

Safe Work Method Statement

Use of nitrogen



1. Project information			
Project No.	Project Title		
Address	ITP Ref.	Client	
2. Team and approvals			
Site Manager	Person(s) consulted in development of SWMS		
OHS Rep.			
Developed by	Signature	Date	
Reviewed by	Signature	Date	










3. Plant & Equipment required	6. Select the high risk construction activities involved in this task		
<ul style="list-style-type: none"> Nitrogen Mechanical aids 	<input type="checkbox"/> Risk of person falling more than 2m	<input type="checkbox"/> Carried out in or near a shaft with a depth greater than 1.5 metres	<input type="checkbox"/> Carried out in, in or near road, railway shipping lane or other traffic corridor
	<input type="checkbox"/> Carried out on telecommunication tower	<input type="checkbox"/> Involves the use of explosives	<input type="checkbox"/> Carried out near movement of mobile plant
4. Emergency Equipment required	<input type="checkbox"/> Involved demolition	<input type="checkbox"/> Carried out on or near pressurised gas mains or pipes	<input type="checkbox"/> Involves artificial extremes of temperatures
•	<input type="checkbox"/> Involves disturbance of asbestos	<input type="checkbox"/> Carried out on or near chemical, fuel or refrigerant lines	<input type="checkbox"/> Carried out in or near water or other liquid
5. Hazardous chemicals used	<input type="checkbox"/> Involves alterations or repair that require temporary support	<input type="checkbox"/> Carried out on or near electrical installations	<input type="checkbox"/> Involves diving work
• Nitrogen	<input type="checkbox"/> Carried out in or near confined space	<input type="checkbox"/> Carried out in an area that may have a flammable or combustible atmosphere	<input type="checkbox"/> Involves tilt up or precast concrete
7. Maintenance checks required:	<ul style="list-style-type: none"> Workers must inspect plant and equipment, including gas cylinders and accessories before use and storage. The Director, Service Operations will ensure that quarterly assessments are carried out to confirm that the conditions as set out in this SWMS are complied with. In the case that it is not being followed, a notice in accordance with the Breach of Work Place Health and Safety requirements procedure WPHS030-1 will 		

be issued.

8. OHS hazards associated with the task		
<input type="checkbox"/> Access / egress	<input type="checkbox"/> Lasers	<input type="checkbox"/> Noise
<input type="checkbox"/> Electrical	<input checked="" type="checkbox"/> Hazardous chemicals	<input type="checkbox"/> Asbestos
<input type="checkbox"/> Moving traffic / plant	<input type="checkbox"/> Power tools	<input type="checkbox"/> Other <input checked="" type="checkbox"/> Dangerous goods (gases)
<input type="checkbox"/> Hot work	<input type="checkbox"/> Fauna	
<input type="checkbox"/> Fatigue / work alone	<input type="checkbox"/> UV light	
<input checked="" type="checkbox"/> Manual handling	<input type="checkbox"/> Falling objects	

9. Environmental hazards associated with the task		
<input type="checkbox"/> Air quality	<input type="checkbox"/> Flora / fauna	<input type="checkbox"/> Contaminated water
<input type="checkbox"/> Bulk excavation / spoil	<input type="checkbox"/> Sediment erosion	<input type="checkbox"/> Noise / vibration
<input type="checkbox"/> Concrete waste	<input type="checkbox"/> Spills	<input type="checkbox"/> Other
<input type="checkbox"/> Contaminated soil	<input type="checkbox"/> Slurry & discharges	
<input type="checkbox"/> Dewatering / pumpout	<input type="checkbox"/> Stormwater	
<input type="checkbox"/> Hazardous chemicals	<input type="checkbox"/> Heritage	

10. Approvals required			11. Personal qualifications & experience (e.g. WorkCover ticket, licence, exp.)	
<input type="checkbox"/> Work at heights	<input type="checkbox"/> Isolations	<input type="checkbox"/> Authority approval	<input checked="" type="checkbox"/> General Construction Card	<input type="checkbox"/> Asbestos removal
<input type="checkbox"/> Hot work	<input type="checkbox"/> Comcare	<input type="checkbox"/> Confined space entry	<input checked="" type="checkbox"/> Site specific induction	<input type="checkbox"/> Other
<input type="checkbox"/> Defence	<input type="checkbox"/> Council approval	<input type="checkbox"/> Other	<input type="checkbox"/> EWP training below 11m	<input type="checkbox"/> Other
<input type="checkbox"/> Overhead power lines	<input type="checkbox"/> Excavation	<input type="checkbox"/> Other	<input type="checkbox"/> High risk work licence	<input type="checkbox"/> Other

12. Personal Protective Equipment (PPE) required								
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
								
<input type="checkbox"/> Other:								

13. Relevant OHS legislation, Codes and Standards

Harmonisation Laws (NSW, ACT, QLD, SA) & Codes of Practice	Australian Standards	
<input checked="" type="checkbox"/> Work Health & Safety Act 2011 <input checked="" type="checkbox"/> Work Health and Safety Regulations 2011/2017 <input type="checkbox"/> Abrasive blasting <input type="checkbox"/> Confined spaces <input type="checkbox"/> Demolition work <input type="checkbox"/> Excavation work <input type="checkbox"/> First aid in the workplace <input checked="" type="checkbox"/> Hazardous manual tasks <input type="checkbox"/> How to manage and control asbestos in the workplace <input type="checkbox"/> How to safely remove asbestos <input type="checkbox"/> Managing electrical risks in the workplace <input type="checkbox"/> Managing noise and preventing hearing loss at work <input checked="" type="checkbox"/> Managing risks of hazardous chemicals <input type="checkbox"/> Managing the risk of falls in the workplace <input type="checkbox"/> Managing the risks of plant in the workplace <input type="checkbox"/> Spray painting and powder coating <input type="checkbox"/> Welding processes	<p>Electrical & Plumbing</p> <input type="checkbox"/> AS 3500 series – Plumbing and drainage <input type="checkbox"/> AS 3012 – Electrical Installations – Construction and Demolition site. <input type="checkbox"/> AS/NZS 3000 – Electrical installations <input type="checkbox"/> AS 4509 – Stand alone power systems <input type="checkbox"/> AS/NZ 3760: In-service safety inspection and testing of electrical equipment; <input type="checkbox"/> AS/NZ 3190: Approval and test specification – Residual current devices (current operated earth-leakage devices); <input type="checkbox"/> AS/NZ 3175: Residual Current Devices;	<input type="checkbox"/> AS 2397 – Safe use of lasers in the building and construction industry <input type="checkbox"/> AS/NZS 1891 – Industrial fall-arrest systems and devices – Safety belts and harnesses <input type="checkbox"/> AS 4839 – The safe use of portable and mobile oxy fuel gas systems for welding, cutting and allied processes. <p>Confined Space</p> <input type="checkbox"/> AS 2865 – Safe working in a confined space <input type="checkbox"/> AS/NZS 1715 – Selection, use and maintenance of respiratory protective devices. <p>Cranes</p> <input type="checkbox"/> AS 1418.1 – Cranes, hoists and winches – General requirements <input type="checkbox"/> AS 1418.8 Cranes, hoists and winches – Special purpose appliances <input type="checkbox"/> AS/NZS 1418.10 – Cranes, hoists and winches – Part 10 – Elevating work platforms <input type="checkbox"/> AS 1418.15:1994 – Cranes (including hoists and winches) Part 15: Concrete placing equipment <input type="checkbox"/> AS 2550.10:2006 – Safe use, Mobile elevating work platform (EWP use only) <p>PPE</p> <input checked="" type="checkbox"/> AS/NZ 1336 Recommended Practices for eye Protection In The Industrial Environment <input checked="" type="checkbox"/> AS/NZ1270:2002 Acoustics - Hearing Protectors <input checked="" type="checkbox"/> AS/NZ 2161 Occupational Protective Gloves
	<p>Asbestos/ Hazardous Substances/ Handling & Storage Materials</p> <input type="checkbox"/> AS/NZS 1596 – The Storage and handling of LP Gas <input checked="" type="checkbox"/> AS 1940 – The storage and handling of flammable and combustible liquids <input checked="" type="checkbox"/> AS 2030: (series) The Verification, Filling, Testing and Maintenance of Cylinders for storage and Transport of compressed gasses;	
	<p>Scaffold</p> <input type="checkbox"/> AS 1576.1 – Scaffolding, General Requirements <input type="checkbox"/> AS 1657 – Fixed Platforms – Walkways – Stairways - Ladders <input type="checkbox"/> AS/NZS 4576 – Guidelines for scaffolding <input type="checkbox"/> AS 1576.4 – Scaffolding Part 4: Suspended scaffolding	
	<p>Plant & Equipment</p>	

14. SWMS Review
<ul style="list-style-type: none"> • SWMS must be formally reviewed by the Site Manager/Project Manager and updated whenever: a significant change to task or activity is identified, an incident occurs relating to the task or activity, a significant hazard is identified relating to the task or activity or maximum 3 months since implementation. • If hazards, that were not included in the SWMS, are identified then works must cease immediately. The SWMS must be reviewed in consultation with the workforce and changes communicated via a toolbox meeting. Toolbox minutes to remain as an attachment to this SWMS.

15. Assessment									
Job Tasks (in order to be completed)	Foreseeable Hazards	Initial Risk Level			Hazard Control Measures 1. Eliminate 2. Substitute 3. Isolate 4. Engineer 5. Admin 6. PPE	Residual Risk Level			Person(s) Responsible
		P	C	R		P	C	R	
1. Handling nitrogen cylinders	Manual tasks	B	3	M	<ul style="list-style-type: none"> Where possible reduce the load of the material being handled. Where possible limit cylinder size to 12kg WC Use mechanical lifting devices where possible or incorporate team lifting Employ correct manual handling techniques and or mechanical assistance Keep back straight and only lift an item within individual capability Avoid carrying long loads around blind corners by planning an alternative route. Where not practical, stay alert for possible pedestrians and approach with care. 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
	Falling objects (cylinders)	B	3	M	<ul style="list-style-type: none"> Be aware of surroundings, i.e. lifting in small areas, heavy traffic areas Where possible limit cylinder size to 12kg WC Wear leather gloves and safety boots when handling Use mechanical aids and restrain object where possible 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
	Cylinder rupture or failure				<ul style="list-style-type: none"> Ensure cylinders are secured or placed on a secured portable trolley Cylinders must be vertical and protected from impact Cylinders must be secured to prevent movement under all transport conditions Cylinder must be certified and clearly labelled. Check valves and connections for any visible damage, If found, notify supervisor and return cylinder to supplier 	B	3	M	Site Manager, Trade / contractor Site Supervisor.
2. Transporting nitrogen	Falling objects	D	3	H	<ul style="list-style-type: none"> Ensure cylinders are properly secured and in an upright position, using a method which ensures cylinders will remain restrained under any condition 	B	3	M	Site Manager, Trade / contractor Site Supervisor.

	Fumes and gases	B	3	M	<ul style="list-style-type: none"> Ensure cylinder valves are capped and closed when transporting Ensure cylinders are properly secured and in an upright position, using a method which ensures cylinders will remain restrained under any condition 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
	Refrigerant burns	B	3	M	<ul style="list-style-type: none"> Do not let skin come into contact with refrigerants Only workers trained in the use of refrigerant gasses are to use them Wear gloves, safety glasses, safety boots and long sleeve shirt/long pants 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
	Cylinder rupture or failure	D	3	H	<ul style="list-style-type: none"> Check cylinders for damage and rust. Check valves and connections for any visible damage, If found, notify supervisor and return cylinder to supplier If found, notify supervisor and return cylinder to supplier. Ensure cylinders are secured or placed on a secured portable trolley Cylinders must be vertical and protected from impact Cylinders must be secured to prevent movement under all transport conditions Cylinder must be certified and clearly labelled. 	B	3	M	Site Manager, Trade / contractor Site Supervisor.
4. Storing nitrogen	Fumes and gases	B	3	M	<ul style="list-style-type: none"> Ensure cylinder valves are capped and closed when storing Ensure cylinders are stored in a well ventilated storage facility and in a shaded location Ensure cylinders are properly secured and in an upright position, using a method which ensures cylinders will remain restrained under any condition 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
	Cylinder rupture or failure	D	3	H	<ul style="list-style-type: none"> Check cylinders for damage and rust. If found, notify supervisor and return cylinder to supplier. Ensure cylinders are secured or placed on a secured portable trolley Cylinders must be vertical and protected from impact Cylinder must be certified and clearly labelled. 	B	3	M	Site Manager, Trade / contractor Site Supervisor.

	Mixing refrigerants	B	3	M	<ul style="list-style-type: none"> • Ensure cylinders are stored in a well ventilated storage facility and in a shaded location • Check valved and connects for any visible damage before storing • Check SDS for safe storage practices 	B	2	L	Site Manager, Trade / contractor Site Supervisor.
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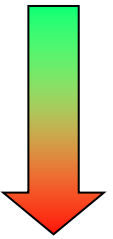
16. Monitoring and review of control effectiveness					
Observation log	01	02	03	04	05
Initial					
Date					

17. Risk Analysis Tables

RISK MATRIX					
CONSEQUENCE RATING	PROBABILITY RATING				
	RARE	UNLIKELY	OCCASIONAL	LIKELY	ALMOST CERTAIN
	A	B	C	D	E
5	High	High	Extreme	Extreme	Extreme
4	Moderate	Moderate	High	Extreme	Extreme
3	Low	Moderate	Moderate	High	Extreme
2	Low	Low	Moderate	Moderate	High
1	Low	Low	Low	Moderate	High

Low	Tolerable, monitor and manage
Moderate	Requires monitoring and strict control measures
High	Do not begin works, seek advice from Department Manager before proceeding, implement additional controls
Extreme	Do not undertake task. Seek advice from Department Manager before proceeding. General Manager will assess this risk after discussions with department manager.

CONSEQUENCE RATING	CONSEQUENCE DESCRIPTION
	Permanent Disability/ Fatality Severe Service Failure/ Effect on Customer Irreversible Damage to Environment
4	Requires Ongoing Medical Treatment Serious Disruption to Job/ Property Damage Serious Environmental Impact
3	Hospitalisation Moderate Disruption to Job/ Property Damage Moderate Environmental Impact
2	Medical Treatment Brief/ Minor Disruption to Job Nil or Minor Property Damage Minor Environmental Impact
1	First Aid Treatment Only Insignificant Effect on Job No Environmental Impact

<p>Most Effective</p>  <p>Least Effective</p>	ELIMINATION – Remove the hazard completely (e.g. eliminate the task, eliminate noise or vibration)
	SUBSTITUTION – Replace with something less hazardous (e.g. use less hazardous chemical)
	ISOLATION - As much as possible, separate the hazard or hazardous work practice from people by distance or using barriers
	ENGINEERING – Modify or redesign equipment and machinery (e.g. raise bench, use guards or RCD)
	ADMINISTRATIVE – Use signage, procedures, inspections, manuals or gain further training.
	PPE – Use personal protective equipment and clothing (e.g. gloves, hard hat, hi-vis vest etc.)

18. Worker Acknowledgement

All Air Comfort Services Pty Ltd employees including subcontractor are to read the ACS Site Specific Safety Plan and sign as their personal acknowledgment of reading and understanding the safety information contained within, prior to commencement on site. The Site Supervisor will check that all employees/subcontractors have a current general safety induction and have attended the builder's site specific induction prior to commencement on site.

BY SIGNING THIS YOU ACKNOWLEDGE THAT:

- The SWMS has been explained to you
- Its contents are clearly understood
- Your qualifications relating to this activity are current and have read your responsibilities below
- You have had the opportunity to have input to the preparation of the SWMS
- You will comply with the SWMS otherwise, you work will stop immediately

OHS responsibilities - all workers	OHS responsibilities - Site Manager / Supervisor
<ul style="list-style-type: none"> • Must have a current General Construction induction card (White Card) • Relevant recognised plant operators ticket if operating machinery and high risk work licence • Completed a site specific induction • Must have the necessary knowledge and experience to complete the works in focus • Must attend tool box talks and other consultation arrangements • Adhere to controls implemented within this SWMS 	<ul style="list-style-type: none"> • Must have a current General Construction induction card (White Card) • Completed a site specific induction • Must have the necessary knowledge and experience to complete the works in focus • Must attend tool box talks and other consultation arrangements • Must monitor and review the implementation of controls (by site and task inspection)

Full Name	Signature	Date	Company	License Type	License Number	White Card Number