Risk Assessment & Method Statement

WILLIAMS SOUTHERN LIMITED CONSTRUCTION

Assessed On Site By:

Contract Number:2363

Site Name: **Co-op Holmer Road**

Site Address:
Co-op Holmer Road Fuel Station
Hereford.
HR4 9Rx

Removal of Existing Degassed Tanks and Surrounding concrete

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1.0	Introduction
1.1	**The principal aims of the document**

To describe a safe system of work and carry out a site specific risk assessment for the works identified below.

1.2	Brief Description of Task

The task entails the removal of existing (old) former fuel storage tanks and their concrete surround. The method of work describes how to break down and excavate down through the forecourt area to reveal the top of the vessels in a safe manner before permanently inerting them to allow safe removal.
The excavation will be sealed inside a cofferdam sheet piling system to remove groundwater movement .

1.3	Specific Location of Work

Filling Station Forecourt

2.0	Standard Personal Protective Equipment

Safety Hat
Safety Footwear
Hi Vis Vest/ Jacket
Safety Gloves Minimum Cut Level 1
Safety Glasses Standard or Prescription
Further PPE as specified in Risk Assessment
Client specific PPE

Any other required PPE specific to this task:

3.0	Method Of Work/ Job Steps
	Refer to Risk Assessment – Section 13.0

- **Removal of Old Tanks, Surround and Former Tank Base.**
- **NOTE: NO WORKS ARE TO START UNTIL ALL RELEVANT PAPERWORK/CAT SCANS AND CLIENT SPECIFIC DOCUMENTATION HAS BEEN COMPLETED.**
- The site manager will ensure that the work area is fenced off with either Heras type fencing or suitable barricades so as to prevent unauthorised entry in to this area and safeguard where necessary persons from any flying debris or being struck by elements being removed from the area.
- The site manager will ensure that safety signage is fixed so as to be clearly visible as appropriate e.g. 'Danger – Deep Excavations' or 'Demolition in Progress'.
- CAT scanning and utility plans checked and ground marked to suit.
- The tanks will be inert using water filling following fuel uplift/ Removal from site. A specialist contractor will carry out these works under their own Rams.
- Before commencing works, the site manager will ensure that a gas monitor be used to check that there is no vapour or any other harmful gas present.
- Once the tanks are inert, the area above the tanks will be excavated.
- The breaker operator will move to the area above the old tanks where care must be taken

when breaking around concrete surrounded old fuel pipework. These must be inert also prior to start of this operation. Care should also be taken when removing long lengths of steel pipe in case they swing into any area where personnel could be positioned. The safety fence is in place to mitigate persons being in this area in case this happens.

- Great care will be taken not to puncture any vessels.
- Once the tank concrete surround is exposed to lid level, the external edges will be plotted to allow for safe driving of the cofferdam sheet piles.
- The piling rig will sit on a prepared piling mat designed to support all equipment.
- All piles will be driven to correct t depth as per design.
- A Shoring system will be installed to meet the load design specification using suitable lifting equipment /20t excavator.
- A hydraulic breaker attached to a mechanical excavator will then be used to commence with the removal of the old tank concrete surround around the tanks to expose the steel vessels.
- The broken concrete should be removed from the hole so as to allow the operator using the breaker attachment to see the areas being broken.
- Once the concrete ends, sides and tops of the tanks have been broken and removed, the tank vessel should now be exposed enough to allow cold cutting across the full length of each vessel. This cutting may be undertaken with an excavator mounted claw or be undertaken by hand held pneumatic specialist metal cutters by appropriate, approved sub-contractors.
- The tanks are effectively 'peeled' open with the excavator and the water (if applicable i.e. not foam as described above) is safely removed before the specialist approved sub-contractor renders the vessels inert. This activity should be done from the surface using a hand held long lance to spray the fluid used to clean and inert the tanks. Any persons undertaking this operation should wear a suitable harness or appropriate fall arrest equipment to prevent them from falling into an empty tank.
- After degas certificates are issued , the vessels will continue to be broken out of their surrounding concrete and eventually pulled from the ground using one or (if required) two excavators. The tanks are flattened, folded and placed into suitable metal recycling skips.
- The tank base is then to be broken with the excavator mounted breaker and removed to stockpile or wagons as applicable.
- The excavation is then fully excavated to the inside of the piling system and to full depth.
- If samples of earth are required in the area beneath the former tank base, this material should be excavated with the machine (excavator) and brought to surface. No persons should enter or go near the hole until it has been backfilled.
- If water is encountered, this must be removed and disposed of as controlled waste as it may be contaminated.
- The method will be either via road tankers or pumped to foul drainage under a discharge consent and treated before leaving site.

- **Post tank removal Works**

- New tank install works Rams -

4.0	Manual Handling
Avoid hazardous manual handling operations so far as is reasonably practicable. Assess any hazardous manual handling operations that cannot be avoided. Reduce the risk of injury so far as is reasonably practicable.	

5.0	Materials

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Piling system
Shoring system

6.0 Tools & Plant

20t excavator with breaker and buckets
Piling rig
Shoring system

7.0 Labour

Williams Southern Ltd Site Operative
Subcontract piling co

8.0 Waste Management

Williams Southern Limited will take all reasonable steps to ensure that materials will be handled efficiently and waste managed properly in line with the waste management hierarchy. We will also ensure that all waste from this site is dealt with in accordance with current legislation.

A record of all materials removed from site will be kept in the site office and be updated by the Site Manager at the end of each shift.

Any Hazardous waste will be removed from site by licensed specialist contractors and dealt with at the nearest appropriate treatment plant.

At the request of the Client or should ground conditions dictate samples of the excavated material will be taken for analysis before been removed from site.

9.0 Williams Southern Permits Applicable – Please Tick ✓

Confined Space	
Demolition	
Electrical Works	
Excavation	
General	
Hot Works	
Working At Height	
Other ……(Please specify)	

10.0 Other Permits Applicable

Client……(Please specify)

Local Authority……(Please specify)

Other ……(Please specify)

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11.0 Other Issues/ General Considerations

Should any entries be made in this section risk control measures must be entered onto the **Additional Risk Assessment – Section 14.0**

Site specific hazards (Weather, Roads, Overhead power lines, Neighbourhood, Traffic, Parking Etc)

12.0 Emergency Response

Emergency Response

- Raise the Alarm to alert others by shouting 'Emergency Excavation Help'.
- The site manager and first aider are to be alerted to assess the situation from a safe place.
- The site manager must advise everyone to stay away from the excavation until he can clarify it is safe and a safe/exclusion zone established.
- If there is no response from the person within the excavation or the cause of the incident is unclear, do or consider the following:
  - Ask the site personnel working near or within the area at the time what has happened.
  - Ask the IP what has happened.
  - Visual inspection of the excavation, check the stability/shoring, look for exposed/disturbed services including electric/gas/water (isolate services and prevent further potential contact if possible).

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- **Do not enter the excavation if it is suspected it is dangerous to do so.**
- If the first aider or site manager, deem that further assistance is necessary a nominated person shall dial 999 and request attendance of emergency services (this may only be applicable in certain circumstance)
- Give specific information regarding the emergency, stating the depth of the excavation the condition of the injured person and all information possible in order for the emergency services to determine the emergency services attendance required (fire brigade and ambulance service for instance).
- Once DANGER to themselves and others has been assessed, provided the excavation is deemed safe, the first aider is to go the IP bringing with them the first aid box.
- The first aider might call for assistance from others.

Rescue Planning

When working in or around a deep excavation a Rescue Plan is to be considered in order to extract persons to a place of safety.

The rescue plan it be finalised by the Contracts Manager/Site Manager incorporating the following for work in deep excavations. (Please delete this red text once plan is specific to your site)

The rescue team is to be made up of the following persons:

- **Person 1 Rescue Coordinator** – This will be the site manager, unless otherwise agreed. This role involves managing the rescue, coordinating, communicating.
- **Person 2 Rescue First Aider** – This role is taking care of the Injured Person (IP) checking for responses and ensuring the Airway/Breathing/Circulation of the IP as a priority.
- **Person 3 Rescue Support** – To support the first aider however instructed to do so and assist the first aider by ensuring the IP is attached to the winch correctly.

Equipment

- First aid kit

Training

- First aider to hold SJA First Aid at Work 3 Day Course (2 day refresher).
- A practice drill shall be undertaken at least once during the program and again if the rescue team changes, recorded in the site diary.

If the first aider suspects a spinal injury and the IP is responsive and breathing, do not move the IP or attempt a rescue. Support the IP and make them comfortable, but ensure the emergency services are informed of the suspected spinal injury.

The priority is to preserve life. If a person is in immediate danger then use whatever means possible to get them out of the excavation. <u>Always assess the DANGER to yourself and others before doing so.</u>

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13.0 Risk/ Hazard Assessment

Risk Assessment Title:	Removal of Existing Tank and Surround	Assessed On Site By:	

IF THE RISK RATING (RR) IS ABOVE 6 IT MUST BE STRICTLY CONTROLLED

Risk Rating (RR) = Severity (S) x Probability (P)

SEVERITY: 5 = Fatality
4 = Major Injury
3 = Injury Requires External Medical Attention
2 = Minor Injury, First Aid Required
1 = Minor Injury, No First Aid Required

PROBABILITY: 5 = Frequent
4 = Probable
3 = Occasional
2 = Possible
1 = Improbable

Legend:

Who could be harmed:
EMP – Employee
CON – Contractor
PUB – Public
VIS- Visitor
UAV – Unauthorised Visitor

Risk Status:
Low = 1 to 6 **Medium = 7 to 11** **High = 12 to 25**

Hazard Identification	Without Controls S	Without Controls P	Without Controls RR SxP	Persons At Risk	Control Measures	With Controls S	With Controls P	With Controls RR SxP	Risk Status
Contact with electricity causing electrocution / cable strike	5	2	10	EMP CON	The use of Cable Avoidance Tool Scanners, service drawings and sub-scan drawings, trained and competent personnel using properly tested serviced equipment will carry out disconnection & testing of all services.	5	1	5	Low
Persons struck crushed or trapped by moving vehicles plant or machinery.	5	2	10	EMP CON PUB VIS	Trained Banks man. Segregation of vehicles & pedestrians via barriers and walkways. Locked gates maintain site perimeter fencing. Speed restrictions for vehicles. Adequate lighting on vehicle pedestrian areas. Information, instruction, supervision. Vehicle hazard warning signals, beacons, siren to be used if available. Vehicle machinery maintenance/records of inspection.	5	1	5	Low

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Collapse, falling into excavation, driving into excavation, air deficiency, explosion	5	2	10	CON EMP UAV PUB	No persons are allowed into any excavation until the following controls are in place: ➢ Atmosphere has been tested & recorded. ➢ Edge protection is in place. ➢ A safe access and egress has been installed. ➢ No water ingress into trench/hole ➢ No lone working. ➢ Signage is in place. ➢ Area to be continuously monitored.	5	1	5	Low
Plant causing the collision, crushing, striking of people or objects.	5	2	10	EMP CON	Machine operators and dumper drivers will be trained in the use of relevant equipment. Each machine will be assigned a banks man who will be in attendance at all times the machine is operational.	5	1	5	Low
Muscular skeletal injuries due to manual handling	3	3	9	EMP	Persons trained in manual handling techniques. Correct lifting techniques (manual handling training) Correct gloves for task do not exceed personal comfort limits – seek assistance.	3	1	3	Low

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Exposure to noise causing temporary hearing loss and potential for permanent damage	3	2	6	EMP CON PUB	On site monitoring. Only work within the recommended guidelines for plant & equipment being used, monitor and record findings.	3	1	3	Low
Slips trips and falls	3	3	9	EMP CON	Good housekeeping, clear up after each stage of the operation.	3	1	3	Low
Harmful Construction Dusts such as silica being inhaled causing long term health issues	3	3	9	PUB CON EMP	Spray water on the building and stock pile to help control the dust during dry conditions. Site to be monitored and recorded at boundary.	3	1	3	Low
Vapour / Fire	5	2	10	PUB CON EMP	Remove hazardous materials /liquids Isolations No hot works No Smoking Permits and training Use specialist trained companies	5	1	5	Low
Lifting	4	2	8	PUB CON EMP	Suitable hard level ground. Survey details Use correct lifting equipment and straps etc Training	4	1	4	Low

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14.0 Additional Risk Assessment

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Additional Hazard Identification	Without Controls			Persons At Risk	Additional Control Measures	With Controls			Risk Status
	S	P	RR SxP			S	P	RR SxP	

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15.0	Declaration
	Based on this risk assessment, the level of risk has been reduced as far as is reasonably practicable.
	Assessed By: *Position:*

16.0 Work Party Register

PERSONS IN ATTENDANCE DURING THE WORK

I, the undersigned, have read, discussed and fully understand the above Method Statement and Risk Assessment and will adhere to all its method of working and conditions set down.

Print Name	Company	Signature	Date