

SUMMARY OF CHANGES TO HAZARDOUS SUBSTANCES QUANTITY LIMITS IN THE SELWYN DISTRICT PLAN

Reasons for any new and revised limits resulting from the proposed adoption of the HSNO classification system are explained beneath each section where a change has been made from the Plan as it stands prior to the variation. The new classifications and revised limits have been selected with consideration to the character of the zone environments, to relevant HSNO controls, to the Ministry for the Environment's Hazardous Facilities Screening Procedure (HFSP), and to consistency with the existing Plan and the Regional Council's Draft Natural Resources Regional Plan. The quantity limits of the existing Plan have been retained as far as possible, as the Council has adopted them previously after consideration of public submissions.

TOWNSHIPS VOLUME

HAZARDOUS SUBSTANCE TYPE	HAZARDOUS SUBSTANCE CATEGORY		QUANTITY LIMITS			
	EXISTING PLAN CLASS	NEW (HSNO) CLASS	(NEW AND REVISED LIMITS SHOWN IN BOLD ITALICS)			
			LIVING ZONES		BUSINESS 1 ZONE	BUSINESS 2 AND 3 ZONES
A	B					
CLASS 1 EXPLOSIVES	1a, 1b ("Explosives")	1.1	0 kg/litres	-	2.5 kg/litres	50 kg/litres
		1.2	15 kg/litres	-	15 kg/litres	50 kg/litres
		1.3	15 kg/litres	-	75 kg/litres	100 kg/litres
		1.5	15 kg/litres	-	75 kg/litres	200 kg/litres
Reason for new Explosives limits The increased limits for explosive materials that have moderate or low risk are derived with consideration to the HSNO controls and Hazardous Substances Emergency Management Regulations limits. Lower limits are recommended for the Business 1 and Living Zones, where there is greater population density and greater relative hazard and risk than the Business 2 zone.						
CLASS 2 FLAMMABLE GASES	2.1a, 2.1b, 2.2, 2.3 ("Gases")	LPG	300 kg	-	2,000 kg	8,000 kg
		2.1.1A	100 kg	250 kg	250 kg	250 kg
		2.1.2A - Flammable Aerosols	100 kg	250kg	250 kg	250 kg
CLASS 3 FLAMMABLE LIQUIDS	3a, 3b, 3c ("Flammable Liquids")	3.1.A, 3.1B Aboveground storage ¹ Underground storage	50 litres 0 litres	- -	3,000 litres 5,000 litres	5,000 litres 50,000 litres
		3.1C	1,000 litres		3,000 litres	5,000 litres
		3.1D Aboveground storage ⁴ Underground storage	1,000 litres 1,000 litres	-	5,000 litres 30,000 litres	30,000 litres 30,000 litres
Reason for revised Flammable Liquids limits The New 3.1C subclass corresponds to current Plan subclass 3b. The revised 1000 litre limit for 3.1C in Living zones will permit storage of up to 1000 litres of 'home blend' heating oil in normal domestic installations, without resource consent.						

¹Not applicable to fuel tanks connected to motors of road vehicles, farm machinery or locomotives.

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CLASS 3 Liquid desensitised explosives	3a, 3b, 3c ("Flammable Liquids")	3.2A, 3.2B, 3.2C	0 litres	-	30 litres	100 litres
Reason for new Liquid Desensitised Explosives limits Liquid desensitised explosives are a separate HSNO subclass in Class 3 flammable liquids, with an additional explosion hazard. The existing Plan's class 3 limits were originally intended primarily for flammable hydrocarbon liquids in widespread use, e.g. petrol, diesel, solvents. As liquid desensitised explosives have a greater intrinsic hazard, more stringent limits are considered appropriate especially in Living zones where there is no normal cause for such materials being present. The 0kg limit for liquid desensitised explosives is also consistent with the proposed limit for subclass 4.1 solid desensitised explosives.						
CLASS 4 FLAMMABLE SOLIDS	4.1, 4.2, 4.3 ("Flammable Solids")	4.1.1A, 4.1.1B	1 kg	-	25 kg	50 kg
Readily combustible solids and solids that may cause fire through friction						
Self-reactive substances		4.1.2A, 4.1.2B, 4.1.2C, 4.1.2D, 4.1.2E, 4.1.2F, 4.1.2G	0 kg	-	5 kg	50 kg
Solid desensitised explosives		4.1.3A, 4.1.3B, 4.1.3C	0 kg	-	5 kg	50 kg
Spontaneously combustible substances		4.2A <i>Spontaneously combustible and pyrophoric substances</i>	1 kg	-	25 kg	50 kg
		4.2B <i>Spontaneously combustible and self-heating substances</i>	1 kg	-	25 kg	50 kg
		4.2C <i>Spontaneously combustible and self-heating substances</i>	1 kg	-	25 kg	500 kg
Solids that emit flammable gas when in contact with water	4.3A, 4.3B	1 kg	-	25 kg	50 kg	
	4.3C	1 kg	-	25 kg	500 kg	
Reasons for new and revised Flammable Solids limits The new subclassification of Class 4 Hazardous Substances reflects the HSNO system. A revision of the existing generic Class 4 limits, to limit self-reactive substances and solid desensitised explosives to 0kg is considered appropriate in Living zones where there is no normal cause for such materials being present. The 0kg limit for solid desensitised explosives is also consistent with the proposed Living Zone limit for subclass 3.2 liquid desensitised explosives. The revised 500kg limits in the Business 2 zone for the least reactive materials in the spontaneously combustible and water-reactive subclasses replaces the existing limits of 50kg, which are considered to be unnecessarily restrictive for industries where such materials may commonly be present.						

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CLASS 5 OXIDISING SUBSTANCES	5.1, 5.2 ("Oxidising Substances")	5.1.1A	50 kg/litres	-	1,000 kg/litres	2,000 kg/litres
		5.1.1B, 5.1.1C	1 kg/litres	-	25 kg/litres	200 kg/litres
Liquids or solids						
Gases		5.1.2A	10 kg	250 kg	250 kg	1,000 kg
Reason for new oxidising substances - gases limits Subclass 5.1.2A replaces existing subclass 2.3. The existing subclass 2.3 limits have been retained with the exception that the existing limit for the Business 1 zone is reduced from 1000kg to 250kg, to be consistent with the controls for other Class 2 gases (other than LPG).						
Organic peroxides	5.1, 5.2 ("Oxidising Substances")	5.2A, 5.2B	1 kg/litres	-	25 kg/litres	200 kg/litres
		5.2C, 5.2D	1 kg/litres	-	25 kg/litres	500 kg/litres
		5.2E, 5.2F, 5.2G	1 kg/litres	-	25 kg/litres	2,000 kg/litres
Reasons for new oxidising substances – organic peroxides limits The current limit for subclass 5.2 Organic Peroxides in the Business 2 zone is 200kg, regardless of relative hazard of the different types of peroxide. This is considered unnecessarily restrictive. The proposed limits allow 500kg/litres for moderate hazard substances and 2000 kg/litres for low hazard substances in this subclass. The new increased limits are still conservative when considered against the recommendations of MfE's Hazardous Facilities Screening Procedure for these subclasses.						
CLASS 6 TOXIC SUBSTANCES	7 ("Toxic and Infectious Substances")	6.1A, 6.1B, 6.1C, 6.1D <u>Including the following subgroups:</u>				
		<u>Agrichemicals and Pesticides</u>	10 kg/litres	50 kg/litres	500 kg/litres	1,000 kg/litres
		<u>HSNO 'Controlled Substances'</u>	0 kg (0m³ gas)	-	0 kg (0m³ gas)	100kg (5m³ gas)
		<u>Toxic gases (other than gases that are HSNO 'Controlled Substances')</u>	0 kg/m³	-	1,000 kg/m³	1,000 kg/m³
		<u>Timber treatment chemicals</u>	20 litres	-	200 litres	200 litres
		<u>Chlorinated hydrocarbons</u>	20 litres	-	1,000 litres	1,000 litres
		<u>Any other toxic substances (that are not otherwise Class 3 flammable liquids)</u>	1 kg/litres	-	200 kg/litres	2,000 kg/litres
		Reasons for new toxic substances limits Class 6 covers a very wide range of substances in everyday use that also fall into other subclasses, for example Class 3 flammable liquids and Class 9 Ecotoxics. For clarity of application in the rural/residential context of Selwyn District, it is reasonable to identify toxic substances in generic subgroups (Agrichemicals, HSNO 'controlled substances'...). The new limits for each subgroup have been selected with due consideration to maintaining consistency with the existing Class 7 limits in the Plan, with the NRRP, and HSNO while also taking account of the relative sensitivity and risk in the different zones. The 1000 kg/litres Business 2 limit for Agrichemicals is consistent with the Rural zone limit for toxic substances in the existing Plan, and with the proposed Class 9.1A limit, recognizing the widespread bulk storage and use of Agrichemicals in the District while also recognising the need to protect water resources. The lower limits for Business 1 and Living zones are consistent with the greater level of hazard and risk to the denser populations in those zones.				

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CLASS 7 RADIOACTIVE MATERIALS	8 ("Radioactive Materials")	N/A	10 ¹³ bequerel per kilogram		10 ¹³ bequerel per kilogram	
CLASS 8 CORROSIVE SUBSTANCES	6	8.2A, 8.2B, 8.2C	10 kg/litres	-	1,000 kg/litres	2,000 kg/litres
CLASS 9 ECOTOXIC SUBSTANCES	9 ("Miscellaneous substances")	9.1A <i>Substances that are very ecotoxic in the aquatic environment</i> 9.1B <i>Substances that are ecotoxic in the aquatic environment</i> 9.1C <i>Substances that are harmful in the aquatic environment</i> 9.1D <i>Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action</i>	25 <i>litres/kg</i> 250 <i>litres/kg</i> 250 <i>litres/kg</i> 250 <i>litres/kg</i>	- - - -	500 litres/kg 500 litres/kg 500 litres/kg 1,000 litres/kg	1000 litres/kg 5,000 litres/kg 5,000 litres/kg 50,000 litres/kg
Reasons for new ecotoxic substances limits Whereas existing Class 9 Miscellaneous Substances specifically includes only timber treatment chemicals and chlorinated solvents, HSNO Class 9 introduces a classification system for a very wide range of substances in everyday use (mainly liquids) that also fall into other subclasses. The limits for each Class 9 subclass have been selected with due consideration to maintaining consistency with the other proposed limits in the Plan, with the NRRP, and HSNO, while also taking account of the relative sensitivity and risk in the different zones. The 1000 kg Business 2 limit is consistent with the limit in the existing Plan for toxic substances that are agrichemicals, and recognises the widespread bulk storage and use of Agrichemicals in the District. The lower limits for Business 1 and Living zones are consistent with the greater level of hazard and risk to the denser populations in those zones.						

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RURAL VOLUME

HAZARDOUS SUBSTANCE TYPE	HAZARDOUS SUBSTANCE CATEGORY		RURAL ZONE QUANTITY LIMITS (NEW AND REVISED LIMITS SHOWN IN BOLD ITALICS)
	EXISTING PLAN CLASS	NEW (HSNO) CLASS	
EXPLOSIVES CLASS 1	1a, 1b ("Explosives")	1.1	2.5 kg/litres
		1.2	15 kg/litres
		1.3	75 kg/litres
		1.5	75 kg/litres
Reason for new Explosives limits The new limits for explosive materials that have moderate or low risk are derived with consideration to the HSNO controls and Hazardous Substances Emergency Management Regulations limits. The limits are consistent with the proposed limits for the Business 1 zone but more stringent than the proposed limit for the Business 4 zone but less stringent than the living zone limit, considering the relatively low density of residential development in the Rural zone.			
FLAMMABLE GASES CLASS 2	2.1a, 2.1b, 2.2, 2.3 ("Gases")	LPG	600 kg
		2.1.1A	100 kg
		2.1.2A - Flammable Aerosols	100 kg
FLAMMABLE LIQUIDS CLASS 3 Flammable Liquids	3a, 3b, 3c ("Flammable Liquids")	3.1.A, 3.1B Aboveground storage ² Underground storage	3,000 litres 3,000 litres
		3.1C	1,000litres
		3.1D Aboveground storage ⁴ Underground storage	5,000 litres 5,000 litres
Reason for revised Flammable Liquids limits The New 3.1C subclass corresponds to current Plan subclass 3b. The revised 1000 litre limit for 3.1C will permit storage of up to 1000 litres of 'home blend' heating oil in normal domestic installations, without resource consent.			
CLASS 3 Liquid desensitised explosives	3a, 3b, 3c ("Flammable Liquids")	3.2A, 3.2B, 3.2C	30 litres
Reason for new Liquid Desensitised Explosives limits Liquid desensitised explosives are a distinct group of Class 3 flammable liquids with an additional explosion hazard. The existing Plan's class 3 limits were originally intended primarily for flammable hydrocarbon liquids in widespread use, e.g. petrol, diesel, solvents. As liquid de-sensitised explosives have a greater intrinsic hazard, a more stringent limit of 30 litres is considered appropriate. The limit is consistent with the proposed limit for the Business 1 zone but more stringent than the proposed limit for the Business 4 zone but less stringent than the living zone limit, considering the relatively low density of residential development in the Rural zone.			

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CLASS 4 FLAMMABLE SOLIDS Readily combustible solids and solids that may cause fire through friction	4.1, 4.2, 4.3 ("Flammable Solids")	4.1.1A, 4.1.1B	1kg
Self-reactive substances	4.1, 4.2, 4.3 ("Flammable Solids")	4.1.2A, 4.1.2B, 4.1.2C, 4.1.2D, 4.1.2E, 4.1.2F, 4.1.2G	1kg
Solid desensitised explosives		4.1.3A, 4.1.3B, 4.1.3C	5kg
Spontaneously combustible substances		4.2A <i>Spontaneously combustible and pyrophoric substances</i>	25kg
		4.2B <i>Spontaneously combustible and self- heating substances</i>	25kg
		4.2C <i>Spontaneously combustible and self- heating substances</i>	25kg
Solids that emit flammable gas when in contact with water	4.3A, 4.3B	1kg	
	4.3C	1kg	
Reasons for new Flammable Solids limits The new subclassification of Class 4 Hazardous Substances reflects the HSNO system. A revision of the existing generic Class 4 limit (1kg) to allow 5kg of solid desensitised explosives is considered appropriate in the Rural zone where such materials may be present. A relaxation of the limit for the least reactive materials in the spontaneously combustible subclass from the generic 1kg limit to 25kg is considered reasonable given the relatively low density of residential development in the Rural zone.			
CLASS 5 OXIDISING SUBSTANCES Liquids or Solids	5.1 ("Oxidising Substances")	5.1.1A	50kg
Gases		5.1.1B, 5.1.1C	1 kg
		5.1.2A	100 kg
Reason for new oxidising substances - gases limits Subclass 5.1.2A replaces existing subclass 2.3. The existing subclass 2.3 limits have been retained.			
Organic Peroxides	5.2 ("Oxidising Substances")	5.2A, 5.2B	1 kg
		5.2C, 5.2D	1 kg
		5.2E, 5.2F, 5.2G	1 kg
CLASS 6 TOXIC SUBSTANCES	7 ("Toxic and Infectious Substances")	6.1A, 6.1B, 6.1C, 6.1D <i>Including the following subgroups:</i>	
		<u>Agrichemicals and Pesticides</u>	1,000 kg/litres
		<u>HSNO 'Controlled Substances'</u>	100 kg

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		<u>Toxic gases (other than gases that are HSNO 'Controlled Substances')</u>	10 kg
		<u>Timber treatment chemicals</u>	20 litres
		<u>Chlorinated hydrocarbons</u>	20 litres
		<u>Any other toxic substances (that are not otherwise Class 3 flammable liquids)</u>	1 kg
Reasons for new toxic substances limits Class 6 covers a very wide range of substances in everyday use that also fall into other subclasses. For clarity of application in the rural/residential context of Selwyn District, it is reasonable to identify toxic substances in generic subgroups (Agrichemicals, HSNO 'controlled substances' ...). The new limits for each subgroup have been selected with due consideration to maintaining consistency with the existing Class 7 limits in the Plan, with the NRRP, and HSNO while also taking account of the relative sensitivity and risk in the Rural zone. The 1000 kg/litres limit for Agrichemicals is consistent with the Rural zone limit for toxic substances in the existing Plan, and with the proposed Class 9.1A limit, recognizing the widespread bulk storage and use of Agrichemicals in the District. New limits that are proposed for the other subgroups of Class 6 have been set with consideration to the HSNO controls and emergency management limits, and the sensitivity of the Rural environment.			
CLASS 7 RADIOACTIVE MATERIALS	8 ("Radioactive Materials")	N/A	10 ¹³ bequerel per kilogram
CLASS 8 CORROSIVE SUBSTANCES	6	8.2A, 8.2B, 8.2C	10 kg
CLASS 9 ECOTOXIC SUBSTANCES	9 ("Miscellaneous substances")	9.1A Substances that are very ecotoxic in the aquatic environment 9.1B Substances that are ecotoxic in the aquatic environment 9.1C Substances that are harmful in the aquatic environment 9.1D Substances that are slightly harmful in the aquatic environment or are otherwise designed for biocidal action	1,000 litres/kg 5,000 litres/kg 5,000 litres/kg 50,000 litres/kg
Reasons for new ecotoxic substances limits Whereas existing Class 9 Miscellaneous Substances specifically includes only timber treatment chemicals and chlorinated solvents, HSNO Class 9 introduces a classification system for a very wide range of substances in everyday use (mainly liquids) that also fall into other subclasses. The limits for each Class 9 subclass have been selected with due consideration to maintaining consistency with the other proposed limits in the Plan, with the NRRP, and HSNO, while also taking account of the relative sensitivity and risk in Rural zone. The 1000 kg subclass 9.1A limit is consistent with the limit in the existing Plan for toxic substances that are agrichemicals, and recognises the widespread bulk storage and use of Agrichemicals in the District.			