TETRA TECH COFFEY

Mirvac Real Estate Pty Ltd

Confined Spaces Assessment

28 Barrack Street, Perth, Western Australia 6000

13 October 2022

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CONFINED SPACES ASSESSMENT

Prepared for
Mirvac Real Estate Pty Ltd

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EXECUTIVE SUMMARY

Tetra Tech Coffey Pty Ltd (TTC) was commissioned by Mirvac Real Estate Pty Ltd (the client) to conduct a confined spaces assessment at the David Malcolm Justice Centre, located at 28 Barrack Street, Perth, Western Australia 6000. Brad Erceg of TTC carried out the audit on 30th August 2022. For the purpose of this audit, the principal definition of a confined space is that described in the *Work Health and Safety (General) Regulations 2022 (WA).*

Identified confined spaces were not entered by personnel at the time of the assessment, therefore the risk assessments contained in this report are limited to general observations made. A more detailed space and task specific risk assessment is required prior to entering any confined spaces identified in this report.

Assessment Findings

The following findings are based on the site inspection, discussions with site personnel, and review of relevant documentation:

- A total of twenty (20) confined spaces were identified at the site. One additional space (a diesel generator day tank in the Generator Room on Level 18) was identified that was not included in the previous assessment report.
- The majority of the identified confined spaces were appropriately signposted, however the diesel generator day tank in the Generator Room on Level 18 was not signposted.
- All confined spaces appeared to be appropriately secured from unauthorised access at the time of the assessment.
- A confined space entry permit system was available for the site (Refer to **Appendix E** for Mirvac Confined Space Entry Permit).
- A documented procedure for the isolation and tag out of plant and services associated with confined spaces was available for the site. This was detailed in the confined space entry permit.
- TTC was advised that no recent confined space entries have occurred at the site.

Note: Refer to **Appendix A** for the confined space register and **Appendix C** for photographs.

Recommended Actions

The following actions are recommended, based on the above findings:

- Ensure a task specific risk assessment is conducted prior to commencing any works within a confined space.
- Ensure the diesel generator day tank in the Generator Room on Level 18 is appropriately signposted. Ensure the signage complies with *AS 2865:2009 Confined Spaces*, Section 3.2.2. Refer to **Appendix D** for examples of confined space safety signage.
- Ensure all staff and contractors working within areas containing confined spaces at the site are provided with appropriate information, instruction and training to ensure they are able to work safely in these areas. It is recommended that this be managed within the site induction.
- Although it was not possible to access the spaces at the time of the inspection, they have been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.
- Avoid entering the confined spaces if possible e.g. conduct cleaning/maintenance activities from outside etc.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure task specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.

- All works and access in relation to confined spaces must be undertaken in accordance with the Work Health and Safety (General) Regulations, 2022 (WA), the Code of Practice: Confined Spaces 2022 (WA) and AS 2865:2009 Confined Spaces.
- TTC is able to assist the client to implement the above recommended actions.

1. INTRODUCTION

Tetra Tech Coffey Pty Ltd (TTC) was commissioned by Mirvac Real Estate Pty Ltd (the client) to conduct a confined spaces assessment at the David Malcolm Justice Centre, located at 28 Barrack Street, Perth, Western Australia 6000. Brad Erceg of TTC carried out the audit on 29th August 2022. For the purpose of this audit, the principal definition of a confined space is that described in the *Work Health and Safety (General) Regulations 2022 (WA).*

Identified confined spaces were not entered by personnel at the time of the assessment, therefore the risk assessments contained in this report are limited to general observations made. A more detailed space and task specific risk assessment is required prior to entering any confined spaces identified in this report.

1.1 Site Description

The site consisted of a 32 level (approximately 32,000m^2) office building, with construction completed in 2015. The building was occupied at the time of the assessment.

2. SCOPE

The objective of the Confined Spaces Assessment was to identify and assess confined spaces at the site and manage the associated risks to the health and safety of site occupants (including workers, students, visitors and contractors). The assessment included a physical inspection of accessible areas of the site, as well as discussions with relevant site personnel, and a review of relevant systems/documentation.

2.1 Inaccessible Areas

The following areas were not accessible during the inspection:

- Within confined spaces, voids and ceiling spaces.
- Within plant and machinery.
- Lift shafts and pits.
- Below cars and stored items.
- Occupied rooms and tenanted areas.

3. WHAT IS A CONFINED SPACE?

The *Work Health and Safety (General) Regulations 2022 (WA)* defines a confined space as being an enclosed or partially enclosed space that:

a) Is not designed or intended primarily to be occupied by a person; and
b) Is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and
c) Is or is likely to be a risk to health and safety from anything specified below:
    (i) an atmosphere that does not have a safe oxygen level; or
    (ii) contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level, or
    (iii) harmful concentrations of any airborne contaminants; or
    (iv) engulfment.

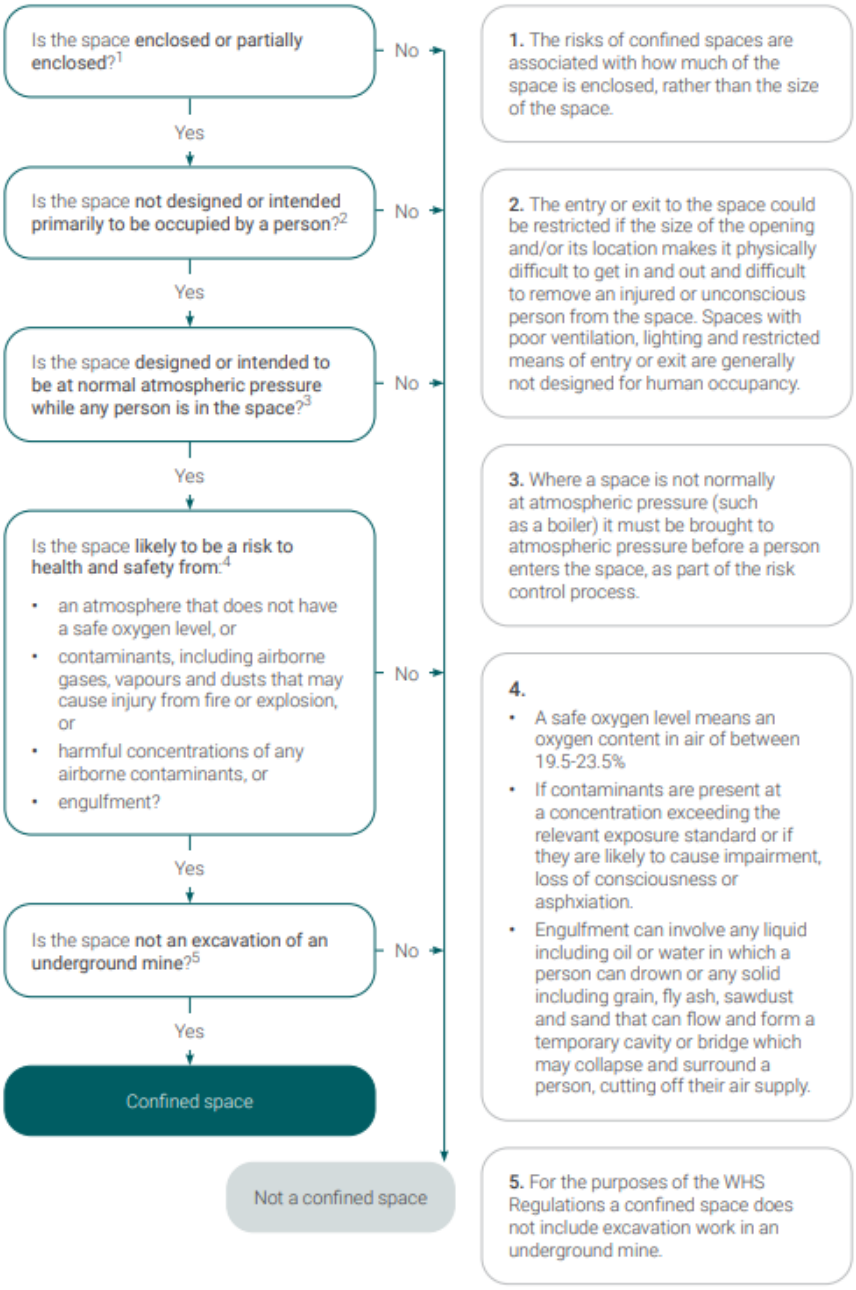
Note: The above definition does not include a space in which excavation work is carried out in an underground mine.

Regulation 66 (1) of the *Work Health and Safety (General) Regulations 2022 (WA)* states that 'A person conducting business or undertaking must manage risks to health and safety associated with a confined

space at a workplace including risks associated with entering, working in, on or in the vicinity of the confined space (including the risk of someone inadvertently entering the confined space)'.

Regulation 66 (2) of the Regulations also states that 'A person conducting a business or undertaking must ensure that a risk assessment is conducted by a competent person for the purposes of sub regulation (1)'.

Further explanation of a confined space definition is explained in the figure below:



Source: Code of Practice: Confined Spaces 2022 (WA)

4. RISK ASSESSMENT

Risk assessments have been conducted for each confined space identified on site. The risk assessments considered the nature of the confined space, including its location, frequency of entry, work performed,

the nature of the potential hazards present and the controls currently in place. Each identified potential hazard was risk assessed, based on the likelihood of an event occurring, and the consequence or outcome of that event in general terms. An overall risk rating of Low, Medium, High, Very High or Extreme was then assigned to each hazard using the provided risk assessment matrix (refer to Risk Matrix below). The assessment of the risk is a subjective assessment and is to be used for guidance purposes in relation to selecting and implementing corrective actions.

Risk Matrix					
LIKELIHOOD	**CONSEQUENCE**				
	Insignificant (No injuries)	**Minor** (First aid only)	**Moderate** (Medical treatment)	**Major** (Extensive injuries, loss of production)	**Catastrophic** (Fatality / permanent disability)
Almost Certain (Expected in most circumstances)	Medium	High	Very High	Extreme	Extreme
Likely (Will probably occur in most circumstances)	Medium	High	Very High	Extreme	Extreme
Possible (Might occur at some time)	Low	Medium	High	Very High	Extreme
Unlikely (Not likely to occur)	Low	Low	Medium	High	Very High
Rare (May occur only in exceptional circumstances)	Low	Low	Medium	High	High

Where the hazards associated with work in particular confined spaces are similar in nature, a group risk assessment has been prepared. Separate space specific risk assessments will be prepared for any confined spaces identified as having unique hazards or risks that are different to the group risk assessment.

Refer to **Appendix B** for confined space risk assessments.

5. FINDINGS

The following findings are based on the site inspection, discussions with site personnel, and review of relevant documentation:

- A total of twenty (20) confined spaces were identified at the site. One additional confined space (a diesel generator day tank in the Generator Room on Level 18) was identified that was not included in the previous assessment report.

- The majority of the identified confined spaces were appropriately signposted, however the diesel generator day tank in the Generator Room on Level 18 was not signposted.
- All confined spaces appeared to be appropriately secured from unauthorised access at the time of the assessment.
- A confined space entry permit system was available for the site (Refer to **Appendix E** for Mirvac Confined Space Entry Permit).
- A documented procedure for the isolation and tag out of plant and services associated with confined spaces was available for the site. This was detailed in the confined space entry permit.
- TTC was advised that no recent confined space entries have occurred at the site.

Note: Refer to **Appendix A** for the confined space register and **Appendix C** for photographs.

6. RECOMMENDED ACTIONS

- Ensure a task specific risk assessment is conducted prior to commencing any works within a confined space.
- Ensure the diesel generator day tank in the Generator Room on Level 18 is appropriately signposted. Ensure the signage complies with *AS 2865:2009 Confined Spaces*, Section 3.2.2. Refer to **Appendix D** for examples of confined space safety signage.
- Ensure all staff and contractors working within areas containing confined spaces at the site are provided with appropriate information, instruction and training to ensure they are able to work safely in these areas. It is recommended that this be managed within the site induction.
- Although it was not possible to access the spaces at the time of the inspection, they have been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.
- Avoid entering the confined spaces if possible e.g. conduct cleaning/maintenance activities from outside etc.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure task specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- All works and access in relation to confined spaces must be undertaken in accordance with the Work Health and Safety (General) Regulations, 2022 (WA), the Code of Practice: Confined Spaces 2022 (WA) and AS 2865:2009 Confined Spaces.
- TTC is able to assist the client to implement the above recommended actions.

7. REFERENCES

- *Work Health and Safety Act, 2020 (WA).*
- *Work Health and Safety (General) Regulations, 2022 (WA).*
- *Code of Practice: Confined Spaces 2022 (WA).*
- *Australian Standard 2865:2009 Confined Spaces.*

8. LIMITATIONS

This report and the associated services performed by Tetra Tech Coffey are in accordance with the scope of services set out in the contract between Tetra Tech Coffey and the Client. The scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to the site.

Tetra Tech Coffey derived the data in this report primarily from visual inspections, examination of available records, and interviews with individuals with relevant information about the site. In preparing this report, Tetra Tech Coffey has relied upon, and presumed accurate, certain information (or absence thereof) provided by government authorities, the Client and others identified herein. Except as otherwise stated in the report, Tetra Tech Coffey has not attempted to verify the accuracy or completeness of any such information.

No warranty, undertaking, or guarantee, whether expressed or implied, is made with respect to the data reported or to the findings, observations, and recommendations expressed in this report. Furthermore, such data, findings, observations, and recommendations are based solely upon existence at the time of the assessment. The passage of time, manifestation of latent conditions or impacts of future events (e.g. changes in legislation, scientific knowledge, land uses, etc.) may require further investigation at the site with subsequent data analysis and re-evaluation of the findings, observations, and recommendations expressed in this report.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the provisions of the agreement between Tetra Tech Coffey and the Client. Tetra Tech Coffey accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon this report by any third party or parties. It is the responsibility of the Client to accept if the Client so chooses any recommendations contained within and implement them in an appropriate, suitable and timely manner.

APPENDIX A: CONFINED SPACES REGISTER

Confined Spaces Register								
Space ID	Type	Level	Location / Comments	Secure	Signage	Dimensions	Risk Assessment	Photo
001	Sewer pit	B	Basement, adjacent to car parking bay 17	Yes	Yes	Unknown	C	1
002	Unknown pit	B	Basement, adjacent to car parking bay 12	Yes	Yes	Unknown	F	2
003	Sewer pit	B	Basement, adjacent to car parking bay 12	Yes	Yes	Unknown	C	2
004 & 005	Storm water pit x 2	B	Basement, adjacent to car parking bay 12	Yes	Yes	Unknown	D	2
006	Unknown pit	B	Basement, adjacent to Tower Store	Yes	Yes	Unknown	F	3
007 & 008	Grease trap x 2	B	Basement, adjacent to Security Office	Yes	Yes	Unknown	E	4
009 - 011	Grease trap x 3	B	Basement, adjacent to car parking bay 27	Yes	Yes	Unknown	E	5
012	Water tank	B	Basement, stormwater tank	Yes	Yes	40m^3	A	6
013	Water tank	B	Basement, Fire Pump Room	Yes	Yes	40m^3	A	7
014	Fuel tank	B	Basement, Diesel Store Room	Yes	Yes	6.5m^3	B	8
015	Sewer pit	B	Basement, Sewer Pump Room	Yes	Yes	Unknown	C	9
016	Unknown pit	B	Basement, Driveway entry to basement	Yes	Yes	Unknown	F	10
017	Water tank x 2	L1	Level 1, Plant Room	Yes	Yes	10m^3	A	11
018	Fuel tank	L18	Level 18, Generator Room	Yes	No	1m^3	B	12, 13

Space ID	Type	Level	Location / Comments	Secure	Signage	Dimensions	Risk Assessment	Photo
019	Water tank x 2	L32	Level 32, Roof	Yes	Yes	30m^3	A	14
020	Water tank x 2	L32	Level 32, Roof	Yes	Yes	10m^3	A	15

APPENDIX B: CONFINED SPACE RISK ASSESSMENTS

Risk Assessment A: Water Tank	
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).	**YES**
A. Is the space not designed or intended primarily to be occupied by a person?	YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?	YES
C. Is the space likely to be a risk to health and safety from:	
• an atmosphere that does not have a safe oxygen level?	YES
• contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level?	NO
• harmful concentrations of any airborne contaminants?	NO
• engulfment?	YES

Works to be completed:	Cleaning and maintenance activities.
Comments:	Access to space is restricted. No access gained during assessment.

Hazard Types	Risk Rating	Recommended Actions
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	L	No action required.
Build-up of organic vapours to within explosive limits	L	No action required.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	M	Wear appropriate hearing protection PPE when accessing plant rooms (required for access to the space).
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	VH	Isolate all inflow pipes into the space.
Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Use a winch or rope pulley system to lower equipment into the tank.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.

Hazard Types	Risk Rating	Recommended Actions
Skin contact with hazardous substances and surface contaminants	L	No action required.
Slips and trips	M	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	M	Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear). Wash hands and face after exiting the space.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights and traffic management issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

Risk Assessment B: Fuel Tank		
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).		**YES**
A. Is the space not designed or intended primarily to be occupied by a person?		YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?		YES
C. Is the space likely to be a risk to health and safety from: • an atmosphere that does not have a safe oxygen level? • contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level? • harmful concentrations of any airborne contaminants? • engulfment?		 YES YES NO YES
Works to be completed:	Cleaning and maintenance activities.	
Comments:	Access to space is restricted. No access gained during assessment.	
Hazard Types	**Risk Rating**	**Recommended Actions**
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	L	No action required.
Build-up of organic vapours to within explosive limits	E	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Only enter the space if the concentration of any flammable vapours is less than 5% of its lower explosive limit. Continually monitor the atmosphere within the space during entry. Ensure no ignition sources are located within or introduced into the space.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	M	Wear appropriate hearing protection PPE when accessing plant rooms (required for access to the space).
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	VH	Isolate all inflow pipes into the space.
Hazard Types	**Risk Rating**	**Recommended Actions**

Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Use a winch or rope pulley system to lower equipment into the tank.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.
Skin contact with hazardous substances and surface contaminants	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear).
Slips and trips	M	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	M	Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	L	No action required.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

Risk Assessment C: Sewer Pit		
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).		**YES**
A. Is the space not designed or intended primarily to be occupied by a person?		YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?		YES
C. Is the space likely to be a risk to health and safety from: • an atmosphere that does not have a safe oxygen level? • contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level? • harmful concentrations of any airborne contaminants? • engulfment?		 YES YES YES YES
Works to be completed:	Maintenance and inspection activities.	
Comments:	Access to space is restricted. No access gained during assessment.	
Hazard Types	**Risk Rating**	**Recommended Actions**
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	E	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up of organic vapours to within explosive limits	E	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Only enter the space if the concentration of any flammable vapours is less than 5% of its lower explosive limit. Continually monitor the atmosphere within the space during entry. Ensure no ignition sources are located within or introduced into the space.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	L	No action required.
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	E	Isolate all services within the space. Ensure no vehicles operate in the vicinity of the entry. Ensure the standby person is monitoring external weather conditions and any other factors that could impact the confined space.

Hazard Types	Risk Rating	Recommended Actions
Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Ensure a two-person lift or lifting device is used when lifting or removing covers. Use a winch to lower equipment into the space.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.
Skin contact with hazardous substances and surface contaminants	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear).
Slips and trips	H	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	M	Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	H	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear). Wash hands and face after exiting the space.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights and traffic management issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

Risk Assessment D: Storm Water Pit	
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).	**YES**
A. Is the space not designed or intended primarily to be occupied by a person?	YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?	YES
C. Is the space likely to be a risk to health and safety from: • an atmosphere that does not have a safe oxygen level? • contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level? • harmful concentrations of any airborne contaminants? • engulfment?	 YES YES YES YES

Works to be completed:	Maintenance and inspection activities.
Comments:	Access to space is restricted. No access gained during assessment.

Hazard Types	Risk Rating	Recommended Actions
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	H	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up of organic vapours to within explosive limits	H	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Only enter the space if the concentration of any flammable vapours is less than 5% of its lower explosive limit. Continually monitor the atmosphere within the space during entry. Ensure no ignition sources are located within or introduced into the space.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	L	No action required.
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	E	Isolate all services within the space. Ensure no vehicles operate in the vicinity of the entry. Ensure the standby person is monitoring external weather conditions and any other factors that could impact the confined space.

Hazard Types	Risk Rating	Recommended Actions
Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Ensure a two-person lift or lifting device is used when lifting or removing covers. Use a winch to lower equipment into the space.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.
Skin contact with hazardous substances and surface contaminants	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear).
Slips and trips	H	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	M	Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	H	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear). Wash hands and face after exiting the space.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights and traffic management issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

Risk Assessment E: Grease Trap	
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).	**YES**
A. Is the space not designed or intended primarily to be occupied by a person?	YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?	YES
C. Is the space likely to be a risk to health and safety from: • an atmosphere that does not have a safe oxygen level? • contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level? • harmful concentrations of any airborne contaminants? • engulfment?	 YES NO YES YES
Works to be completed:	Cleaning and maintenance activities.
Comments:	Access to space is restricted. No access gained during assessment.

Hazard Types	Risk Rating	Recommended Actions
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	H	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up of organic vapours to within explosive limits	H	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Only enter the space if the concentration of any flammable vapours is less than 5% of its lower explosive limit. Continually monitor the atmosphere within the space during entry. Ensure no ignition sources are located within or introduced into the space.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	M	Wear appropriate hearing protection PPE when accessing plant rooms (required for access to the space).
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	VH	Isolate all services within the space. Ensure the standby person is monitoring external weather conditions and any other factors that could impact the confined space.

Hazard Types	Risk Rating	Recommended Actions
Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Ensure a two-person lift or lifting device is used when lifting or removing covers. Use a winch to lower equipment into the space.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.
Skin contact with hazardous substances and surface contaminants	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear).
Slips and trips	M	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	VH	Isolate all power sources within the space. Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear). Wash hands and face after exiting the space.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights and traffic management issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

Risk Assessment F: Unknown Pit	
Does the space meet the requirements of a Confined Space? (If the answer to A, B, and at least one part of C, is yes, then the space is a confined space and requires a risk assessment).	**YES**
A. Is the space not designed or intended primarily to be occupied by a person?	YES
B. Is the space at, or is designed or intended to be at normal atmospheric pressure while any person is in the space?	YES
C. Is the space likely to be a risk to health and safety from:	
• an atmosphere that does not have a safe oxygen level?	YES
• contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion level?	YES
• harmful concentrations of any airborne contaminants?	YES
• engulfment?	YES

Works to be completed:	Cleaning and maintenance activities.
Comments:	Access to space is restricted. No access gained during assessment.

Hazard Types	Risk Rating	Recommended Actions
Restricted entry and egress in an emergency	VH	Wear a safety harness and remain connected to a lifeline at all times. Ensure the standby person remains in constant contact with person(s) entering the space.
Oxygen deficiency whilst work in progress	E	Monitor the atmosphere within the space prior to entering. Only enter the space if oxygen levels are within the safe range (19.5% to 23.5%). Ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up or excess of vapours such as hydrogen sulphide (H_2S) or carbon monoxide (CO) to concentrations above the workplace exposure standards (WES)	VH	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Continually monitor the atmosphere within the space during entry.
Build-up of organic vapours to within explosive limits	VH	Monitor the atmosphere within the space prior to entering. Purge and ventilate the space if required. Only enter the space if the concentration of any flammable vapours is less than 5% of its lower explosive limit. Continually monitor the atmosphere within the space during entry. Ensure no ignition sources are located within or introduced into the space.
Airborne dust concentrations above the WES	L	No action required.
Radiation (non-ionising and ionising)	L	No action required.
Noise generated at levels above 85 dB(A)	M	Wear appropriate hearing protection PPE when accessing plant rooms (required for access to the space).
Hazard Types	**Risk Rating**	**Recommended Actions**
Uncontrolled introduction of substances (e.g. steam, water, gases etc.)	VH	Isolate all services within the space.

		Ensure the standby person is monitoring external weather conditions and any other factors that could impact the confined space.
Engulfment	E	Isolate all inflow pipes into the space. Wear a safety harness and remain connected to a lifeline at all times.
Manual handling of covers, lowering equipment into pits	M	Ensure a two-person lift or lifting device is used when lifting or removing covers. Use a winch to lower equipment into the space.
Mechanical hazards (e.g. entanglement, crushing, cutting, etc.)	L	No action required.
Skin contact with hazardous substances and surface contaminants	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear).
Slips and trips	M	Wear slip resistant boots.
Falls from height	VH	Wear a safety harness and remain connected to a lifeline at all times.
Electrical hazards	VH	Isolate all power sources within the space. Portable electrical equipment should be protected through an RCD, located outside of the space.
Biological hazards (e.g. E-coli)	M	Wear appropriate PPE (e.g. gloves, long sleeve shirt and pants, boots and eye wear). Wash hands and face after exiting the space.
Lack of lighting	H	Use appropriate and safe temporary lighting and/or torch within the space.
Heat and cold stress	L	No action required.

General Recommendations

- Avoid entering the confined space if possible e.g. conduct cleaning activities from outside etc.
- Ensure access to the confined space remains secure at all times.
- Only authorised personnel are to access the confined space.
- All works and access in relation to confined spaces must be undertaken in accordance with AS 2865-2009.
- Ensure that the person responsible for the confined space work issues an entry permit prior to any persons entering the confined space.
- Ensure contractors are appropriately trained to undertake confined space entry and standby duties.
- Ensure site specific emergency rescue procedures and equipment are available and readily accessible during any confined space work.
- Ensure contractor safe work method statement (SWMS) addresses working at heights and traffic management issues.
- Ensure suitable PPE is available and appropriately maintained.
- Ensure a task specific risk assessment is conducted within the space prior to commencing any works.
- Although it was not possible to access the space at the time of the assessment, it has been deemed to be a confined space (in order to take a precautionary approach) and should continue to be treated as such until confirmed as otherwise.

APPENDIX C: PHOTOGRAPHS

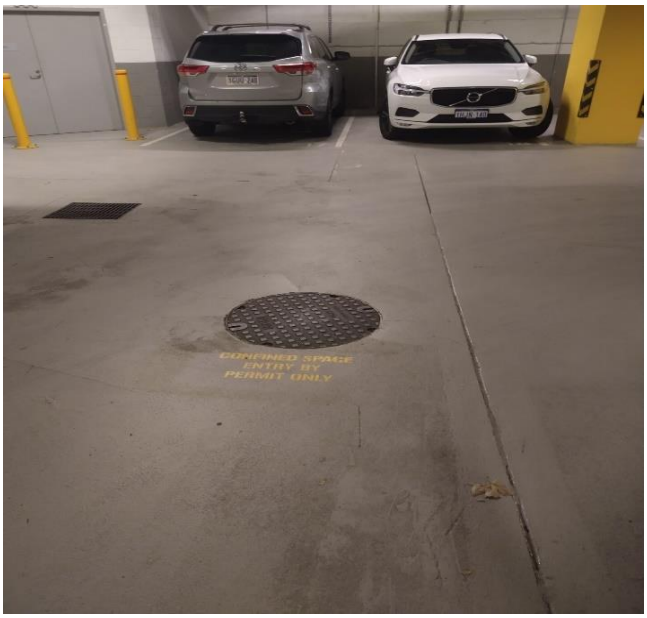


Photo 01. Basement Level, sewer pit

Photo 02. Basement Level, unknown pit (x1), sewer pit (x1), storm water pits (x2)

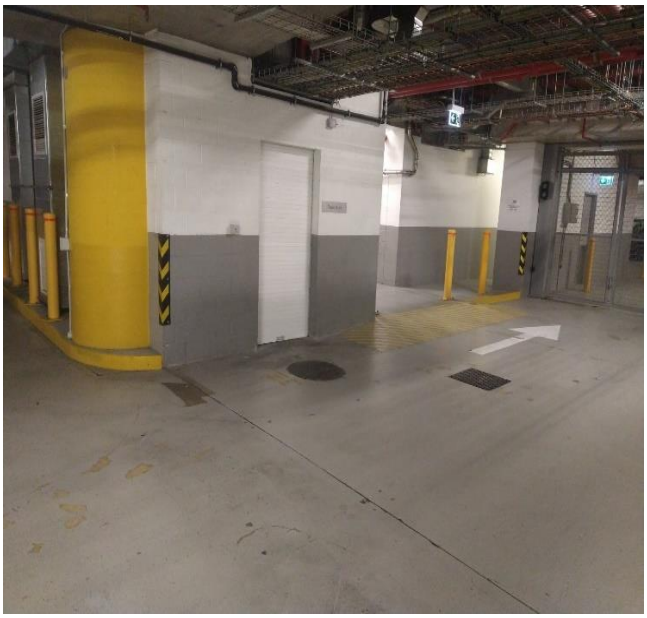


Photo 03. Basement Level, sewer pit

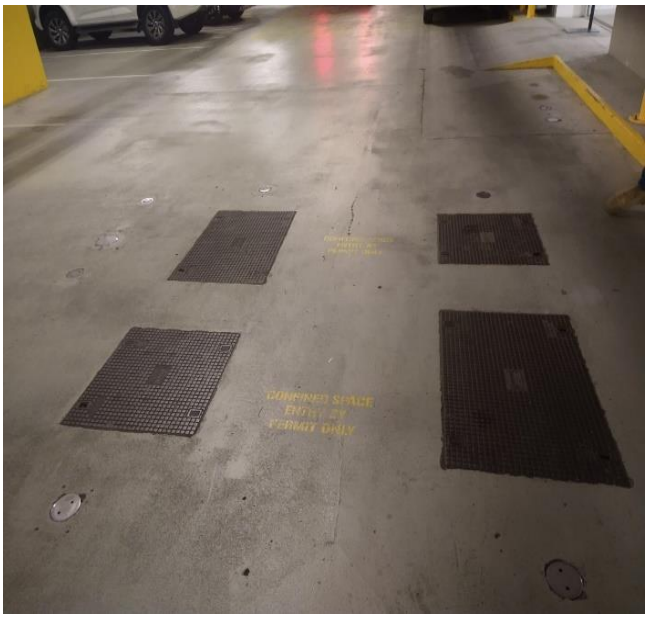


Photo 04. Basement Level, grease traps(x2)

Photo 05. Basement Level, grease traps (x3)

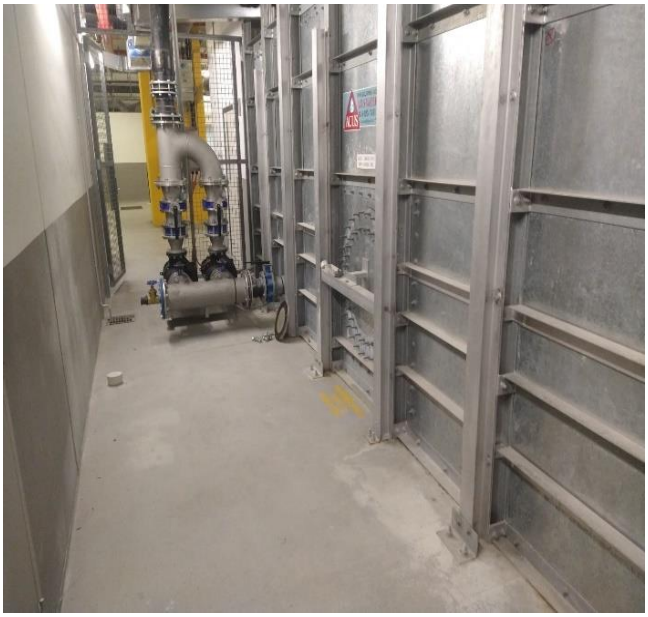


Photo 06. Basement Level, water tank

Photo 07. Basement Level (Fire Pump Room), water tank

Photo 08. Basement Level (Diesel Storeroom), fuel tank

Photo 09. Basement Level (Sewer Pumproom), sewer pit

Photo 10. Basement Level (driveway entry to basement), unknown pit

Photo 11. Level 1 (Plantroom), potable water tank (x2)

Photo 12. Level 18 (Gas Generator Room), fuel tank

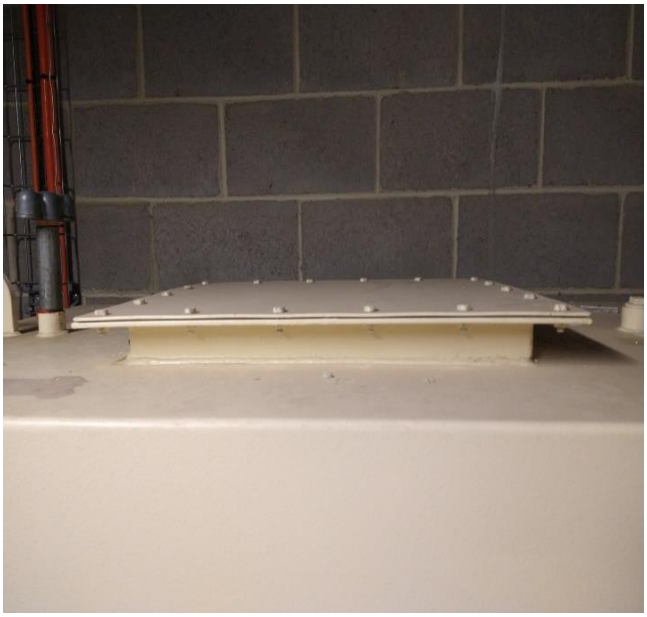


Photo 13. Level 18 (Gas Generator Room), fuel tank – hatch view

Photo 14. Level 32 (Roof), water tank (x2)

Photo 15. Level 32 (Roof), water tank (x2)

APPENDIX D: CONFINED SPACE SIGNAGE

Example A: Fixed confined space warning sign that can be established in a prominent position adjacent the confined space or on the access hatch.

Example B: Another fixed confined space warning sign that can be established in a prominent position adjacent the confined space or on the access hatch. The warning signage carries brief information that would need to be listed in the confined space entry permit.

Example C: Mobile confined space warning sign that can be established in a prominent position adjacent the confined space while works are in progress.

APPENDIX E: MIRVAC CONFINED SPACE ENTRY PERMIT

Confined Space Entry Permit

To be completed by competent persons					
1. Workplace:					
Permit Issue Date:				Permit No.	
Permit valid from (Reviewed each shift)	Date:	Time:	**to**	Date:	Time:
2. Confined Space Covered by this Permit (Type & I.D):					
Description of location of Confined Space:					
3. Service Provider Company Name (SP):					
SP Supervisor Name:				Mobile Phone:	
SP Assessor/Competent Person Name:				Mobile Phone:	
4. Description of work to be undertaken:					
5. Isolation and Preparation of Confined Space for Entry					
• A Risk Assessment /Job Safety Environment Analysis (JSEA) or equivalent must be developed, read, agreed, signed by team members and a copy attached to this permit;					
• All details of this permit are to be completed, implemented, checked and signed where indicated (➔) by the Service Provider Competent Person (identified in section 3) before work commences;					
• Check 'Confined Spaces Register for Special Precautions (section 8) & Confined Space Identification (section 2)					
• Only the work listed in section 4 may be carried out.					

The following isolations & preparations have been made:	**Note – all questions must be answered YES or N/A (Not Applicable)**	**Y**	**N/A**
a) Pipelines identified, and isolated (e.g. water, steam, gas) using Isolation Lockout Tagout MMR		☐	☐
b) Mechanical/Electrical Drives - isolated using Isolation Lockout Tagout MMR		☐	☐
c) Sludges/deposits/waste identified as non-toxic - removed/flushed without putting personnel at risk		☐	☐
d) Harmful materials (e.g. dusts, fumes, gases, chemicals) - removed/flushed without putting personnel at risk		☐	☐
e) Electrical services relevant to the confined space - isolated using Isolation Lockout Tagout MMR		☐	☐
f) External activities/tasks/operations which may have an effect on the confined space are controlled		☐	☐
g) All personnel have undertaken Confined Space training & current certificates have been sighted and copied		☐	
h) Entry points are controlled/fenced/barricaded and signage in place (e.g. Confined Space, No Smoking)		☐	
i) Adequate natural ventilation checked or forced ventilation in place and effective		☐	
j) No Smoking permitted within the Confined Space, signs in place, and control measure included in JSEA		☐	
k)		☐	
l)		☐	
➔ **Service Provider Competent Person – Signature:**		**Date:**	
6. ATMOSPHERIC TESTING			

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Version: V1
Document Number: HSE:GR:MC:3.1.6:PE:0140

Confined Space Entry Permit

1. Workplace:							
Permit Issue Date:				Permit No.			
Equipment make:				Model No.	Serial No.		
Date of test:		Time of test		Date of last calibration :			
GAS TESTED		Acceptable Limits	RESULT	GAS TESTED		Acceptable Limits	RESULT
Oxygen	O^2	19.5% - 23.5%		Lower Explosive Limit gases	**LEL**	<5%	
Carbon Monoxide	**CO**	TWA - 30ppm					
Hydrogen Sulphide	H^2S	TWA – 10ppm					
CONTINUED MONITORING of the Confined Space atmosphere **is** ☐ / **is not** ☐ required (tick)							
HOT WORK within the Confined Space **is** ☐ / **is not** ☐ permitted (tick) – refer Hot Work Permit Procedure							
Comments:							
➔ **Service Provider Competent Person – Signature:**				**Date:**			

7. USE OF HAZARDOUS SUBSTANCES		
All Hazardous Substances (e.g. chemicals, aerosols, paints, solvents) must have a **MSDS (or SDS)** at the workplace.		
No Hazardous Substances other than those listed below may be taken into the confined space:		
a)	b)	c)
d)	e)	f)
➔ **Service Provider Competent Person – Signature:**		**Date:**

8. SPECIAL PRECAUTIONS (include items listed in the Confined Spaces Register)		
a)	b)	c)
d)	e)	f)
➔ **Service Provider Competent Person – Signature:**		**Date:**

9. PERSONAL PROTECTIVE EQUIPMENT/RESCUE EQUIPMENT – IDENTIFY ITEMS TO BE IN PLACE		
☐ Self-Contained Breathing Apparatus SCBA	☐ Chemical Oxygen Technology Self-Rescue unit	
☐ Air Purifying Filter respiratory protective device	☐ Particle Respiratory Protective device	
☐ Personal Motion Monitor	☐ Fall Arrest harness	☐ Lifeline/ Rescue line
☐ Safety Helmet	☐ Safety Eyewear	☐ Safety Footwear
☐ Hand Protection	☐ Hearing Protection	☐ Protective Clothing
Other: ☐ ☐		
➔ **Service Provider Competent Person – Signature:**		**Date:**

10. STAND-BY PERSONNEL – to be completed by each stand-by person during confined space occupancy

Confined Space Standby Person (PRINT name)	DATE	Time ON 1st. duty	Time OFF 1st.duty	Time ON 2nd.duty	Time OFF 2nd. duty

The Stand-by personnel listed above have been trained in the Emergency Response Plan for this Confined Space:

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Version: V1
Document Number: HSE:GR:MC:3.1.6:PE:0140

Confined Space Entry Permit

1. Workplace:			
Permit Issue Date:		Permit No.	
➔ **Service Provider Competent Person – Signature:**		**Date:**	
11. RECORD OF UNDERSTANDING THE PROCEDURES FOR CONFINED SPACE ENTRY			
I/We understand the procedures required for entry and work in the confined space and the protective measures and equipment to be used (evidence of confined space training must be provided before entering the space).			
Name:	Signature:	Time:	Date:
Name:	Signature:	Time:	Date:
Name:	Signature:	Time:	Date:
12. METHOD OF COMMUNICATION – Stand-by person to work crew			
☐ Radio	☐ Voice	☐	
➔ **Service Provider Competent Person – Signature:**		**Date:**	
13. AUTHORISATION			
Based on the information provided above, the confined space described above is, in my opinion, in a safe condition for entry and the work to be done, provided that all the precautions are fully observed:			
➔ **Service Provider Competent Person**	Signature:	Time:	Date:

14. CONFINED SPACE ENTRY RECORD

Entrant Name	Entry Time	Signature	Exit Time	Signature

14. SIGN OUT – tick all applicable boxes			
a) All persons have left the confined space - further entry not permitted unless a new entry permit is completed. ☒			
b) All equipment **has** ☐ **/ has not** ☐ been withdrawn	**c)** The work **has** ☐ **/ has not** ☐ been completed.		
d) Equipment/ plant/ machinery **is** ☐ / **is not** ☐ fit for use **N/A** ☐			
e) The work has been suspended ☐ and observations of unsatisfactory aspects of the operation in the confined space are noted for attention prior to undertaking similar operations (attach separate sheet if necessary) Notes:			
➔ **Service Provider Competent Person**	Signature:	Time:	Date:
15. ACCEPTANCE OF COMPLETED WORK – To be completed by MIRVAC Representative			
I accept the work as defined in Section 4 of this permit has been completed:			
Name:	Signature:	Time:	Date:

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