Independent Review of the Dangerous Goods Act 1985 and associated regulations

Consultation Paper

Andrew Palmer QC
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Terms and abbreviations used in this Paper

Term/Abbreviation	Description
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AE Code	Australian Code for the Transport of Explosives by Road and Rail
Building Act	*Building Act 1993*
Comcare	The Commonwealth statutory authority for work health and safety and workers' compensation
dangerous goods	As defined in section 3 of the *Dangerous Goods Act 1985* See: Box 1
DG	dangerous goods
DG Act	*Dangerous Goods Act 1985*
DG framework	The *Dangerous Goods Act 1985*, all regulations made under section 52 of that Act, and all subordinate instruments and codes of practice under that Act
DG licence holder	A person who holds a licence issued under the *Dangerous Goods Act 1985*
DG regulations	The regulations made under section 52 of the *Dangerous Goods Act 1985*, that is, the Dangerous Goods (Transport by Road or Rail) Regulations 2018, the Dangerous Goods (Storage and Handling) Regulations 2012, the Dangerous Goods (Explosives) Regulations 2011 and the Dangerous Goods (HCDG) Regulations 2016
duty-holder	A person who has obligations under legislation
EPA	Environmental Protection Authority
EP Act 1970	*Environment Protection Act 1970*
EP Act 2017	*Environment Protection Act 2017*
EPAA 2018	*Environment Protection Amendment Act 2018*
Explosives Regulations	Dangerous Goods (Explosives) Regulations 2011
ESM	Essential Safety Measures required under Part 15 of the Building Regulations 2018
first supplier	As defined in regulation 5 of the Dangerous Goods (Storage and Handling) Regulations 2012
FRV	Fire Rescue Victoria
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
hazardous substances	As defined under regulation 5 of the Occupational Health and Safety Regulations 2017 See: Box 2

Term/Abbreviation	Description
HCDG	High Consequence Dangerous Goods, which for the purposes of the HCDG Regulations means ammonium nitrate
HCDG Regulations	Dangerous Goods (HCDG) Regulations 2016
manifest quantity	The thresholds for determining manifest and notification requirements for dangerous goods storage facilities, outlined under Schedule 2 of the Dangerous Goods (Storage and Handling) Regulations 2012 See: Box 7
Maxwell Review	*Occupational Health and Safety Act Review*, Chris Maxwell QC, March 2004
MHF	Major Hazard Facility, as defined under regulation 5 of the Occupational Health and Safety Regulations 2017
Model WHS Act	Model Work Health and Safety Act
Model WHS Laws	The Model WHS Laws include: the Model Work Health and Safety Act, the Model Work Health and Safety Regulations, and the Model Work Health and Safety Codes of Practice
OHS	occupational health and safety
OHS Act	*Occupational Health and Safety Act 2004*
OHS framework	The *Occupational Health and Safety Act 2004*, and any regulations, compliance codes, and other subordinate instruments made under that Act
OHS Regulations	Occupational Health and Safety Regulations 2017
Planning Act	*Planning and Environment Act 1987*
Review	Independent Review of the *Dangerous Goods Act 1985* and associated regulations
SDS	safety data sheet
Storage and Handling Code	Code of Practice for the Storage and Handling of Dangerous Goods 2013
Storage and Handling Regulations	Dangerous Goods (Storage and Handling) Regulations 2012
Transport Regulations	Dangerous Goods (Transport by Road or Rail) Regulations 2018
Terms of Reference	The Terms of Reference for the Independent Review of the *Dangerous Goods Act 1985* and associated regulations See: Appendix A
UN Code	The globally recognised four-digit number used to identify chemicals and substances under the ADG Code
WHS	work health and safety
WorkSafe	The Victorian WorkCover Authority

A note from the Independent Reviewer

Chemicals, and products made from chemicals – from fertiliser, fuel and explosives to paper, plastics and paint – form an integral part of our economy and everyday life. This means that the importation, manufacture, sale, transport, storage, reprocessing and disposal of chemicals are also essential to our way of life. However, many essential chemicals are dangerous, and activities involving them can create significant risks. These include risks to the health and safety of:

- Victorians whose jobs require them to work with such chemicals;
- emergency services personnel, particularly firefighters, who respond to incidents involving these chemicals; and
- members of the public who live, study or work near to (and sometimes even far away from) the places where these chemicals are manufactured, used, stored and disposed of.

These also include risks of damage to property located near to those places; and risks of harm to the environment.

All of these risks were highlighted in August 2018, when a major chemical fire broke out at a warehouse in West Footscray. The warehouse contained millions of litres of toxic waste and the fire took more than a week to subdue. The risks were highlighted again in April 2019 when a fire broke out at a waste management facility in Campbellfield, in Melbourne's northern suburbs. That fire also took several days to subdue.

The fires released plumes of toxic smoke, caused the evacuation of homes and workplaces and the closure of schools, and endangered the health of Victorians who lived both near to and far from the fires, as well as the emergency services personnel who battled to put the fires out.

Following these fires, WorkSafe and the Environment Protection Authority discovered many more sites, particularly in Melbourne's northern suburbs, that were being used to illegally store dangerous chemicals. The clean-up of these sites was still continuing through mid-2020, at enormous expense to taxpayers and risk to those carrying it out.

Image: April 5, 2019. Fire crews douse a fire at a factory on Thornycroft Street in Campbellfield, Melbourne, Victoria. (Photo by Alex Coppel / Newspix).

These events raised questions about the regulation of dangerous chemicals in Victoria. The regulatory frameworks that apply to dangerous chemicals are complex and overlapping, and the areas of overlap add to the complexity. This is partly due to the fact that the same chemicals can, at varying points in their life cycle, be classified in different ways under different regulatory frameworks, with each framework giving rise to distinct but overlapping duties. Unnecessarily complex or overly onerous regulation can lead to non-compliance, affect the competitiveness of industry, and drive legitimate operators from the market.

The various regulatory frameworks need to keep pace with changes and trends in the market for dangerous chemicals, and the ways in which these chemicals are used, stored, handled, transported and disposed of. One of those trends, which became apparent following the 2018 and 2019 fires, has been an increase in illegal activity in the waste market for dangerous chemicals.

It is also important that Victorian legislation maintains a degree of consistency with the regulation of dangerous chemicals in the rest of Australia, and the world. This consistency is particularly important in relation to the transportation of dangerous chemicals, given that they are often transported across state and international boundaries.

In light of the above, I was tasked to consider whether the DG Act and associated regulations are fit for their intended purposes. To that end, the Review was asked to:

a. examine the extent to which the DG Act and associated regulations promote the safety of persons and property and the effective management of dangerous goods;

b. consider how the DG Act and associated regulations could be enhanced to be more risk-based and prevention focused;

c. consider the efficacy of the DG Act and associated regulations in deterring non-compliance and illegal activity in relation to the management of dangerous goods;

d. examine whether any amendments to the DG Act and associated regulations are required to respond to emerging issues and challenges related to the management of dangerous goods; and

e. identify ways to streamline and modernise the DG Act and regulations.

While the Terms of Reference (see Appendix A) are focused on the DG Act and its associated regulations, the questions they pose cannot be answered without considering the ways in which that legislation interacts with the other regulatory frameworks that apply to dangerous chemicals, and with the ways in which dangerous goods legislation is enforced.

This Consultation Paper is designed to stimulate and promote discussion about the regulation of dangerous goods in Victoria, by raising a number of issues – some broad, some more specific – and suggesting ways in which those issues might be addressed. In responding to the issues raised in this Consultation Paper, I encourage you to provide practical examples, wherever possible, of your experience with the dangerous goods framework. You are also welcome to raise other issues in your written submission that may not have been covered in this Paper.

In preparing this Paper, I have been enormously assisted by consultations held (under COVID conditions) with WorkSafe, the Environment Protection Authority and Emergency Management Victoria as well as representatives of many of the organisations that make up WorkSafe's Dangerous Goods Stakeholder Reference Group. I would like to thank each of these organisations for the contributions they have made. I am also grateful for the support I have received from the Review's Secretariat team.

Andrew Palmer QC

About the Independent Review of the *Dangerous Goods Act 1985* and associated regulations

In April 2020, the Hon Jill Hennessy MP, then Minister for Workplace Safety, announced a comprehensive review of Victoria's dangerous goods laws and appointed me as the Independent Reviewer to conduct the Review. The Terms of Reference for the Review can be found at Appendix A.

The Review is part of the Victorian Government's response to high profile incidents associated with illegal chemical stockpiling at several sites across Melbourne. The Review will consider contemporary issues and challenges in the management of dangerous goods, including emerging risks and issues and their impact on the safety of persons and property. I will undertake extensive stakeholder consultation throughout the Review. Targeted meetings with key stakeholders were held from May to September 2020 to assist in the formulation of this Consultation Paper.

The primary purpose of this Consultation Paper is to facilitate broader public discussion about the management of dangerous goods in Victoria. All interested individuals and organisations are invited to comment on the issues raised in this Paper by making a submission to the Review. I will conduct further consultation following receipt of the submissions and during the process of drafting a final report. This report is due to be provided to the Minister for Workplace Safety in mid-2021.

How to make a submission

You are invited to share your views on the issues raised in this Consultation Paper.

This Consultation Paper presents issues for consideration which address the Terms of Reference. A complete list of the questions asked throughout the Paper can be found in Appendix B. These questions are designed to assist you to make a submission. You are not required to address all of the questions posed and you are also welcome to raise other issues that may not have been covered in this Paper.

Written submissions can be made electronically through the Victorian Government's Engage Victoria website at www.engage.vic.gov.au. If you would like to provide your submission in a different way, or if you have any questions, please email DGReview@worksafe.vic.gov.au or write to:

Dangerous Goods Act Review
C/- WorkSafe Victoria
P O Box 279
Geelong VIC 3220

All submissions must be received by **5pm on Monday 30 November 2020**.

Submissions will be published on the Engage Victoria website unless you indicate that you do not want your submission to be published.

Any information contained in submissions may be referred to or reproduced in the final report. If you do not wish your submission (or any part of it), or your name (or the name of your organisation), to be referred to in the final report, please state this clearly in your submission.

Victoria's dangerous goods landscape

What are dangerous goods?

Chemicals are, generally speaking, classified as "dangerous goods" if they pose an immediate physical hazard to persons or property. This includes substances that are corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water reactive.[1] Most dangerous goods can also harm a person's health if they are inhaled or absorbed through the skin, causing both immediate and/or long-term health effects.[2] These dangerous goods are also considered to be "hazardous substances" and are regulated under both the DG and OHS frameworks.

The DG Act defines "dangerous goods" in accordance with the Australian Code for the Transport of Dangerous Goods by Road or Rail (ADG Code: see Box 1).

Whilst a number of dangerous goods are used in industrial settings in large quantities, many are also every day products used in the home, office or workplace. The varied and widespread use of dangerous goods in the community presents a complex challenge for regulators.

1 See WorkSafe, *Dangerous goods: Safety basics* (Online Guidance, 6 December 2019) <https://www.worksafe.vic.gov.au/dangerous-goods-safety-basics>.

2 See WorkSafe, *Hazardous Substances: Safety Basics* (Online Guidance, 23 January 2020) <https://www.worksafe.vic.gov.au/hazardous-substances-safety-basics>.

Box 1 Definition of dangerous goods

The DG Act defines "dangerous goods" as having the same meaning as in the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code), with some exceptions. Dangerous goods are considered dangerous due to their inherent nature which, if not controlled effectively, can cause serious or fatal injuries and large scale damage to property and the surrounding environment.

ADG Code

- The ADG Code assigns dangerous goods to one of nine classes according to the predominant hazard they present. Some of these classes are subdivided into divisions. The numerical order of the classes and divisions does not reflect the degree of danger.
- Each class is identifiable through an internationally recognised labelling system which provides quick information on the hazardous properties of dangerous goods.
- Examples of the ADG class labels, and the types of goods in each class, are shown at Appendix C.
- The ADG Code classes included in the DG Act's definition of "dangerous goods" (with examples of ADG Code class labels) are as follows:

Class 2: Gases

Class 3: Flammable liquids

Class 4: Flammable solids, substances liable to spontaneous combustion and substances which in contact with water emit flammable gases

Class 5: Oxidising substances and organic peroxides

Class 6.1: Toxic substances

Class 8: Corrosive substances

Class 9: Miscellaneous dangerous substances and articles

- Most of the ADG classes have equivalent categories under Part 2 of the "GHS", which deals with physical hazards (see Box 2).

Inclusion of other goods in the definition of "dangerous goods"

The DG Act uses its own definition of "explosives", instead of including ADG Code Class 1 (explosives).

The DG Act definition also includes combustible liquids having a flash point of higher than 60°c, HCDGs, goods too dangerous to be transported, and any other chemicals declared to be dangerous goods.

The lifecycle of dangerous goods

Dangerous goods in Victoria generally progress through five key stages of their "product life" – raw material extraction, manufacture/import, sale/distribution, use, and disposal.

The lifecycle commences when the dangerous goods (or the materials from which they are made) are extracted in their raw form.

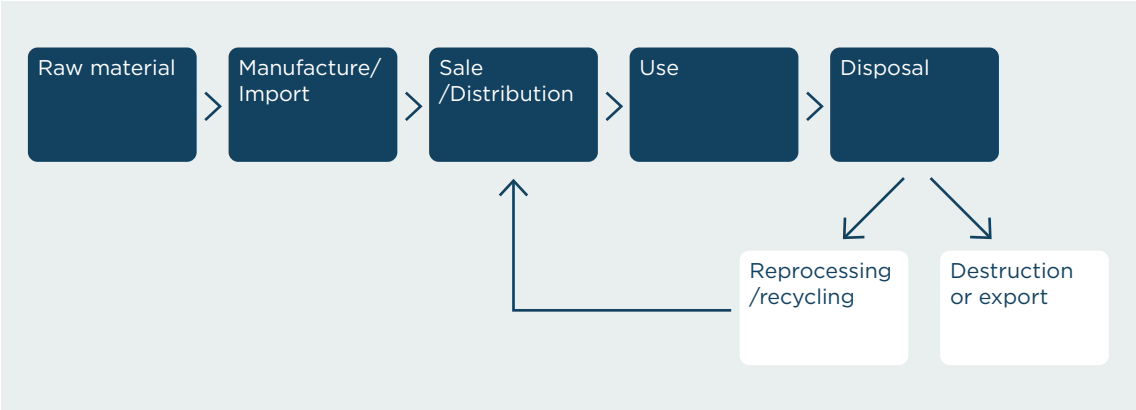
Dangerous goods will become a consumable product after they have been manufactured from those raw materials or have been imported into Victoria.[3]

These products will then be supplied through a wholesale/distribution process where they may be used in other manufacturing or production activities, or to fulfill a range of other purposes across various industries.

When dangerous goods products are damaged, unwanted, or no longer usable they become waste. This waste must be treated so it can be safely reprocessed, disposed of at an approved facility or exported.

Dangerous goods are likely to be transported at various points throughout their lifecycle.

Figure 1: Lifecycle of dangerous goods



3 DG Act, s 3 defines "manufacture" as including any part or whole of the process of: making non-dangerous goods from dangerous goods; making non-dangerous goods from non-dangerous goods, where in the course of the process dangerous goods are made; and the unmaking, altering, repairing or remaking of dangerous goods.

Key aspects of the dangerous goods market

The dangerous goods market in Victoria has changed significantly since the DG Act was introduced in 1985. For example, in recent years, the dangerous goods sector increasingly relies on the importation of chemicals, and less on their manufacture in Australia.

Dangerous goods are used for a variety of purposes across a range of industries. The production of many goods and services in Victoria relies on the input of chemicals. Industry sectors that rely on chemical inputs include refineries, food and agriculture, and building and construction.

Transport

Dangerous goods are primarily transported by road in Victoria, and only occasionally by rail. Dangerous goods are transported across the state every day, from road tankers moving thousands of litres of LPG, to local tradespeople carrying cylinders of acetylene in their vans. Many dangerous goods transport businesses also operate across state boundaries.

To transport dangerous goods or explosives in Victoria, both the vehicle and the driver must be licensed. Between 1 July 2014 and 30 June 2019, WorkSafe issued:

- 6,903 road vehicle licences (fleet trailer)
- 5,404 dangerous goods driver licences
- 201 licences for drivers of explosives vehicles
- 90 licences for explosives vehicles.

Storage and handling

The storage and handling of dangerous goods is undertaken across almost all Victorian industries in some capacity. As with transport, it is likely that some storage and handling will be necessary at each stage of the dangerous goods lifecycle. As the quantity of stored dangerous goods increases, so do the regulatory obligations and the required safety standards.

Persons storing or handling dangerous goods do not need to be licensed. However, they must notify WorkSafe when quantities of stored dangerous goods exceed a specified threshold. Significantly large quantities of dangerous goods may require an MHF licence under Victorian OHS laws (see Box 5).

As shown in Figure 2 below, persons storing dangerous goods span a broad spectrum.

Waste

When dangerous goods reach the end of their "product life" they are either disposed of, reprocessed, or exported.

When a person has chemicals that require disposal, they can engage the services of a waste treatment facility. A waste treatment facility will generally charge a disposal fee for waste that has no market value. Depending on the chemical and its market value, the facility may instead pay to receive the waste, or collect it at no cost.

The waste treatment facility must treat the chemicals so that they can be safely reused, recycled or disposed of at an EPA licensed landfill site. Some waste may be exported interstate for treatment or disposal (such as acid waste).[4]

The waste facility may themselves reprocess the dangerous goods and sell them, or sell them to a business that will reprocess them.

Figure 2: Dangerous goods storage and handling spectrum

4 Geoff Latimer, Blue Environment Pty Ltd on behalf of the Department of the Environment and Energy (Cth), *Hazardous Waste in Australia 2019* (May 2019).

Number of regulated entities

It is difficult to identify the total number of businesses in Victoria that deal with dangerous goods and in what capacity given their widespread use across multiple industries. However, one way of gaining some insight into the number of entities subject to the dangerous goods regime is to examine the number of licence holders. There is a range of activities under Victoria's DG framework that require a licence. The number of licences issued for each licence class under the DG regulations indicates the most common activities which require a licence in Victoria. Licences issued by WorkSafe are generally valid for five years; accordingly, the breakdown of licences issued over a five-year period illustrates the approximate number of persons undertaking each activity.[5]

In the five-year period commencing 1 July 2014 to 30 June 2019, WorkSafe issued 15,022 licences/permits across all dangerous goods licence classes. Of these, 86% related to licensing of road vehicles and drivers. Other licences were for the use of blasting explosives (5.6%), permits to have unsupervised access to HCDGs (3.6%), and licences for pyrotechnicians to discharge fireworks (2.4%).

As noted above, the storage and handling of dangerous goods above a specified threshold requires notification to WorkSafe. Notified information must also be updated every five years, so the volume of notifications received over a five-year period can provide an approximation of the number of duty-holders storing larger quantities of dangerous goods.[6] From 1 July 2014 to 30 June 2019, WorkSafe received 3,389 notifications from occupiers.

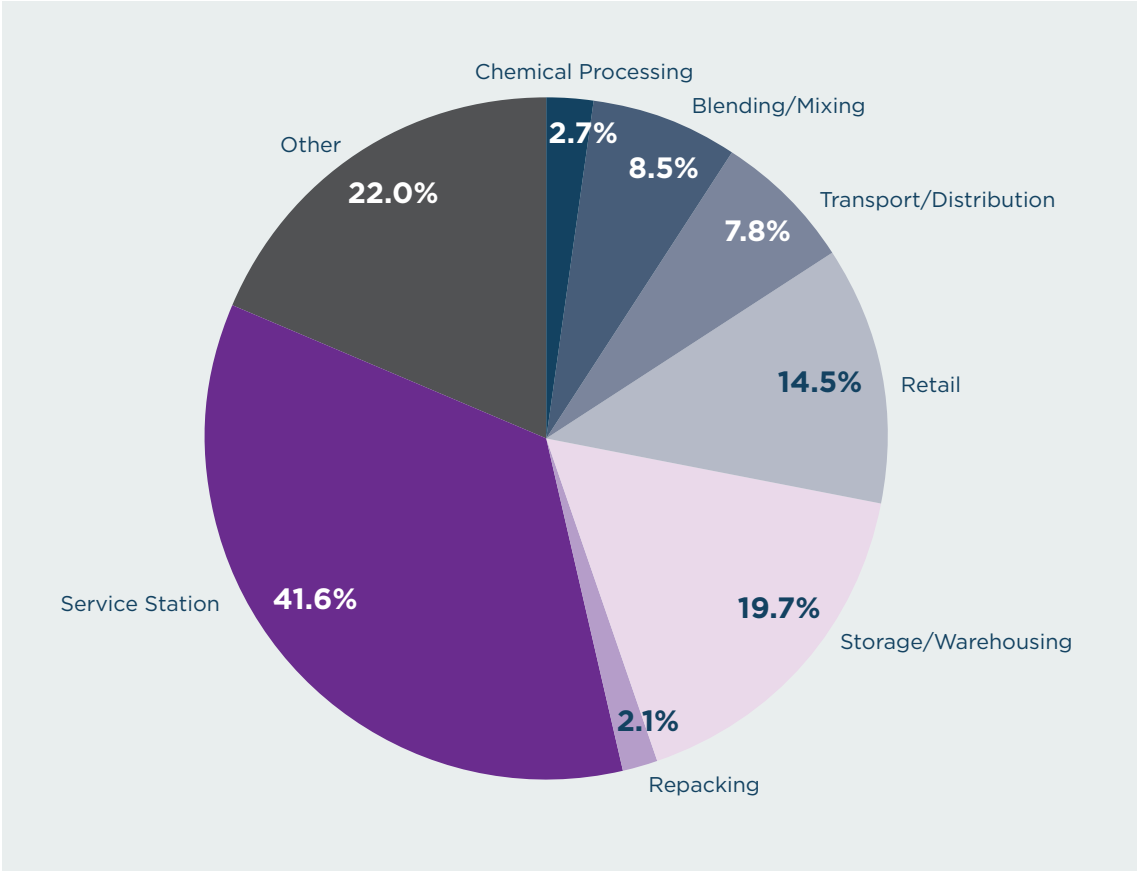
The notification form defines a number of principal activities involving dangerous goods: chemical processing, blending/mixing, transport/distribution, retail, storage/warehousing, repacking, service station and other.

The occupier of the premises where the dangerous goods are stored is required to identify which of those activities they undertake. Figure 3 charts the principal activities reported by occupiers over a five-year period from 1 July 2014 to 30 June 2019.

5 Licences issued by WorkSafe may not accurately represent all persons undertaking those activities to which the licence relates in Victoria at a point in time due to mutual recognition provisions allowing interstate licence holders to undertake the same activities in Victoria, persons who hold a valid licence but have ceased undertaking the activities to which the licence relates and/or persons who may be undertaking activities without holding the required licence.

6 The number of notifications received over five years may not accurately represent the number of occupiers of premises storing and/or handling dangerous goods above the Manifest Quantity at a particular point in time, as there is no requirement for an occupier to notify WorkSafe if they cease storing dangerous goods above the Manifest Quantity. It is also difficult to ascertain from the data whether the notification received is for new premises, or is an update of notified information for existing premises.

Figure 3: Principal activities involving dangerous goods reported by occupiers of premises from 1 July 2014 to 30 June 2019[7]



7 Because occupiers can report more than one principal activity, the total adds up to more than 100%.

The dangerous goods regulatory framework

Overview of the current dangerous goods regulatory framework

In Victoria, dangerous goods are primarily regulated by the *Dangerous Goods Act 1985*. The DG Act aims to address the risks that dangerous goods pose in our community by imposing conditions on people involved in all stages of the dangerous goods life cycle, including manufacture, storage, transport, sale and use of dangerous goods.

The DG Act is supported by four sets of regulations:

- Dangerous Goods (Transport by Road or Rail) Regulations 2018

  The Transport Regulations give effect to the *Australian Code for the Transport of Dangerous Goods by Road & Rail* (ADG Code). The ADG Code is adopted by all Australian jurisdictions to ensure national consistency.

- Dangerous Goods (Storage and Handling) Regulations 2012

  The Storage and Handling Regulations promote the safe handling and storage of dangerous goods by imposing labelling, packaging and storage requirements on manufacturers, suppliers, occupiers of dangerous goods storage facilities and workers, with the obligations increasing according to the quantity of dangerous goods stored.

- Dangerous Goods (Explosives) Regulations 2011

  The Explosives Regulations control access to and use of explosives in Victoria by imposing a range of duties, including a strict licensing framework, on anyone involved in the manufacture, storage, sale, transport and/or use of explosives. The Explosives Regulations also give effect to the *Australian Code for the Transport of Explosives by Road and Rail* (AE Code), which sets out requirements for the transport of explosives.

- Dangerous Goods (HCDG) Regulations 2016

  The HCDG Regulations control access to, and use of, HCDGs. The HCDG Regulations prohibit the sale and supply of HCDGs, and impose a strict licensing framework on anyone involved in the import, export, manufacture, sale, supply, use, handling, transport, transfer or disposal of HCDGs. The only substance that is declared to be HCDGs, and therefore captured by these regulations, is ammonium nitrate.[8] Ammonium nitrate is the main ingredient of the most common type of explosives used in Australia. It can also be used as a fertiliser.

8 Declarations are made under the DG Act, s 9B. The HCDG Regulations apply to ammonium nitrate, calcium ammonium nitrate containing more than 45% ammonium nitrate and ammonium nitrate emulsions and mixtures containing more than 45% ammonium nitrate.

The table below provides an overview of Victoria's existing dangerous goods framework.

Principal Legislation				
Dangerous Goods Act 1985 • Aims to promote the safety of persons and property in relation to the manufacture, storage, transport, transfer, sale and use of dangerous goods and the import of explosives into Victoria. • Provides WorkSafe inspectors with inspection and enforcement powers. • Imposes responsibilities on duty holders and establishes offences and penalties.				
Subordinate Legislation				
	Transport Regulations	**Storage and Handling Regulations**	**Explosives Regulations**	**HCDG Regulations**
Purpose	Manage the risks arising from the transport of dangerous goods over land and ensure consistency with other Australian jurisdictions.	Provide for the safe storage and handling of dangerous goods.	Manage the risks of explosives to ensure the safety of people and property.	Regulate access to HCDGs (ammonium nitrate).
Key Feature	Set out the obligations of persons involved in the transport of dangerous goods over land and give effect to the ADG Code.	Impose packing, labelling and storage obligations on manufacturers, suppliers and occupiers of dangerous goods storage facilities.	Impose duties on people involved in the manufacture, sale, storage and use of explosives, including licensing.	Impose a licensing requirement for anyone who has access (including manufacture, sale, use, storage, etc).
Supporting documents				
	ADG Code	Storage and Handling Code	AE Code	–

Intersection of the DG regulatory framework with other regulatory frameworks

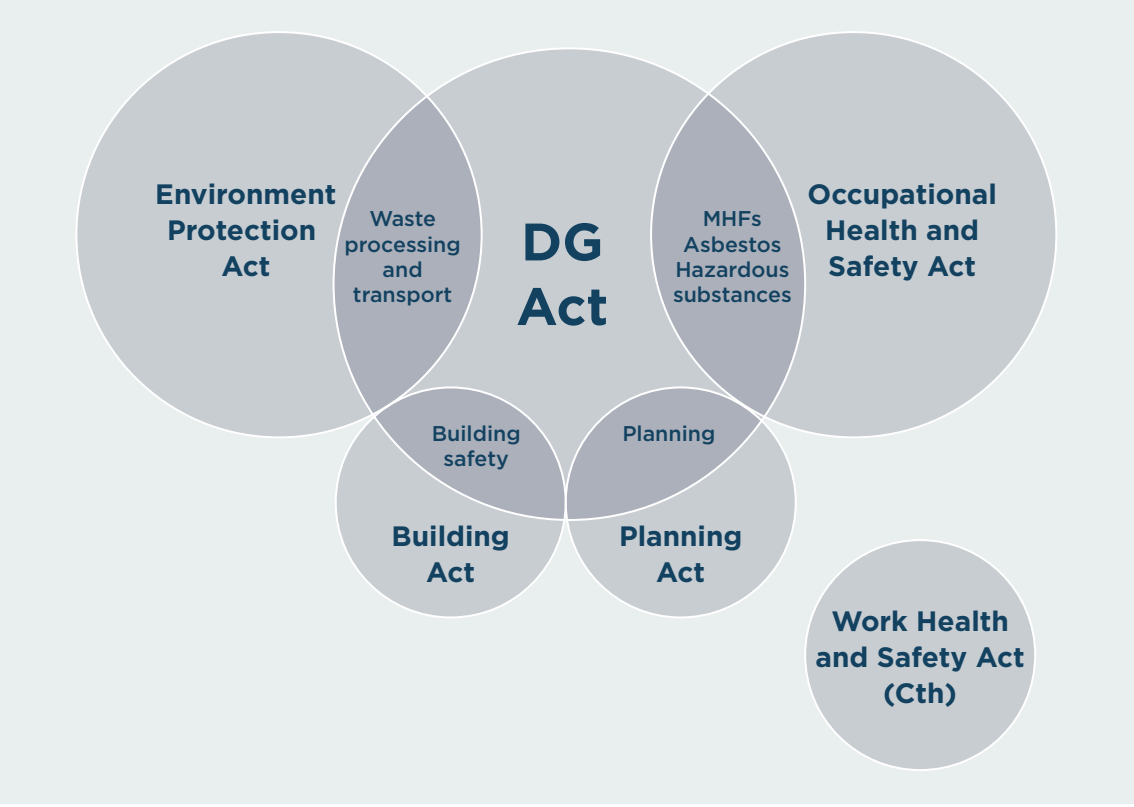
The regulation of dangerous goods interacts with other legislation, including the *Environment Protection Act 1970* (the EP Act), the *Occupational Health and Safety Act 2004* (the OHS Act), the *Building Act 1993* and the *Work Health and Safety Act 2011* (Cth). Figure 4 below illustrates some of the subject matter overlap.

Occupational Health and Safety Act 2004

The OHS Act applies to Victorian workplaces and employers, unless the workplace is covered by Commonwealth legislation (see discussion below). Accordingly, most corporate entities that use dangerous goods in Victoria must also comply with the OHS Act and the OHS Regulations. An entity's obligations under the dangerous goods legislation can overlap with its obligations under the OHS Act and Regulations.

The general duties in Part 3 of the OHS Act apply to a range of duty-holders, including employers, self-employed persons, employees, persons who manage or control a workplace, and manufacturers and suppliers of substances. These duties are broad enough to apply to many activities involving dangerous goods.

Figure 4: Interaction of DG Act with other legislation



These general duties for employers include:

- employers must, so far as is reasonably practicable, provide and maintain for their employees a working environment that is safe and without risk to health;
- in order to comply with this general duty, an employer must make arrangements for ensuring, so far as is reasonably practicable, safety and the absence of risks to health in connection with the use, handling, storage or transport of substances (including dangerous goods); and
- employers must ensure that persons, other than their employees, are not exposed to risks to their health or safety arising from the employers' undertakings,[9] including members of the public.

Self-employed persons must ensure, so far as is reasonably practicable, that their undertakings do not expose people to risks to their health and safety.[10] A similarly broad duty applies to a person who manages or controls a workplace.[11]

A person who manufactures or supplies a substance (including dangerous goods) that is to be used at a workplace is under a duty to ensure that the substance is, so far as is reasonably practicable, safe and without risks to health, and to provide to each person to whom they provide the substance, adequate information about the purpose of the substance, and any conditions necessary for its safe use.[12]

These general duties in the OHS Act are supported by the OHS Regulations, which set out detailed requirements that relate to specific work, such as construction, certain workplaces such as Major Hazard Facilities, and the use of certain materials, including asbestos, lead and "hazardous substances".

Hazardous substances

Most dangerous goods are also "hazardous substances" under the OHS Regulations (see Box 2). Despite the overlap, the two terms are not interchangeable; whereas "dangerous goods" are classified on the basis of their immediate physical or chemical effects such as fire, explosion or corrosion, "hazardous substances" are classified based on the immediate and long-term health effects from exposure.

Part 4.1 of the OHS regulations imposes duties on:

- Manufacturers or importing suppliers in relation to determining whether a substance is a hazardous substance; the preparation and provision of safety data sheets; and labelling.
- Employers and self-employed persons in relation to controlling risks associated with using hazardous substances; maintaining a register of hazardous substances; and exposure standards, atmospheric monitoring and health monitoring.

Workplaces that deal with dangerous goods that are also hazardous substances must comply with both the Storage and Handling Regulations and Part 4.1 of the OHS Regulations (see Box 3).

9 OHS Act, s 23.
10 OHS Act, s 24.
11 OHS Act, s 26.
12 OHS Act, ss 29–30.

Box 2 Definition of hazardous substances

Part 4.1 – Hazardous Substances of the OHS Regulations applies to chemicals that are classified in Part 3 of the GHS, which deals with "health hazards".

- The GHS is the Globally Harmonized System of Classification and Labelling of Chemicals published by the United Nations.
- Part 3 of the GHS divides substances into 11 classes based on the type of harm each can cause to a person's health. The classes are divided into categories based on their potency and extent to which they cause harm.
- The GHS uses nine hazard pictograms which represent physical, health and environmental hazards. Two example pictograms are shown below.

The 11 classes in Part 3 are:

- *Acute toxicity*
- *Skin corrosion/irritation*
- *Serious eye damage/eye irritation*
- *Respiratory sensitizer*
- *Skin sensitizer*
- *Germ cell mutagenicity*
- *Carcinogenicity*
- *Toxic to reproduction and effects on or via lactation*
- *Specific target organ toxicity following single exposure*
- *Specific target organ toxicity following repeated exposure*
- *Aspiration hazard.*

There are various risk categories within each of the classes. The lowest level risk category for six of these classes is excluded from the definition of "hazardous substances" in the OHS Regulations.

Part 4.1 of the OHS Regulations contains duties and obligations to manage the health and safety risks associated with hazardous substances. There are several carve-outs from Part 4.1, the most important of which is that it does not apply to the transport of hazardous substances.

MIX WELL
BEFORE USE

Major Hazard Facilities

Premises holding a significant quantity of dangerous goods may also need to comply with the MHF regime in Part 5.2 of the OHS Regulations. A facility is classified as an MHF either when the quantity of dangerous chemicals present at the facility exceeds a prescribed threshold, or at WorkSafe's discretion (if the quantity present exceeds 10% of that threshold).

The MHF regime is the most stringent regulatory regime within Victoria's OHS framework. MHFs must develop a safety case, approved by WorkSafe, and must also obtain and hold an MHF licence (see Box 5).

MHF licensing is accompanied by regular inspections. There are currently 43 licensed MHFs in Victoria.

Box 3 Overlap of dangerous goods and hazardous substances regulation

Two separate but overlapping regulatory regimes exist:

- "dangerous goods" are regulated under the DG framework (see Box 1)
- "hazardous substances" are regulated under the OHS Regulations (see Box 2)

The two regimes are intended to manage different risks: "physical hazards" under the DG framework and "health hazards" under the OHS Regulations. However, most chemicals that are dangerous goods are also hazardous substances (though the reverse is not always true).

A person involved in activities involving chemicals (such as manufacturing, storing, handling and using):

- has to work out which regulatory regime(s) to apply to which chemicals
- has to apply only the OHS Regulations if their activities only involve chemicals that meet the classification for "hazardous substances" but do not meet the classification for "dangerous goods"
- has to apply only the DG Act and its associated regulations if those activities only involve chemicals that meet the classification for "dangerous goods" but do not meet the classification for "hazardous substances"
- in all other cases, has to apply both regulatory regimes, sometimes to the same chemicals.

Regulations 12 and 60 of the Storage and Handling Regulations slightly reduce this regulatory duplication in a limited range of risk types.

Environment Protection Act 1970

The EP Act 1970 and associated regulations regulate pollution and waste that impact human health and the environment. Of particular relevance to this Review, the EP Act regulates the storage and transport of "prescribed industrial waste".[13] In many instances, "prescribed industrial waste" under the EPA Act 1970 will also be "dangerous goods" under the DG Act.

The EP Act 1970 and associated regulations contain obligations related to the transport of prescribed industrial waste. Transport is regulated through a permit system. Regulations require a person to transport prescribed industrial waste using a vehicle with an EPA permit, and with a waste transport certificate accompanying the load. A waste transport certificate lists key information about the nature and quantity of the waste being transported.[14] The certificates allow waste to be tracked as it is transported. Waste can only be transported to facilities with EPA approval.

Section 8(2) of the DG Act provides an exemption for the transport of prescribed industrial waste. Under the exemption, the provisions of the DG Act and the Transport Regulations do not apply to the transport of prescribed industrial waste for which a permit or transport certificate mentioned above is required.

As well as permits and waste certificates, the EPA administers works approval and licence systems. A works approval allows a person to conduct works or make changes to their premises (for example, to construct a waste treatment plant). An EPA licence allows a person to conduct certain activities at licensed premises. These activities include the storage, treatment and disposal of prescribed industrial waste. Sites used for the storage and processing of relevant quantities of waste, which is also dangerous goods, will be subject to obligations under both the DG Act (enforced by WorkSafe) and the EP Act 1970 (enforced by the EPA).

It is important to note that the existing EP Act 1970 will be replaced by the *Environment Protection Act 2017*. The replacement will take effect alongside further changes contained in the *Environment Protection Amendment Act 2018*. This is expected to take effect from 1 July 2021. Many of these reforms are relevant to this Review, in that they suggest ways in which the dangerous goods legislation could also be modernised. Some of these are discussed later in this Paper.

13 The EP Act 1970 refers to both "prescribed waste" and "prescribed industrial waste". The Environment Protection (Industrial Waste Resource) Regulations 2009 define "prescribed industrial waste". Whereas regulations previously also defined "prescribed waste", those regulations have now been revoked.

14 The exclusion in the DG Act, s 8(2) refers to both "prescribed waste" and "prescribed industrial waste". However, "prescribed waste" appears to be no longer relevant: see note 13 above.

Building Act 1993

Building owners are responsible for the upkeep and maintenance of buildings, including any safety features known as "essential safety measures" (ESMs).[15] ESMs are the safety features required under Part 15 of the Building Regulations 2018, which are designed to protect a building and its occupants from fire.

The ESM requirements apply to buildings used for the storage of dangerous goods.[16] Owners of dangerous goods storage facilities are required to maintain the ESMs.

Responsibility for enforcing obligations under the Building Act and regulations is shared between the Victorian Building Authority, the municipal surveyor of the relevant municipal council, and Fire Rescue Victoria.

Planning and Environment Act 1987

Operators of a dangerous goods facility may also be subject to obligations under the *Planning and Environment Act 1987* (the Planning Act). There are various subordinate instruments under the Planning Act that establish requirements relating to land use and development and planning permits.

Work Health and Safety Act 2011 (Cth)

Some sites located within Victoria are regulated under the *Work Health and Safety Act 2011* (Cth). This includes sites used for storage of dangerous goods, as well as MHFs.

The Victorian DG Act and OHS Act do not apply to these sites in most circumstances, and so WorkSafe has limited jurisdiction. The regulator for the *Work Health and Safety Act 2011* (Cth) is Comcare (a Commonwealth government agency).

The Work Health and Safety Act 2011 (Cth) follows the approach set out in the Model WHS Laws, adopted by all Australian jurisdictions except for Victoria and Western Australia (see Box 6 for an overview of how the model laws compare with Victoria's DG legislation). It stipulates the storage and handling requirements for dangerous goods, and also sets out the occupational health and safety obligations that apply to those workplaces.

Other aspects of these operations (for example transport to and from these facilities), are still regulated under Victorian law (for example the Transport Regulations).

15 Building Regulations 2018, r 214 defines "essential safety measures" <https://www.vba.vic.gov.au/consumers/guides/essential-safety-measures>.

16 ESMs can include fire detection and alarm systems, fire doors, emergency hydrants and emergency lighting. ESMs are required for most buildings. All classes of building defined in A3.2 of the National Construction Code Series Volume One, Building Code of Australia Class 2-9 Buildings (except a house or outbuilding) must be maintained by building owners, who must also prepare an annual ESM report. ESMs are enforced by municipal councils.

Duties across the DG lifecycle

The way Victoria's DG framework interacts with related legislation is best illustrated by looking at the DG lifecycle, including manufacture and import, sale and distribution, use and reuse, waste and disposal, and transport.

Manufacture and import

Manufacturers and importing suppliers, as a first step, must determine whether goods are "dangerous goods", under the Storage and Handling Regulations. If they are dangerous goods, the manufacturer or importing supplier must assign the goods to an appropriate class, subsidiary hazard and packing group in accordance with the Transport Regulations, or classify the goods into a hazard class under the GHS.[17]

If the goods are being prepared for transport, they must be packaged in accordance with the Transport Regulations. This requires the manufacturer or importing supplier to ensure the goods are adequately contained and will not react adversely with the packaging materials.[18]

The importing supplier or manufacturer must also prepare a safety data sheet (SDS) in accordance with the Storage and Handling Regulations, or the OHS Regulations (if the dangerous goods are also hazardous substances).[19] An up-to-date version of the SDS must be provided to anyone to whom the manufacturer or first supplier supplies the dangerous goods.

Sale and distribution

Sellers and distributors must ensure that dangerous goods are compliant with the packing, marking and labelling requirements of the Storage and Handling Regulations before they are sold. If the dangerous goods are being sold in a container, the seller or distributor must ensure that the container does not, and will not, leak. If the purchaser of the dangerous goods is providing their own container, the seller must take all reasonable steps to ensure that the container is in good condition, is made of material that will not react adversely with its contents, is clearly marked with the name of the dangerous goods, and will not leak.

A supplier must provide an SDS to the purchaser, unless the dangerous goods are being sold in a retail setting, such as at a hardware store or in a petrol station.[20]

A person who sells explosives or HCDGs must be licensed.[21]

17 Storage and Handling Regulations, r 13. Manufacturers and first suppliers also meet this obligation if the dangerous goods are assigned or classified in accordance with corresponding legislation. This includes the Model WHS Laws.
18 Storage and Handling Regulations, r 15.
19 Storage and Handling Regulations, r 20.
20 Storage and Handling Regulations, r 22.
21 Storage and Handling Regulations, r 22.

Use

As outlined above, the OHS Act imposes a range of broad general duties on employers, self-employed persons and persons who manage or control a workplace, as well as on employees. Broadly, employers, self-employed persons and persons who manage or control a workplace must ensure that the risks of using dangerous goods are reduced so far as is reasonably practicable. If the dangerous goods are also hazardous substances, the specific obligations of Part 4.1 of the OHS Regulations must also be followed.

Businesses using dangerous goods must also ensure that they handle chemicals in a manner that is consistent with the Storage and Handling Regulations.

Waste and disposal

The DG Act and regulations do not apply to the disposal and transport of dangerous goods waste, except to provide that it is an offence to neglect to safely dispose of dangerous goods.[22] Instead, the management of dangerous goods waste is governed by the EP Act and its associated regulations. The effect of the EP Act and regulations as it relates to the management and disposal of DG waste is outlined above.

Transport

The transport of dangerous goods is governed by the Transport Regulations (except for prescribed industrial waste, which is managed under the EP Act, as described above).

Those transporting dangerous goods must do so in a safe manner, so far as is reasonably practicable and must follow the ADG Code, which stipulates specific requirements for packing, marking and labelling, placarding containers and vehicles, consigning, loading and unloading dangerous goods for transport.

Explosives transporters must adhere to additional requirements under the Explosives Regulations, including the requirements of the AE Code. Transporters must also hold a licence that allows them to transport explosives.[23] Similarly, if the transporter is transporting HCDGs, they must also hold a licence permitting them to do so.[24]

22 DG Act, s 31.
23 Explosives Regulations, rr 108–109.
24 HCDG Regulations, r 7.

The Review's Terms of Reference

The Terms of Reference (set out in full in Appendix A) require the Review "to consider if the DG Act and associated regulations are fit for their intended purposes". In considering this very broad question, I have been asked to consider and examine a number of more specific matters which, for the purposes of this discussion, I will refer to as my "Terms of Reference". This section addresses each of those Terms of Reference in turn, exploring the issues that seem relevant to them, and asking a series of questions on which I seek submissions.

Term of Reference A: Promoting safety and the effective management of dangerous goods

The first Term of Reference requires the Review to "examine the extent to which the DG Act and associated regulations promote the safety of persons and property and the effective management of dangerous goods". On any measure, these two objectives are fundamental to the purposes and operation of Victoria's DG framework.

Initial stakeholder feedback suggests that although there are numerous ways in which Victoria's DG framework could be updated and improved, it works reasonably well in most contexts.

However, the chemical warehouse fires that prompted this Review, and the subsequent discovery of further illegal stockpiles of dangerous chemicals, clearly represent serious regulatory failures. The fact that such incidents are relatively infrequent is more than balanced by the fact that their consequences can be catastrophic, potentially threatening the lives, health, and property of hundreds, and even thousands, of people. The occurrence of such incidents therefore indicates that Victoria's dangerous goods legislation is not sufficiently meeting these fundamental objectives.

In considering the possible reasons for this regulatory failure, one of the main challenges in effectively regulating dangerous goods is the enormous diversity in both attitude and competence of the businesses and other entities upon whom the framework imposes duties. Given this diversity, legislation and enforcement that will be effective for some duty-holders, will not necessarily work for others.

For example, well-resourced and capable duty-holders may be able to effectively and efficiently manage risk with relatively little guidance from legislation or the regulator; whereas poorly resourced or inexpert duty-holders may require very detailed legislative guidance coupled with regular enforcement action. Similarly, while most duty-holders would prefer to comply with the law, there are clearly some who deliberately set out to evade it.

In considering whether our DG framework is effective in meeting its objectives we need to consider how suitable the legislation is for each type of duty-holder. My preliminary consultation with stakeholders suggests that in the regulation of dangerous chemicals there are five main "archetypes" of duty-holder (see Box 4).[25]

25 Cf. Department of Health and Human Services, *Better regulatory practice framework* (March 2018), 13.

One of the fundamental aims of this Review is to ensure that Victoria's DG framework is drafted and enforced in a way that is both appropriate, and likely to be effective, for each of these very different types of duty-holder.

This raises questions such as:

- Should dangerous goods duties be couched in broad, general terms or in detailed, prescriptive terms?
- How can the dangerous goods regime be simplified and made easier to understand and apply?
- Do dangerous goods inspectors have sufficient powers?
- Are there unnecessary obstacles to the enforcement of the DG framework, including enforcement against officers of companies that break the law?

I will address these questions in more detail further in this section. For now, I invite submissions in relation to the following, more general, questions:

Question 1
To what extent does Victoria's dangerous goods legislation promote the safety of persons and property?

Question 2
To what extent does it promote the effective management of dangerous goods?

Question 3
How could it be improved so that it better promotes these objectives?

Box 4 Duty-holder archetypes

A "duty-holder" is someone who has an obligation to do something under the DG Act or regulations, such as to manage a risk. Duty-holder compliance depends on both their **willingness** and **capacity** to comply.

Preliminary consultations have suggested that regulated entities broadly fall into five main compliance archetypes. These archetypes are important to keep in mind when considering the most effective ways to regulate dangerous goods:

Willing and able

- Take all reasonable steps to comply with the law and have access to expert compliance advice when they need it.
- Typically large, well-resourced operations where dangerous goods are likely to form part of their core business.

Well intentioned

- Try to comply but, through a lack of expertise or resources, may not always meet their obligations.
- May misunderstand what is required.
- Typically small to medium-sized entities.
- Dangerous goods may not be part of their core business.

Reluctant

- Prepared to test the boundaries of the law in order to minimise compliance obligations.
- May be willing to "cut corners" or challenge their obligations.

Uninformed

- Not aware of the requirements of the law, or possibly even that they are subject to dangerous goods regulation.
- Likely to be small, poorly resourced, operations.

Deliberately evasive

- Deliberately break the law, and actively seek to avoid detection.
- Aware that legislative duties exist, but put profit before compliance.
- May be associated with other criminal activities.

Term of Reference B: Being more risk-based and prevention focused

The second Term of Reference requires the Review to "consider how the DG Act and associated regulations could be enhanced to be more risk-based and prevention focused".

Risk-based legislation focuses on the minimisation of any risks which are contrary to the objectives of the legislation, and thereby to a reduction in harm. Risk-based regulation is inherently prevention-focused: by minimising exposure to the risk of harm we aim to prevent that harm from occurring (or at least reduce its incidence).

For example, one of the objects of the OHS Act is "to eliminate, at the source, risks to the health, safety or welfare of employees and other persons at work".[26] In line with this objective, the OHS Act requires an employer to provide a working environment that is, so far as is reasonably practicable, "safe and without risks to health".[27] The obvious aim is to reduce the incidence of workplace death and injury: in other words, to prevent harm.

Many of the DG Act's objects are also (although sometimes less obviously) focused on the minimisation of risk and the prevention of harm, including:[28]

- to promote the safety of persons and property in relation to the manufacture, storage, transport, transfer, sale and use of dangerous goods and the import of explosives into Victoria;
- to ensure that adequate precautions are taken against certain fires, explosions, leakages and spillages of dangerous goods;
- to allocate responsibilities to occupiers and owners of premises to ensure that the health and safety of workers and the general public is protected; and
- to provide for the management of risks arising out of security concerns associated with explosives and high consequence dangerous goods.

26 OHS Act, s 2(b).
27 OHS Act, s 21(1).
28 DG Act, s 4.

During my preliminary consultations, no-one raised any concerns about the objects of the DG Act. The question raised by the second Term of Reference is, therefore, better understood as being how the dangerous goods legislation can be enhanced so as to better meet those objects by being more risk-based and prevention focused.

Question 4
How could the DG Act and associated regulations be enhanced to be more risk-based and prevention focused?

In considering this broad question, we will examine:

- the different types of regulatory duties;
- the combination of those duties that is likely to most effectively reduce risk and prevent harms;
- the ways in which the DG Act and associated regulations can bring a stronger focus onto activities which present higher risks; and
- any other ways in which the DG Act and associated regulations could be enhanced to meet these aims.

Regulatory duties

Regulatory legislation can impose different kinds of duties (or "standards") to achieve its aims.[29] These categories of duties are not entirely discrete, and the boundaries between them can often be blurred.

The approach generally adopted in Australian (including Victorian) occupational health and safety law is based on the 1972 report of a British Government Committee of Inquiry into Health and Safety at Work chaired by Lord Robens.

Principle-based duties

Principle-based duties set a general objective or standard that is akin to a duty of care. A well-known example of a broad and general principle-based duty is an employer's duty under the OHS Act to provide a working environment that is, so far as is reasonably practicable, safe and without risks to health.[30]

Principle-based duties can also be narrow in their focus: for example, the duty in the Storage and Handling Regulations to reduce, so far as is reasonably practicable, the risk of dangerous goods chemically or physically interacting with other substances.[31]

Principle-based duties are flexible, leave it to the duty-holder to determine how best to meet the duty, and require continuous improvement in line with developments in technology, work processes and industry knowledge and practice.

However, they offer little or no guidance to duty-holders as to how to meet their obligations and are open to interpretation and ambiguity. It may, for example, require the verdict of a jury to determine whether or not the safety measures a duty-holder took reduced a particular risk "so far as was reasonably practicable".

For that reason, principle-based duties often have to be supplemented or supported by more detailed and prescriptive regulation and guidance. They are also often supported through process duties.

29 See, generally, the extremely helpful discussions in R Johnstone, E Bluff and A Clayton, *Work Health and Safety: Law and Policy* (Law Book Co, 3rd ed, 2012), chapter 3; and the Maxwell Review, chapter 9.
30 OHS Act, s 21(1).
31 Storage and Handling Regulations, r 35.

Prescriptive duties

Prescriptive duties (or "specification standards") require duty-holders to adopt specific measures to control risk. For example, under the OHS Regulations an employer must ensure that a power tool is not used to cut, grind or polish engineered stone, unless the tool is used with "an integrated water delivery system that supplies a continuous feed of water", "a commercially available on tool extraction system connected to a Dust Class H Vacuum" or (if neither of these is reasonably practicable) "local exhaust ventilation".[32]

Prescriptive duties have the advantage of telling a duty-holder exactly what they must do in order to comply and enable the regulator to easily check whether a duty has been breached. However, they also have many disadvantages:

- a vast amount of detailed legislation may be needed to cover all possible hazards and risks;
- the standards may become out-of-date or obsolete; and
- prescriptive duties can stifle innovation and improvement, and do not allow for (or require) an evolving best-practice.

For this reason, Lord Robens' Report recommended a move away from prescriptive duties, and they have now become relatively rare in occupational health and safety legislation.

Performance-based duties

Performance-based duties set a standard or target which the duty-holder must achieve, but do not tell the duty-holder how to achieve it. Examples of such duties include specifying minimum separation distances between fireworks and members of the public;[33] or a duty to not exceed an exposure standard for a hazardous substance.[34]

Performance-based duties:

- can allow for changes in technology and work processes;
- do not stifle innovation; and
- leave it to the duty-holder to work out the most cost-effective way of achieving the standard.

However, once the standard is achieved, performance standards do not require or even necessarily encourage the duty-holder to make further safety improvements.

32 OHS Regulations, r 319C.
33 Explosives Regulations, r 155.
34 OHS Regulations, r 165.

Process duties

Process duties require duty-holders to follow particular processes to manage and control risk. Duties to identify hazards, carry out risk assessments or review risk control measures are all process duties. Such duties are common in the OHS Regulations and are also found in the Storage and Handling Regulations.[35]

Process duties proceed on the basis that a duty-holder who follows the mandated process is more likely to meet their obligations under a general duty.

Documentation (or information) duties

Documentation (or information) duties require duty-holders to record or provide specified information, including duties to:

- record risk assessments;
- maintain registers or manifests of dangerous goods;[36] and
- notify regulators of certain events, such as exceeding a threshold quantity of dangerous chemicals,[37] or the occurrence of a notifiable incident.[38]

Documentation duties can assist the regulator to check whether the duty-holder has complied with their obligations and can alert the regulator to changes in the level of risk.

Both process duties and documentation duties can represent a regulatory burden and – as a general proposition – should only be required if that burden is likely to result in clear improvements in risk management.

One of the main questions being considered by this Review is what the best combination of duties is for the regulation of dangerous goods, given the complexity of dangerous chemicals, and the widely varying characteristics of the different types of duty-holders (see Box 4).

35 See, for example, Storage and Handling Regulations, r 26.
36 See, for example, Storage and Handling Regulations, r 45.
37 See, for example, Storage and Handling Regulations, r 66.
38 OHS Act, ss 37–38; and DG Act, s 32.

A new general duty for dangerous goods?

The DG Act does not contain a broad, general principle-based duty such as those found in comparable legislation, including the OHS Act and the EP Act 2017. Section 31 of the DG Act is the closest to a general principle-based duty:

31 Persons required to take precautions

(1) An occupier or person in charge of premises where dangerous goods are manufactured, stored or sold, an owner or person in charge of a vehicle or boat used to transport dangerous goods and a person who uses, handles or transfers dangerous goods—

(a) must take all reasonable precautions for the prevention of—

(i) tampering, theft or unauthorized access;

(ii) any fire or explosion;

(iii) any leakage; or

(iv) any damage to property or danger to the public incurred by an accident—

involving dangerous goods in the ownership, control or possession of that person; and

(b) must not abandon, discard or otherwise neglect to dispose safely of any dangerous goods in the ownership, control or possession of that person.

Section 31 can be contrasted with the new general environmental duty in section 25 of the EP Act 2017, which will provide (when it comes into force) that "A person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable". Unlike section 25 of the EP Act, section 31 of the DG Act:

- does not apply to every person who engages in an activity involving dangerous goods, but only to specific categories of such persons (namely occupiers or persons in charge of premises where such goods are manufactured, stored or sold; owners or persons in charge of a vehicle or boat used to transport dangerous goods; and persons who use, handle or transfer dangerous goods);
- does not apply to every risk associated with dangerous goods, but only to the risks that are listed; and
- applies a different principle from comparable legislation, by requiring the taking of "all reasonable precautions", rather than the minimisation of risk so far as is reasonably practicable.

A more modern risk-based approach to dangerous goods regulation might mirror the approach taken in the OHS Act and EP Act by placing a broad, general principle-based duty at its core. Such a duty could, for example, require any person who is engaging in any activity involving dangerous goods to minimise, so far as is reasonably practicable, the risks of harm to people or property arising from that activity.

A general principle-based duty regulating dangerous goods would also pick up some duty-holders and activities not covered by the general duties in the OHS Act; and might help to focus duty-holders' attention on the risks associated with dangerous goods and the safety measures needed to control those risks.

Question 5
Should dangerous goods legislation include a broad, general principle-based duty to minimise risks of harm to persons and property?

Principle-based duties tend to be preferred by duty-holders (ie the "willing and able") who have the resources and expertise to safely manage risk themselves. However, such duties offer very little guidance to those duty-holders who are less able to safely manage risks themselves (such as the "well-intentioned"). This can be particularly problematic with a subject matter as complex as dangerous chemicals where safe management often requires a high level of technical knowledge and expertise.

Any general principle-based duty will need to be supported by more detailed guidance. This guidance could take the form of detailed, prescriptive regulation, or (as I discuss below) guidance material such as codes of practice and compliance codes.

The role of regulations

The safe management of dangerous goods often requires a higher level of resources and technical knowledge than many duty-holders possess.

Regulations can be used to provide direction to such duty-holders about how to meet general principle-based duties. This direction can take the form of prescriptive duties, performance-based duties, process duties and/or documentation duties.

Prescriptive duties relieve the duty-holder of the need to identify risks and to identify the safety measures that would control those risks; performance-based duties relieve the duty-holder of the need to identify the risk, but leave it to them how to control it; and process duties require the duty-holder to engage in a process that is likely to support the identification of both risks and the safety measures needed to control them.

In addition to both general and narrow principle-based duties, the Storage and Handling Regulations contain a mixture of these more detailed and prescriptive duties, including:

- prescriptive duties in relation to matters such as marking, labelling and placarding;
- process duties in relation to matters such as hazard identification and the review of risk control measures; and
- documentation or information duties in relation to matters such as safety data sheets, manifests and registers of dangerous goods, and notification when quantities of dangerous goods exceed specified thresholds.

The Explosives Regulations, HCDG Regulations and Transport Regulations all contain comparable combinations of duties.

Due to the guidance that all of these kinds of duties provide to duty-holders, much of the preliminary stakeholder feedback supports a continued role for detailed and prescriptive duties in the regulation of dangerous goods.

As noted above, there is a problem in that these detailed duties may be seen as "minimum compliance" standards. This can stifle the development of innovative and more cost-effective ways of managing risk, and continuously evolving best-practice. However, there are at least two ways of reducing this problem.

The first is to allow a duty-holder to "opt-out" of the detailed regulatory regime, and instead develop their own safety systems and processes, as long as those systems will provide the same level of safety as the prescriptive regime.

This type of mechanism is already in place in the Storage and Handling Regulations. Regulation 9 allows WorkSafe to exempt a duty-holder from any or all of the regulations, if and only if WorkSafe is satisfied that the person is "capable of achieving a level of health and safety of persons and safety of property that is at least equivalent to the level that would be achieved if these Regulations were complied with". However, the process of assessing applications for such exemptions can place a heavy workload on the regulator.

A second way of avoiding the problem is to provide the detailed guidance through non-mandatory codes rather than mandatory regulation. We consider the roles of codes in dangerous goods regulation below.

The role of codes

Non-mandatory codes of practice and compliance codes can support regulatory regimes. Both types of code provide practical guidance to duty-holders for complying with their obligations (although there are differences in their legal effect).[39]

Codes provide that guidance by explaining legal obligations and how to comply with them in plain English; by supplementing those verbal explanations with visual figures and diagrams; by providing examples; and by suggesting specific measures that can be taken to manage risk.

Although codes can be more easily expressed in plain English than can legislation, the process of tracking regulations through to a code, and then from the code to any further material referred to (such as an Australian Standard), can be complicated.

Codes can also be more easily updated and modernised to take account of changes in technology and emerging issues than regulations can. However, because they do not have the legal force of an Act or regulations, they can be more easily overlooked or ignored by duty-holders. It is also more difficult for a regulator to enforce compliance with a code, than with a regulation.

Guidance as an alternative to a code

An alternative option to a formal code is to issue guidance to accompany the legislation. WorkSafe has issued a significant amount of guidance material in relation to dangerous chemicals, including *Your health and safety guide to: Hazardous substances* (2008),[40] and *Managing Chemicals in the Workplace: A step by step guid*e (2017).[41]

Regulators often issue guidance to help duty-holders understand and meet their obligations. The guidance forms part of the "state of knowledge", which is one of the factors that must be taken into account in determining what is "reasonably practicable". Where guidance has been issued it forms part of "what the person concerned knows, or *ought reasonably to know*, about the hazard or risk and any ways of eliminating or reducing the hazard or risk".[42]

However, following the guidance does not guarantee that a duty-holder has met their legal obligations. Guidance material, thus, has even less legal force than formal codes.

39 "Codes of practice", such as the *Code of practice for the storage and handling of dangerous goods*, can be issued under s 56 of the DG Act. A duty-holder is free not to follow a code of practice, as long as they implement some alternative method of complying with the DG Act. "Compliance codes" are issued under s 149 of the OHS Act. With a compliance code, duty-holders are still free to find their own way of complying with their duties; but duty-holders who follow the compliance code will be taken to have complied with the relevant provisions of the Act.

40 See WorkSafe, *Hazardous Substances: A health and safety guide* (Online Guidance, February 2008) <https://www.worksafe.vic.gov.au/resources/hazardous-substances-health-and-safety-guide>.

41 See WorkSafe, *Managing chemicals in the workplace: A step-by-step guide* (Online Guidance, June 2017) <https://www.worksafe.vic.gov.au/resources/managing-chemicals-workplace-step-step-guide>.

42 OHS Act, s 20(2)(c); and Storage and Handling Regulations, r 5 (emphasis added).

Question 6
Broadly speaking, do the Storage and Handling, Explosives, HCDG and Transport Regulations impose the right combination of the different kinds of duties?

Question 7
What role should codes and guidance material play in supporting the DG Act and associated regulations?

Question 8
Do you have any suggestions about how the codes and guidance material issued by WorkSafe could be improved?

Permissioning frameworks

A risk-based approach to regulation should also aim to ensure that operators experience a level of regulation and enforcement that is proportionate to the risk profile of their activities. Risk-based regulation should impose greater controls where there are greater risks.

The Review is considering whether the DG Act's focus on risk can be enhanced through an increased use of permissioning – or licensing – frameworks. Permissioning frameworks require a person to obtain a licence, permit or registration, before they can engage in an activity – for example, a person is not allowed to drive a car unless they have a driver's licence.

The DG Act and its associated regulations already impose licensing requirements in a number of areas. The Explosives Regulations, Transport Regulations and HCDG Regulations all include licensing frameworks; and the DG Act provides that a person commits an offence if they carry out an action in respect of which a licence is required without holding the relevant licence.[43] WorkSafe is also empowered to (for example):

- Require a person applying for certain licences to carry out such investigations (including hazard analysis and risk evaluation studies) as WorkSafe thinks fit, and to a standard acceptable to WorkSafe;[44] and
- Insert any conditions, limitations or restrictions in the licence that WorkSafe thinks appropriate to ensure the safety of persons and property or to ensure compliance with the Act.[45]

43 DG Act, s 21(2).
44 DG Act, s 21(3).
45 DG Act, s 23.


CORROSIVE
3 M
Danger

Although there is no licensing framework under the Storage and Handling Regulations, an occupier of premises where dangerous goods that exceed the "manifest quantity" are stored and handled must notify WorkSafe of that fact,[46] and is subject to additional obligations under the regulations (see Box 5).[47]

Previous dangerous goods regulation (in effect until 2000) did include a licensing framework for occupiers of premises storing dangerous goods. From 2000 onwards, that licensing framework was abolished.

A licensing scheme could have the following benefits:

- Providing an opportunity to ensure full compliance with the regulations prior to a licence being granted.
- Ensuring that certain conditions are met before a licence is granted, for example, that high risk facilities storing and handling dangerous goods are fit for purpose and are located in areas that are sufficiently separated from sensitive land uses.
- Requiring that an operator is a "fit and proper person": if they present a relevant concern to the community, they do not get a licence.
- Imposing additional duties on high risk sites, in the same way that prescribed mines have additional duties under the OHS Regulations compared to other mines (for example, requiring the establishment and implementation of a safety management system and the conduct of a safety assessment).[48]
- Allowing WorkSafe to require occupiers to carry out specific hazard and risk studies as a pre-condition of the licence.[49]
- The threat of licence revocation or suspension might encourage licence-holders to increase their ongoing compliance level.

46 Storage and Handling Regulations, r 66.
47 See, for example, Storage and Handling Regulations, r 55.
48 OHS Regulations, pt 5 div 1 sub-div 3.
49 WorkSafe is already empowered to ask for this before giving a licence (DG Act, s 21(3)), but this only applies if there an obligation to obtain a licence.

However, there are drawbacks and limitations to the introduction of a new licensing framework:

- A licensing scheme could impose a significant regulatory burden both on those who are required to apply for a licence, and WorkSafe which would be required to assess those applications, and to administer the licensing scheme.
- It is unlikely to have very much impact on illegal operators (the "deliberately evasive" duty-holder archetype).

The Review is considering whether a licence requirement should be introduced for dangerous goods sites that are high risk, but do not meet the threshold to be characterised as an MHF.

The Review is also considering what the appropriate threshold might be to trigger such a license requirement. This is further discussed in the section dealing with Term of Reference E.

Question 9

Should a permissioning framework be introduced for higher-risk sites and/or activities involving dangerous goods?

Box 5 Larger quantities and MHFs

When an operator's storage exceeds the manifest quantity (see Box 7) listed in the Storage and Handling Regulations, they must notify WorkSafe and meet the larger quantity duties, which require the duty-holder to:

- develop, implement and maintain a written emergency management plan
- obtain advice from emergency services authorities on emergency management plans and fire protection systems
- display outer warning placards
- prepare and maintain a manifest of dangerous goods stored at the premises.

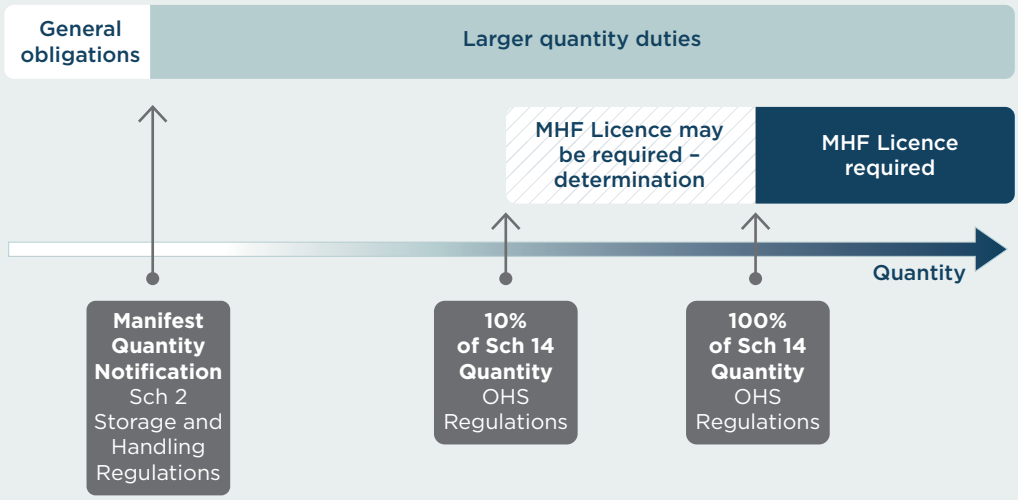
In Victoria, these larger quantity duties apply to around 4,000 sites.

Under the OHS Regulations, operators must notify WorkSafe if they store over 10% of the threshold quantity (see Box 7) listed in the OHS Regulations.

WorkSafe then determines whether the operation is an MHF (under the OHS Regulations). If so, the operator must:

- submit a safety case to WorkSafe for assessment
- achieve full safety compliance, before attaining their licence to operate
- also comply with the dangerous goods legislation (unless exempted).

If the operator reaches 100% of the threshold quantity, there is no need for the determination and the facility is deemed an MHF.



Incident notification

Requiring duty holders to notify regulators when an incident occurs can support risk-based and preventative approaches to regulation. Even a harm-free incident strongly suggests that risks are not being well-managed. Incident notification alerts WorkSafe to duty-holders and activities that may require attention, so as to reduce further risk.

The DG Act has very limited notification requirements: a licensee, prescribed person, or master of a ship is required to report any fire, explosion, spillage, leakage or escape involving dangerous goods to the nearest fire authority or to a police station (but not to WorkSafe).[50]

However, many duty-holders under the DG Act will also be duty-holders under the OHS Act, which imposes somewhat broader notification requirements. The OHS Act requires an employer or self-employed person to notify WorkSafe immediately after becoming aware that a notifiable incident has occurred at a workplace under their management or control.[51] Notifiable incidents include those that result in death or in a person requiring medical treatment within 48 hours of exposure to a substance, or that expose a person in the immediate vicinity to an immediate risk to the person's health or safety through the escape, spillage or leakage of any substance including dangerous goods (within the meaning of the DG Act).[52]

However, a duty-holder is not required to notify WorkSafe of an incident involving the escape, spillage or leakage of dangerous goods if no-one happened to be in the immediate vicinity at the time, even if the incident had the potential to cause harm.

Queensland's mining and quarrying legislation avoids this limitation by requiring notification of any "high potential incident",[53] which is defined as "an event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person".[54]

The Review is considering whether the incident notification obligations in relation to dangerous goods should be similarly broad.

Question 10
What kinds of incidents involving dangerous goods should duty-holders be required to report to WorkSafe?

50 DG Act, s 32.
51 OHS Act, s 38.
52 OHS Act, s 37.
53 *Mining and Quarrying Safety and Health Act 1999* (Qld), s 195.
54 *Mining and Quarrying Safety and Health Act 1999* (Qld), s 18.

Term of Reference C: Deterring non-compliance and illegal activity

The third Term of Reference requires the Review to "consider the efficacy of the DG Act and associated regulations in deterring non-compliance and illegal activity in relation to the management of dangerous goods".

Although non-compliance issues can arise with several of the identified duty-holder archetypes, they are most obvious and acute in relation to the "deliberately evasive" archetype. The significant increase in illegal activity in the waste market for dangerous chemicals in Victoria now represents one of the greatest sources of risk to persons and property.

In order to reduce the risks associated with dangerous goods sites, including illegal sites, WorkSafe needs to have:

- accurate and up to date information or intelligence about where dangerous goods are being stored, used or disposed of;
- sufficient and appropriate powers to enter and intervene in those sites; and
- the ability to deter non-compliance by bringing effective enforcement proceedings.

Initial stakeholder consultation suggests that:

- there is room for improvement in each of these aspects of the dangerous goods legislation; and
- WorkSafe's compliance and enforcement action has at times been adversely affected by resourcing limitations, and by a lack of interagency coordination and information sharing.

Stakeholder consultation also suggests that there is strong support among legitimate operators for effective enforcement action against non-compliant operators. This is because cost undercutting by non-compliant operators affects the viability of compliant operators.

Question 11
How could the dangerous goods legislation be made more effective in deterring non-compliance and illegal activity in relation to the management of dangerous goods?

Intelligence gathering

Stakeholders have suggested that illegal activity in the waste market was able to grow undetected partly because regulators failed to actively monitor the market and to share information.

Identifying dangerous goods sites

WorkSafe is obviously aware of dangerous goods sites where the operators are subject to licensing requirements (such as MHFs) or comply with notification requirements in relation to stored quantities.

However, WorkSafe may not be aware of those dangerous goods sites where the operator fails to comply with notification requirements (either through evasion or ignorance) or is not subject to any notification requirements. For example, it was only after the 2018 and 2019 warehouse fires that WorkSafe became aware of the 13 other illegal chemical storage sites.

There may also be many small-scale operators who are unaware that they are subject to dangerous goods regulation (the "uninformed" duty-holder archetype). Their small scale and geographic spread may make detection difficult.

The Review has been informed that in the past WorkSafe inspectors would sometimes carry out street by street door knocks in industrial areas where such operators were likely to be located; but that this kind of compliance action is very resource intensive. Some stakeholders have also suggested that relying on desktop audits as an alternative to site inspections is an unreliable method of monitoring compliance.

Question 12
What methods could WorkSafe use to identify unknown dangerous goods sites, and do those methods require additional legal powers?

Using the notifications scheme

The Storage and Handling Regulations require occupiers of premises that store and handle dangerous goods above the "Manifest Quantity" to notify WorkSafe of specified information (see Box 5). This includes the nature of the activities involving dangerous goods and the maximum quantities stored and handled. Occupiers are required to update their notification every five years or at longer intervals as specified by WorkSafe.[55]

Some stakeholders have observed that the risk profile of a site may change drastically in the five-year period between notifications.

The Review is considering whether the notification requirements provide WorkSafe with sufficient information to effectively monitor dangerous goods sites.

Question 13
Are the triggers for notification appropriate?

Question 14
What types of information should be notified?

55 Storage and Handling Regulations, r 66.

Market monitoring and tracking

As dangerous goods progress through their lifecycle, market indicators might suggest the possible presence of illegal activity. For example, a sudden or sharp drop in the cost of disposing of chemical waste may indicate the presence of illegal operators, who are avoiding compliance costs. That price undercutting may lead legitimate operators to exit the market – another indicator of illegal activity.

The Review has been informed that both of these had been occurring in Victoria in the years leading up to the 2018 and 2019 fires, but that the facts were either unknown to regulators, or their significance was overlooked and uninvestigated.

The Review is considering whether, and how, the DG framework can be enhanced to enable greater market oversight and monitoring.

Question 15

What methods could WorkSafe use to monitor the dangerous goods market, and do those methods require additional legal powers?

Interagency coordination

Information sharing

Stakeholders have also suggested that government agencies (including municipal councils) do not always share relevant information with each other, and that this can hamper the detection of illegal or unknown dangerous goods activity.

WorkSafe's power to share the information in its possession is regulated by the DG Act. Section 10D prohibits WorkSafe officers and employees from disclosing information acquired in the course of their employment, except to the extent necessary to perform their official duties, or to perform a function or exercise a power on behalf of WorkSafe. However, section 10E allows them to disclose information to a "corresponding Authority".[56] WorkSafe is also required to provide certain, specific information to FRV and to municipal councils.[57]

WorkSafe thus lacks a clear legislative mandate to share information and intelligence in its possession with other relevant government agencies. No doubt those agencies are also restricted in their capacity to share their information with WorkSafe.

56 A corresponding authority is a Government department or statutory authority of the Commonwealth Government, or the Government of another State or of a Territory, that is responsible for administering a law corresponding to the OHS Act, the DG Act or the *Equipment (Public Safety) Act 1994.*

57 DG Act, ss 28–29.

Putting the legislative framework to one side, a lack of clear protocols (such as memoranda of understanding between the different agencies) may also impede sharing of information. In the absence of clear protocols, the sharing of information may depend on pre-existing working relationships between individual employees of different agencies.

The Review is considering whether the timely and effective sharing of information between government agencies could be improved through a clearer and more permissive legislative framework.

Question 16
To what extent is the detection of unknown or illegal dangerous goods activity hampered by restrictions on information sharing by government agencies?

Question 17
What kind of information sharing should be permitted?

Roles and responsibilities

The Review will also consider other ways to support interagency cooperation. Some stakeholders have observed that the agencies involved in the regulation of dangerous goods, including WorkSafe, the EPA, FRV and local councils, could better coordinate their efforts where there is overlapping jurisdiction.

Some stakeholders have suggested that interagency coordination issues were evident in the context of major dangerous goods incidents such as the West Footscray and Campbellfield fires. The issues they have identified extend beyond communication between agencies, to decision making about the deployment of the variously available agency powers, and to the resolution of which agencies are best placed to take lead and coordination roles.

The Review has heard that agencies have taken steps to improve coordination at an operational level within the constraints of existing legislation. The Review is considering whether further improvements may be supported through changes to the legislative framework, or through a clearer delineation of the roles and responsibilities of different agencies.

Question 18
What are the obstacles to the effective management of dangerous goods where the functions and powers of multiple agencies intersect and overlap?

Question 19
How could interagency coordination in relation to dangerous goods be improved?

Question 20
Should powers be delegated between agencies to improve coordination?

Investigation and inspection powers

WorkSafe needs sufficient and appropriate powers to effectively intervene and respond to instances of non-compliance, especially those driven by archetype five (the "deliberately evasive"), where criminal activity can lead to major incidents.

Entry powers

An inspector appointed under the DG Act is authorised to enter any place at which the inspector reasonably believes there are dangerous goods, or there is any container, equipment, fittings, piping, appliance or other thing that is being, has been, or is likely to be, used for, or in connection with, the manufacture, supply, transfer, storage, transport, sale or use of dangerous goods, or for the import into Victoria of explosives.[58]

The exercise of this power gives an inspector certain other investigative powers, including the power to seize things,[59] and the power to require the production of documents and the giving of information.[60] These powers are available to inspectors appointed under the OHS Act.[61]

Although the powers of entry are broad, the requirement that an inspector can only enter a place if they reasonably believe that there are dangerous goods there (or containers and equipment etc. relating to dangerous goods), means that a (reasonably held) suspicion is not sufficient for entry.

The requirement is likely to prevent an inspector from entering until a proper basis for such a belief can be established. If there is no-one at the place who is willing to confirm the presence of dangerous goods (or containers or equipment etc.), and the inspector is unable to see inside, those grounds may be difficult to establish.

Given the risk posed by dangerous goods, and the fact that the timeliness of an intervention may be critical to its success, the threshold for the exercise of these powers may be too high.

The powers of entry of an inspector are also limited in regards to residential premises. An inspector cannot enter any place used solely for residential purposes without the consent of the occupier or a search warrant.[62]

Stakeholders have suggested that this impedes inspectors from taking action where dangerous goods, such as fireworks, are stored on residential premises.

Question 21
Under what circumstances should a dangerous goods inspector be permitted to enter a place where dangerous goods might be stored?

Question 22
Should there be a power for inspectors to enter residential premises? What should the threshold for such a power be?

58 DG Act, s 13A. A dangerous goods inspector is also authorised to detail, inspect and examine any vehicle, ship or boat used, or that the inspector believes on reasonable grounds is being, or is likely to be, used for the transport of dangerous goods.
59 DG Act, s 13B.
60 DG Act, s 13C.
61 OHS Act, ss 99–100.
62 DG Act, s 16.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Notices and directions

Inspectors appointed under the DG Act have many of the same powers as inspectors appointed under the OHS Act, including powers to:

- issue non-disturbance notices, improvement notices and prohibition notices;
- give directions due to an immediate risk to safety; and
- require assistance from certain persons.[63]

Inspectors under the DG Act have the additional power to issue directions concerning damaged or spilled dangerous goods.[64] This power arises if an inspector reasonably believes that a danger to any person or property exists, or may arise.[65]

If this threshold is met, then the inspector is empowered to direct the owner, or the person in possession or control, or who last had possession or control, of the dangerous goods or container to either render harmless the dangerous goods or container; or dispose of, or remove, the spilled dangerous goods and render harmless anything contaminated by them; and to do so by safe means within a specified time.

An inspector may take such action themselves if they believe on reasonable grounds:

- that the person to whom they have issued a direction to do so has failed to comply with the direction or is likely to use unsafe means; or
- that such a direction cannot be served on the owner or other such person; or
- that such a direction cannot be served without a delay which may increase the danger; or
- that there is an immediate danger to any person or property.

In cases where the inspector takes such action, WorkSafe may recover the costs of the action from the occupier of the place.

Although these powers appear broad, the threshold to their exercise can be hard to meet in some circumstances. For example, following the West Footscray and Campbellfield fires an additional 13 sites were found to be stockpiling chemical waste and other waste materials. Despite the obvious risks arising from these sites, there were obstacles to the exercise of these powers, including:

- An inspector had to have reasonable grounds for believing that there were damaged or spilled dangerous goods, or a damaged dangerous goods container, inside the premises (the fact that there was a large, illegal stockpile of such chemicals is not, in itself, enough).
- These grounds had to be established at a time when it was likely to have been unsafe to actually enter those premises.

63 DG Act, ss 17B, 17C, 17D, 18A and 19; OHS Act ss 110–112, 120–121.
64 DG Act, s 17K.
65 Or if the dangerous goods are in a container that is dislodged from a vehicle, boat or ship.

- There are issues about what constitutes an "immediate danger" and what matters an inspector must consider in determining whether there is one.
- The absence of any explicit power for WorkSafe to promptly intervene where a duty-holder is known, and can be served with a direction, but does not have the means of complying with the direction (and there is no "immediate danger").
- The absence of a power to seek an injunction to compel compliance with a direction that has not been complied with.

When amendments come into force,[66] the EPA Act 2017 will provide broader inspector powers and increased scope for issuing notices. Some examples include:

- Part 9.3 – provides for powers of entry and inspection of authorised officers and persons assisting authorised officers. Notably, section 246(c) will allow an inspector to enter and inspect a place or premises to determine if there is a risk of harm to human health or the environment. Section 255 will also allow an inspector to serve an information gathering notice.
- Part 10.2 – section 272 will allow an inspector to issue a prohibition notice if the inspector reasonably believes that an activity is likely to cause harm (without there needing to be an immediate risk of such harm).
- Part 10.3 – will enable the EPA to issue notices to investigate and environmental action notices in specified circumstances.
- Part 10.4 – Site Management Orders, will allow the EPA to establish long-term controls to ensure the safe ongoing management of sites that would otherwise pose ongoing risks to the community and environment.
- Part 10.9 – will enable the EPA to exercise clean up powers when it believes there is immediate or serious risk of harm (without all the pre-conditions that apply to the exercise of such powers under the DG Act).

The Review is interested in whether broader powers such as those introduced by the EPAA 2018 are necessary to enable WorkSafe to intervene in an effective and timely way at non-compliant sites.

Question 23
Does WorkSafe need broader powers to intervene at non-compliant sites?

Question 24
If so, what powers does it need, and what should be the threshold to the exercise of those powers?

66 Amendments made by the EPAA 2018. These amendments come into effect on 1 July 2021.

Redirection of corporate obligations

If one of the notices described above is issued to a body corporate that is being wound-up there is little or nothing WorkSafe can do to enforce the notice. This is the case even if the body corporate is a subsidiary of another body corporate that is continuing to trade; WorkSafe cannot, for example, compel the controlling body corporate to comply with a notice issued to its subsidiary, or redirect the notice to the controlling entity.

By contrast, Part 10.7 of the EP Act 2017 will allow the EPA to redirect an environmental action notice or site management order to the controlling entity if the subsidiary has been wound up or has failed to comply with the notice or order. The EPA will also be able to redirect obligations to the individual officers of the body corporate; and to redirect obligations to a related or associated entity in case of a transfer of land.

The Review is considering whether the dangerous goods legislation should give similar powers to WorkSafe in respect of notices under the DG Act.

Question 25
Should WorkSafe have the power to redirect body corporate obligations to their officers and controlling entities?

Cost recovery powers and financial assurances

As noted above, section 17K of the DG Act allows WorkSafe to recover its costs where it has taken action to destroy, render harmless or dispose of dangerous goods. However, the cost of cleaning up a dangerous goods site can be enormous,[67] and those costs will only be recoverable if the occupier of the site has sufficient assets to cover them.

Part 10.9 of the EP Act 2017 will provide the EPA with much broader cost recovery powers including powers to recover costs in relation to clean-up, the issuing of notices, and other monitoring and enforcement action. Those costs can be recovered from a range of people (not only the person who was occupying the premises at the time), including:

- the person who the EPA reasonably believes caused the circumstances that required action to be taken;
- the owner or occupier of the place at which the relevant circumstances exist;
- a person who was the owner or occupier at the time the relevant circumstances first came into being; and
- a person who had been issued with a notice in relation to those circumstances.

The EPA will also have the power to require a person undertaking an activity to provide financial assurances for the costs and expense of remediation or clean-up activities. Financial assurances can be required as a condition of a permission (or licence), or can be included in a site management order, or environmental action notice.

67 For example, in the 2018–19 financial year WorkSafe incurred $56 million of costs in cleaning-up the 13 non-compliant sites referred to above: WorkSafe Victoria, *Annual Report 2018–19* (October 2019) p87.

There are no financial assurance provisions under the DG Act; nor are dangerous goods duty-holders (other than the owners of vehicles used to transport dangerous goods)[68] even required to hold adequate insurance in relation to the risks associated with their activities.

The Review is interested in whether increased cost recovery powers, and the power to require the provision of financial assurances, will improve WorkSafe's capacity to recoup losses from high cost interventions and place greater financial accountability on non-compliant operators.

Question 26
What costs should WorkSafe be able to recover, and from whom?

Question 27
Should WorkSafe be empowered to require entities engaging in dangerous goods activities to provide financial assurances, and if so, how should this be done?

68 Transport Regulations, pt 20.

Responsibility for disposing of dangerous goods waste

After they have been used, dangerous goods must be disposed of, recycled or reprocessed, as must any waste generated by their use. Many dangerous goods operators dispose of their waste by paying someone else to take it away.

There are no requirements under the DG framework for waste producers to undertake any due diligence or to select an accredited provider. They can choose their waste provider entirely on price, and there are no legal incentives or requirements for them to take steps to ensure that the waste provider disposes of their waste safely.

As is now apparent, the market for this service in Victoria had been compromised by non-compliant operators, who were stockpiling the chemicals in unsafe warehouses, rather than destroying, recycling or reprocessing them safely.

Section 31(1)(b) of the DG Act makes it an offence for a person to "abandon, discard or otherwise neglect to dispose safely of any dangerous goods in the ownership, control or possession of the person". However, it would be very difficult to prove that a dangerous goods operator committed this offence by paying someone to take their waste away, even if the price they paid for this service ought to have raised some suspicion.

The EP Act 2017 will place duties on producers of industrial waste to dispose of it at a lawful place.[69] Similar duties already exist under the OHS Regulations in relation to asbestos, with asbestos removalists under a duty to dispose of asbestos waste at an EPA licensed site.[70]

The Review is considering whether dangerous goods operators should only be permitted to dispose of their waste to an accredited waste provider (which would require a permissioning framework for waste providers); or should be under some other obligation to exercise due diligence when selecting a waste provider to ensure that their dangerous goods waste will be safely disposed of.

Question 28
Should dangerous goods operators only be permitted to dispose of their waste to accredited waste providers?

Question 29
Alternatively, should dangerous goods operators have a duty to undertake due diligence in relation to the disposal of their waste?

Enforcement proceedings

While the reduction of risk and prevention of harm must be the primary aim of any risk-based legislation, the legislation also needs to deter non-compliance by giving WorkSafe the ability to bring effective enforcement proceedings against those who engage in illegal activity. The Review is considering a number of ways to enhance WorkSafe's ability to bring effective enforcement proceedings and thereby deter non-compliance, including:

- an enhanced ability to bring enforcement proceedings against officers of body corporates that breach the law;
- the ability to bring civil penalty proceedings as an alternative to criminal prosecution;
- the ability to issue infringement notices; and
- increased penalties.

69 EP Act 2017, Part 6.4.
70 OHS Regulations, Part 4.4.

Officer accountability

Prosecuting a body corporate with limited assets is often ineffective because the company may simply go into liquidation and then "phoenix" as a new entity. In such cases, it may be much more effective to prosecute the individual officers of the entity. The knowledge that they could be prosecuted is also likely to act as a powerful incentive for officers to ensure that their body corporates comply with the law.

Currently under the DG Act, an officer of a body corporate may be guilty of an offence committed by a body corporate where it is proved that the offence was committed with the consent or connivance of, or attributable to any willful neglect of the officer of the body corporate.[71] The fault element that must be satisfied is extremely high: the prosecution has to prove beyond reasonable doubt that an officer consented to or connived in the conduct, or acted with willful neglect.

By contrast, under the OHS Act an officer of a body corporate is guilty of an offence if the body corporate contravenes a provision of the OHS Act and the contravention is attributable to the officer not taking reasonable care.[72] This fault element is significantly lower than that required under the DG Act.

The fault element for holding an officer accountable for an offence of a body corporate is even lower under the amendments introduced by the EPAA 2018: if a body corporate commits an offence, then an officer of the body corporate also commits an offence if they failed to exercise due diligence to prevent the commission of the offence.[73] There is no requirement that the body corporate's offence be attributable to the officer's failure to exercise due diligence.

Furthermore, with some offences, if a body corporate commits an offence, an officer of the body corporate is deemed to have committed the offence as well, but can rely on a *defence* of due diligence. That is, the officer must prove (on the balance of probabilities) that they exercised due diligence to prevent the commission of the offence by the body corporate.

The Model WHS Laws also rely on a due diligence test for officer liability, but take the approach further. Instead of treating officer liability as an extension of corporate liability, the Model WHS Laws directly impose a due diligence duty on officers of body corporates.

This duty provides that "If a person conducting a business or undertaking has a duty or obligation under this Act, an officer of the person conducting the business or undertaking must exercise due diligence to ensure that the person conducting the business or undertaking complies with that duty or obligation". The Model WHS Laws go on to provide what reasonable steps are required by the taking of due diligence.

71 DG Act, s 46.

72 OHS Act, s 144. S 144(3) sets out the considerations that must be taken into account when considering if the officer is guilty of an offence, including what the officer knew about the matter, their decision-making ability in the corporation and whether the contravention was attributable to any other person.

73 EP Act 2017, Part 11.8.

During preliminary stakeholder consultation, some stakeholders supported the shift to a due diligence duty. This was on the basis that it provides much clearer guidance to officers about the positive steps they must take in order to avoid liability.

Question 30
Should officer liability for dangerous goods offences be based on a due diligence test or duty?

Civil penalties

The seriousness of dangerous goods offences and the importance of prosecuting them is beyond question. However, one of the main obstacles to a successful criminal prosecution is the very high standard of proof: beyond reasonable doubt. The difficulty of reaching this standard of proof is a common reason why enforcement proceedings are not initiated (even in cases where guilt seems probable); and a reason for why they are often unsuccessful (again, including in cases where the evidence suggests the accused is more likely than not to have been guilty). One of the effects of the high standard of proof in criminal prosecutions is that many guilty offenders go unpunished.

Introducing a civil penalty regime, under which the civil standard of proof applies, may avoid this problem. This much lower standard of proof only requires proof on the balance of probabilities, or more likely than not. However, the fines under a civil penalty regime can be as significant as under criminal prosecution (although the deterrent effect may be less because a civil penalty order does not carry the stigma of a criminal conviction).

Amendments to the EP Act 2017 will introduce a civil penalty regime for environmental offences.[74] This regime will operate alongside, not instead of, the criminal regime: that is, with some offences the EPA will have the choice of bringing a criminal prosecution or seeking a civil penalty order. There are also civil penalties provisions under the Model WHS Laws.

The Review is considering whether WorkSafe should have the option of bringing a civil penalty proceeding in relation to dangerous goods contraventions, as an alternative to a criminal prosecution.

This Review is not considering whether the current criminal prosecution regime for dangerous goods contraventions should be replaced by a civil penalty regime. Dangerous goods offences should continue to be criminally prosecuted when the evidence permits.

Question 31
Should a civil penalty regime be introduced into the dangerous goods legislation, so that WorkSafe has the option of bringing a civil penalty proceeding in relation to a dangerous goods contravention, as an alternative to a criminal prosecution?

74 EP Act 2017, Part 11.5.

Infringements

Infringement notice schemes allow regulators to bypass the complexity of legal proceedings for minor contraventions of the law. WorkSafe is currently implementing an infringements scheme for some offences under the OHS Act. However, while the DG Act allows an infringements scheme to be introduced through regulations,[75] no offences have yet been designated as infringement offences.

An infringements scheme would allow inspectors to issue small fines to duty holders for breaches of certain duties under the DG Act. Not all offences under the DG Act could be made infringement offences. The *Attorney General's Guidelines to the Infringements Act 2006* specify that infringements can only be introduced for summary offences that are easily proved, and where no discretion can be applied. A breach of an infringement offence must be plainly apparent without the need for rigorous analysis.

Infringements can be issued on the spot, and therefore offer WorkSafe inspectors an immediate enforcement tool. Used in conjunction with an improvement notice, infringement notices may allow inspectors to both punish and remediate minor breaches of the DG Act.

Question 32
Should an infringements scheme be introduced for dangerous goods offences and if so, which ones?

Penalties

During preliminary consultation, some stakeholders have suggested that the Review should consider reforms to the penalties under the DG Act. The DG Act has recently undergone changes to its penalties regime through the introduction of the *Dangerous Goods (Penalty Reform) Act 2019*, which increased the penalties available for a range of offences and introduced the new offence in section 31D. Section 31D provides for the highest penalties under the DG Act, for reckless conduct that endangers persons. Nevertheless, there may be a case for a further increase in penalties.

Question 33
Should maximum penalties be increased for (some or all) dangerous goods offences?

75 DG Act, s 45B.

Term of Reference D: Emerging issues and challenges

The fourth Term of Reference requires the Review to "examine whether any amendments to the DG Act and associated regulations are required to respond to emerging issues and challenges related to the management of dangerous goods".

Regulatory regimes need to keep pace with changes in the market, in work processes and in technology. In the dangerous goods market, the issues and challenges raised by such changes include:

- The increase of illegal activity in the dangerous goods market, particularly the waste market.[76]
- The negative impact that price undercutting by illegal operators has on the viability of compliant operators.[77]
- The broader shift in the Australian economy from manufacturing to importing manufactured goods, including chemicals.[78]
- The impact this shift has on the ways in which chemicals need to be transported and stored.
- The vulnerability of overseas supply chains to disruption (as demonstrated by the COVID-19 pandemic).
- Bans on Australia exporting its waste to other countries.[79]
- The lack of adequate waste infrastructure in Victoria, including infrastructure and businesses able to safely destroy, recycle or reprocess chemical waste.[80]
- Inconsistencies between the regulatory regimes applying in different Australian jurisdictions.[81]
- Where Victoria's framework is more onerous than that of its neighbours, this can lead to the closure or relocation of Victorian infrastructure, and a consequent increase in the need to transport chemicals within Victoria to and from those interstate manufacturing warehouse, reprocessing or waste facilities.[82]

76 See under "Term of Reference C: Deterring non-compliance and illegal activity" for discussion on how the dangerous goods legislation could be improved to prevent and deter illegal activity.
77 See under "Term of Reference C: Deterring non-compliance and illegal activity" for discussion on illegal operators in the dangerous goods market.
78 See under "Victoria's dangerous goods landscape" for discussion on the dangerous goods market in Victoria.
79 Parliament of Victoria, Legislative Council Environment and Planning Committee, *Inquiry into recycling and waste management: final report* (November 2019).
80 Sustainability Victoria, *Statewide waste and resource recovery infrastructure plan* (2018).
81 See under "Term of Reference E: Streamlining and modernising" for discussion on the regulation of dangerous goods by other Australian jurisdictions.
82 See under "Term of Reference E: Streamlining and modernising" for discussion on the regulation of dangerous goods by other Australian jurisdictions.

- The increased use of sub-contractors, particularly in transport, where there can be multiple levels of sub-contracting. This can make it difficult for compliant dangerous goods operators, who are engaging companies to transport, store or dispose of dangerous chemicals, to check whether the work will be undertaken in a compliant manner.
- Potential introduction of automated vehicles in the Australian market and its impact on the dangerous goods transport industry.[83]
- Increasing insurance premiums for high-risk activities such as those involving dangerous goods.

The Review is interested in hearing how dangerous goods frameworks should adapt and change in order to meet these and other challenges.

Question 34
How has the dangerous goods industry changed from when the DG Act was first introduced?

Question 35
Are there any other emerging issues and challenges that Victoria's dangerous goods legislation should be responding to?

Question 36
What does the future of the dangerous goods industry look like?

Question 37
What are the main challenges in the disposal of chemical waste in Victoria?

Question 38
Are there new technologies being introduced into the dangerous goods industry that will change the way the industry operates? Will this create new risks?

Question 39
How does Victoria's dangerous goods legislation need to adapt and change in order to meet these issues and challenges?

83 National Transport Commission, *In-service safety for automated vehicles: Consultation regulation impact statement* (July 2019).

Term of Reference E: Streamlining and modernising

The fifth Term of Reference requires the Review to "identify ways to streamline and modernise the DG Act and regulations". As a 35-year old piece of legislation that has been amended on numerous occasions, often in a piecemeal fashion, there is a clear need to modernise and streamline the DG Act and its associated regulations. This should:

- make it easier to understand, apply and enforce; and
- reduce the compliance burden for both the regulator and the regulated.

In addition to the matters already considered in this Paper, one of the most important ways of modernising and streamlining the legislation is to bring it into line with other more modern regulatory frameworks that are also likely to apply to those who are subject to the DG Act, in particular the OHS Act, the OHS Regulations and the new EP Act 2017. Consistency with other states can also be important to duty-holders that operate across state boundaries.

This Review is considering a number of ways to streamline and modernise the DG Act, including:

- harmonising the language, structure and conceptual framework with the OHS Act;
- incorporating the dangerous goods legislation within the framework of the OHS legislation;
- more closely aligning Victoria's dangerous goods legislation with other Australian dangerous goods legislation; and
- other proposals suggested by stakeholders during preliminary consultation.

Harmonising the DG Act with the OHS Act

The DG Act was enacted in 1985, the same year as the predecessor to the current OHS Act. That Act was replaced in 2004, following the Maxwell Review. Since 2004, there have been numerous amendments made to the DG Act, and these have generally tended to bring the DG Act more into line with the OHS Act. However, that process could be taken much further.

Stakeholder feedback confirms that the OHS Act is far better known and understood than the DG Act. Although the DG Act and OHS Act deal with similar subject matter, for someone who is familiar with the OHS Act, there is much about the DG Act that is foreign and unfamiliar. This includes the structure of the Act, the very different order and numbering of comparable provisions, and different language and concepts. This means that it is often difficult for a duty-holder who is familiar with the OHS Act to find (and apply) the comparable provisions in the DG Act.

I have already discussed the fact that the DG Act does not include any general principle-based duty comparable to those found in the OHS Act. As I noted, section 31 is probably the closest equivalent, but instead of using the familiar and well-understood test of reasonable practicability, it requires the duty-holder to "take all reasonable precautions". The DG Act also uses a different test for officer liability.[84] This means that very little of the litigation or learning in relation to these tests in the OHS Act can be transferred to the DG Act.

The Review is considering whether the language, structure and conceptual framework of a new DG Act should be modelled much more closely on the OHS Act. This might include replacing more specific duties such as those found in section 31 of the DG Act, with a broad, general principle-based duty, as discussed earlier in this Paper. It might also involve re-ordering the various parts, divisions and sections of the DG Act so as to follow (as much as possible) the order and structure of the OHS Act.

Question 40
Should a new DG Act adopt (as far as possible) the structure, order, language and conceptual framework of the OHS Act?

84 See under "Term of Reference C: Deterring non-compliance and illegal activity".

Incorporating dangerous goods legislation within the OHS Act

As explained earlier in this Paper, Victoria is one of only two states (the other is WA) with separate legislation to deal with dangerous goods. All other Australian jurisdictions regulate dangerous goods within their Work Health and Safety legislation (based on the Model WHS Laws) (see Box 6).

Under the Model WHS Laws, this is achieved by means of Schedule 1, which extends the application of the Act to dangerous goods. Clause 1 states that "This Act applies to the storage and handling of dangerous goods even if the dangerous goods are not at a workplace or for use in carrying out work". Clause 2 then extends the meanings of a number of terms used in the Act so as to ensure that they apply to dangerous goods.

The Model WHS Laws then regulate hazards involved in the storage, handling and use of dangerous goods, while separate legislation deals with the specific risks associated with explosives and HCDGs. There is also separate legislation to give effect to the ADG Code regarding the transport of dangerous goods (see discussion of transport below).

Another way of using the OHS Act to regulate dangerous goods in Victoria would be to add dangerous goods-specific provisions to the OHS Act, such as a new general principle-based duty or the additional inspector powers, both discussed earlier in this Paper.

There are several possible benefits to incorporating the dangerous goods legislation within the OHS Act, including:

- As the OHS Act is better known than the DG Act, uninformed duty-holders are more likely to become aware of their obligations in relation to dangerous goods.
- The dangerous goods provisions would be able to draw on the machinery of the OHS Act in relation to numerous matters such as the appointment of inspectors, the issuing of notices and officer liability (rather than having to replicate those provisions in separate legislation, and to then keep them updated in line with any amendments to the OHS Act).
- Having a single regulatory framework apply to all dangerous chemicals (see discussion immediately below).

In Victoria, two separate regulatory regimes apply to the storage and handling of hazardous chemicals: the Storage and Handling Regulations apply to "dangerous goods", and Part 4.1 of the OHS Regulations applies to "hazardous substances" (see Box 3). These two categories overlap, so duty-holders often have to apply both frameworks. Preliminary stakeholder consultation suggests that this creates confusion and an unnecessarily onerous regulatory burden.

By contrast, in those jurisdictions that have adopted the Model WHS Laws, a single regulatory regime applies to all hazardous chemicals,[85] and to most of the risks associated with those chemicals. Incorporating the dangerous goods legislation within the OHS Act would allow the same approach to be taken in Victoria.

Question 41

Should dangerous goods legislation be incorporated within the OHS Act?

85 The main exception to this is in relation to transport which (as in Victoria) is subject to legislation designed to give effect to the ADG Code.

Box 6 Comparison with the Model WHS Laws

In Victoria, Dangerous Goods and Occupational Health and Safety are regulated under two separate Acts.

This is different from the majority of Australian jurisdictions which regulate dangerous goods and occupational health and safety together under their version of the Model WHS Act.

Model Work Health and Safety Act

Adopted in all Australian States and Territories, except in Victoria and Western Australia.

This legislation addresses the physical hazards of dangerous goods and health hazards of hazardous substances by regulating both as "hazardous chemicals".

Separate legislation is used to address DG transport, explosives and HCDGs, as outlined below:

	DG	OHS	MHFs	DG Transport	Explosives	HCDG
Victoria	DG Act	OHS Act		Transport Regulations	Explosives Regulations	HCDG Regulations
WHS Jurisdictions	WHS Act • DGs are regulated as "hazardous chemicals" • OHS and DG risk co-regulated • MHFs included			Specific DG transport legislation	Specific explosives legislation	Specific HCDG legislation OR under explosives legislation

Transport of dangerous goods

Every Australian jurisdiction (including Victoria) has separate legislation (whether it be an Act, regulations or both) that gives effect to the Australian Code for the Transport of Dangerous Goods by Road & Rail (the ADG Code). The ADG Code in turn gives effect to international conventions on the transport of dangerous goods.[86] This ensures that the regulation of dangerous goods transportation is nationally and internationally consistent.

Given that dangerous goods need to be transported across international and state boundaries, the need for such consistency is obvious and unquestioned. This means that even if the rest of dangerous goods legislation were to be incorporated within the OHS Act, there would still need to be separate legislation, based on the ADG Code, to regulate the transport of dangerous goods.

However, stakeholders have raised a number of additional issues about the regulation of dangerous goods transport in Victoria.

First, stakeholders have raised concerns about the fact that the DG Act and Transport Regulations do not apply to the transport of prescribed industrial waste for which a permit or a transport certificate under the EP Act is required.[87] This is the case even when the waste being transported are dangerous goods under the ADG Code. One of the consequences of this anomaly is that a vehicle transporting the waste is not required to display the usual placarding, or carry the usual manifest, that is required in the transport of dangerous goods. This may mean that in the event of an incident involving the vehicle, emergency services personnel do not have ready access to the information they need in order to know how to deal with the incident.

The Review is considering whether the exception for the transport of prescribed industrial waste should continue. If it were removed, the EP Act would continue to apply to the transport of prescribed industrial waste as it currently does. This includes the existing arrangements for permits and waste tracking certificates mentioned earlier in this Paper. If that waste were also dangerous goods, all of the DG Act and Transport Regulations would also apply. This includes requirements for placarding and labelling of the dangerous goods (waste) being transported.

86 In particular, the United Nations' recommendations on the Transport of Dangerous Goods Model Regulations.

87 DG Act, s 8(2). Victoria is the only Australian jurisdiction to exclude the transport of waste from the transport requirements under the ADG Code. See also, note 13 above.

Secondly, stakeholders have raised concerns about the fact that changes to the ADG Code do not immediately flow through to each jurisdiction's transport of dangerous goods legislation. In Victoria, for example, amendments to the ADG Code only come into force from the date that notice of the amendments is published in the Government Gazette.[88] The fact that amendments come into force at different times in different jurisdictions can lead to inconsistencies in the transport of dangerous goods regulations. The Review is considering whether amendments to the ADG Code should automatically come into force.

Thirdly, the Review is considering whether the Transport Regulations could be simplified by replacing the multiplicity of detailed regulations and offence provisions with a single offence of failing to comply with the ADG Code. This could mean that the Transport Regulations only need to deal with administrative matters (such as licensing and appeals) that are necessary to support the implementation of the ADG Code.

Question 42
Should DG Act and Transport Regulations apply to the transport of prescribed industrial waste?

Question 43
Should amendments to the ADG Code come into force automatically?

Question 44
Should the detailed regulations and offence provisions in the Transport Regulations be replaced by a single offence of failing to comply with the ADG Code?

88 DG Act, s 10(1B).

Other opportunities for streamlining

The Review is also considering other opportunities for streamlining and modernising the DG Act and Regulations proposed by stakeholders during preliminary consultation.

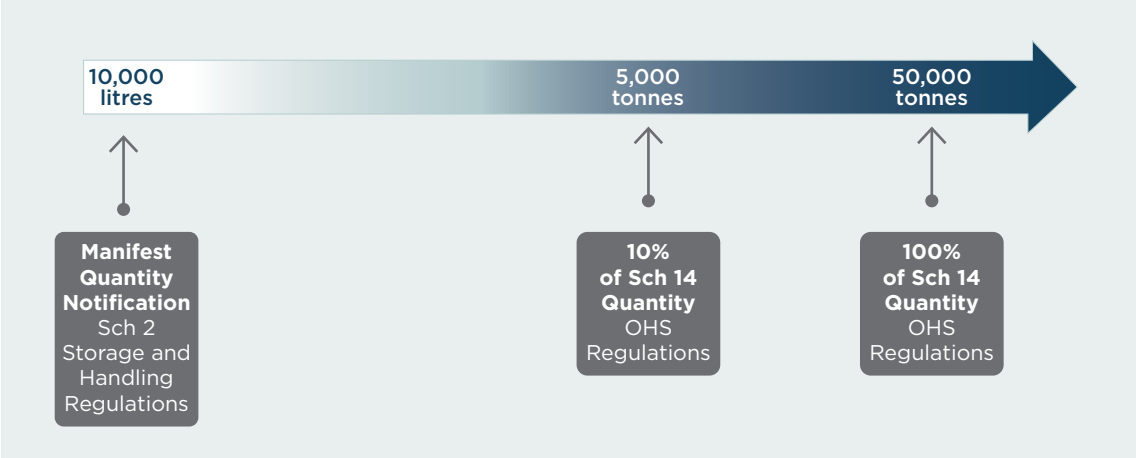
Thresholds and classification systems

During preliminary consultations, some stakeholders have raised the different systems for classifying and measuring quantities of chemicals, and calculating thresholds for specific obligations, under the OHS framework and DG framework (see Box 7).

It can be difficult to keep track of obligations and compare the risks of a site as measured under the two frameworks. For example:

- While some thresholds under the Storage and Handling Regulations are measured in litres, other thresholds relating to the same chemicals under the MHF framework may be measured in tonnes.
- While Schedule 2 of the Storage and Handling Regulations defines threshold quantities of chemicals classified under the ADG Code (by reference to their UN Code), Schedule 14 of the OHS Regulations defines MHF thresholds with reference to the ADG Code and the GHS, as well as specifying individual chemicals.

Figure 5: Comparison of relevant quantities for kerosene under the Storage and Handling Regulations and the OHS Regulations



The MHF regulations aim to capture the highest risk sites storing dangerous goods through the Schedule 14 thresholds. There are very significant differences in the threshold quantity for a particular dangerous good that would classify the site as an MHF, and the Manifest Quantity under the Storage and Handling Regulations (see Figure 5 for an example).

Earlier in this Paper I raised whether a permissioning framework should be introduced for higher-risk storage sites and/or activities involving dangerous goods. This would also require consideration of the appropriate thresholds to trigger a licence requirement. This could be based on Schedule 2 (similar to the manifest quantity), Schedule 14 (similar to the MHF thresholds), or some alternative system.

The Review is interested in opportunities to streamline the way in which chemicals are classified, thresholds are applied, and obligations are derived across the DG framework (including transport, storage and handling, and explosives).

Question 45

How can the way in which dangerous chemicals are classified and captured be streamlined?

Box 7 Classification systems and threshold quantities

The DG framework and OHS framework use various systems for classifying chemicals. These classification systems then serve as the basis for calculating threshold quantities or applying obligations.

Threshold quantities recognise a level of risk, and trigger obligations and controls. So, a certain amount of chemicals, of a certain class, triggers certain obligations to manage the risk.

The application of some of these systems is demonstrated below:

Function	Regulation generating obligation	Classification system
Definition of dangerous goods (Box 1)	DG Act	ADG Code
Definition of hazardous substances (Box 2)	OHS Regulations	GHS
Thresholds • Notify WorkSafe at 10% of threshold quantity • Determine an MHF at 100% of threshold quantity (Box 5)	OHS Regulations Schedule 14 sets thresholds	**Threshold captures** • Individually specified chemicals • Chemicals identified from ADG Code • Chemicals identified by hazard class under GHS
Thresholds • Manifest Quantity • Placarding Quantity • Fire Protection Quantity	Storage and Handling Regulations Schedule 2 sets thresholds	**Threshold captures** • Chemicals identified from ADG Code by reference to UN Class
Assign class upon manufacture or first supply	Storage and Handling Regulations, Part 3	**Assign to** • Class in accordance with ADG Code – or – • Classify to hazard class under GHS
Threshold Licence required to transport dangerous goods	Transport Regulations Part 18 sets thresholds	ADG Code
Threshold Licence required to transport explosives	Explosives Regulations Part 7 sets thresholds	**Threshold captures** Chemicals identified by Hazard Division and Classification Code under the AE Code

Building safety measures

Some stakeholders have observed that many dangerous goods operations are carried out in buildings that are old, unsafe and not fit for purpose. These structures pose significant fire risks and are therefore a danger to the public. Stakeholders have suggested a need for greater enforcement of ESMs for establishing new facilities as well as for ongoing operations.[89]

ESM compliance could be supported by WorkSafe, either through requirements under a permissioning scheme, or through requirements under the Storage and Handling Regulations, as one of the "larger quantity" duties (see Box 5).

Question 46
Should ESM compliance be a condition of operating a dangerous goods site or facility?

Regulations 54 and 55 of the Storage and Handling Regulations require occupiers of premises to seek the written advice of emergency services authorities if they intend to establish a fire protection system. Occupiers are only required to "have regard to" that written advice.

Question 47
Should occupiers be required to implement the advice given by emergency services authorities, rather than simply "have regard to" it?

Mutual recognition of interstate licences

Some stakeholders have proposed that the DG Act could be modernised by providing for the mutual recognition of interstate licences, including HCDG, explosives and transport licences. Stakeholders have observed that the lack of recognition of state licences causes inconvenience to duty-holders who operate across jurisdictions, and means that Victoria's DG framework does not address the way businesses operate in the modern day.

Question 48
Should Victoria recognise interstate dangerous goods licences?

89 See under "The dangerous goods legislative framework" for explanation of ESMs.

Explosives Regulations

The Explosives and HCDG Regulations have only been the subject of very limited preliminary stakeholder consultation. However, two issues have been raised.

First, it has been suggested that Explosives Regulations should also regulate high consequence dangerous goods, rather than having separate HCDG Regulations. At present the only substance that has been declared to be HCDG is ammonium nitrate. Although ammonium nitrate is not itself an explosive, it is the most important ingredient of the most commonly used types of explosives in Australia (it can also be used as a fertiliser). If ammonium nitrate was deemed to be an explosive for the purposes of the Explosives Regulations, then there would arguably be no need for separate HCDG Regulations.

Secondly, it has been argued that, for security reasons, there is a strong need for national consistency in the regulation of explosives. However, as each Australian jurisdiction currently takes its own approach, and there is no national model law, there is no legislation that this Review could recommend or that the Victorian Parliament could enact that would be capable of achieving this goal.

Question 49
Should ammonium nitrate be regulated by the Explosives Regulations?

Term of Reference F: Other relevant matters

The Review's primary task is "to consider if the DG Act and associated regulations are fit for their intended purposes". The preceding sections of this Paper have explored issues relating to each of the first five Terms of Reference. The final Term of Reference requires the Review to consider "any other relevant matters".

The issues raised in relation to the first five Terms of Reference have been partly shaped by the Review's preliminary stakeholder consultation. However, the views of those stakeholders are unlikely to reflect the experiences and views of all members of the Victorian community who are affected by dangerous goods. This final Term of Reference provides an opportunity to raise other issues and matters that may have been overlooked.

Question 50
Are there any other relevant matters that the Review should consider?

Appendix A: Terms of Reference

Independent Review of the Dangerous Goods Act (1985) and associated regulations

Terms of Reference

Background

1. The Independent Review of the Dangerous Goods Act (DG Act) (1985) and associated regulations ("the Independent Review") will consider contemporary issues and challenges in the management of dangerous goods, including emerging risks and issues and their impact on the safety of persons and properties.
2. The Independent Review will have regard to the broader program of work across the Victorian Government that is relevant to the management of dangerous goods.

Scope

3. The Reviewer will conduct the Independent Review to consider if the DG Act and associated regulations are fit for their intended purposes.
4. To this end the Independent Review will:
   a. examine the extent to which the DG Act and associated regulations promote the safety of persons and property and the effective management of dangerous goods
   b. consider how the DG Act and associated regulations could be enhanced to be more risk-based and prevention focused
   c. consider the efficacy of the DG Act and associated regulations in deterring non-compliance and illegal activity in relation to the management of dangerous goods
   d. examine whether any amendments to the DG Act and associated regulations are required to respond to emerging issues and challenges related to the management of dangerous goods
   e. identify ways to streamline and modernise the DG Act and regulations
   f. any other relevant matters

5. Where the Reviewer finds the legislative or regulatory framework could be improved, the Reviewer must provide recommendations to give effect to such improvements.
6. In undertaking the Independent Review the Reviewer will have consideration to any relevant work that is being or has already been undertaken in this area, and recommendations from recent reviews, with particular regard to:
    a. the State Crisis Resilience Council (SCRC)
    b. the Essential Services Commission's (ESC) Review into Recycling
    c. the final report of the Legislative Council Environment and Planning Committee's Inquiry into Recycling and Waste Management
    d. the Victorian Auditor-General's report *Recovering and Reprocessing Resources from Waste*
    e. Inspector-General Emergency Management report on Coolaroo and Tottenham fires.
    f. Coroner reports on Tottenham and Campbellfield fires
    g. recent or ongoing legislative and regulatory reforms relating to dangerous goods
    h. the Model work health and safety (WHS) laws relating to dangerous goods

Principles

7. The Independent Review will be guided by the following principles:
    a. the review will be risk and evidence based;
    b. the review should, where possible, focus on prevention and protection of safety to persons and property;
    c. the review can have regard to the broader framework for identifying, inspecting and managing high risk waste and resource recovery sites but must not make recommendations on other Victorian Government departments and agencies.

Governance

8. The Independent Review will be undertaken by an Independent Reviewer with support from a WorkSafe-led Secretariat Group (Secretariat).
9. The Independent Reviewer will report directly to the Minister for Workplace Safety.

Deliverables

10. The Independent Reviewer will undertake extensive stakeholder consultation throughout the review and will release consultation materials seeking public comment in late 2020.
11. The Independent Reviewer will provide a final written report, including recommendations, to the Minister for Workplace Safety by mid-2021.

Appendix B: Table of questions

Term of Reference A	
The extent to which the DG Act and associated regulations promote the safety of persons and property and the effective management of dangerous goods	
Question 1	To what extent does Victoria's dangerous goods legislation promote the safety of persons and property?
Question 2	To what extent does it promote the effective management of dangerous goods?
Question 3	How could it be improved so that it better promotes these objectives?

Term of Reference B	
How the DG Act and associated regulations could be enhanced to be more risk-based and prevention focused	
Question 4	How could the DG Act and associated regulations be enhanced to be more risk-based and prevention-focused?
Question 5	Should dangerous goods legislation include a broad, general principle-based duty to minimise risks of harm to persons and property?
Question 6	Broadly speaking, do the Storage and Handling, Explosives, HCDG and Transport Regulations impose the right combination of the different kinds of duties?
Question 7	What role should codes and guidance material play in supporting the DG Act and associated regulations?
Question 8	Do you have any suggestions about how the codes and guidance material issued by WorkSafe could be improved?
Question 9	Should a permissioning framework be introduced for higher-risk sites and/or activities involving dangerous goods?
Question 10	What kinds of incidents involving dangerous goods should duty holders be required to report to WorkSafe?

Term of Reference C	
The efficacy of the DG Act and associated regulations in deterring non-compliance and illegal activity in relation to the management of dangerous goods	
Question 11	How could the dangerous goods legislation be made more effective in deterring non-compliance and illegal activity in relation to the management of dangerous goods?
Question 12	What methods could WorkSafe use to identify unknown dangerous goods sites, and do those methods require additional legal powers?
Question 13	Are the triggers for notification appropriate?
Question 14	What types of information should be notified?
Question 15	What methods could WorkSafe use to monitor the dangerous goods market, and do those methods require additional legal powers?
Question 16	To what extent is the detection of unknown or illegal dangerous goods activity hampered by restrictions on information sharing by government agencies?
Question 17	What kind of information sharing should be permitted?
Question 18	What are the obstacles to the effective management of dangerous goods where the functions and powers of multiple agencies intersect and overlap?
Question 19	How could interagency coordination in relation to dangerous goods be improved?
Question 20	Should powers be delegated between agencies to improve coordination?
Question 21	Under what circumstances should a dangerous goods inspector be permitted to enter a place where dangerous goods might be stored?
Question 22	Should there be a power for inspectors to enter a residential premises? What should the threshold for these powers be?
Question 23	Does WorkSafe need broader powers to intervene at non-compliant sites?
Question 24	If so, what powers does it need, and what should be the threshold to the exercise of those powers?
Question 25	Should WorkSafe have the power to redirect body corporate obligations to their officers and controlling entities?
Question 26	What costs should WorkSafe be able to recover, and from whom?
Question 27	Should WorkSafe be empowered to require entities engaging in dangerous goods activities to provide financial assurances, and if so, how should this be done?
Question 28	Should dangerous goods operators only be permitted to dispose of their waste to accredited waste providers?
Question 29	Alternatively, should dangerous goods operators have a duty to undertake due diligence in relation to the disposal of their waste?
Question 30	Should officer liability for dangerous goods offences be based on a due diligence test or duty?

Term of Reference C	
The efficacy of the DG Act and associated regulations in deterring non-compliance and illegal activity in relation to the management of dangerous goods	
Question 31	Should a civil penalty regime be introduced into the dangerous goods legislation, so that WorkSafe has the option of bringing a civil penalty proceeding in relation to a dangerous goods contravention, as an alternative to a criminal prosecution?
Question 32	Should an infringements scheme be introduced for dangerous goods offences, and if so, which ones?
Question 33	Should maximum penalties be increased for (some or all) dangerous goods offences?

Term of Reference D	
Whether any amendments to the DG Act and associated regulations are required to respond to emerging issues and challenges related to the management of dangerous goods?	
Question 34	How has the dangerous goods industry changed from when the DG Act was first introduced?
Question 35	Are there any other emerging issues and challenges that Victoria's dangerous goods legislation should be responding to?
Question 36	What does the future of the dangerous goods industry look like?
Question 37	What are the main challenges in the disposal of chemical waste in Victoria?
Question 38	Are there new technologies being introduced into the dangerous goods industry that will change the way the industry operates? Will this create new risks?
Question 39	How does Victoria's dangerous goods legislation need to adapt and change in order to meet these issues and challenges?

Term of Reference E	
Ways to streamline and modernise the DG Act and regulations	
Question 40	Should a new DG Act adopt (as far as possible) the structure, order, language and conceptual framework of the OHS Act?
Question 41	Should dangerous goods legislation be incorporated within the OHS Act?
Question 42	Should DG Act and Transport Regulations apply to the transport of prescribed industrial waste?
Question 43	Should amendments to the ADG Code come into force automatically?
Question 44	Should the detailed regulations and offence provisions in the Transport Regulations be replaced by a single offence of failing to comply with the ADG Code?
Question 45	How can the way in which dangerous chemicals are classified and captured be streamlined?
Question 46	Should ESM compliance be a condition of operating a dangerous goods site or facility?
Question 47	Should occupiers be required to implement the advice given by emergency services authorities, rather than simply “have regard to” it?
Question 48	Should Victoria recognise interstate dangerous goods licences?
Question 49	Should ammonium nitrate be regulated by the Explosives Regulations?
Term of Reference F	
Other relevant matters	
Question 50	Are there any other relevant matters that the Review should consider?

Appendix C: Examples of goods in ADG Code classes

Source: WorkSafe Victoria

Class 1 Explosives

Division 1.1 Substances and articles which have a mass explosion hazard

- Nitro-glycerine
- Detonators
- Black (gunpowder) powders
- Blasting explosives

Division 1.2 Substances and articles which have a projection hazard but not a mass explosion hazard

- Projectile with busting discs
- Rockets with bursting charge
- Grenades hand or rifle with bursting charge

Division 1.3 Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard

- Aerial Shells
- Propellants

Division 1.4 Substances and articles which present no significant hazard

- Distress Signals
- Safety Cartridges
- Primers or percussion caps
- Fireworks

Division 1.5 Very insensitive substances which have a mass explosion hazard

- Blasting agents

Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard

- Squib-small explosives charge used in stimulate gunfire in film making

Class 2 Gases

Division 2.1 Flammable gases

- Cartridges for portable stoves stored in a home
- Liquefied petroleum gas (LPG)
- Natural gas

Division 2.2 Non-flammable, non-toxic gases

- Helium
- Nitrogen

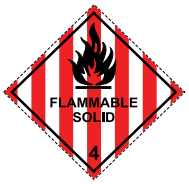
Division 2.3 Toxic gases

- Chlorine for swimming pools
- Ammonia in industrial refrigeration
- Sulphur dioxide

Class 3 Flammable liquids

- Petrol
- Methanol
- Turpentine
- Toluene (glues and thinners)
- Acetone (enamel paints, nail polish remover)

Class 4 Flammable solids; substances liable to spontaneous combustion; substances which on contact with water, emit flammable gases



Division 4.1 Flammable solids, self-reactive substances solid desensitized explosives and polymerizing substances

- Fire lighters
- Matches
- Magnesium ribbons

Division 4.2 Spontaneously combustible

- White or yellow phosphorus
- Copra (dried coconut meat)
- Unstabilised fish meal

Division 4.3 Dangerous when wet

- Aluminum powder
- Sodium and potassium metals
- Calcium carbide (used to produce acetylene gas)
- Alkaline earth metal alloys

Class 5 Oxidising substances and organic peroxides

Division 5.1 Oxidising substances

- Some home bleaches and nappy sanitisers
- Calcium hypochlorite (pool chlorine, granules)

Division 5.2 Organic peroxides

- Benzoyl peroxide (plastics, fiberglass resin)
- Acetone peroxide (bleach in flour)

Class 6 Toxic and infectious substances

Division 6.1 Toxic substances

- Formaldehyde (resins, disinfectant, fungicide)
- Pentachlorophenol (timber preservative)
- Cyanides and isocyanates (two pack paints)

Division 6.2 Infectious substances

- Blood samples from people with infectious or notifiable diseases
- Used needles and syringes

Class 7 Radioactive material

- Medical treatment
- Diagnostic x-ray

Class 8 Corrosive substances

- Car and truck batteries
- Glacial acetic acid (peeling processed fruit)
- Caustic soda (sodium hydroxide)

Class 9 Miscellaneous dangerous substances and articles, including environmentally hazardous substances

- Blue, brown and white asbestos
- Lithium ion batteries

Notes

Notes