautions</b>	Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
<b>Clean up methods</b>	Ventilate area.

## 7 HANDLING AND STORAGE

### Handling and storage

Use no oil or grease.  
Open valve slowly to avoid pressure shock. Segregate from flammable gases and other flammable materials in store. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Personal protection</b>	Do not smoke while handling product. Wear suitable hand, body and head protection. Avoid oxygen rich (>21%) atmospheres. Ensure adequate ventilation. Clothing impregnated with oxygen should be ventilated by walking in fresh open air for 15 minutes.
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## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Molecular weight</b>	32
<b>Melting point</b>	-219°C
<b>Boiling point</b>	-183°C
<b>Critical temperature</b>	-118°C
<b>Relative density, gas</b>	1.1 (air=1)
<b>Relative density, liquid</b>	Not applicable
<b>Vapour Pressure 20°C</b>	Not applicable
<b>Solubility mg/l water</b>	39 mg/l
<b>Appearance/Colour</b>	Colourless gas
<b>Odour</b>	None
<b>Autoignition temperature</b>	Not applicable
<b>Other data</b>	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## 10 STABILITY AND REACTIVITY

<b>Stability and reactivity</b>	May react violently with combustible materials. May react violently with reducing agents. Violently oxidises organic material.
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## 11 TOXICOLOGICAL INFORMATION

<b>General</b>	No toxicological effects from this product.
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## 12 ECOLOGICAL INFORMATION

<b>General</b>	No ecological damage caused by this product.
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# SAFETY DATA SHEET

## 13 DISPOSAL CONSIDERATIONS

**General** To atmosphere in a well ventilated place.  
Do not discharge into any place where its accumulation could be dangerous.  
Contact supplier if guidance is required.

## 14 TRANSPORT INFORMATION

**Proper Shipping Name** Oxygen, compressed  
**UN Nr** 1072  
**Class** 2.2  
**Subsidiary risk** 5.1  
**ADR/RID Classification Code** 10  
**ADR/RID Hazard Nr** 25  
**Labelling ADR** Label 2.2: non flammable non toxic gas  
Label 5.1: fire intensifying risk

### Other transport information

Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- adequate ventilation.
- compliance with applicable regulations.

## CYLINDER CHARACTERISTICS

Cylinder size	Maximum Filled Pressure at 15°C (bar) supplied	Approx. Dimensions incl. valve and guard where (Kg) (mm)	Approx. Gross Cylinder Weight	Manifolded Cylinder Pallets (MCPs)	Maximum Filled Pressure at 15	Approx. Dimensions incl. valve & guard where supplied (mm)	Max. Gross Cylinder Weight (Kg)
E	137	500 x 150	7	WW (15xW)	230	1290 x 1810 x 840	1500
F	137	855 x 140	18	QW† (12 x W)	230	2000 x 1112 x 832	1500
X	230	940 x 140	20	ZW† (20 x W)	230	2080 x 1330 x 1090	2315
Y	230	910 x 203	39	WN* (15 x N)	200	1290 x 1810 x 840	1500
W	230	1460 x 230	80				
N*	200	1460 x 230	82				

† Offshore customers only

\*Sizes N and WN only available in High Purity Oxygen

OUTLET CONNECTION: 5/8" BSP female right hand cone recessed.

## 15 REGULATORY INFORMATION

**Number in Annex I of Dir 67/548** 008-001-00-8.

**EC Classification** O;R8

### Labelling of cylinders

- **Symbols** Label 2.2: non flammable non toxic gas  
Label 5.1: fire intensifying risk.
- **Risk phrases** R8 Strongly supports combustion.
- **Safety phrases** S9 Keep container in well-ventilated place.  
S17 Keep away from combustible material, use no oil or grease.

## 16 OTHER INFORMATION

**This product is not suitable for breathing or medical purposes.**

Ensure all national/local regulations are observed.

Ensure operators understand the hazard of oxygen enrichment.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Do not use oxygen as a substitute for air, nitrogen or any other gas.

Always leak check cylinders when first collected, delivered or used using an approved leak detection fluid.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

For further safety information please refer to "Safe Under Pressure" and "Guidance for carriage of gas cylinders on vehicles", both of which are available from your local BOC outlet.



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All BOC Safety Data Sheets are available online at [www.boc.com/uk/sds](http://www.boc.com/uk/sds)

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Manchester M28 2UT  
Fax: 0800 111 555**

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**1850 333 435**

**P.O. Box 201  
Bluebell, Dublin 12  
Fax: 01 409 1801**



# COSHH / DSEAR

## Risk Assessment No: 001



### PROPANE (C3H8)

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	<b>50</b>	Contractors	<b>0</b>	Public	<b>0</b>
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**PROPANE (C3H8)**

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
		<b>X</b>	<b>X</b>					<b>X</b>	

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
<b>X</b>		<b>X</b>			<b>X</b>	

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
<b>X</b>	<b>X</b>		<b>X</b>	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
<b>None stated</b>	<b>None stated</b>

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Main Risk – Extremely flammable.  
Secondary Risk – Liquid propane extremely cold when released quickly, care to be taken when handling equipment and cylinders – wear gloves if required.











**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

All cutting and use of propane is to be carried out in well ventilated areas.

When using propane or changing cylinders e.g. decontamination units equipment should be leak tested prior to use.

Is health surveillance or monitoring required?	<b>YES</b>		<b>NO</b>	<b>X</b>
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**PERSONAL PROTECTIVE EQUIPMENT**

 Mask			 Visor		
 RPE			 Goggles	<b>X</b>	Safety glasses should be worn when changing cylinders or when a risk of liquid propane being released exists.
 Gloves	<b>X</b>	Gloves may be required for handling extremely cold items e.g. cylinder exchanges.	 Overalls		
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation – In high concentrations may cause asphyxiation. In low concentrations may have a narcotic effect. Remove victims from area and keep warm and rested. Seek medical assistance.

Skin/Eye Contact – In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Immediately flush eyes thoroughly with water for at least 15 minutes. Seek medical assistance.

Eye Contact – N/A

Swallowing – Ingestion is not considered a potential route of exposure.

**STORAGE**

Minimise on-site storage.

Ensure containers are stored in a secure well-ventilated area away from sources of heat and direct sunlight. Store separately from Oxygen products.

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
			<b>X</b>	

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled	<b>YES</b>	<b>X</b>	<b>NO</b>	
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**RISK RATING FOLLOWING CONTROL MEASURES**

<b>HIGH</b>		<b>MEDIUM</b>		<b>LOW</b>	<b>X</b>
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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# Propane

PRODUCT : PROPANE MSDS NR : 302-00-0037 BOC VERSION : 1.07 DATE : 25/06/10 PAGE : 1/2

## 1 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY

<b>Product name</b>	Propane.
<b>Chemical formula</b>	C <sub>3</sub> H <sub>8</sub> .
<b>Company identification</b>	See end of page 2.
<b>Emergency phone Nos</b>	See end of page 2.

## 2 COMPOSITION/INFORMATION ON INGREDIENTS

<b>Substance/Preparation</b>	Substance.
<b>Components/Impurities</b>	Contains no other components or impurities which will influence the classification of the product.
<b>CAS Nr</b>	74-98-6.
<b>EEC Nr</b>	200-827-9.
<b>(from EINECS)</b>	
<b>ASHRAE Nr</b>	R290.

## 3 HAZARDS IDENTIFICATION

<b>Hazards identification</b>	Extremely flammable Liquefied gas.
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## 4 FIRST AID MEASURES

<b>Inhalation</b>	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
<b>Skin/eye contact</b>	In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Immediately flush eyes thoroughly with water for at least 15 minutes. Obtain medical assistance.
<b>Ingestion</b>	Ingestion is not considered a potential route of exposure.

## 5 FIRE FIGHTING MEASURES

<b>Specific hazards</b>	Exposure to fire may cause containers to rupture/explode.
<b>Inform Fire Brigade</b>	
<b>Hazardous combustion products</b>	Incomplete combustion may form carbon monoxide.
<b>Suitable extinguishing media</b>	All known extinguishants can be used.
<b>Specific methods</b>	If possible, stop flow of product. Move away from container and cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.
<b>Special protective equipment for fire fighters</b>	Use self-contained breathing apparatus.

## 6 ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Eliminate ignition sources. Post warning notices (including no smoking).
<b>Environmental precautions</b>	Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
<b>Clean up methods</b>	Ventilate area.

## 7 HANDLING AND STORAGE

### Handling and storage

Ensure equipment is adequately earthed. Close cylinder valve when not in use to prevent contamination of the cylinder. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from heat and ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Personal protection</b>	Ensure adequate ventilation. Do not smoke while handling product.
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## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Molecular weight</b>	44.
<b>Melting point</b>	-188°C.
<b>Boiling point</b>	-42.1°C.
<b>Critical temperature</b>	97°C.
<b>Relative density, gas</b>	1.5 (air=1).
<b>Relative density, liquid</b>	0.58 (water=1).
<b>Vapour Pressure 20°C</b>	8.3 bar.
<b>Solubility mg/l water</b>	75 mg/l.
<b>Appearance/Colour</b>	Colourless gas.
<b>Odour</b>	Sweetish. Poor warning properties at low concentrations. Stenchant often added.
<b>Autoignition temperature</b>	470°C.
<b>Flammability range</b>	2.2-9.5 vol% in air.
<b>Other data</b>	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## 10 STABILITY AND REACTIVITY

<b>Stability and reactivity</b>	Can form explosive mixture with air. May react violently with oxidants.
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**11 TOXICOLOGICAL INFORMATION**

**General** No known toxicological effects from this product.

**12 ECOLOGICAL INFORMATION**

**General** No known ecological damage caused by this product.

**13 DISPOSAL CONSIDERATIONS**

**General**  
Avoid discharge to atmosphere. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into any place where its accumulation could be dangerous. Contact BOC if guidance is required. "Empty" cylinders still contain flammable vapour. Return empty cylinders promptly to your supplier.

**14 TRANSPORT INFORMATION**

**Proper Shipping Name** Propane.  
**UN Nr** 1978.  
**Class/Div** 2.1.  
**ADR/RID Classification Code** 2F.  
**ADR/RID Hazard Nr** 23.  
**Labelling ADR** Label 2.1: flammable gas.

**Other transport information**  
Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured and:  
– cylinder valve is closed and not leaking.  
– valve outlet cap nut or plug (where provided) is correctly fitted.

- valve protection device (where provided) is correctly fitted.
- there is adequate ventilation.
- they comply with applicable regulations.

**15 REGULATORY INFORMATION**

**Number in Annex I of Dir 67/548** 601-003-00-5.  
**EC Classification** F+;R12.  
**Labelling of cylinders**  
– **Symbols** Label 2.1: flammable gas.  
– **Risk phrases** R12 Extremely flammable.  
– **Safety phrases** S9 Keep container in well ventilated place.  
S16 Keep away from ignition sources – No smoking.

**16 OTHER INFORMATION**

Propane quality conforms to BS4250  
Ensure all national/local regulations are observed.  
Ensure operators understand the flammability hazard.  
The hazard of asphyxiation is often overlooked and must be stressed during operator training. Contact with liquid may cause cold burns and/or frostbite. Users of breathing apparatus must be trained. This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Always leak check cylinders when first collected, delivered or used, using an approved leak detection fluid. Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.  
For further safety information please refer to "Safe Under Pressure" which is available from your local BOC outlet.

**CYLINDER CHARACTERISTICS**

Cylinder Size (see Note 1 & 2)	Outlet Connection (see Note 3)	Approx. Dimensions (see Note 4) (mm)	Max. Gross Weight (kg)
A	5/8" BSP	270 x 387	16
B	Female	320 x 540	32
D	Left Hand	320 x 910	57
E	Cone Recessed	375 x 1250	108
F	1 1/4" ACME Right Hand Male	320 x 706	46

**NOTES:**

1. Not all cylinder sizes are available at all locations.
2. F size cylinders are for use with fork lift trucks. F cylinders are liquid withdrawal, Cylinders A, B, D, E are vapour withdrawal.
3. For cylinders A, B, D, E this outlet connection is designed primarily to receive the gas pressure regulator. Each cylinder valve incorporates a safety valve which operates at approximately 26 bar.
4. The height includes the valve and guard.
5. Where manifolds of individual cylinders are required please contact BOC's Customer Engineering Services Department for details.



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**In the Republic of Ireland:  
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Fax: 0800 111 555**

**BOC Ireland  
P.O. Box 201  
Bluebell, Dublin 12  
Fax: 01 409 1801**



# COSHH

## Risk Assessment No: 001



### CRYSTALLINE SILICA DUST

**WRING GROUP LTD**

**ALL DIVISIONS**

Describe the activity or work process.  
*(Include how long and how often this is carried out and the quantity of substance used)*

The processes of Demolition, Crushing, Site Clearance, Soft Strip, Vehicle Repair and Maintenance.  
These processes are carried out regularly

Location of process being carried out?

Yard, Workshop, Demolition sites, Asbestos Removal sites

Identify the persons at risk:

Employees	X	Contractors	X	Public	X
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Name the substance involved in the process and its manufacturer.  
*(A copy of a current safety data sheet for this substance should be attached to this assessment)*

**CRYSTALLINE SILICA DUST**  
Dust is created during various demolition activities

**CLASSIFICATION (state the category of danger)**

TOXIC	CORROSIVE	FLAMMABLE	EXPLOSIVE	OXIDIZING	HEALTH	IRRITANT	ENVIRO	GAS BOTTLES	HARMFUL
					X				X

**HAZARD TYPE**

<b>GAS</b>	<b>VAPOUR</b>	<b>MIST</b>	<b>FUME</b>	<b>DUST</b>	<b>LIQUID</b>	<b>SOLID</b>
				X		

**ROUTE OF EXPOSURE**

<b>INHALATION</b>	<b>INJECTION</b>	<b>INGESTION</b>	<b>EYES</b>	<b>OTHER</b>
X		X	X	

If 'OTHER' please specify

**WORKPLACE EXPOSURE LIMITS (WELs) please indicate n/s if not applicable**

Long-term exposure level (8hrTWA)	Short-term exposure level (15mins)
Respirable Crystalline Silica 0.1mg- m3	None stated

**STATE THE RISK TO HEALTH FROM IDENTIFIED HAZARDS**

Prolonged inhalation of dust can lead to the development of respiratory ill health, in particularly silicosis.

Dust can cause irritation by abrasion to skin and eyes.

Dust can cause gastrointestinal irritation if ingested.

**CONTROL MEASURES** (for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers. Take account of those substances that are produced from activities undertaken by another employer's employees.

Workplace Exposure Limit (WEL) for respirable crystalline silica = 0.1 mg.m-3 (8hr time weighted average)

When crushing –conveying - loading, wet 'spray' systems or local exhaust ventilation should be used.

Respiratory protection equipment may be required in addition to engineering controls.

Eye protection should be used to prevent dust entering the eyes.

When manually handling blocks, bulk chips, the normal protective equipment for use on building sites should be used, in particular safety helmets, safety footwear with protective toe caps and abrasive resistant gloves.









Is health surveillance or monitoring required?

**YES**

**X**

**NO**

**PERSONAL PROTECTIVE EQUIPMENT**

 Mask	<b>X</b>	Dust mask with protection levels P3 should be used.	 Visor		
 RPE			 Goggles	<b>X</b>	Should be suitable to prevent ingress of dust and have anti-mist protection.
 Gloves	<b>X</b>	Any suitable, should be removed after use to avoid dust contamination.	 Overalls	<b>X</b>	Should be suitable to prevent ingress of dust.
 Footwear			 Other		

**FIRST AID MEASURES**

Inhalation: If irritation occurs, remove the affected person to fresh air and seek medical attention if necessary.

Skin: wash with soap and water.

Eyes: irrigate with copious amounts of water and obtain medical attention if irritation persists.

Ingestion: Swallowing small amounts of dust is unlikely to cause significant reaction. Do not induce vomiting. Give plenty of water to drink and seek medical attention if necessary

**STORAGE**

Keep dusts damp at all times

**DISPOSAL OF SUBSTANCES AND CONTAMINATED CONTAINERS**

HAZARDOUS WASTE	SKIP	RETURN TO DEPOT	RETURN TO SUPPLIER	OTHER
				<b>X</b>

**If other, please arrange for disposal by a licenced contractor to appropriate facility**

Has the exposure been adequately controlled

**YES**

**X**

**NO**

**RISK RATING FOLLOWING CONTROL MEASURES**

HIGH	MEDIUM	<b>X</b>	LOW
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<b>ASSESSED BY</b>	Tim Whittle	<b>DATE</b>	01.11.20	<b>REVIEW DATE</b>	01.11.23
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# MATERIAL SAFETY DATA SHEET

Effective Date: 10-10-11

## 1 - IDENTIFICATION

CHEMICAL NAME Crushed concrete	CHEMICAL FORMULA Not applicable	MOLECULAR WEIGHT Not applicable
TRADE NAME Crushed concrete		
SYNONYMS Crushed concrete, Recycled concrete, Crushed concrete base course, Recycled concrete pavement, Recycled concrete base course, Reclaimed concrete material		DOT IDENTIFICATION NO. NONE

## 2 - PRODUCTION AND COMPONENT DATA

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO.	% (Approx.)	EXPOSURE LIMITS
Aggregate (granite, limestone, sand and gravel, etc.)* *Composition varies naturally-typically contains quartz (crystalline silica)	Mixture 14808-60-7	60-95%	See Section 6
Fly Ash	68131-74-8	0-11	
Hydrated Portland Cement	65997-15-1	3-40	
Calcium Hydroxide	1305-62-0	15-25	
Particulates Not Otherwise Regulated	NA	-	

## 3 - PHYSICAL DATA

APPEARANCE AND ODOR Generally grey, solid mixture. Faint odor.	SPECIFIC GRAVITY 1.7 – 3.0
BOILING POINT (At 1 Atm): Not applicable	VAPOR DENSITY IN AIR (Air = 1) Not applicable
VAPOR PRESSURE (mm Hg @ 20°C) Not Applicable	% VOLATILE, BY VOLUME Not Applicable
EVAPORATION RATE (at 1 Atm, and 25°C; n-butyl acetate = 1): Not Applicable	SOLUBILITY IN WATER Negligible

## 4 - REACTIVITY DATA

STABILITY Stable under normal temperatures and pressures	CONDITIONS TO AVOID Avoid contact with incompatible materials (see below).
INCOMPATIBILITY (Materials to avoid) Strong acids. Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.	
HAZARDOUS DECOMPOSITION PRODUCTS None known.	
HAZARDOUS POLYMERIZATION Not known to polymerize	

## 5 - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (Method used) Not flammable	FLAMMABLE LIMITS IN AIR Not flammable
EXTINGUISHING AGENTS None required	
UNUSUAL FIRE AND EXPLOSION HAZARDS Contact with powerful oxidizing agents may cause fire and/or explosions (see Section 4 of this MSDS).	

## 6 - TOXICITY AND FIRST AID

EXPOSURE LIMITS (When exposure to this product and other chemicals is concurrent, the exposure limit must be defined in the workplace). Unless specified otherwise, limits are expressed as eight-hour-time-weighted averages (TWA).

ABBREVIATIONS: TLV = threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH); MSHA PEL = permissible exposure limit of the Mine Safety and Health Administration (MSHA); OSHA PEL = permissible exposure limit of the Occupational Safety and Health Administration (OSHA);  $\text{mg}/\text{m}^3$  = milligrams of substance per cubic meter of air.

**Respirable Dust:** MSHA and OSHA PEL =  $(10 \text{ mg}/\text{m}^3) + (\% \text{SiO}_2 + 2)$

**Total Dust:** MSHA PEL =  $(30 \text{ mg}/\text{m}^3) + (\% \text{SiO}_2 + 3)$ ; OSHA PEL =  $(30 \text{ mg}/\text{m}^3) + (\% \text{SiO}_2 + 2)$

**Particulates Not Otherwise Regulated:** TLV =  $10 \text{ mg}/\text{m}^3$  (inhalable/total particulate), TLV =  $3 \text{ mg}/\text{m}^3$  (respirable particulate)

**Respirable Crystalline Silica (quartz):** TLV =  $0.025 \text{ mg}/\text{m}^3$

**Portland Cement:** TLV =  $10 \text{ mg}/\text{m}^3$

**Calcium Hydroxide:** TLV =  $5 \text{ mg}/\text{m}^3$

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions such as those described below

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.

PRIMARY ROUTE(S) OF EXPOSURE:      X Eyes                  X Skin                  Ingestion                  X Inhalation

### ACUTE TOXICITY:

**EYE CONTACT:** Direct contact with dust may cause immediate or delayed irritation or inflammation due to alkalinity of material. Contact with large amounts of concrete dust may cause moderate eye irritation due to mechanical abrasion

**SKIN CONTACT:** Concrete dust may cause dry skin, discomfort, irritation and dermatitis. Skin affected by dermatitis may include symptoms such as redness, itching, rash, scaling, and cracking.

**INGESTION:** Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

**INHALATION:** Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion or due to alkalinity of material. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.

Use of crushed concrete for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

### FIRST AID

**EYES:** Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while hold the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

**SKIN:** Wash with soap and water. Contact a physician if irritation persists or later develops.

**INGESTION:** If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

### FIRST AID (cont'd)

**INHALATION:** Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a

physician if irritation persists or later develops.

#### CHRONIC TOXICITY

Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate limits has caused silicosis, a lung disease. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Smoking may increase the risk of developing lung disorders, including emphysema and lung cancer. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a causal relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk of developing lung cancer, a risk that increases with the duration of exposure. Many of these studies of silicotics do not account for lung cancer confounders, especially smoking.

Crushed concrete is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). In October 1996, an IARC Working Group re-assessing crystalline silica, a component of this product, designated crystalline silica as carcinogenic (Group 1). The NTP indicates that crystalline silica is reasonable anticipated to be a carcinogen (Group 2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

## 7 - PERSONAL PROTECTION AND CONTROLS

#### RESPIRATORY PROTECTION

The need for respiratory protection should be evaluated by a qualified safety and health professional. When exposures exceed applicable limits, respiratory protection is required. Respirators used must be NIOSH-approved for the exposure(s) present. Respirator use must comply with applicable OSHA or MSHA regulations.

#### VENTILATION

Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

#### SKIN PROTECTION

See Hygiene section below.

#### EYE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

#### HYGIENE

Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

#### OTHER CONTROL MEASURES

When necessary, respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee workstations.



## 8- STORAGE AND HANDLING PRECAUTIONS

Follow the personal protection and controls set forth in Section 7 of this MSDS when handling this product. Respirable crystalline silica-containing dust may be generated during processing, handling and storage.

Do not store near food and beverages or smoking materials.

## 9 - SPILL, LEAK, AND DISPOSAL PRACTICES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

The personal protection and controls identified in Section 7 of this MSDS should be applied as appropriate.

Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry sweep spilled material.

This product is not subject to the reporting requirements of Title III of SARA, 1986 and 40 CFR 372.

### WASTE DISPOSAL METHOD

Pickup and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

## 10 - TRANSPORTATION

### DOT HAZARD CLASSIFICATION

None

### PLACARD REQUIRED

None

### LABEL REQUIRED

Label as required by the OSHA Hazard Communication standard [29 CFR 110.1200 (f)] and applicable state and local laws and regulations.

### For Further Information

### Contact:

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**Notice:** Luck Stone Corporation believes that the information contained on this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance. Also, the suggestions should not be confused with or followed in violation of applicable laws, regulation, rules, or insurance requirements.

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