

Agenda







- Responsibility
- Health and safety control
- Regulations
- Performance standard (location certification)
- Specific provisions, with examples
- Non-compliant site plan
- Plans for stationary tanks
- Questions

Who's Responsible?







- PCBU with management or control
 - Responsible for having a site plan available for inspection
- Compliance certifier
 - Responsible for verifying a plan
- > These roles are distinct and should not be confused

A Health and Safety Control







- Prescribed requirement of the HS Regulations
- > There to:
 - Protect the health and safety of workers on site
 - Protect the health and safety of other people who may come on site
 - ❖ Assist emergency services in an incident
 - Assist compliance certifiers with site assessments
- A site plan is important, it carries substance (i.e. it is not required for frivolous reasons) and should be treated accordingly

Quality of Site Plans







··· and need not necessarily be prepared by a person with qualifications in the preparation of plans [r. 3.3]

- CAD drawings are not prescribed
- > The site plan to contain elements required by the regulations
 - Accurate and drawn to scale
 - Identify actual distances and other relevant dimensions
- Certifiers must:
 - Be dispassionate and objective
 - Verify requirements with regulations and performance standard

Legislative Requirements







The HS Regulations require a site plan to meet the following requirements:

- \triangleright Regulation <u>3(3)</u>
 - Be accurate
 - All relevant elements are drawn to scale
- Regulations 9.22/10.26/12.8/12.34/13.34
 - Show legal boundaries of property
 - Include site details
 - Identify all Hazardous Substance Locations (HSL)
 - Identify all Hazardous Areas / Controlled Zones
 - Distances from HSL to public/protected places

Performance Standard







- In addition to the regulatory requirements, when certifying a site, the compliance certifier must verify the following are captured on site plans:
 - North point accurately orientated
 - Legend or key that defines colours, shaded areas, symbols, abbreviations etc (where relevant)
 - Elevation drawings (where relevant)
- More than one site plan may be provided (e.g. a separate plan for the legal boundary)

Summary

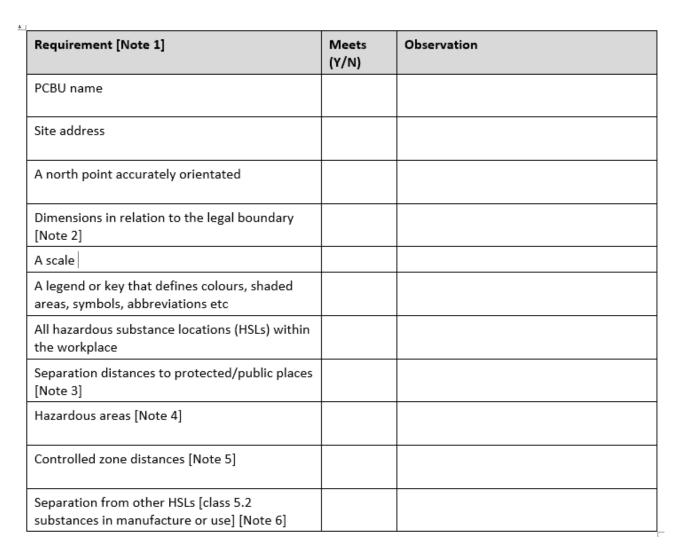






- > The regulations and performance standard set the requirement for site plans, what must be included and what must be verified by the compliance certifier
- The requirements for content and verification do not change on the basis of the size or complexity of the site

Site Plan Assessment









Legal Boundary







- Legal boundary of the site with the HSL to be shown on site plan
- > The physical position of the HSL in relation to the legal boundary to be shown
- For particularly large sites (e.g. farms, national parks), it may not be necessary to show the legal boundary of the entire site. That part of the boundary closest to the HSL may be sufficient.
- Legal boundary of the entire site is preferred (aerial pictures help)

Scale







- > A scale must be included accurate and drawn to scale [r. 3(3)]
- The scale must be meaningful enabling a person inspecting the plan to identify actual distances and other relevant dimensions
- Without a scale, a site plan would not be considered compliant, even if it included key dimensions or measured distances of key features

All Hazardous Substance Locations







- All HSLs must be included on the site plan
- This includes HSLs that the compliance certifier may not be assessing and certifying
- > If a HSL arises from a stationary tank, then the stationary tank must be shown on the plan
- ➤ However, the requirements of r. 17.80(1) do not need to be verified by the certifier, other than for:
 - LPG, propane, butane and isobutane,

where r. 17.80 applies by virtue of 10.34(1)(k)(iii), hence the requirements of r. 17.80(1)(a) to (h) must be shown on the site plan

Separation Distances







- The extent of the prescribed separation must be shown to:
 - Protected places
 - Public places
- This can be achieved by showing a "perimeter" or "radius line" around the HSL
- Without such a line, a site plan would not be considered compliant, even if it stated the actual separation distances

Hazardous Areas







- The extent of the hazardous area must be shown on a site plan, for example as cross-hatched (zone 1) or hatched areas (zone 2)
- > It is not sufficient to only state the actual distances or dimensions of the hazardous area
- The hazardous area needs only be shown on a horizontal plane (i.e. 2-dimensionally)
- Three-dimensional information, often seen as pictures from AS/NZS 60079 is informative and should not be discouraged
- ➤ However, 3-dimensionality is not a verifiable requirement of the performance standard

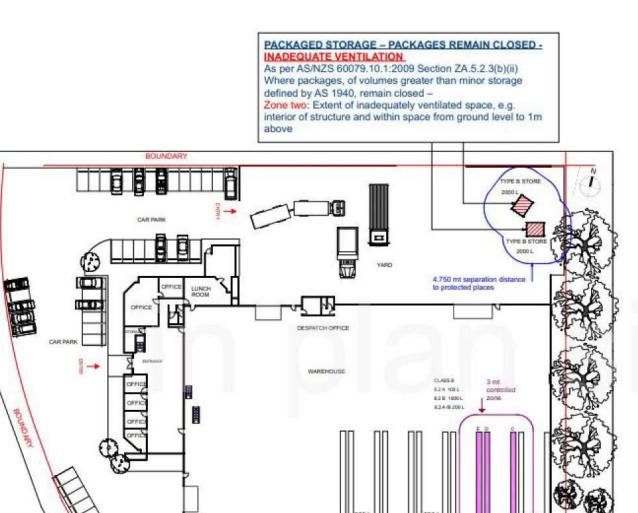
Controlled Zones



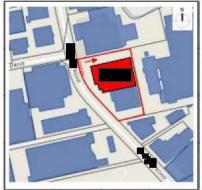




- A requirement of class 1 (r. 9.22), classes 3.2 and 4 (r. 10.26) and class 5 (r. 12.8 and 12.34) substances
- The physical position and extent of the controlled zone must be shown
- This can be achieved by showing a "perimeter" or "radius line" around the HSL
- Without such a line, a site plan would not be considered compliant, even if it stated the actual extent of the zone



SOUTH OFFICE



LOCATION PLAN

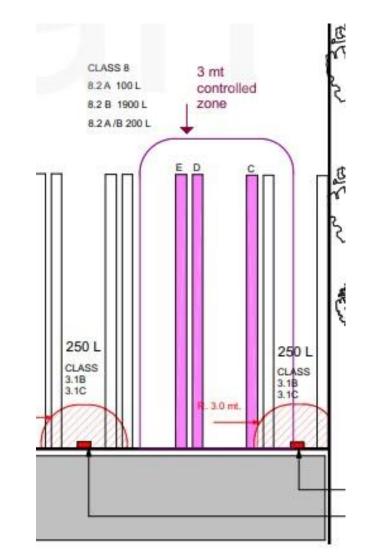
- AS1940 STORAGE CABINET

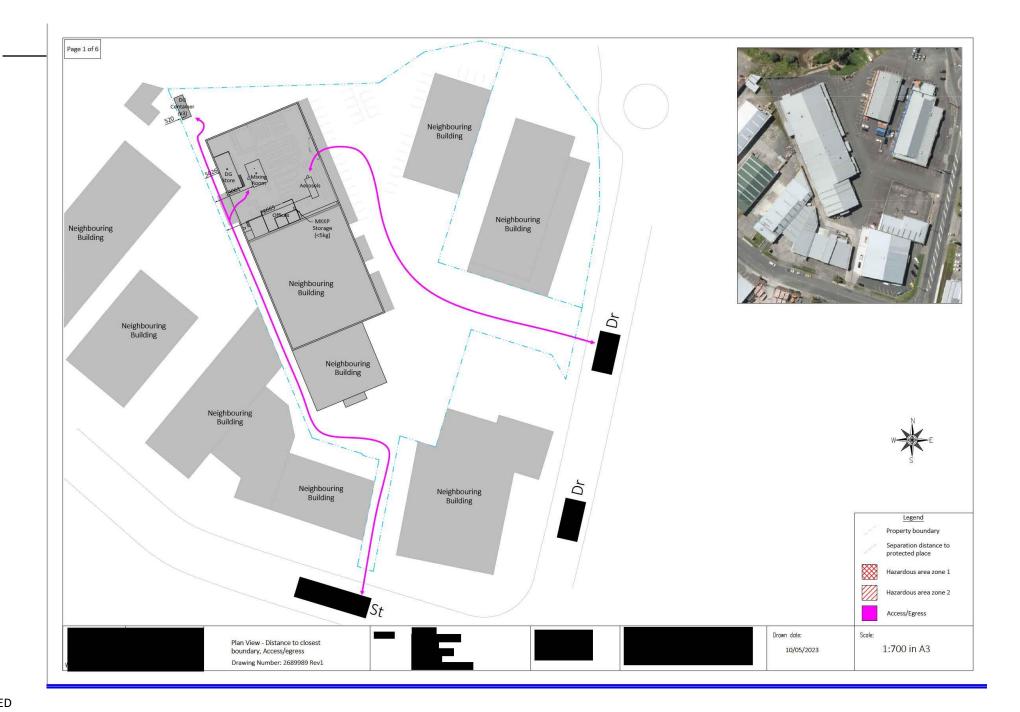
As per AS/NZS60079.10.1: 2009 Section ZA.5.2.3 (C) For storage cabinets as defined by AS1940, irrespective of the ventilation of the storage area

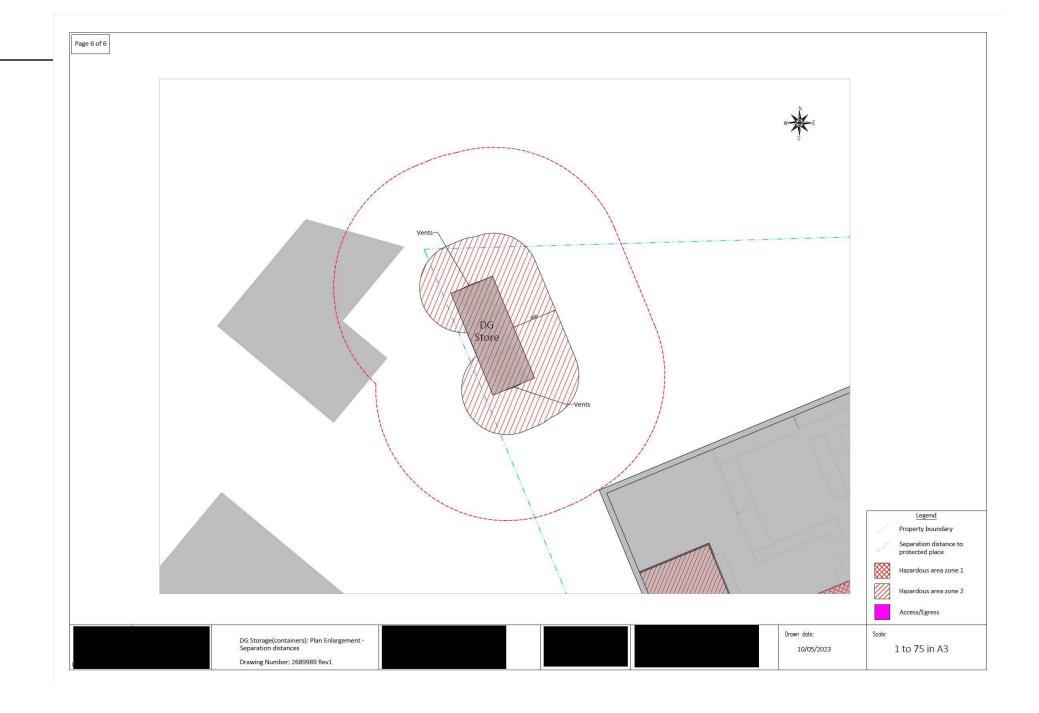
Zone One: - Full interior of the cabinet

Zone Two: - The exterior of the cabinet together with any vent provided on the cabinet, from ground level to one meter above and three meters laterally.

SITE PLAN SCALE 1:400 @A3











Site Boundary

Boundary, showing location and Naighbours

SITE PLAN

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Area 1 – Storage type D – Chemical Storage – 20,000L Flammable Liquids Category 2,3 & 4 (3.1B-D)

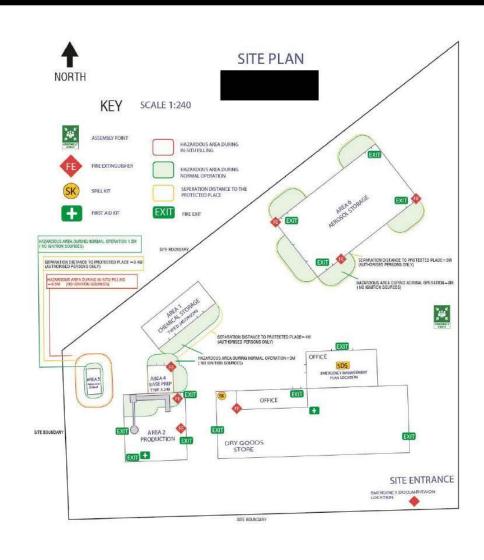
Area 4 – workroom type 3 – Base preparation – 2,500L Flammable Liquids Category 2 (3.1B)

Area 5 - Propellant storage - 2,220Kgs LPG in 222KG in-situ fill Cylinders - Flammable Gas Category 1A (2.1.1A)

Area 6 – Aerosol storage – 90,000L Aerosol Category 1, 2 & 3 (2.1.2A)

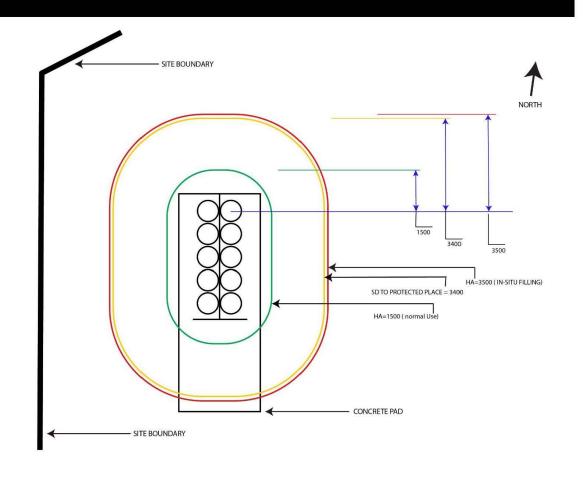
SITE PLAN

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SITE PLAN

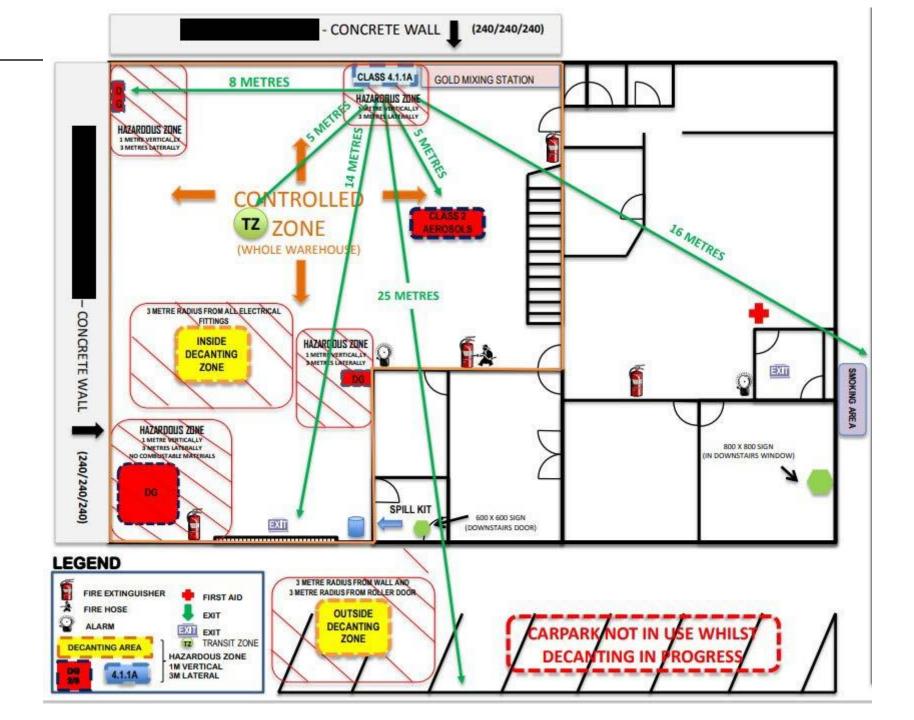


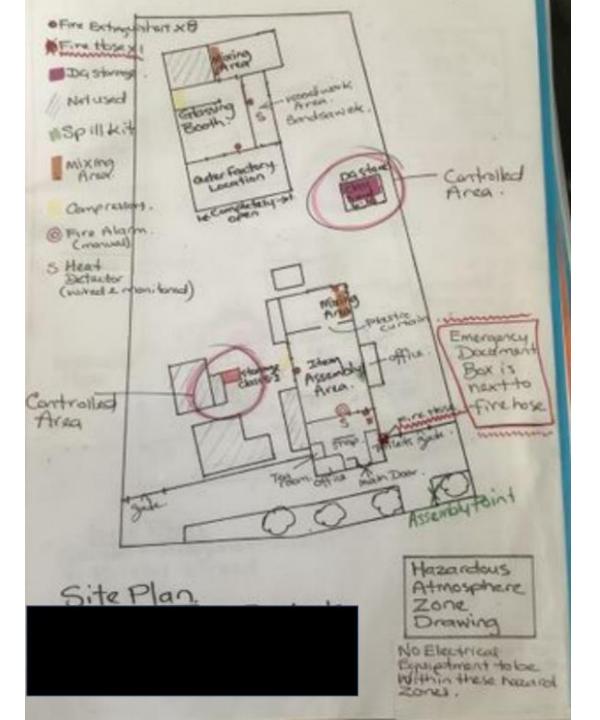
LPG CYLINDER STORAGE DETAIL – 10 X 222KG CYLINDERS 2,220KG TOTAL STORAGE

SCALE 1:100

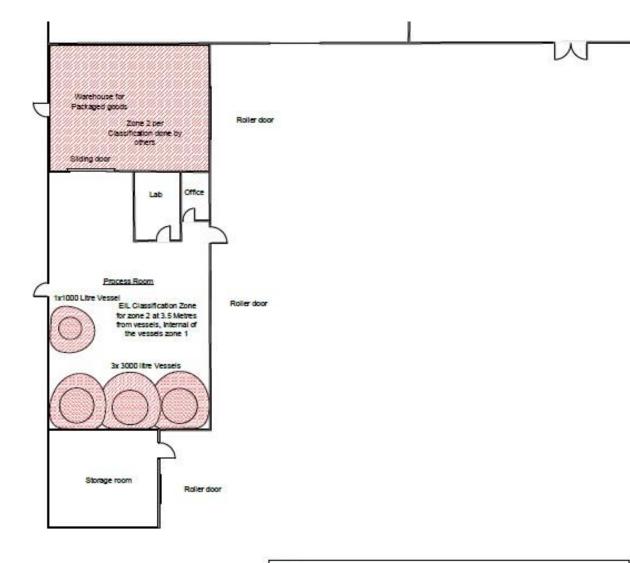
SITE PLAN

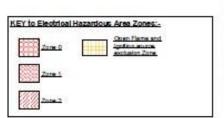
VERSION 5.1 SEPT 2021 SUPERSEDES 5.0 SEPT 2021











Notes:

- Correct Signage must be in place for Filing locations and All Storage Tank Area as per HSNO regulations. "No Smoking or Naked Flames with in 8 meters " or similar.
- No Electrical equipment to be altered or installed in any area zoned Hazzardous with out company approval.
- 3. Classification based on the principles of AS/NZS 60079.10.1;2009 Explosive atmospheres -
- Classification of areas Explosive gas atmospheres
- 4. This drawing forms part of the facility Dossier.
- 5.This drawing is not to scale/Schematic drawing only-please refer to attached report for stated distances For actual distances as per standard AS/NZs 90079.10.1
- Distances contained within the report are, Zone 2.3.5 metres horizontally from the vessel, 1.5 metres vertically above the vessel
- 7. Zone 1 is internal the vessel.





600 litre above ground petrol tank

Separation distance to Protected Places = 2 metres

Hazardous area around the petrol tank = 4 metres.

Table ZA.5.2.1.2				
Capacity of tank kL	Lateral distance m			
2				
7	5			
	6			
10	7			
25	8			
50				
200	12			
≥500	15			

		AB	OVE GRO	UND PE	TROL / DIE	SEL TANKS	
		PE	TROL			j	
Tank Volume water capacity			600 Litres				
HILU				2000		E006	
LILU				0		E006	
Table 30(4)	Petrol						
lt .	HILU	•	LILU	-			
600	2000		0		0	0	
1,000	2000		0		2000	0	

HSNO site plan for LPG

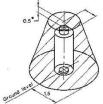


Hazardous zone is an area where there may be flammable vapours present and no sources of ignition are permitted within this area. Hazardous area = 1.5 metres

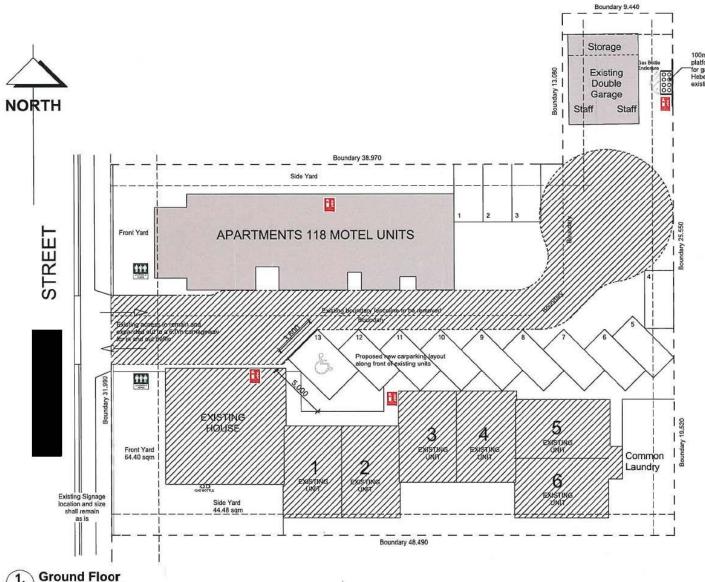
Separation distance required from Protected Places = 2.7 metres – this is very comfortably achieved.



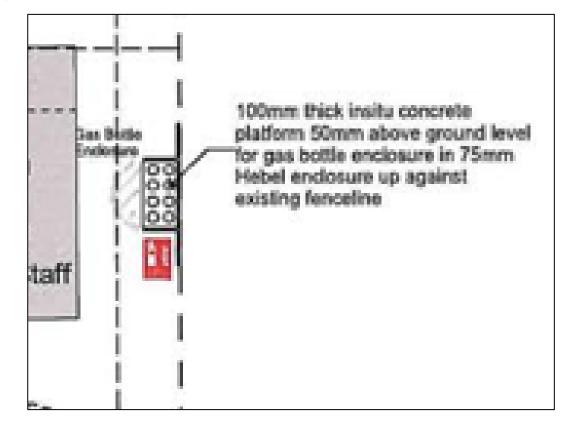




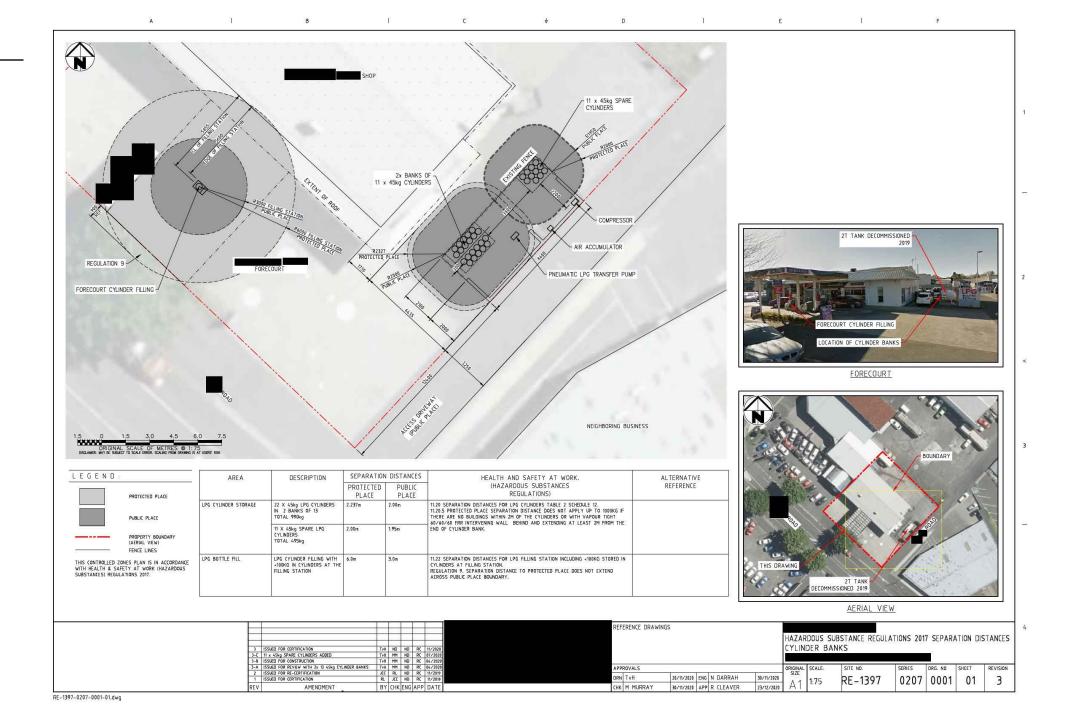
		LPG BOTTLES	
kg LPG Bottle	Quantity		
9			
15			
18			Either ente
20			
27			
45			
190			
6 Pallet Truck			
8 Pallet Truck			
Other Quantity	1,440		
Aggregate quantity of LPG store	ed (kg)		1,440
Protected Place	2627	mm	(Health and
Public Place	2000	mm	
HAZ Zone 1	0	mm	(AS/NZS 6
HAZ Zone 2	1500	mm	
HILU	2627		(HSNO Tra
LILU	2000		

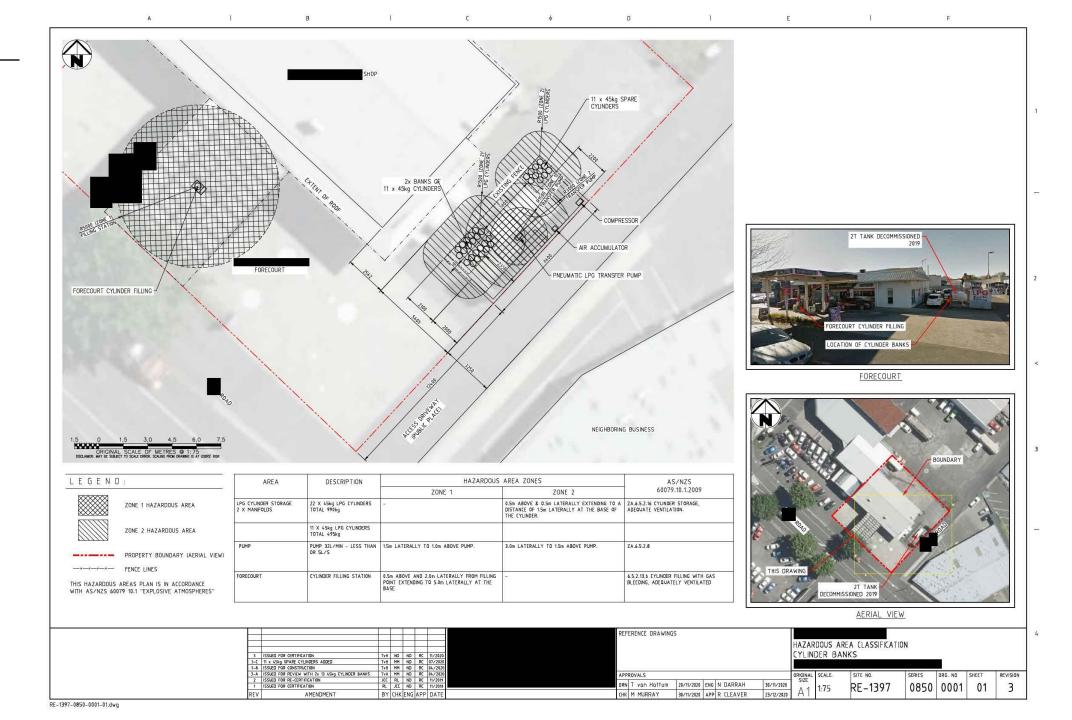


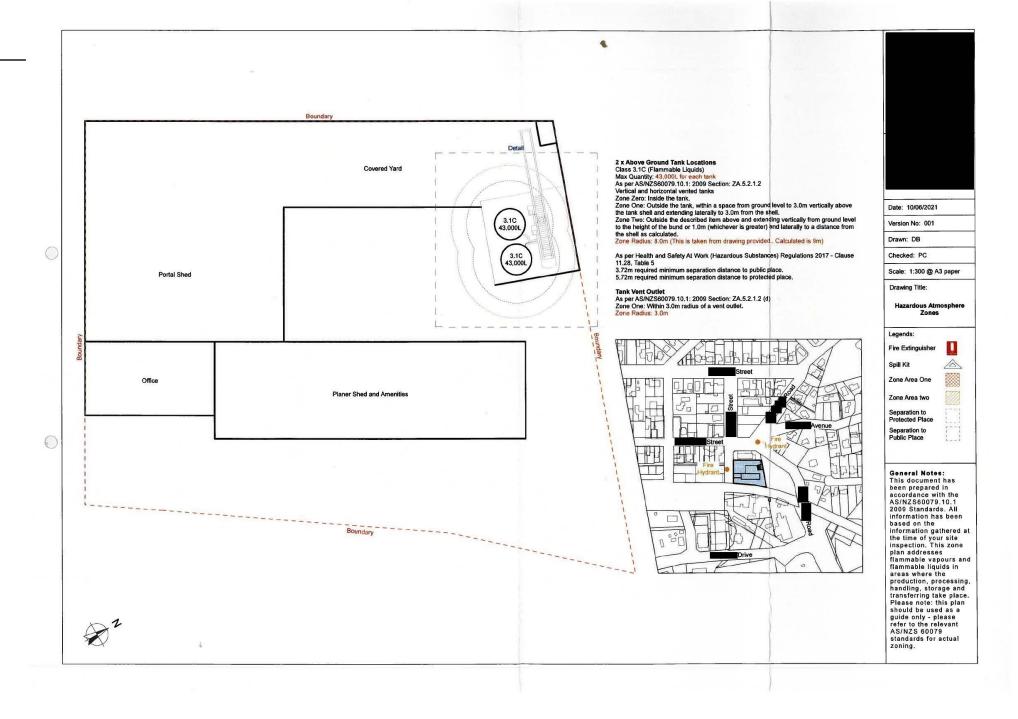
100mm thick insitu concrete platform 50mm above ground level for gas bottle enclosure in 75mm Hebel enclosure up against existing fenceline



Scale 1:200







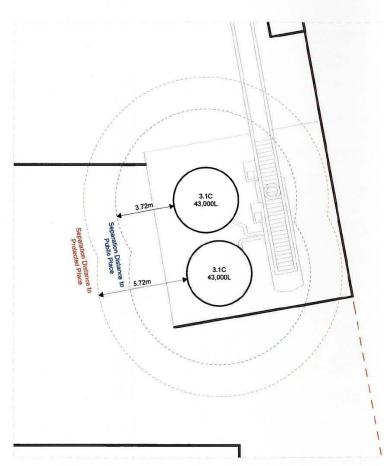


Clause 11.28, Table 5

3.72m required minimum separation distance to public place. 5.72m required minimum separation distance to protected place.

Tank Vent Outlet

As per AS/NZS60079.10.1: 2009 Section: ZA.5.2.1.2 (d) Zone One: Within 3.0m radius of a vent outlet.





Date: 10/06/2021

Version No: 001

Drawn: DB

Checked: PC

Scale: 1:150 @ A3 paper

Drawing Title:

Hazardous Atmosphere Zones

Legends:

Fire Extinguisher

Spill Kit

Zone Area One

Zone Area two

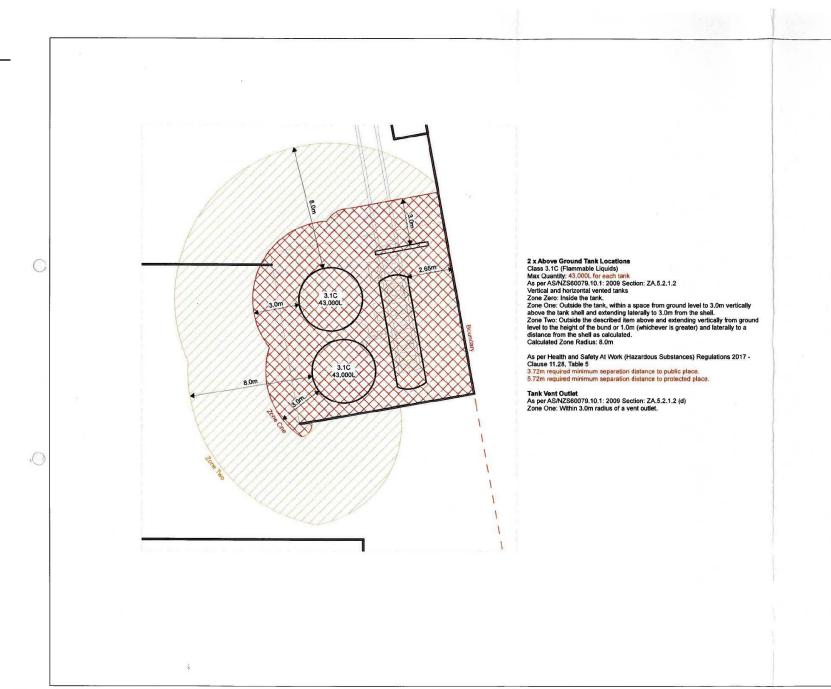
Separation to Protected Place

Separation to Public Place

zoning.

General Notes: This document has been prepared in accordance with the AS/NZS60079.10.1 2009 Standards, All information has been based on the information gathered at the time of your site inspection. This zone plan addresses flammable vapours and flammable liquids in areas where the production, processing, handling, storage and transferring take place. Please note: this plan should be used as a guide only - please refer to the relevant AS/NZS 60079 standards for actual







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Zone Area One

Zone Area two

Separation to Protected Place

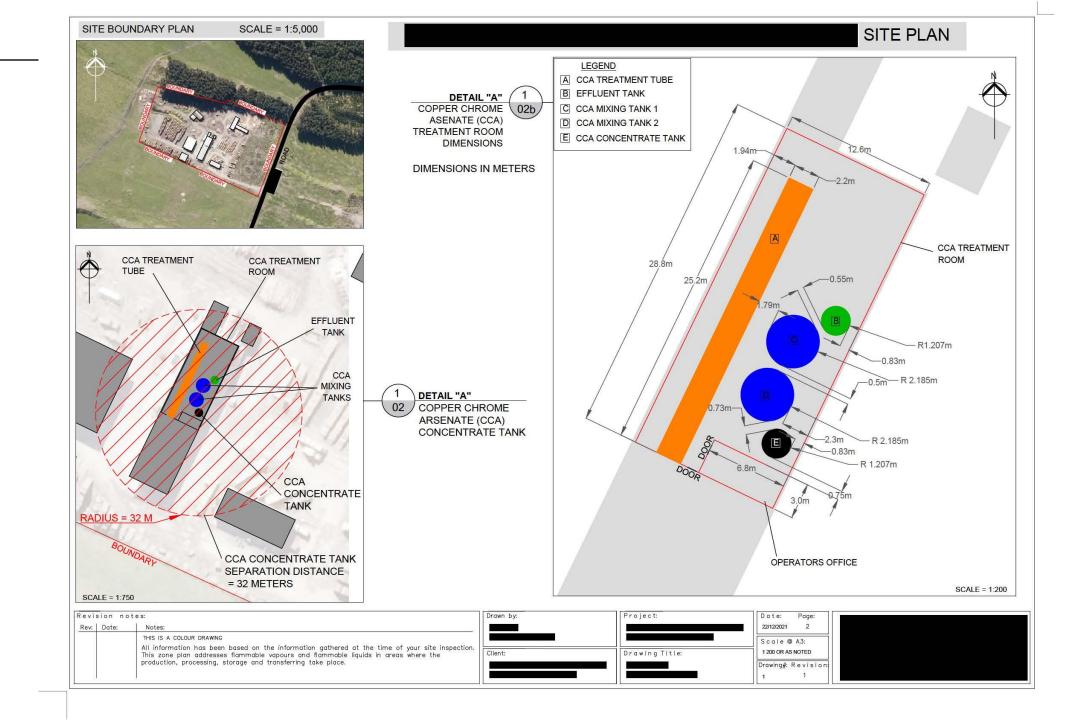
General Notes:

Separation to Public Place

This document has been prepared in accordance with the AS/NZ580079.10.1 2009 Standards. All information has been based on the information gathered at the time of your site inspection. This zone plan addresses flammable vapours and flammable liquids in areas where the production, processing, handling, storage and transferring take place.

should be used as a guide only - please refer to the relevant AS/NZS 60079 standards for actual zoning.

2



Substances Below HSL Thresholds







A site plan does not need to show the physical position of hazardous substances that are below the quantity that requires a hazardous substance location to be established

Non-compliant site plans







- Compliance certifier should consider a conditional location certificate in the first instance
- If the PCBU does not address the non-compliances with the site plan, the conditional certificate will expire
- There is no regulatory requirement to notify the expiry of a conditional certificate
- Guidance on conditional location certificates and the notification of refusal to issue a compliance certificate is pending

Requirements for SCSs [r. 17.80]







The HS Regulations require a plan where there is a stationary container system

The plan to describe the physical position of the stationary container system in relation to:

- Legal boundary (if separation distances are within 5 m of that boundary)
- Every building on site
- Every SCS present on site
- Every storage area for packaged hazardous substances
- Every storage area for gas cylinders

SCSs [cont.]







- Every secondary containment systems for every stationary tank that is part of the system
- All fire fighting equipment and facilities, including firewalls and vapour barriers
- Every transfer point for a class 2.1.1 or 3.1 substance

To issue a stationary container system compliance certificate, a certifier must verify that records specified in r. 17.80 (which includes a plan) are available (r. 17.91(2)(k))

Getting you home healthy and safe. That's what we're working for.

