FIREWORKS: A REVIEW OF THE LAW

POLICY PAPER

LAW REFORM COMMISSION OF TRINIDAD AND TOBAGO



FIREWORKS

A review of the law



APRIL, 2020 LAW REFORM COMMISSION OF TRINIDAD AND TOBAGO

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Preface

This Paper is intended to promote a discussion on the Law Reform Commission's reference on the regulation of the fireworks industry. The Paper explores the scope of the current legislative framework governing the industry and the role of enforcement authorities. The major issues surrounding the recent growth in the industry including the increasing availability and use of fireworks are examined. Further, the firework regulations and enforcement measures in other jurisdictions are examined before preliminary recommendations for a specific fireworks policy in Trinidad and Tobago are put forward.

Executive Summary

In Trinidad and Tobago, fireworks have become a popular source of entertainment during the annual periods of national celebrations, private functions, celebrations and concerts. At present, citizens can enjoy the public firework displays put on by a number of local firework suppliers or purchase fireworks for their own private use. The steady demand for fireworks in the past decade has resulted in significant growth in the local fireworks industry as reflected by an increase in the number of local firework suppliers.

The growth in the industry and the ease with which fireworks can be obtained and used by the general public have resulted in calls for the sale and use of fireworks to be banned or alternatively, that the sale and use of fireworks are strictly regulated. These calls are premised on the fact that fireworks are explosives which can pose a serious threat to the safety of citizens, animals and property. Moreover, some fireworks create excessive disturbance which negatively affect citizens, particularly the vulnerable members of society. Fireworks also raise a national security concern as the explosive components found in some fireworks can be used to construct improvised bombs. Some fireworks produce sound so similar to firearms and bombs that they cannot be easily distinguished. This makes it possible for the illegal use of firearms to be masked by the use fireworks.

In the past, malfunctioning fireworks and instances of misuse have been responsible for most of the local firework related accidents. In this regard, public awareness and safety education is important to prevent or reduce the likelihood of accidents occurring or to minimize injuries and damage to property. In the same vein, it is necessary to ensure that fireworks are properly packaged and are accompanied by adequate user instructions and safety warnings.

It is further noted that the risks associated with pyrotechnic special effects are similar to those posed by fireworks. In fact, there have been reports of incidents in Trinidad and Tobago where persons have suffered injuries from accidents resulting from malfunctioning special effects.

Having reviewed fireworks regulations in several jurisdictions, two main approaches have been identified which will be referred to as Model A and Model B. Mode A involves the imposition of strict prohibitions against the import, sale and use of fireworks. While Mode B aims to balance the safety and entertainment values by regulating the industry through a system of authorisations and classification. The Commission has opted to pursue an approach along the lines of Mode B for two reasons. Firstly, the provisions of the Explosives Act currently reflect a similar approach, and secondly, imposing Model A would essentially put an end to the industry, causing suppliers to suffer significant losses, render those in the industry unemployed and citizens will no longer be able to purchase and use fireworks for their private entertainment. Closing the industry presents the risk of encouraging and promoting the illegal smuggling of fireworks, where the quality and safety of the fireworks entering the country will not be subjected to testing, which consequently may create a greater risk to national security and public safety. In relation to regulating the fireworks industry, there is no specific legislation, policy or standards to control the local fireworks industry. However, as they are explosives, they fall within the scope of the Explosive Act, Chapter 16:02 (the Explosive Act), which makes provision for the importation, storage, sale, removal and conveyance of all explosives. The Explosives Act makes specific provision for gunpowder, dynamite and safety cartridges and includes a "catch all" provision which covers all other explosives including fireworks and other articles intended to have a pyrotechnic effect. This approach can therefore lead to ambiguity in the law for the simple reason that gunpowder and fireworks, although both are considered to be explosives for the purposes of the Act, are two distinct explosive products, used for different purposes, belong to different consumer markets and present different levels of hazard. It is noted that gunpowder is contained in most fireworks. The quantity of gunpowder (and other explosive components) in a particular firework determines the type and degree of its resulting effect and should be considered when formulating the fireworks control policy.

The Summary Offences Act, Chapter 11:02 (The Summary Offences Act) makes it an offence to discharge, throw or let off fireworks in certain places. Under the Fireworks Permit Regulations (made pursuant to section 101), the Commissioner of Police or any Superintendent authorised by him, may grant written permission prescribing the time, place or conditions on or at which persons may use fireworks within a town. The regulations require applicants to give at least two days' notice before the intended display but has no provision requiring applicants to consult those likely to be affected by the display or to submit any sort of safety management plan. There is also a clear need to require those in the industry to be trained or certified in the handling and use of fireworks and other pyrotechnic articles.

Further, under the current legislative regime, there is no system to classify fireworks based on explosive content, hazard levels or the type of the resulting effect. The classification of fireworks has been the cornerstone of regulations in the jurisdictions studied in this paper. By implementing a system of classification, those jurisdictions were able to categorise fireworks by hazard levels. This made it possible to identify fireworks that can be sold to the general public and those that should only be sold to and used by professional operators. In some jurisdictions, fireworks that emit sounds in excess of 120 decibels are prohibited from being sold to the general public to reduce the likelihood of nuisance occurring. In other jurisdictions, consumer fireworks can only be sold and used during prescribed periods.

Another concern is that fireworks often end up in the hands of minors who put themselves and others at risk through either unsupervised use or misuse of fireworks. For this reason, there should be strict controls with respect to persons who sell fireworks and the locations from which they are sold. The current penalties under the Explosive Act appear to be ineffective as a deterrent or punishment and therefore should be revised. It is also suggested that the minimum age to purchase fireworks should be raised from sixteen (16) to eighteen (18) years of age. In addition to the legislatives concerns, proper enforcement is vital to the overall control of the industry. A collaboration between several state authorities, namely, the Police, Customs, Environmental Management Authority and the Fire Services is necessary to achieve this aim. The Police and Customs are responsible for the enforcement of the Explosives Act. The Environmental Management Authority is mandated under the Environmental Management Act to manage *inter alia*, noise controls and hazardous substances. The Fire Service has a duty to provide advice and awareness to the general public about precautionary measures to be taken when using fireworks. The future fireworks policy should clearly define the duties of each authority. This would provide much needed clarity, especially for the general public, who will be able to identify the correct authority when there is a breach of the regulations or any firework related incidents. Additionally, regulatory authority should be given the responsibility of overseeing the implementation of any future fireworks policy.

The risks, nuisance and threat to national security associated with fireworks provides sufficient impetus for the industry to be strictly controlled. Therefore, recommendations for a policy to regulate the industry at all levels of the supply chain are put forward. In the interests of national security and public safety, this policy should be formulated and incorporated within the legislative framework as a matter of utmost urgency.

Chapter One

Introduction

1.1 In 2003, the Law Reform Commission ("the Commission") reviewed the laws governing the use of fireworks following numerous complaints from the general public. The Commission prepared a report in which it examined the legal position in relation to the sale and use of fireworks in Trinidad and Tobago and other jurisdictions. Since the 2003 report, the Commission sought views from the Police Service on the current legislation's ability to effectively regulate fireworks and for any statistics in relation to the number or firework related complaints. With the nationwide increase in fireworks use and events such as the Port of Spain bombing in 2005, the Commission has kept under review this country's legislation governing fireworks.

1.2 Fireworks are devices containing combustible components which produce spectacular effects and explosions when ignited.¹ They take many forms and produce four primary effects including noise, light, smoke and floating materials (for example confetti). Generally, they are designed to burn with flames and sparks of many colours. They have been categorised as an individual class of explosives in a number of jurisdictions. However, most fireworks contain the explosive gunpowder which is a powdered mixture of saltpetre, sulphur, and charcoal.²

1.3 With the increasing use of fireworks across Trinidad and Tobago there is a growing risk of danger to persons, animals and property. The Commission noted several online petitions by private citizens and animal activist groups calling on the Government to either ban fireworks or impose strict regulations.³ Up to the time of writing the regulatory framework governing fireworks remain unchanged despite the repeated calls for a total ban or more stringent regulations to be put in place to control the sale and use of fireworks. This Paper examines the concerns raised in relation to fireworks within the context of the existing laws in order to ascertain whether legislative reform is necessary, and if so, how best to achieve effective regulations of the industry. In doing so, a comparative analysis of fireworks regulations for a policy to regulate fireworks in Trinidad and Tobago.

¹ Oxford Dictionary, Thesaurus and Wordpower Guide, Oxford University Press, published October 4, 2001, 476.

² Ibid 571.

³ Alexandra Sui, 'Ban the use of fireworks by private citizens in Trinidad and Tobago' (*Change.org*, 2015) <https://www.change.org/p/the-prime-minister-ban-the-use-of-fireworks-by-private-citizens-in-trinidadand-tobago> accessed 02 April 2019; Kevon Felmine, 'Woman starts online petition against fireworks' (*Trinidad Guardian*, 4 January 2016)

http://www.guardian.co.tt/news/2016-01-03/woman-starts-online-petition-against-fireworks accessed 02 April 2020.

Chapter Two

Fireworks in Trinidad and Tobago: An Overview

2.1 For centuries, spectacular fireworks displays have marked celebrations across the world. Today, one can almost expect to see fireworks and pyrotechnic displays at most, if not all, major international events. Similarly, in the past two decades, fireworks have become increasingly popular in Trinidad and Tobago during periods of national celebrations. Citizens can enjoy public fireworks displays or purchase and use fireworks for their own private enjoyment. Fireworks displays have become an integral feature in most of our major national celebrations, including Carnival, Independence, Divali, Christmas and New Years' Eve celebrations. It is noted that the demand and use of fireworks are seasonal, being at its highest during the periods leading up to national celebrations.⁴ The increasing demand for fireworks is responsible for the rapid growth in the local fireworks industry as reflected by the increase in the number of fireworks merchants within recent years. However, the Commission notes that there are three primary importers of fireworks who supply the other local wholesale and retail fireworks merchants.⁵

2.2 Within recent years, a number of firework related incidents have been reported in the daily newspapers following periods of national celebrations:

- Several patrons suffered serious injuries as a result of malfunctioning fireworks at a concert.⁶
- A fifteen (15) year old boy had his right index finger blown off and sustained lacerations to his leg.⁷
- Choir members suffered serious burns at the launching of a hotel in Port of Spain.⁸
- An infant suffered severe injuries to his hand and a fifty-four (54) year old man lost three fingers on his left hand.⁹

⁴ 'Fifth Report of the Joint Select Committee on Social Services and Public Administration on an Inquiry into the Adverse Health Effects of Fireworks' (Third Session [2017/2018] 11th Parliament of The Republic Of Trinidad And Tobago, Laid in the House of Representatives 25 May 2018 and in the Senate 21 May 2018), 4.1.41 <<u>app</u>> accessed 02 April 2020.

⁵ Ibid, 4.3.21.

⁶ 'Question on fete injuries' (*Trinidad and Tobago Newsday*, 27 February 2006) http://www.newsday.co.tt/news/0,1523.html> accessed 02 April 2020.

⁷ Anika Gumbs, 'Firecracker victims stable' (*Trinidad and Tobago Newsday*, 25 October 2006) http://www.newsday.co.tt/news/0,46525.html accessed 02 April 2020.

⁸ 'Enthusiasm for drama must be checked by safety needs' (*Trinidad Guardian*, 7 April 2008) http://legacy.guardian.co.tt/archives/2008-04-07/editorial.html accessed 02 April 2020.

⁹ Stacey Moore, 'Man's hand blown off' (*Trinidad and Tobago Newsday*, 13 November 2015) http://www.newsday.co.tt/news/0,219849.html> accessed 02 April 2020.

- Twenty-four (24) persons killed in fireworks warehouse explosion¹⁰
- Teenager killed after firework exploded in his face¹¹

2.3 The most critical setback to regulating fireworks effectively is the absence of a specific fireworks policy or legislation. Currently, the only source of regulation is to be found in a few provisions of various pieces of legislation. The Summary Offences Act, Chap. 11:02 prohibits the use fireworks in certain places. The Fireworks Permit Regulations made thereunder requires persons wishing to use fireworks to obtain a permit from the Commissioner of Police. Under the Public Festivals and Holidays Act, Chap. 19:05 the President may allow certain activities including the use of fireworks to be carried out in public places during public festivals.

2.4 The Explosives Act, Chap. 16:02 addresses more comprehensively, the importation, sale, storage and transport of explosives generally and gunpowder which is the active ingredient in fireworks. Notably, there are no specific provisions for fireworks in the Explosives Act. Fireworks fall within the ambit of the Explosives Act because: (i) they fall within the definition of "explosives" under the Act; and (ii) because they contain gunpowder. Despite the provisions of the Act preventing the sale of explosives to persons under the age of 18 years, minors continue to purchase fireworks with relative ease. The Explosive Act neither offers guidelines on the safe use of fireworks nor requires persons within the industry to obtain certification in the safe handling and use of fireworks and other pyrotechnic devices. The safety standards under the Occupational Safety and Health Act, Chap. 88:08 (OSHA) applies to the fireworks industry. However, the OSHA standards are general in nature and do not deal with the specifically with the dangers associated with fireworks.

2.5 In addition to safety issues, a common objection to the use of fireworks is that it creates noise pollution and nuisance. The high noise levels given off by some fireworks can be particularly distressing for elderly, babies and persons who are ill. Fireworks also negatively affect domestic animals and wildlife. Animal rights groups have warned that the loud noises from fireworks lead to pets being injured or lost.¹² Provision is made under the Noise Pollution Control Rules 2001 made pursuant to the Environment Management Act, Chap. 35:05 to restrict activities that create noise in excess of specified levels in certain areas and at certain times. The Environmental Management Authority (EMA) and EMA Police are responsible for the enforcement of the Rules. It is submitted however that the EMA has no real teeth to enforce the Noise Control Rules each time a firework is illegally set off. The application of the rules is further limited in terms of

¹⁰ 'Mexico fireworks blast at Tultepec warehouse kills 24' (*BBC website*, 6 July, 2018) https://www.bbc.com/news/world-latin-america-44731778 accessed 02 April 2020.

¹¹ 'Youth killed by fireworks' (BBC website, 18 October, 2000)

http://news.bbc.co.uk/2/hi/uk_news/978499.stm> last accessed 02 April 2020.

¹² 'As Govt funds celebrations for Independence Day...Animal rights groups concerned about fireworks' (*Trinidad Guardian*, 26 August 2010) http://www.guardian.co.tt/news/animal-rights-groups-concerned-about-fireworks-6.2.341193.ffdc1b77ec> accessed 02 April 2020.

geographical zones, which may need to be revised to take into account the recent increase in the use of fireworks.

2.6 Critical to the effective regulation of the fireworks industry is having proper enforcement mechanisms in place. The industry is under-regulated in several key areas which makes the task of enforcement even more difficult. The Police are responsible enforcing the provisions of the Summary Courts Act and the Explosives Act in relation to fireworks. However, greater involvement is needed from other state authorities including Fire Service, the EMA, the Forensic Science Centre and Customs and Excise Division.

2.7 Fireworks must be imported in accordance with the provisions of the Explosives Act. However, the Act does not require that fireworks undergo testing for compliance with safety standards before being imported. There is no system of classifying fireworks based on hazard or noise levels under the Act. It is submitted that effective regulation of the industry must be hinged on a system of classification based on explosive content, hazard and noise levels. The absence of a system of classification allows for any type of fireworks to be imported, thus, dangerous and excessively loud fireworks end up on the local market. It is noted that in other jurisdictions the sale of certain fireworks is banned outright, there are categories of fireworks that can be sold to only professional firework operators and less dangerous categories that can be sold to adults or even children (for example pistol caps).

2.8 In recent years, the practice has developed in the periods leading up to national celebrations for individuals and businesses to set up temporary structures across the country from which they offer fireworks for sale. While the legality of this practice is questionable in terms of being able to comply with the storage and sale requirements under the Explosives Act, it is also noted that minors obtain fireworks through these vendors and go on to use them unsupervised putting themselves and others at risk. Some of the dangerous effects of fireworks were referred to in paragraph 2.2.

2.9 In relation to the national security concerns, the sound effect given off by some fireworks bare similarity to that of firearms or other explosive devices, such as bombs. Often they cannot be distinguished and this may provide an opportunity for the illegal use of firearms or other dangerous explosives to be masked during the periods in which fireworks are commonly used.¹³ A further national security concern is that the explosive ingredients in fireworks may be used to construct improvised bombs or other devices which may be capable of causing death, serious injury and damage to property.¹⁴

¹³ Six year old Jodel Ramnath was the country's first murder victim for 2016. While watching the fireworks light up the sky outside his home, he was shot by an unknown gunman and subsequently died. His neighbour, sixty-nine year old Alvina Warner also suffered the same fate that morning; Sasha Harrinanan, 'Bloodshed in the Beetham' (*Trinidad and Tobago Newsday*, 2 January 2016) http://newsday.co.tt/news/0,222006.html > accessed 02 April 2020.

¹⁴ It is alleged that the bombs used in the Boston 2013 bombings were made using explosive ingredients contained in retail fireworks; 'Boston bombing suspect bought fireworks in New Hampshire' (*Reuters*, 23 April 2013) http://www.reuters.com/article/us-usa-explosions-boston-fireworks/boston-bombing-suspect-bought-fireworks-in-new-hampshire-idUSBRE93M1AM20130423> accessed 02 April 2020.

2.10 Despite the risks and disturbances associated with fireworks, it is noted that in addition to providing entertainment, the fireworks industry is of economic value in that it generates revenue, can boosts tourism and provides employment for many citizens. However, in light of numerous firework related injuries, the high noise levels and the threat to national security associated with the use of fireworks there must be a balance. An absolute ban will be too harsh as this will bring about the closure of the industry, meaning loss of jobs, profits and revenue and citizens will be deprived the opportunity of purchasing and using fireworks for their own private enjoyment. An absolute ban may also be perceived as a disproportionate punishment of the many law abiding and responsible citizens for the recklessness of an irresponsible minority.

2.11 It is suggested that developing a comprehensive fireworks policy to regulate the industry in-built with proper enforcement mechanisms seems to be a more favourable option in moving forward. In formulating the fireworks policy, the key will be balancing the entertainment and economic value against the risks and distress associated with the use of fireworks.

Chapter Three

Legislation governing fireworks in Trinidad and Tobago and other jurisdictions

3.1 In Trinidad and Tobago there is no specific policy governing the fireworks industry or guiding the enforcement of fireworks related offences. However, it is noted that different aspects of firework regulation fall under several pieces of legislation:

Explosives Act

3.2 The Explosives Act regulates the import, sale and removal of explosives through a system of licences and criminal offences. Fireworks are subject to the Explosives Act as they are included in the Act's definition of an explosive and because most contain a combination of gunpowder and other combustible components. The Explosives Act furnishes no definition of "fireworks", but section 2 of the Summary Offences Act, Chap. 11:02 provides that "fireworks" include "bombs, torpedoes, squibs, rockets and serpents". Section 33 of the Explosives Act can be described as a 'catch all' provision as it states that the provisions in the Act relating to the sale and import of gunpowder apply *mutatis mutandis* to other explosives except safety cartridges.

Summary Offences Act

3.3 The Summary Offences Act provides that it is an offence to use fireworks in a town or within 60 feet from the centre of the street in a place not being a town. Further, the Fireworks Permits Regulations made pursuant to section 101 of the Summary Offences Act requires persons wishing to use fireworks to obtain a permit from the Commissioner of Police prior to using fireworks.

The Environmental Management Authority

3.4 The Environmental Management Authority Act (EMAA) makes provision for the EMA to designate hazardous substances and to prescribe performance standards and procedures for the safe handling of such substances. The Noise Pollution Control Rules made under the EMAA divides the country into three zones and prescribes the permitted daytime and night time noise levels for each zone.

3.5 With respect to enforcing the various Acts, the Trinidad and Tobago Police Service is responsible for the Explosives Act and the Summary Offences Act; The Customs Division for the Explosives Act at the country's borders; and the Environmental Police Unit for the Environmental Management Authority Act.

An overview of fireworks legislation in other jurisdictions

3.6 The legislation in several jurisdictions, was examined to ascertain whether there exist any foreign models which could provide guidance in formulating a fireworks policy for Trinidad and Tobago.

In the majority of Caribbean states, legislation dealing with explosives was enacted decades ago when the use of fireworks was not as prevalent as today. Fireworks have also evolved to become more powerful and dangerous in recent years. Appendix I to this paper discusses how fireworks work and the classification systems that are based on hazard levels in other jurisdictions. It is noted however, that the relevant legislation within the Caribbean region deals with explosives in more general terms and makes no specific provision for regulating the firework lifecycle.¹⁵ Therefore, legislation from within the region provides little guidance in formulating a fireworks policy for Trinidad and Tobago.

However, there are laws regulating the fireworks industry in jurisdictions outside the Caribbean region. These include England, Canada, Australia (New South Wales, Queensland and South Australia) and New Zealand. In those jurisdictions, the fireworks policy is reflected in either specific fireworks legislation or under general explosives legislation. Fireworks controls have been made in either primary or secondary legislation. From these jurisdictions, two main approaches to regulating fireworks have been identified:

(1) A prohibition against the sale and use of fireworks by the general public, where either the government alone may import fireworks and conduct public fireworks displays during national celebrations.

In Singapore, there is an absolute ban on dangerous fireworks based on the criteria set out in the Dangerous Fireworks Act 1999, these include firecrackers, rockets and sand crackers. Northern Ireland, imposed a strict ban on the illegal possession of fireworks in 2002. Any garden fireworks found in the possession of anyone without a licence, other than a legitimate trader could result in a fine up of up to £5,000. In the Republic of Ireland, the sale of fireworks to anyone other than professional display operators is prohibited.¹⁶ In Chile, the sale and use of fireworks by the general public is prohibited but professional firework operators are permitted to conduct public firework displays.

Rationale:

3.7 Public safety is the common ground relied on by jurisdictions that prohibit use of fireworks by the general public. The decision to impose such a stringent measure may have been significantly influenced by prior events or particular circumstances existing within in a state. For example, it may be the result of a series of fireworks related

¹⁵ The Explosives Act Chapter 215 (Bahamas); The Explosives Act Cap.162 (Barbados); The Dangerous Goods Act, Chapter 134 (Belize); The Explosives Act, Chapter 16:06 (Guyana); The Gunpowder and Explosives Act, Cap. 142 (Jamaica)

¹⁶ Change to NI fireworks laws' (*BBC News*, 15 April 2002)

http://news.bbc.co.uk/2/hi/uk_news/northern_ireland/1930626.stm> accessed 02 April 2020.

accidents, as was the case in Singapore, or otherwise in the interests of national security where the use of fireworks has been abused / misused in furtherance of violence, public unrest and rioting.

3.8 In Singapore, the government started regulating the use of fireworks in 1968 when they became a serious public safety issue because of the surge in fires associated with their use. Despite introducing regulations to ban the use of certain types of fireworks, the problem of fires caused by fireworks persisted. This prompted the government to introduce a series of stricter laws to tackle the issue. A total ban on the use of fireworks in Singapore was put in place when the Dangerous Fireworks Act came into operation in 1972.¹⁷ A similar ban was implemented in Northern Ireland following riots in North and West Belfast during which a number of police officers were injured after fireworks were used as deadly crude bombs by rioters.¹⁸

(2) Regulation of the fireworks industry at all levels of the supply chain through a system of licences, safety requirements and criminal offences. The fireworks industry in Australia, Canada, England and New Zealand are some of the most heavily regulated in the world. In these jurisdictions, regulations cover all aspects of a fireworks' lifecycle. From the time of manufacture or import, fireworks are subject to a series of safety requirements, including compulsory testing for compliance with specified safety standards. There are also requirements for proper labelling, marking and clear instructions imposed by the regulations. Fireworks may only be transported or stored under a permit or licence. Vessels and magazines must also satisfy stringent safety and security requirements. A licence is required to sell fireworks, and the premises from which they are to be sold must be also be licenced. The regulations also prescribe the periods in which the general public may purchase and use fireworks. Some fireworks can only be purchased and used by adults while some may only be purchased and used by persons certified in the safe use and handling of fireworks. Certain types of fireworks are also prohibited owing to the high levels of danger or noise that they pose. In order to conduct public displays, the regulations require the intended sites to be approved, proper safety systems must be in place and prior notice must be given to those likely to be affected in order to obtain permission.

Rationale:

3.7 In these jurisdictions, safety concerns were foremost in the development of regulations for the fireworks industry. The regulations were also introduced to deal with other major problems associated with using fireworks, particularly, the impact of the high noise levels on humans and animals and the frequency of fires, injuries and deaths resulting from the abuse and misuse of fireworks. For example, in England, mini-rockets and airbombs were banned in order to stop anti-social behaviour involving fireworks. The

¹⁷ 'Regulating the Use of Fireworks' (*National Library Board Singapore*, 4 October 2013)

<http://eresources.nlb.gov.sg/infopedia/articles/SIP_2013-10-04_181113.html> accessed 02 April 2020.
¹⁸ 'Change to NI fireworks laws' (*BBC News*, 15 April 2002)

http://news.bbc.co.uk/2/hi/uk_news/northern_ireland/1930626.stm> accessed 02 April 2020.

regulations also prescribe the periods in which fireworks can be purchased and used to limit the disturbance to those specified periods.

3.9 Importantly, these jurisdictions recognised the need to find a balance between several factors. These included the economic interests of the industry, the entertainment value, the responsibility of the state to ensure safety and security of its citizens and the right of citizens to the peaceful enjoyment of private property. The regulations reflect a balance which preserves the fireworks industry and allows the general public to use and enjoy fireworks, albeit in and safe, responsible and reasonable manner.

Areas of concern within the current laws regulating fireworks

3.10 As mentioned above, there is no specific fireworks policy or legislation in Trinidad and Tobago but there are provisions within the existing legislation which apply to regulate fireworks. Together, these provisions form the current 'system' of fireworks regulations which by this very nature, presents difficulties in relation to enforcement and prosecutions. Having examined the local and foreign fireworks regulations, several areas in current system that may require strengthening in order to effectively regulate the fireworks industry. Some of the concerns identified are listed below:

Absence of cohesive policy and legislation to guide the enforcement and prosecution of fireworks offences.

There is no specific policy to regulate the fireworks industry. The Explosives Act seeks to control the manufacture, storage, sale, storage, import and export of explosives in general terms. The Act makes specific provisions for gunpowder and safety cartridges and further provides that the provisions relating to the sale, storage and removal of gunpowder shall mutatis mutandis apply to all other explosives. As mentioned above, most, if not all, fireworks contain gunpowder. Therefore, the provisions that govern gunpowder also apply *mutatis mutandis* to fireworks. It should be noted however, that most fireworks contain a mixture of gunpowder and other The question is whether the law should be explosive components. concerned only with the quantities of gunpowder contained in fireworks, or its mixture with the other explosive components. The latter should be thee relevant concern, as under the legislation a distinction has to be made between gunpowder on its own and fireworks which contain a mixture of several explosive components. In any event, if fireworks are regarded as 'other explosives' and the 'catch all' provision applies, the sale, storage and removal of fireworks will be subject to those provisions which currently apply to gunpowder. As a result, there may be ambiguities when applying the weight requirements set out in the various provisions of the Act. That is, whether the relevant measure should be the total weight of gunpowder contained in the fireworks, or alternatively, the combined weight of all the explosives contained in fireworks. For the purposes of clarity, certainty and public safety, there should be specific policy to regulate the operations within fireworks industry.

- There is no system of classifying fireworks under any of the current enactments being used to regulate fireworks. The benefits of a system of classification flows through the entire supply chain. Firstly, the importation of certain dangerous and loud fireworks can be prohibited. Secondly, fireworks can be categorised based on the intended user, for example, small, adult or professional. Classification will also affect regulations in relation to the safety requirements for sale, storage, use and transport.
- The Explosives Act does not impose testing, labelling and instructions requirements on fireworks to be imported into Trinidad and &Tobago.
- Current laws do not require training and certification in the safe use and handling of fireworks for employees in the fireworks industry.
- There is no restriction on the periods and times in which fireworks may be sold to and used by the general public and private display operators.
- There are inadequate controls to deal with firework offences The Explosive Act falls short in several areas which are critical to the overall control of fireworks, including: possession, transportation, packaging, storage and the manner in which fireworks are displayed in shops. The non- regulation in those critical areas opens the gateway for the illegal and unsafe trade, possession and use of fireworks.
- Furthermore, the current penalties under the Explosives Act and the Summary Offences Act as they relate to firework related offences are archaic and thus, inadequate as an effective punishment or deterrent to the commission of such offences. In this regard, more comprehensive regulations supported by stringent penalties are required to effectively regulate the industry.

Difficulty with enforcement and prosecution of the current legislative provisions regarding fireworks

3.11 The nature of the current system of regulating fireworks presents difficulties for the authorities responsible for enforcement and prosecutions:

- Enforcement agencies first have to determine whether a particular activity is covered under the Explosives Act, Summary Offences Act or the Noise Pollution Control Rules prior to taking any action against persons who may possibly be carrying out an illegal activity involving fireworks.
- Although the Explosives Act seeks to control all explosives including fireworks, the Act does not take into account the characteristics which are specific to fireworks. For example, the weight requirements set out in the

Act refer to gunpowder but fireworks are comprised of gunpowder, blackpowder and other combustible components. The Act is silent on which is the relevant measurement for the purposes of enforcing the Act to control fireworks. That is, whether it should be the combined weight of the explosive components or only the weight of its gunpowder content.

- The Summary Offences Act attempts to restrict the use of fireworks to the most remote areas and away from public streets. Owing to significant development since the Summary Offences Act was enacted which has seen rural areas moving towards a more urban and sub-urban structure, the current law which is premised on restricting the use of fireworks in towns or from a specified distance away from the centre of the street in rural areas may have to be revised. For similar reasons, the zones set out in the Noise Control Rules may need to be reviewed.
- Under the Public Holidays and Festivals Act, Chapter 19:05, the President can authorise the use of fireworks within towns and streets during public festivals. However, a police officer may seize fireworks from a person during a public festival if he is of the opinion that it is likely to be used for causing injury to the person and he considers that it in the interest of the safety of the public to do so.
- There must be a concerted effort among the responsible authorities, namely, the Police Service, Customs, Fire Service, EMA and the Forensic Science Centre to coordinate, work together and share information. Currently, enforcing and prosecuting fireworks offences lies with the Police Service. The enforcement difficulties faced by the Police Service are evident during periods of national celebrations when fireworks are constantly set off in breach of the law with few or no charges being laid.
- Enforcement of the current regulations is therefore not practical in relation to the illegal use of fireworks. It is difficult for the police to apprehend every person who illegally sets off fireworks under the current system. Without sufficient man power, proper reporting and evidence gathering systems in place enforcement and prosecuting difficulties will always be encountered under the current system. Unless a person is caught in the act of illegally setting of fireworks, any action by the police will be after the fact and therefore the prosecution of the offence will depend heavily on the forensic analysis of the evidence gathered by the police. In this regard, the forensic analysis is essential to the successful prosecution of fireworks offences.

3.12 In the following chapters, the ability of the current law to effectively deal with the issues raised in Chapter One will be considered. The focus will be placed on how the issues are dealt with by other jurisdictions before putting forward recommendations for reform in Trinidad and Tobago.

Chapter Four

Importation of Fireworks

4.1 This Chapter provides a comparative analysis of the local and foreign laws governing the importation of fireworks with a view to identifying any deficiencies in national enactments.

4.2 In considering the importation of fireworks, focus will be placed on the importance of licencing and ensuring the safety of imported fireworks. In relation to licencing, the authority responsible for issuing the licences and the requirements that must be satisfied to obtain a licence to import fireworks are examined. The measures taken in other jurisdictions to impose safety standards and ensure the safety of imported fireworks will also be considered.

The import of fireworks

4.3 Fireworks are not manufactured locally but are imported primarily from China and the United States. As this stage represents the beginning of the life cycle in the local market, regulating the import of fireworks is crucial to achieving a successful regulatory regime to control the overall use of fireworks.

4.4 Foreign laws illustrate that by imposing safety requirements and restricting the import of certain types of fireworks based on their classification, noise levels or explosive content authorities are able to obtain a measure of control at the beginning of the supply chain. This alleviates some of the difficulties faced by enforcement agencies as dangerous and loud fireworks can be restricted or prohibited from entering a country while ensuring that only fireworks tested for compliance with safety standards or those with acceptable noise levels are allowed to enter our borders. With such measures in place, enforcement agencies are better able to focus their time and resources on the illegal use of fireworks.

Provisions under the Explosives Act relating to the import of fireworks

4.5 As mentioned above, the provisions in the Explosives Act governing the import of gunpowder apply *mutatis mutandis* to all explosives (except safety cartridges). Fireworks are subject to these provisions for two reasons, firstly, because they are included in the definition of explosives in section 2 of the Act and secondly, because gunpowder is the igniting agent in most fireworks.

4.6 There are two relevant provisions which deal with the licence to import explosives in the Explosives Act. Firstly, under section 7(1) only wholesale dealers are permitted to import gunpowder. Section 7(1) provides: "No person other than a wholesale dealer shall import gunpowder into Trinidad and Tobago". The Act is silent on whether or not this section also applies to explosive products, like fireworks, which contain a combination of gunpowder and other explosives. A strict application of section 7 would mean only wholesale dealers will be able to import fireworks containing gunpowder. A person who

imports gunpowder, not being a wholesale dealer contrary to section 7(1) will be liable to a fine of two thousand dollars (\$2000.000).

4.7 Secondly, in Part III of the Act, entitled "Explosives Generally", section 35(1) provides that:

35. (1) No person, other than a licensed wholesale dealer, shall import into Trinidad and Tobago any explosive unless he first obtains a licence in that behalf from the Minister who may in his absolute discretion refuse the same or grant the same subject to such terms and conditions as he may think fit; but no such licence shall be required for the importation of safety cartridges.

Importing explosives contrary to section 35(1) is punishable by a fine of two thousand dollars (\$2000.000). The Act does not list any requirements for obtaining a wholesale dealer's licence under section 35(1).

4.8 The procedure for obtaining a wholesale dealer's licence under sections 7 and 35 are very different. Moreover, it is to be noted that neither imposes a limit on the amount of fireworks which can be imported. The requirements and procedure to be followed to obtain the wholesale dealer's licence referred to in section 7 is set out in section 11. This licence is issued by the Magistrate of the district where the premises to be licenced is located and by virtue of section 13(2) will be valid up until the following March 31st from the date it was granted. Section 13(2) will also apply to licences granted under section 35 pursuant to section 35(2).¹⁹ Section 11 also provides the following requirements that must be satisfied before a wholesale dealer's licence can be issued:

- Written certification from the police officer in charge of that division that there is on the premises to be licensed a sufficient fireproof vault or other place which is capable of safely storing one hundred eighty pounds (180lbs) of gunpowder;
- Every such fire-proof vault or other place shall have the word "Gunpowder" painted or otherwise legibly marked on the door thereof;
- A fee of five hundred dollars (\$500.00).

4.9 The Importation, Storage, etc., of Gunpowder and Cartridges other than Safety Cartridges Regulations made under section 8 regulates how imported gunpowder is to be treated when it is being landed or shipped. Breaching the regulations is punishable by a fine of one thousand dollars (\$1000.00), two hundred dollars (\$200.00) for each day the breach continues and forfeiture of the whole amount of gunpowder or cartridges found in any vessel in breach of the regulations.

The regulations governing the import of fireworks in other jurisdictions

4.10 The main issues surrounding the regulations governing the import of fireworks include: the authorisation to import fireworks; ensuring the safety of imported fireworks which involves having a classification system; testing fireworks for compliance with safety

¹⁹ Section35(2) provides: "Subject to this Part the provisions of Part I as to the importation, sale and removal of gunpowder shall *mutatis mutandis* apply to every other explosive except safety cartridges".

standards; and imposing labelling and marking requirements before fireworks can be imported.

Licencing

4.11 In order to legally import fireworks in a number of jurisdictions, persons and corporate bodies are required by law to first obtain authorisation in the form of a licence, permit or test certificate. In the majority of jurisdictions examined, regulatory authorities²⁰ are responsible for *inter alia* granting the authorisation for importing fireworks as well as other activities involving dangerous goods or substances. Such regulatory authorities in some jurisdictions impose conditions on licences which, if broken, can result in the revocation of the licence or its refusal to renew. These regulatory authorities exist in most of the jurisdictions examined including the Australian States, Canada, England and New Zealand. For example, in Queensland, import licences are valid for five years. In Canada applicants have the choice of obtaining an annual permit or a single-use permit.

Licensing requirements

4.12 For the most part, the requirements to obtain authorisation to import fireworks in the jurisdictions examined are similar. Common features include:

• Storage

Importers of fireworks are required to have a capable storing facility to house the imported fireworks. In New South Wales for example, the import licence allows an importer to store a certain quantity of fireworks, while in other jurisdictions importers are required to obtain a separate storage licence for the premises at which the imported fireworks are stored. In England, there is no requirement for an import licence or permit per se, however, fireworks importers are required to obtain a storage licence from the Health and Safety Executive²¹ if the quantity to be stored exceeds two (2) tonnes of imported fireworks. Where the amount to be stored is less than, the licence is issued by the local authority.²² Storage licences will be discussed under Chapter Five.

• Packaging, labelling and instructions

In some jurisdictions, there are standards for packaging fireworks. Hence, fireworks must be packaged in such a way as to reduce the risk of the firework breaching its packaging and causing danger to users. In New Zealand, the test for fireworks packaging is that it must remain intact for at least 30 seconds after being held above an ignited cigarette lighter. The packaging must also bear name

²⁰ The following are the Authorities responsible for issuing licences with respect to carrying out activities involving fireworks:

[•] WorkCover (New South Wales); Explosives Inspectorate (Queensland); SafeWork (South Australia); WorkSafe (Victoria);

[•] Local Licencing Authorities in England²⁰;

[•] Explosives Regulatory Division (ERD) of the Ministry of Natural Resources in Canada;

[•] Environmental Protection Authority (EPA) in New Zealand

²¹ The Health and Safety Executive was established by section 10(1) of the Health and Safety at Work etc. Act 1974 (c. 37).

²² Explosive Regulations 2014, Schedule I, para 1.

of the manufacturer and the country of origin. Additionally, there must be clear instructions on the use of contents. Finally, fireworks are also required to bear markings which signify compliance with certain recognised safety standards.

Additional requirements imposed in some jurisdictions include:

- Submitting safety management plan
 In Queensland, applicants must include with their application a copy of the safety
 management system, including risk assessments, security plan, emergency
 response plan, procedures and controls, to a standard acceptable to the Chief
 Inspector of Explosives before permission is granted for the importation of
 fireworks.
- Submitting background checks/ criminal records
 In Queensland, an applicant for an import licence must declare and give details of
 any convictions for an offence within the previous ten (10) years and any current
 Domestic Violence Orders within Australia. Where the applicant is a corporate
 body, a security assessment for each person named as a director, owner, office
 bearer or partner must be submitted with the licence application. In New South
 Wales, an applicant must have a current security clearance (SC) from WorkCover
 or apply for a SC at the same time as the import licence.

In the application for a SC the applicant must give details of any convictions under the Work Health and Safety Act 2011 and/or the Work Health and Safety Regulation 2011 and/or the NSW Explosives Act and/or the NSW Explosives Regulation and/or the Construction Safety Act 1912 and/or the Dangerous Goods Act 1975 or any other equivalent legislation in any state or territory in Australia or elsewhere in the last 10 years and submit a completed application for a national criminal history record check. The import licence will not be processed until the SC has been approved.

• Stating the reason for the application.

Applicants must have a legitimate reason for importing explosives. For example in Canada, under section 46(1)(e) of the Explosive Regulations applicants are required to state the purpose for importing the explosive under number of headings including: personal, industrial or commercial use, reloading, field trial or other testing, sale, consignment, pyrotechnic event, fireworks display or other purpose). This also obtains in Queensland and New South Wales.

 Furnishing details of the location where the imported fireworks will be stored In Canada, Queensland and New South Wales, applicants must state the location where the imported fireworks will be stored. This enables the authorities to inspect the premises for compliance with the storage regulations. In England, importers of fireworks are required by the Fireworks (Amendment) Regulations 2004 to inform Border Control of the address of the premises where the imported fireworks will be stored. This measure was designed to ensure compliance immediately following importation. In New South Wales, a photocopy from a local street directory or other map showing the location of the storage site must be submitted with the application form.

- Description of the explosive to be imported. In Canada and Queensland importers must provide the product name and UN number of each explosive to be imported. Similarly, in New South Wales the application form further requires importers to provide the UN number, Class or division, typical quantity to be stored and units (L or kg/NEQ (Net Explosive Quantity) or number), the Proper shipping name and the Product or common name.
- Certification or training in the safe handling of explosive materials. In several jurisdictions, firework importers must obtain and provide evidence of special training or certification in the safe handling of explosive materials. This issue will be further discussed in Chapter Seven.

Ensuring the safety of imported fireworks

4.13 In a number of jurisdictions, the laws governing explosives direct regulatory authorities to establish a list of authorised of explosives. Only authorised explosives can be manufactured, imported, used, transported, stored and sold within the respective jurisdictions. In order to obtain authorisation for an explosive, an application has to be made to the relevant regulatory authority who makes a determination based on the explosive type, components, design, hazard type and the risk of unintended ignitions.

4.14 In addition, some jurisdictions require that fireworks be tested for compliance with safety, design and construction requirements before they can be imported. In England, the Pyrotechnic Articles (Safety) Regulations 2015 (2015 Regulations) requires category 1, 2 or 3 fireworks which are manufactured outside the European Union (EU) to conform to European safety standards. Such fireworks have to be tested by a notified body (NB) for compliance with the essential safety requirements set out in Schedule 2 of the 2015 Regulations. Once approved, the products must carry the CE mark and details of the manufacturer and importer must appear on their labels.

4.15 In Queensland, under the Fireworks Product Safety Code (the safety code) imported fireworks must be tested for compliance with the requirements set out in the Fireworks Product Safety Sampling and Test Standard (the safety standards) before they can be sold or used in Queensland. The code and the safety standards have efficacy under the Explosives Act 1999 and the Explosive Regulations 2003. Essentially, the safety standards provide labelling, structural and safety performance standards with which imported fireworks must comply. The code and the safety standards help to identify each firework with its batch of manufacture or import consignment. Samples are taken from each batch or consignment and tested for conformity with the stipulations in the Fireworks Product Safety Sampling and Test Standard. Importers must obtain a conformance certificate to certify that the representative sample which has been presented to the tester for evaluation is free of any critical non-conformances. Once the firework passes the test, it is given a Certificate of Compliance from the tester. A

Compliance Certificate Number is then assigned to all the fireworks in the same batch or consignment.

4.16 In New Zealand, each batch of every consignment of imported retail fireworks is required to undergo testing for compliance with mandatory requirements for the construction and design of retail fireworks set out in regulation 11 of the Hazardous Substances (Fireworks) Regulations 2001. These requirements must be met before a test certificate can be issued. The testing criteria is set out in the Code of Practice for Retail Fireworks: Design, Performance, Testing, Storage, Transport, Sale and Use which is approved pursuant to Sections 78 and 79 of the Hazardous Substances and New Organisms Act.

Chapter Five

Storage of Fireworks

5.1 In this chapter, the regulations governing the storage of fireworks are examined from a local and international perspective. For the most part, fireworks are stored for the purposes of sale and/ or use. Owing to the explosive nature of fireworks and the disastrous consequences which can result from unintended ignitions at places where large quantities of fireworks are stored, the Commission is of the view that storage regulations is of critical importance. The following paragraphs look at the provisions for the storage of firework in Trinidad and Tobago's Explosives Act before examining the approach taken in other jurisdictions to regulate the storage of fireworks.

The law governing the storage of fireworks in Trinidad and Tobago

5.2 As mentioned above, fireworks are subject to the provisions of the Explosive Act. However, to fully understand the legal requirements to store fireworks one must first appreciate the structure of the Explosive Act. The Explosive Act is divided into three Parts: Part I regulates gunpowder, Part II makes provision for safety cartridges and Part III makes provision for explosives in general. However, in Part III, section 35(2) provides that the provisions in Part I relating to the import, sale and removal of gunpowder shall apply *mutatis mutandis* to all other explosives except safety cartridges.

5.3 While the issue of storage is not included in section 35(2), there are minimum storage requirements applicable to the licences to import and sell gunpowder under Part I of the Act. This impacts on how fireworks are stored because most fireworks contain a combination of gunpowder and other explosive components. For the purpose of this discussion, two approaches are considered, first, applying the gunpowder provisions strictly to those fireworks that contain gunpowder, and secondly, treating fireworks as general explosives which are subject to Part III of the Act.

Application of the gunpowder provisions to fireworks

5.4 Under Part I of the Explosives Act, gunpowder can be stored by persons who sell gunpowder under a wholesale or retail dealer's licence at the premises mentioned in the licence.²³ In order to acquire a dealer's licence, the applicant must satisfy certain minimum storage requirements. To obtain a wholesale dealer's licence, the applicant must have a fireproof vault capable of storing 180 pounds of gunpowder on the premises to be licensed. To obtain a retail dealer's licence, the applicant must have a metal case lined with wood, which is equipped with handles and must be capable of storing 30 pounds of gunpowder on the premises to be licensed. The licences are issued by a Magistrate and are valid until the following March 31st after the date they were granted. The Act does not prescribe a maximum limit on the amount of gunpowder that can be stored on licenced premises. However, section 8 of the Explosives (Manufacture of Fireworks) Order provides that no more than one hundred and seventy-five (175) pounds of manufactured fireworks or partly finished fireworks shall be stored on any magazine or building where explosives are, or liable to be.

²³ Explosives Act, ss 11, 12.

5.5 By virtue of section 3(1), only the Minister of National Security²⁴ can appoint a place or vessel to be a magazine for the reception of gunpowder. Further, section 6 requires any lawfully imported gunpowder to be taken into government magazines. It is to be noted that the Act does not make provision for setting up privately owned magazines for storing gunpowder. Therefore, under Part I of the Act, fireworks containing gunpowder can be stored either at licensed premises under sections 11 and 12 or at Government magazines.

5.6 Section 4 of the Act sets out safety requirements which must be adhered to at Government magazines. These include restricting what can be stored in the magazine to gunpowder alone, specifying what materials are used to construct the interior of the magazine, specifying when repairs can be done and the materials or the tools that can be used to conduct the repairs, the type of clothes to be worn and a minimum age requirement for entering a magazine. In addition, the Powder Magazine Rules made pursuant to section 5 prescribe the conduct to be adhered to by persons employed in those magazines. A breach of the Rules is punishable by a fine of two hundred dollars (\$200.00).

5.7 Section 16 of the Act requires wholesale and retail dealers to keep a Gunpowder receipt book and a Gunpowder delivery book on licensed premises and to make the proper entry in the respective book each time gunpowder is received or delivered.²⁵ A dealer who fails to make the required entry or makes a false entry is liable to a fine of two thousand dollars (\$2000.00).

Application of Part III of the Explosives Act to fireworks

5.8 In Part III, sections 35 to 37 provide for the import, storage and sale of explosives in general. Section 35(1) contemplates that only licenced wholesale dealers are permitted to import explosives. The wholesale dealer's licence is granted by the Minister "in his absolute discretion" and may be made subject to terms and conditions. The licence also permits the holder to store explosives. It should be noted that the Act does not provide any factors which the Minister has to consider or any requirements the applicant must satisfy before the Minister exercises his discretion to grant or refuse the licence. Section 35 provides:

35. (1) No person, other than a licensed wholesale dealer, shall import into Trinidad and Tobago any explosive unless he first obtains a licence in that behalf from the Minister who may in his absolute discretion refuse the same or grant the same subject to such terms and conditions as he may think fit; but no such licence shall be required for the importation of safety cartridges.

²⁴ The Explosives Act does not state which Minister is responsible for implementing the Act. However, the Explosives Act is classified under defence, security and public order, all of which, according to the gazetted assignment of ministerial responsibility (dated 9th September 2015) falls under the responsibility of the Minister of National Security. The Minister of National Security has exercised powers to make subsidiary legislation under the Act, for example, The Magazine (Appointment and Supervision) Order, 1997 (Legal Notice No. 10 of 1997) made pursuant to section 3 and the Magazine (Appointment and Supervision) Order, 1991 (Legal Notice No. 78 of 1991).

²⁵ The books must be kept in accordance with Form A and Form B as set out in the Schedule to the Act.

(2) Subject to this Part the provisions of Part I as to the importation, sale and removal of gunpowder shall mutatis mutandis apply to every other explosive except safety cartridges.

(3) Any person who contravenes this section or the conditions of a licence issued hereunder is liable to a fine of two thousand dollars.

5.9 It is also important to note that the provisions relating to the storage of gunpowder in Part I of the Act do <u>NOT</u> apply *mutatis mutandis* to the explosives imported under Part III with exception to safety cartridges. In addition, the words "Subject to this Part" in section 35(2), gives the provisions of Part III effect over the provisions of Part I.²⁶ Thus, the particular provisions governing the storage of gunpowder in magazines, vaults and metal cases in Part I will not apply to explosives imported under Part III. The issue is then: what provision is made in the Explosives Act for storing explosives imported under Part III of the Act? In particular, where are they to be stored and under what conditions.

5.10. Section 36(1) provides that any explosives imported under a licence granted under Part III must be stored in either a Government magazine or a place or building that has been approved by the Minister. It is noted that the Act neither sets out requirements/ conditions under which the explosives (imported under Part III) are to be stored in a Government magazine nor what must be satisfied in order for a building or place to be approved by the Minister. The legislature left the matter to the discretion of the Minister. The Minister is empowered by section 36(2) to make regulations relating to the conditions under which explosives may be stored in a Government Magazine. It is noted however, that to date, no specific regulations for the storing fireworks have been made pursuant to section 36(2). Section 36 provides:

36.(1) The Minister may provide a magazine in which any description of explosive may be stored, and every person importing or keeping any explosive under a licence issued under this Part shall store the explosive either in the Government magazine or in a building or place approved by the Minister.

- (2) The Minister may make Regulations relating to—
 - (a) the conditions under which explosives may be stored in the magazine;
 - (b) the rent to be paid and the times at, and the manner in which, the rent shall be payable or recoverable;
 - (c) the sale or disposal of explosives in respect of which any rent may be in arrears, and the manner in which the proceeds of any such sale shall be dealt with.

5.11 It is further noted that 36(2) does not give the Minister power to make regulations in relation to approved building or places for storing explosives. Three things are to be noted. First, the regulatory making power under section 36(2) is expressly restricted to magazines. Secondly, he is given the express power under section 36(1) to approve any building or place for the storage of explosive. Finally, it is submitted that by virtue of

²⁶ Clark (C & J) Ltd v IRC [1973] 2 All ER 513; [1973] 1 WLR 905.

section 37, the Minister may, by Order, impose conditions or restrictions on the storage of explosives in an approved building or place. Of course, it is expected that the Minister would act reasonably and follow best practices applicable to the subject matter. This can include prescribing the criteria for obtaining the approval as well as stipulating specific storage requirements. Section 37 provides:

37. The Minister may, by Order, prohibit absolutely, or subject to conditions or restrictions, the manufacture, keeping, importation, conveyance and sale or any of them of any explosive which is of so dangerous a character that, in the judgment of the Minister, it is expedient for the public safety to make the Order.²⁷

5.12 It is further noted that the Explosives (Manufacture of Fireworks) Order, made pursuant to section 37, sets out several general safety precautions that must be observed at magazines and buildings in which explosives are stored.

The regulations governing the storage of fireworks in other jurisdictions

5.13 The following paragraphs examine how other jurisdictions regulate the storage of fireworks after they are imported, pending wholesale or retail sale and intended use by professional firework operators and ordinary citizens. In the selected jurisdictions, regulating the storage of fireworks is an important part of the overall system of regulations to ensure safety throughout the firework lifecycle. Firework storage is therefore subject to stringent safety requirements not only to ensure that fireworks are stored safely, but also to promote the safety of employees at storage sites as well as members of the public. The following factors form the basis of the storage regulations in the jurisdictions examined:

- Classification by hazard type
- Net Explosive Content and the maximum quantity to be stored
- Authorisation, requirements for authorisation and mandatory conditions
- Safety standards, safety requirements and safety distances

Authorisation

5.14 Generally, the explosives laws in other jurisdictions require some form of authorisation to store certain types or large quantities of fireworks. In those jurisdictions, regulatory authorities grant authorisation in the form of a licence, permit or certificate depending on whether the purpose of the storage is for intended sale or use. In most jurisdictions, authorisation to store fireworks is subject to conditions which are either stipulated by the regulations or are imposed by the regulatory authority. Generally, individuals or corporate bodies in the business of importing or selling fireworks on a wholesale and retail basis are required to obtain licences. Permits are granted for the purpose of storing fireworks temporarily or for a particular occasion, for example, single use permits under the Explosive Regulations 2013 in Canada. It is noted however, that in some jurisdictions no authorisation is required to store fireworks containing a small amount of explosives, a limited amount of certain types of fireworks or a limited amount of display fireworks at the display site prior to the display.²⁸

²⁷ It is noted that the words 'storage' and 'keeping' are used interchangeably throughout the Act.

²⁸ Explosive Regulations 2014, regulation 7 (England);

5.15 The existence of a system of classification is essential to regulating the storage of fireworks in several jurisdictions. In particular, the hazard type and the net explosive quantity (NEQ) (also referred to as net explosive content (NEC) and net explosive mass (NEM)²⁹) of fireworks are used in other jurisdictions to determine the level of precaution that must be taken when storing fireworks. In those jurisdictions, the NEQ (NEC or NEM) of an explosive product refers to the mass of the explosive components alone and does not include the mass of any packaging and tubing. Of the jurisdictions, examined only the Canadian Explosives Regulations 2013 make reference to the gross weight of an explosive, that is, the combined weight of the explosive components, tubing and packaging.

Obtaining authorisation

5.16 Regulatory authorities usually grant the permission to store fireworks through an application process. Applicants must satisfy certain requirements which are either set out in the relevant regulations or by the regulatory authorities. In some the jurisdictions, applicants must be certified by law enforcement that they are fit to acquire and keep explosives.

5.17 In England, section 5 of the Explosive Act 1875 provides that explosives must be stored in a licensed factory or licensed magazine or store. Additionally, the Explosive Regulations 2014 require applicants for any licence to store explosives to obtain an explosive certificate from the Health and Safety Executive. The explosives certificate identifies the person or company as being fit to acquire and/or keep relevant explosives and sets out the quantity and type of explosives that can be stored under the certificate.³⁰ Applicants for a storage licence must also obtain assent from the local authority.³¹

5.18 In Canada, applicants for authorisation are required to submit a criminal record check together with their application for authorisation.³² Similarly, in Queensland, applicants are required to declare any criminal charges, convictions or if they have been subject to any Domestic Violence Orders within the previous ten years. In New South Wales, applicants must obtain a security clearance from the regulatory authority and also provide a statement on their experience in the safe storage, handling and transport of explosives, knowledge of the Australian Explosives Code and the Australian Standards AS2187 and any relevant training or qualifications. In New Zealand, if more than 500 kg (gross weight) of fireworks is being stored, they are required to be under the control of an approved handler or handled by a person trained in the safe handling of explosive who is under the direct supervision of an approved handler. However, an approved handler is not required where the firework is secured at a hazardous substance location or designated use zone in a container that meets the requirements of either regulations 23 and 24, or 25 of the Hazardous Substances (Class

²⁹ Explosive Regulations 2014, regulation 2(4) (England); Explosive Regulations 2013, regulation 3(1) (New South Wales).

³⁰ Explosive Regulations 2014, regulations 4; 5.

³¹ Regulation 14 of the Explosive Regulations 2014 (England) sets out the assent procedure for local authorities, which requires the licensing authority to issue a draft licence which the applicant then submits to the relevant local authority. The local authority is then required to inspect the premises, send out notice to persons or business in the consultation zone and hold a public hearing to receive any representations or objections before assenting to the licence being granted by the licensing authority.

³² Explosive Regulations 2013, regulations 182; 183.

1 to 5) Controls Regulations 2001. Other requirements include conducting a risk assessment, providing the authority with a fire safety plan, security plan, emergency response plan, operational procedures and controls, site/floor plans and evidence of compliance with prescribed safety standards.

Conditions

5.19 The authorisation to store fireworks can be granted subject to conditions imposed by the relevant regulations or by the regulatory authority. In England for example, regulation 13(5) of the Explosive Regulations 2014 provides that all licences to store explosives must include conditions which specify the site and, within it, the places where the explosives may be stored, the hazard type, the description and maximum amount of explosives which may be stored or otherwise present. In Canada, the Minister of Natural Resources can make any licence, permit or certificate subject to any term or condition, in addition to those prescribed by the regulations,³³ that the Minister considers necessary for the protection of any person or property, compliance with security or safety standards.³⁴

5.20 In New South Wales the General Explosive Conditions 2013³⁵ (GEC) set out the conditions for explosive licences and security clearances issued under the Explosives Act and the Explosives Regulations. The GEC also imposes specific conditions on holders of explosive storage licences.³⁶

What fireworks are subject to storage regulations?

5.21 In the jurisdictions examined, fireworks falling within Class 1.3 or 1.4 hazard type under the UN standards are subject to storage requirements. However, under the Explosive Regulations 2014 in England, stipulated quantities of these types of fireworks can be stored without authorisation for specified periods.³⁷

³³ Explosive Regulations 2013, Part 7.

³⁴ Explosive Act, R.S.C., 1985, c. E-17, s 7(2).

³⁵ 'General explosive licence and security clearance conditions under the NSW Explosives Act and Regulation' (*SafeWork NSW*) https://www.safework.nsw.gov.au/resource-library/licence-and-registrations/general-explosive-licence-and-security-clearance-conditions-under-the-nsw-explosivesact-and-regulation> accessed 02 April 2020.

³⁶ Importantly, under the GEC it is a condition that licence holders must comply with AS2187 – Explosives: Storage, transport and use (AS 2187); AS4326 – The storage and handling of oxidizing agents; The Australian Explosives Code (titled Australian Code for the Transport of Explosives by Road and Rail); and The Australian Dangerous Goods Code. Condition 82 requires that when explosives (which are not for immediate use) are received at the place of storage they must be stored within 12 hours and explosives loaded on vehicles at storage sites for dispatch must be removed from the premises within 12 hours. Condition 82 also requires the packaging of all explosives received at storage premises to be inspected, and if necessary, they are to be repackaged in sound packaging of equivalent structure as the original packaging. Importantly, condition 84 restricts the amount of explosives that can be stored in buildings with internal magazines. For internal magazines in the same building, the total quantities must not exceed 200kg of Class 1.3 explosives or 200kg Class 1.4 explosives. Further, two or more magazines in the same building must be separated by either an effective means of segregation to prevent communication of an explosion from the magazines or by a distance, in a straight line, of at least 10 metres.

³⁷ Explosive Regulations 2014, regulation 7.

Where can fireworks be stored?

5.22 Regulations permit fireworks to be stored in magazines, storage units or up to a limited amount in dwellings. The firework type, explosive quantity and purpose for storage determines where fireworks can be stored, the period of storage and the safety requirements that must be applied at the storage location. It is further noted that in some of the jurisdictions, there are very detailed and specific requirements in relation to the design and construction of magazines, the manner in which fireworks are packed and the level of precaution that must be taken to ensure safety and security. These requirements are either set out in the regulations, as is the case in Canada, or, are stipulated by approved standards or codes which have been incorporated into the regulations as in some of the Australian States and New Zealand.³⁸

Safety and security requirements applicable to fireworks storage

5.23 Regulations also impose a number of requirements on persons or companies that store explosives. The requirements are similar to those set out in sections 4 and 5 of the Trinidad and Tobago's Explosives Act which seek to prevent unintended ignitions at the storage site, ensure the safety of employees and persons in its vicinity and to prevent unauthorised access to magazines.³⁹ There are however, some requirements present in the foreign Regulations which are not included in the Explosives Act; these include: maximum quantities to be stored at storage sites, safety distances, packing methods and maintaining proper ventilation and air circulation at storage sites.

5.24 In several jurisdictions, there are limits on the amount of explosives that can be stored at a storage location. The limit varies according to the type of authorisation, the hazard type of the explosives, whether they are stored in a magazine, storage unit or a dwelling, the type of packaging and the duration of the period of storage. These limits are either set out in regulations (for example, the English Explosives Regulations 2014 and the Canadian Explosives Regulations 2013) or in specified safety standards referred to in the regulations as in some Australian States and New Zealand (which incorporates the Australian Standard AS 2187).

5.25 Maintaining safety distances is another important aspect of ensuring the safety of storage locations. This measure seeks to minimise the risks associated with an initiation or explosion at the storage site from communicating internally and externally to other storage sites, buildings or infrastructure. It is noted that section 7 of the Explosives (Manufacture of Fireworks Order) gives the Commissioner of Police the authority to approve safety distances between explosive storage sites and other buildings, highways, public footpaths or other businesses. However, in other jurisdictions mandatory safety distances are prescribed based on the type and the quantity of explosives stored at the location. In England, the safety distances are set out in Schedule 5 to the Explosive Regulations 2014. In Canada, the regulations require holders of magazine licences to ensure that magazines are located at an

³⁸ Hazardous Substances (Class 1 to 5) Controls Regulations, regulations 22-31 (New Zealand).

³⁹ Explosive Regulations 2014 (UK); Explosive Regulations 2013 (Canada), Explosive Regulations 2013 (New South Wales); Explosive Regulations 2017 (Queensland); Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 and the Hazardous Substances (Fireworks) Regulations 2001 (New Zealand).

acceptable distance from surrounding structures, infrastructure and places where people are likely to be present. The acceptable distance is determined by the Minister on the basis of risk of harm to people or property, in light of the quantity and type of explosives to be stored in the magazine, the strength, proximity and use of surrounding structures and infrastructure and the number of people likely to be in the vicinity of the magazine at any one time. In New South Wales and Queensland, the respective regulations require explosives to be stored in accordance with the Australian Explosives Code and AS2187.1 which prescribes safety distances for Class 1 explosives. In New Zealand, the Environmental Protection Authority Code of Practice for the Storage of Explosives approves the separation distances set out in AS 2187.1 –1998 for Class 1 explosives.

5.26 Regulations in some of the jurisdictions also prescribe the manner in which fireworks are packed at the storage location. For example, in Canada, regulation 150(1) of the Explosive Regulation 2013 provides that packages and containers of explosives must be stacked so that they will not fall over, collapse or be de-formed, torn or crushed and must not be stacked higher than the stacking line for the magazine.

5.27 In Canada, the regulations also require magazines to be constructed and maintained so that they are well-ventilated and resistant to theft, weather and fire. Similar requirements are also imposed in New Zealand under the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001.

5.28 In most jurisdictions, persons or corporate bodies who store explosives are required to keep a record of all explosives received and removed from storage locations. This is similar to the requirement under section 16 of the Explosives Act. Other jurisdictions require the details of the type, product code, quantity, hazard type of the explosive and the receiver's licence to be kept for a prescribed period ranging from 3 to 5 years.⁴⁰ Importantly, this measure aims to ensure that explosives can be identified and traced throughout the supply chain.

⁴⁰ Explosive Regulations 2014, regulation 35 (England); Explosive Regulations 2013, regulation 156 (Canada); Explosive Regulations 2013, regulation 76 (New South Wales); Explosive Regulations 2017, regulation 109 (Queensland).

Chapter Six

Supply of fireworks

6.1 In recent years, the number of local fireworks suppliers has been on the rise owing to the high demand for fireworks, particularly during periods of national festivals and celebrations. However, there are several concerns about the manner in which fireworks are being supplied and sold to the public. This chapter undertakes an examination of the laws governing the supply of fireworks in Trinidad and Tobago and in other jurisdictions. Focus will be on the necessary authorisation to sell fireworks: when, where, what types and to whom fireworks can be sold; all important issues in relation to supply within the context of the legislative issues outlined in Chapter 3.

The laws governing supply and sale of fireworks in Trinidad and Tobago

6.2 In Trinidad and Tobago, the supply of all explosives is governed by the Explosives Act. As discussed in the previous chapter, Part I of the Act can be applied to fireworks containing gunpowder and Part III can apply to fireworks because they are considered explosives. The following paragraphs look at the requirements under Parts I and III in relation to the sale of fireworks.

6.3 Section 10 of the Explosives Act provides that **only a wholesale or retail dealer may sell, offer or expose gunpowder for sale**. The Act provides for the licensing of wholesale and retail dealers of gunpowder under sections 11 and 12 respectively, and wholesale dealers of explosives (of any description) under section 35(2). The requirements for the licences to deal gunpowder as are set out in sections 11 and 12.

Requirements under Part I

6.4 Section 11 provides the requirements that applicants must satisfy in order to obtain a wholesale dealer's licence. Firstly, applicants must obtain written certification from the police that on the premises to be licensed, there is a sufficient fireproof vault or other place which is capable of safely storing one hundred and eighty (180) pounds of gunpowder. The fire-proof vault or other place shall have the word "Gunpowder" painted or otherwise legibly marked on the door thereof. Wholesale dealers can keep no more than the maximum amount of one hundred and eighty (180) pounds of gunpowder on his premises in the vault or other place. A payment of five hundred dollars (\$500.00) must be made for a licence. A breach of any of the requirements under section 11 is punishable by a fine of two thousand dollars (\$2000.00).

6.5 In order to obtain a retail dealer's licence, applicants must satisfy the following requirements set out in section 12 of the Act. Firstly, applicants must obtain written certification from the police that on the premises to be licensed, the applicant has a strong and suitable metal case lined with wood that is capable of containing thirty (30) pounds of gunpowder. The metal case must also be furnished with a lock, key and handles, and has the word "Gunpowder" painted or otherwise legibly marked thereon. The metal case must be kept in the place appointed by the police. Retail dealers are also required to affix

his name and the words "licensed retailer of explosives" in some conspicuous place on the front of his licensed premises. Unlike wholesale dealers, section 12 does not impose a maximum limit on how much gunpowder can be stored by retail dealers on the licences premises. However, section 12(4) prohibits retail dealers from selling more than thirty (30) pounds of gunpowder at any one time. A breach of the section 12 requirements is punishable by a fine of one thousand dollars (\$1000.00).

Requirements under Part III

6.6 As discussed in the previous chapter, the Act does not provide the requirements for obtaining a wholesale dealer's licence under Part III. Granting of the licence is in the absolute discretion of the Minister. Further, section 35(1) provides that the Part III wholesale dealer's licence may be made subject to terms or conditions that the Minister thinks fit. Thus, terms and conditions imposed by the Minister can cover virtually anything.

6.7 There is no expressed provision for a retail dealer's licence under Part III of the Act. However, by virtue of section 35(2), the provisions relating to the sale of gunpowder in Part I will apply to the sale of other explosives under the wholesale dealer's licence under Part III. Section 10 applies to permit wholesale and retail dealers to sell, offer or expose fireworks for sale. Further, section 12(1) (which permits licensed wholesale dealers of gunpowder to sell by retail) will permit wholesale dealers licensed under Part III to sell fireworks on a retail basis. The thirty (30) pound retail sale limit under section 12(4) will also apply to the sale of fireworks by dealers licensed under Part III. Applying this limit to the sale of fireworks will present practical difficulties as the weight or mass of gunpowder cannot be equated with that of fireworks, which is made up of gunpowder, other explosive components, tubing and packaging. The Act may need to be revised to take into account the mass of the actual explosives contained in fireworks, also referred to as the Net Explosive Content (NEC) or Net Explosive Mass or Quantity (NEM or NEQ) in other jurisdictions which was discussed in Chapter Five.

6.8 There are other provisions in Part I of the Act relating to the sale of gunpowder which apply (by virtue of section 35(1)) to the sale of explosives under Part III. These provisions include sections 14 to 18 (inclusive) of the Act, which when applied to the sale of explosives under Part III, have the following effect:

- Section 14 makes it an offence to occupy unlicensed premises from where explosives are sold or offered for sale. An occupier of unlicensed premises will be liable to a fine of one thousand five hundred dollars (\$1,500.00) if he fails to satisfy the Magistrate hearing the case that he had no notice of the sale or offering for sale, or that he took all reasonable means to prevent the sale or offering or exposing for sale, and, as soon as he reasonably could, reported that information to a police officer.
- Section 15 creates two offences: (1) selling or exposing explosives for sale without a dealer's licence; and (2) being a licensed wholesale or retail dealer and selling or offering explosives for sale from premises not mentioned in the licence. Both offences are punishable by a fine of two thousand dollars (\$2,000.00).

The recent practice that has developed of selling fireworks from temporary structures in locations such as parking lots and from roadsides raises concerns regarding licence requirements for storage and sale as stipulated in section 12. It is noted that section 12(5) provides for a conspicuous notice at the "licensed premises" indicating the retail dealer's name and the words "licensed retailer of explosives". There is nothing in the Act however to suggest that "licensed premises" must be a permanent structure or building. It is suggested that the Act be amended to define "premises" to include permanent buildings or structures as a means of curbing an unsafe selling practice.

- Section 16 requires dealers to keep a Gunpowder Receipt Book and Gunpowder Delivery Book in accordance with Forms A and B as set out in the Schedule to the Act. Failure to keep similar records with respect to explosives received and delivered or making false entries amounts to an offence which is punishable by a fine of two thousand dollars (\$2,000.00). It is suggested that the forms in the Act should be revised to include the receipt and delivery of fireworks and other explosives.
- Section 17 prohibits the sale of explosives to persons under the age of 16. Contravention of this section is an offence punishable by a fine of two hundred dollars (\$200.00).

It is suggested that the age of a "child" referred to in section 17 should be eighteen (18) years, to be in accord with other local legislation treating with children and to match regulations of other common law jurisdictions. Alternatively, with a classification system, certain small fireworks may be purchased by persons of at least 12 or 16 years of age. Further, the penalty attached to this offence is outdated and does not provide an adequate punishment or act as an effective deterrent to would-be offenders.

Section 18, mandates that explosives exceeding one pound in weight, when being
publicly sold or exposed for sale, to be in a substantial case, canister, or other
package, made and closed so as to prevent the gunpowder from escaping.
Contravening this requirement amounts to an offence making the person selling or
exposing same for sale liable to a fine of two hundred dollars (\$200.00), and all or
any part of the gunpowder exposed for sale will be forfeited.

The issue for considerations is whether one pound of gunpowder is equated with one pound of explosives or fireworks. In relation to fireworks, the current law does not differentiate between the gross mass of fireworks and the net mass of the explosive components contained in fireworks and this presents an enforcement problem. When the Act was enacted in 1907, the prevalence of fireworks use was far less than it is today and therefore such differentiation was neither necessary nor warranted the contemplation of the then legislature. However, given the contemporary use of fireworks, it is submitted that a review of this area of the Act is warranted in order to effectively regulate fireworks.

6.9 The Act does not restrict what types of fireworks which can be sold to the public or specify the periods in which they can be sold. Therefore, it is currently legal for all types of fireworks to be publicly sold throughout the calendar year. At present, there does not seem to be major concerns with respect to the year-round sale of fireworks in Trinidad and Tobago. It is noted however, that in other jurisdictions, laws restrict the sale of certain fireworks to specified periods. Reasons for the restrictions will be discussed later in this Chapter.

Regulation of supply and sale in other jurisdictions

6.10 In other jurisdictions, the supply and sale of fireworks are subject to very detailed regulations. In addition to requiring authorisation to sell fireworks, the regulations in most jurisdictions:

- restrict the types of fireworks which can be sold to the general public;
- impose age requirements on the sale and purchase of fireworks;
- specify permitted periods during which fireworks can be sold or displayed for sale; and
- impose requirements on fireworks sellers

Authorisation

6.11 In most of the jurisdictions examined, laws require persons or corporate bodies wishing to sell fireworks to obtain authorisation under a licence, permit or certificate. Generally, the licensed seller is permitted to sell fireworks on premises mentioned in the licence.

6.12 The authorisation to store explosives and a system to classify explosives play an essential role in regulating the supply and sale of fireworks in several of the jurisdictions examined.

6.13 In England, A licence is not required to sell class F.1 (indoor) fireworks. However, under the Fireworks Regulations 2004 (made pursuant to the Fireworks Act 2003) a licence from the local licensing authority⁴¹ is required to sell adult fireworks⁴² to the public.

⁴¹ Local licensing authorities are defined in the as follows:

⁽a) the Common Council for the City of London;

⁽b) London Borough Councils;

⁽c) fire and civil defence authorities;

⁽d) the Council of the Isles of Scilly;

⁽e) County councils or the District councils;

⁽f) In Scotland, the council for the local government area; and

⁽g) In Wales, the county council or the county borough councils;

⁴² Fireworks Regulations 2004, regulation 3 defines "adult firework" as:

⁽a) any firework which does not comply with the relevant requirements of Part 2 of BS 7114 when tested in accordance with the appropriate test method (if any) in Part 3 of BS 7114; or

Regulation 9 of the Fireworks Regulations 2004 provides that local licensing authorities may only grant the licence to sell fireworks if the applicant has a storage licence or registered premises under sections 5 and 21 of the of the Explosives Act 1875 respectively.⁴³ Therefore, suppliers must also satisfy the requirements for storing explosives as discussed in the Chapter Five. The local licensing authority will not grant a licence to sell fireworks if the applicant has committed specified offences under section 11 of the Fireworks Act 2003, section 12 of the Consumer Protection Act 1987, sections 4, 5 and 32 of the Explosives Act 1875 or offences relating to the storage, use or keeping of fireworks under the Health and Safety at Work Act 1974.⁴⁴

6.14 Similarly, in Canada, authorisation to store explosives is necessary for obtaining the authorisation to sell explosives. Under the Explosives Regulations 2013, a vendor magazine licence (VML) authorizes the storage of explosives for the purposes of sale or for sale and use. The requirements for obtaining a VML are set out in Part 6 of the Regulations.

6.15 In Canada, consumer fireworks (Class F.1) can be sold by distributors and retailers.⁴⁵ Distributors of consumer fireworks are required to have a licence, while retailers are not. A licence is required to sell display fireworks. Licenced sellers are required to store the consumer fireworks in the magazine mentioned in their licence, while unlicensed retailers are required to store them in a sales establishment in accordance with the specific regulations.⁴⁶

6.16 In New South Wales, up to one (1) tonne of toy fireworks (gross) can be sold without a licence to supply.⁴⁷ Toy fireworks include amorces, blaster balls, confetti bombs, bon-bon crackers, sparklers, streamer cones, toy pistol caps, starting pistol caps and indoor table bombs. Fireworks other than toy fireworks can only be sold under a licence to supply explosives under the Explosives Regulations 2013. The licence to supply will only be granted by the regulatory authority if the requirements set out in Part 3 of the Regulations are satisfied. These requirements include submitting a security clearance or application for a security clearance if not previously obtained, a safety plan, a safety management plan, details of explosives held, other explosive licences held and a statement of the experience and knowledge in the safe handling of explosives (of the applicant or the nominated person in the case of a corporation applicant). A summary of these requirements is set out in the guide to supplying explosives published by SafeWork NSW. The licence to supply authorises the holder to: purchase or possess fireworks for

⁽b) any firework (except for a cap, cracker snap, novelty match, party popper, serpent, sparkler or throwdown) which does comply with those requirements;

⁴³ See Chapter 5 for the requirements for storage licence under the Explosives Act 1875 and Explosive Regulations 2014.

⁴⁴ Fireworks Regulations 2004, regulation 9.

⁴⁵ Distributors are persons who sell consumer fireworks or rocket motors, reloading kits or igniters to other distributors or to retailers, whether or not they sell to users. Retailers are persons, other than distributors, who sell consumer fireworks or rocket motors, reloading kits or igniters.

⁴⁶ Explosives Regulations 2013, sections343-349 for unlicensed retailers of consumer fireworks; sections 312-315 for unlicensed retailers of model rocket motors.

⁴⁷ Explosive Regulations 2013, regulation 47.

the purpose of supplying them under the licence; store the fireworks at the premises (if specified in the licence); and supply fireworks at the premises (if specified in the licence).

6.17 In Queensland, the Explosives Act 1999 and the Explosive Regulations 2003 governs the sale of fireworks. Firstly, section 41 of the Explosives Act 1999 provides that only authorised persons are permitted to sell explosives. A breach of this section amounts to an offence punishable by 200 penalty units⁴⁸ or imprisonment for a term of three (3) months. It is noted that the section 41 requirement does not apply to small fireworks which have been categorised as 'unrestricted fireworks' listed in Schedule 6 to the Regulations.⁴⁹ Fireworks can be sold by holders of either a licence to sell explosives or a fireworks contractor licence under the Explosive Regulations.⁵⁰ The licence to sell explosives allows the holder to purchase fireworks for the purpose of selling under the licence, possess and store fireworks as required under Part 8 of the Regulations and to sell fireworks at the premises stated in the licence. A fireworks contractor licence allows the holder to supply fireworks to a fireworks operator for use by the latter in a display organised by the fireworks for the purpose of supplying them to fireworks operators, storing and transporting them in accordance with Parts 8 and 9 of the Regulations

6.18 In New Zealand, a specific authorisation to sell fireworks is not required by law, but importers and retailers must comply with the safety requirements set out in the Hazardous Substances and New Organisms Act 1996 and the regulations made thereunder, in particular, the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 and the Hazardous Substances (Fireworks) Regulations 2001.

Who can purchase fireworks and the age requirements?

6.19 In addition to requiring authorisation to sell fireworks, regulations in most jurisdictions restrict who purchase, acquire and possess certain types of fireworks. Within the supply chain, a system of classification plays an essential role in regulating the sale of fireworks in other jurisdictions. The restrictions are generally aimed at promoting consumer safety, by ensuring that fireworks end up in the hands of persons who are responsible and capable of safely keeping or using them.

6.20 In England, the Fireworks Regulations 2004 were specifically aimed at addressing the antisocial and criminal use of fireworks by regulating supply and use. Regulation 4 prohibits persons under the age of eighteen (18) years from possessing adult fireworks in public places. Regulation 10(2) further states that it is illegal to sell adult fireworks to persons under the age of 18 and that is illegal for anyone under the age of eighteen (18) to possess adult fireworks in a public place. Regulation 5 prohibits persons other than those listed in regulation 6 (which includes professionals in the business of organising

⁴⁸ One penalty unit is equivalent to \$126.15 (Australian dollars) according to the Penalties and Sentences Regulation 2015 as amended by the Queensland Penalties and Sentences (Penalty Unit Value) Amendment Regulation 2017.

⁴⁹ Explosives Regulations 2003, regulation 74; Unrestricted fireworks include: amorces and caps for toy pistols, indoor table bombs, model rocket motors—maximum weight 62.5g, snaps for bonbon crackers, sparklers, starting pistol caps, streamer cones and indoor decorative fountains.

⁵⁰ Explosive Regulations 2003, regulations 25; 31.

fireworks displays or trading fireworks) from possessing a category 4 firework. Section 32 provides that fireworks of class F4 should only be made available on the market to persons with specialist knowledge.

6.21 The Pyrotechnic Articles (Safety) Regulations 2015 implemented two European Directives 2013/29/EU and 2014/58/EU into UK law. Essentially the regulations are intended to improve the safety of fireworks made available on the market. In relation to the supply of fireworks, the regulations prohibit certain category F2 and F3 fireworks from being made available on the market and provides that retailers must not sell:

- Christmas crackers, to anyone under the age of 12 years;
- F1 category fireworks other than a Christmas cracker to anyone under the age of 16;
- F2 and F3 category fireworks to anyone under the age of 18;
- F4 category fireworks to members of the public (they can only be supplied to a person with specialist knowledge).

6.22 In Canada, the Explosive Regulations 2013 also set out restrictions on the sale of consumer fireworks (F.1) and display fireworks (F.2). Under the Regulations, consumer fireworks are not to be sold to persons under 18 years of age and display fireworks are only to be sold to persons who hold a licence to store display fireworks or a user who holds the fireworks operator certificate who provides the seller with a copy of local authority's approval to hold the fireworks display in which the fireworks will be used.

6.23 In New South Wales, the Explosive Act 2003 and Explosive Regulations 2013 impose restrictions on the sale of explosives which also apply to fireworks. For example, section 9 of the Act prohibits the sale of explosives to persons under eighteen (18) years of age. A contravention of this provision is punishable by a maximum of fifty (50) penalty points. This restriction applies to both toy fireworks and display fireworks. Further, the Explosive Regulations 2013 provides that explosives may only be sold to persons who are authorised to receive them. In relation to display fireworks, these include *inter alia* a holder of a storage licence, pyrotechnician's licence or fireworks (single use) licence. However, no licence is required under the regulations to purchase toy fireworks.

6.24 In Queensland, only 'unrestricted fireworks' can be sold to the general public without authorisation.⁵¹ Regulation 42 of the Explosive Regulations 2003 provides that explosives must not be sold to persons who are not authorised to store, sell or use explosives or who are otherwise authorised under a regulation for example, a holder of a firework contractor licence.⁵² Although the holder of a firework operator licence is permitted to use display fireworks, regulation 32(2) expressly states that operators are not permitted to purchase fireworks.

⁵¹ Explosive Regulations 2003, Schedule 6 provides a list of the unrestricted fireworks which includes: amorces and caps for toy pistols, indoor table bombs., model rocket motors—maximum weight 62.5g., snaps for bon bon crackers, sparklers, starting pistol caps, streamer cones and indoor decorative fountains.

⁵² Explosive Regulations 2003, regulation 75(d).

6.25 In New Zealand, retail fireworks may only be sold to persons over eighteen (18) years of age while novelty fireworks can be sold to persons of any age. The regulations also prohibit sparklers (locally referred to as 'star lights') from being sold individually, they can only be sold in retail fireworks packages. A retail fireworks package can contain up to fifty (50) sparklers but must contain at least three other fireworks with a minimum pyrotechnic substance content of 15 grams per item.⁵³ The package must be constructed of fire-resisting material and have been certified by a test certifier.

6.26 The regulations provide that a retail fireworks package is any package of fireworks that:

- (a) is offered for retail sale as a single unit; and
- (b) meets the requirements of regulation 10(4) of the Hazardous Substances (Packaging) Regulations 2001;⁵⁴ and
- (c) if the package contains sparklers, ---
 - (i) contains at least 3 other fireworks (not being sparklers) with a minimum pyrotechnic substance content of fifteen (15) grams per item; and
 - (ii) contains no more than fifty (50) sparklers, whether contained separately or in packets

Periods in which fireworks can be used or sold

6.27 In England and New Zealand, fireworks can only be sold during permitted periods. In England, regulation 9 of the Fireworks Regulation 2004 permits the sale of adult fireworks to the public between specified periods. To sell adult fireworks outside the following periods a special licence is required:

- the first day of the Chinese New Year and the three days immediately preceding it;
- the day of Divali and the three days immediately preceding it;
- during the period beginning on the 15th October and ending on the 10th November; or
- during the period beginning on the 26th December and ending on the 31st December.

6.28 In New Zealand, the regulations permit the retail sale of fireworks during the period beginning on 2 November and ending at the close of 5 November in each year. However, fireworks can be used all year round. The regulatory authority can authorise the sale of fireworks outside these periods for the purpose of cultural or religious gatherings where the use of fireworks is a feature of the cultural or religious tradition.⁵⁵ There have been

⁵³ Hazardous Substances (Fireworks) Regulations 2001, regulations 3, 4, 6(3).

⁵⁴ Hazardous Substances (Packaging) Regulations 2001, regulation 10(4) provides that a firework must be packed in packaging that retains its integrity after being held in the flame of a cigarette lighter for 25 seconds if the firework is:

⁽a) subject to the Hazardous Substances (Fireworks) Regulations 2001; and

⁽b) not protected from any ignition source; and

⁽c) displayed for sale in areas accessible to the public.

⁵⁵ Hazardous Substances (Fireworks) Regulations 2001, regulations 6 ;7.

calls however for restrictions on the use of fireworks outside the four-day sale period in New Zealand.⁵⁶

Requirements for sellers

6.29 Having examined the regulations governing the sale of fireworks in several jurisdictions, it is apparent that fireworks suppliers are required to comply with a number of requirements to ensure safety at sale establishments and to promote the safe use of fireworks. These include:

- prohibiting the display of fireworks in shop windows;⁵⁷
- requiring suppliers to keep certain fireworks out of the reach of customers, for example, behind counters or in locked storage cabinets;⁵⁸
- requiring sellers not to supply a purchaser more than the amount he is authorised to store under his authorisation or the maximum limit prescribed by law in relation to purchasers who do not hold any specific authorisation;⁵⁹
- requiring suppliers to have safety warnings and signs at the premises where the fireworks are stored;⁶⁰
- requiring suppliers to pass on certain information to customers, for example, information on the safe use of fireworks and firework laws and related offences;⁶¹
- requiring suppliers to keep a record of the name and address of purchasers of fireworks, the type, product name and amount of fireworks sold for a specified amount of time.⁶²

⁵⁶ Greer Berry, 'Editorial: Fireworks laws need new spark' (*Manawatu Standard*, November, 2015) <http://www.stuff.co.nz/manawatu-standard/opinion/73593327/editorial-fireworks-laws-need-newspark> accessed 02 April 2020.

⁵⁷ Explosive Regulations 2017, regulation 85 (Queensland).

⁵⁸ Explosive Regulations 2017, regulation 101(b) (Queensland).

⁵⁹ Explosive Regulations 2013, regulation 350 (Canada); Explosive Regulations 2013, regulation 75 (New South Wales).

⁶⁰ Explosive Regulations 2017, regulation 101(c) (Queensland).

⁶¹ Fireworks Regulations 2004, regulation 10 (England); Explosive Regulations 2013, regulation 352 (Canada).

⁶² Explosives Regulations 2017, regulation 91 (Queensland) 5 years; Explosive Regulations 2013, regulation 76(New South Wales) 5 years; Explosive Regulations 2013, regulation 420 (Canada) 2 years.

Chapter Seven

Use of fireworks

Using and handling fireworks

7.1 The acquisition and use of fireworks represent the end of the supply chain. Many of the concerns raised in Chapter Three materialise at this point; these include: risks and dangers to life and property; high noise levels causing disturbance to citizens particularly to the vulnerable members of society and animals; misuse and the deliberate use of fireworks for criminal purposes. This Chapter focuses on the laws governing the use of fireworks in Trinidad and Tobago and other jurisdictions. In addition to considering when, where and by whom fireworks can be used, also addressed is the use of the match cracker commonly known as scratch-bombs.

Provisions in the laws of Trinidad and Tobago governing the use of fireworks.

7.2 In Trinidad and Tobago, the laws provide basic provision for the use of fireworks. Under the current law, persons can use fireworks throughout the year. However, the Summary Offences Act and regulations made thereunder, restrict where fireworks can be used. It is an offence to use fireworks within specified towns without a permit. In other places not being in a specified or declared town a permit is not required to use fireworks, but it is illegal to use fireworks in any street or within sixty (60) feet from the centre of any street. Sections 99 and 100 of the Summary Offences Act provide:

- 99. (1) Except as prescribed by Regulations under this Act, any person who throws, casts, sets fire to, or lets off any fireworks within any town is liable to a fine of one thousand dollars (\$1,000.00).
 - (2) In this section and in sections 100 and 101, "town" includes the City of Port-of-Spain, the City of San Fernando, and the Borough of Arima, and every part of the area within two miles of the boundaries of such City or of either of such Boroughs, and also any place or area declared by the Minister, by Order, to be a town or to be deemed to be included within a town for the purposes of the said sections.
- 100. Any person who throws, casts, sets fire to, or lets off any fireworks into, in, or upon any street not being in any town, or into, in, or upon any place being within sixty feet of the centre of any such street, is liable to a fine of four hundred dollars (\$400.00).

7.3 The Fireworks Permits Regulations made pursuant to section 101 of the Summary Offences Act, provides for the Commissioner of Police or a Superintendent authorised by him to grant written permission prescribing the "time, place and conditions at or on which such person or persons may throw, cast, set fire to or let off any firework or fireworks in a town". This permission may be cancelled or varied at any time by the Commissioner of

Police or Superintendent. The application for written permission must be made in writing at least forty-eight (48) hours prior to the time of the intended use and must contain particulars of the description of the fireworks to be used and the particular locality in the town in which the fireworks will be used. No similar permission is required by the regulations for using fireworks outside of the specified towns.

7.4 It is noted however that there is no express provision in the Fireworks Permit Regulations requiring applicants to provide proof that the persons conducting the display are competent, certified or experienced in the safe handling and use of fireworks. Therefore, any person can apply for and be granted written permission to use fireworks in a town under the Fireworks Permit Regulations.

7.5 In addition, the President can make regulations under section 5(2) of the Public Holidays and Festivals Act, Chap. 19:05 which authorise the use of fireworks in streets and public places during public festivals. Section 5(2) and 5(3) of the Act provides:

- (2) The President may make Regulations for the conduct and management of public festivals or any particular public festival and for the proper behaviour of persons and the preservation of the peace at such festivals; and, without prejudice to the generality of this provision, Regulations made under this subsection may permit persons to celebrate such festivals in the streets and other public places with parades, processions, music and fireworks, and may permit them to throw specified substances at other persons, to appear masked or otherwise disguised and generally to celebrate the festivals in any manner that may be prescribed.
- (3) Regulations under subsection (2) may prohibit any person from having with him in any public place during the celebration of a public festival any specified article which in the opinion of the President may be used for causing injury to the person.

7.6 The regulations made under section 5(2) can only permit the use of fireworks within streets and public places <u>during public festivals</u>. Importantly, by virtue of section 5(3), the regulations can restrict certain dangerous fireworks from being used in streets and public places. This may only be possible if a system of classifying fireworks is incorporated in the future reforms.

7.7 Further, it is an offence under to the Civil Aviation [(No. 8) Aviation Security] (Amendment) Regulations, 2011⁶³ to do any act that is likely to endanger or endangers

⁶³ Legal Notice No. 145 of 2011.

³A. (1) Notwithstanding the requirements of regulation 3, a person shall not recklessly or negligently perform any act, whether on board an aircraft or outside an aircraft, that is likely to endanger or endangers an aircraft or a person on board an aircraft.

⁽²⁾ An act under sub-regulation (1) that is likely to endanger or endangers an aircraft or a person on board an aircraft, includes but is not limited to the following:

an aircraft or a person on board an aircraft. Regulation 3A (2)(b) specifically refers to directing fireworks at aircraft in a way that may affect a flight crew member in the performance of his duties. Upon summary conviction the offence is punishable by a fine of ten thousand dollars (\$10,000.00) and imprisonment for one (1) year.

7.8 Another concern is the safety of sites where professional fireworks displays are conducted. With the increasing popularity of professional displays, those responsible for organising and conducting displays should be required to exercise the degree of care to protect the site, their employees, spectators and those in the near vicinity from the risks associated with the display. In this regard, there is no specific policy or legislation governing professional fireworks displays in Trinidad and Tobago, it is noted however that the safety obligations imposed on employers to ensure the safety of their employees under Part II of the Occupational Safety and Health Act, Chap. 88:08 will apply to persons employed in the fireworks industry. Persons wishing to conduct fireworks displays may also be required to acquire Noise Variation permits from the Environmental Protection Authority under the rule 9 of the Noise Pollution Control Rules 2001 where fireworks in the display are expected to exceed the permitted noise levels.

7.9 As mentioned in the previous chapter, section 17 of the Explosives Act prohibits the sale of explosives to persons under sixteen (16) years of age. However, there are neither age restrictions for possessing and using fireworks nor any provision for the training and certification or acknowledgment of recognised industry standards in using or handling fireworks. Further, in the absence of a system of classification, all fireworks including those used only by trained professionals in other jurisdictions can be purchased and used by members of the general public.

Enforcement of laws regulating fireworks in Trinidad and Tobago

7.10 As discussed in previous chapters, the main provisions governing fireworks in Trinidad and Tobago can be found in the Explosives Act, Summary Offences Act and the Fireworks Permit Regulations made thereunder and the Noise Pollution Control Rules 2001 made pursuant the Environmental Management Authority Act. The responsibility for enforcing these laws in relation to fireworks is as follows:

• The Trinidad and Tobago Police Service (TTPS) is responsible for enforcing the provisions of the Explosives Act regulating the sale, storage and removal of explosives and for enforcing the provisions of the Summary Offences Act and the Public Holidays and Festivals Act which regulates the use of fireworks. The TTPS is also responsible for prosecuting persons who illegally transport, supply, store and use fireworks. Where death, serious injury or damage to property result from firework use, the TTPS may also lay charges under the Offences against the Person Act, Chap. 11:08, Malicious Damages Act, Chap. 11:06 and if fireworks

⁽a) a radio transmission that affects a communication, navigation or automatic flight guidance systems of an aircraft; and

⁽b) a laser light source, fireworks, flares or other light sources directed at an aircraft that may affect a flight crew member in the performance of his duties.

⁽³⁾ A person who contravenes sub-regulation (2) commits an offence and shall be liable on summary conviction to a fine of ten thousand dollars and to imprisonment of one year.".

were used to commit a terrorist act, charges may be laid under the Anti-Terrorism Act, Chap. 12:07.

- The Customs Division is responsible for enforcing provisions of the Explosives Act regulating the import of explosives at local ports of entry.
- The Environmental Management Authority (EMA) and the EMA Police are responsible for enforcing the Noise Pollution Control Rules 2001.
- The Fire Service is mandated by section 3A of the Fire Services Act, to save and protect life or property from damage or destruction by fire or other hazards and to provide and advise upon preventative measures against the occurrence of such damage or destruction.

Regulating the use of fireworks in other jurisdictions

7.11 In other jurisdictions, there are specific regulations governing the use of fireworks. Some of the regulations are straightforward, for example those requiring authorisation to use certain types of fireworks, imposing age restrictions on the use of fireworks and permitting the use of fireworks during specified periods and times. Regulating other aspects of use are more complex, for example, prescribing the requirements for the certification of a professional fireworks display operator or pyrotechnician and safety measures to be taken at sites where fireworks displays are to be conducted.

7.12 Specific issues which are either not covered or may require strengthening in the laws of Trinidad and Tobago are considered below. It is noted that these issues are addressed comprehensively in the foreign regulations and may be of some assistance when formulating a policy or in guiding legislative reforms to regulate the fireworks industry in Trinidad and Tobago.

Specified times for using fireworks

7.13 Owing to public outcry against the noise created by fireworks in England, regulations were made to prohibit the use of adult fireworks during 'night hours'. These hours are specified in regulation 6 of the Fireworks Regulations 2004 as 11:00 p.m. to 7:00a.m, except on the following permitted fireworks nights:

- beginning at 11 pm on the first day of the Chinese New Year and ending at 1 am the following day;
- beginning at 11 pm on 5th November and ending at 12 am the following day;
- beginning at 11 pm on the day of Diwali and ending at 1 am the following day; or
- beginning at 11 pm on 31st December and ending at 1 am the following day.

7.14 A breach of the curfew can result in a fine of \pounds 5000 and/or six months imprisonment. Police also have the power to issue fixed penalty notices in the sum of \pounds 80 to those under the age of 18 caught possessing fireworks in a public place or those

breaching the 11 pm curfew time. The curfew does not to apply to category F1 fireworks or F2 sparklers.⁶⁴

7.14 With respect to noise, it is noted that within recent times, silent fireworks are being used as an alternative to the louder traditional fireworks. They are not an entirely new invention, as their visual effects have been used for years to accompany fireworks with loud bangs. Recently, the local government of Collecchio, Italy passed a law that only permits the use of silent fireworks. This law was aimed at reducing the stress that traditional fireworks cause to animals, both pets and wildlife.⁶⁵

7.15 As mentioned previously, fireworks can only be sold or displayed for sale in New Zealand between 2nd to 5th November each year, but there are no restrictions on when they can be used.

Prohibited fireworks

7.16 Foreign regulations also prohibit the sale and use of certain dangerous or loud fireworks. In England, the Fireworks Regulations 2004 prohibits the sale and use of category 3 fireworks which produces a maximum A-weighted impulse sound pressure level exceeding 120 decibels. In Canada, it is illegal to use fireworks that are not authorised under the regulations. It is also illegal to use bombs, snaps, m-80 salutes, flash crackers, throw-down torpedoes, cigarette loads, trick matches, sprite bombs, and firecrackers. In Queensland, the prohibited fireworks are listed in Schedule I to the Explosive Regulations 2003 and includes certain candles, fountains, crackers and strings of crackers. In New South Wales, the use of any explosive that is not authorised under the Explosive Regulations 2013 is prohibited.

7.17 In Trinidad and Tobago there are concerns about the sale and use of scratchbombs because of its excessively loud report and the potential to cause serious injuries. A local businessman with knowledge of fireworks described scratch bombs in the following manner:

"... [A]n annoyance to society because it's an overpowered item which is illegally imported into the country and it doesn't come with any guide or labelling for its proper use...It's really just a strip of cardboard wrapped around a small bit of sulphur, used in place of a wick, which doesn't give the user any adequate time to throw it or run away after it has been lit, which often leads to the device exploding in the person's hand. Scratch bombs are usually eight to ten times more powerful than conventional fireworks, so it's a very loud, very explosive device and it doesn't meet any of the international safety guidelines..."⁶⁶

⁶⁴ Lorraine Conway, 'Regulation of Fireworks' (*House of Commons Briefing Paper' Number* 5704, November 2015) 8.

⁶⁵ 'Quiet Fireworks' Promise Relief for Children and Animals', (New York Times, June 2016) https://www.nytimes.com/2016/07/01/science/july-4-fireworks-quiet.html?_r=0> accessed 02 April 2020.

⁶⁶ Shane Superville, 'Trinidad doesn't need scratch bombs' (*Trinidad Newsday*, 29 December 2016) http://archives.newsday.co.tt/news/0,237802.html> accessed 02 April 2020.

7.18 Further, in an inquiry into the adverse health effects of fireworks conducted by the Joint Select Committee on Social Services and Public Administration (JSC) in 2017, it was stated that scratch-bombs accounted for the majority of recorded firework related injuries. One of the JSC's recommendations was that there should be a restriction or ban on the use of scratch-bombs. It is suggested that this should also apply to other dangerous and loud fireworks that have been prohibited in other jurisdictions. The recommendations emanating from the public hearing held by the JSC on 15 March 2017 is set out in the summary of proceedings in Appendix II.

7.19 The Explosives (Prohibition of Scratch Bombs) Order, 2018 made pursuant to section 37 of the Explosives Act specifically prohibits any person from manufacturing, importing, keeping, conveying or selling a scratch bomb.⁶⁷ The penalty for contravening this prohibition is a fine of twenty thousand dollars (\$20,000.00) and to imprisonment for ten (10) years pursuant to sections 38 and 39 of the Explosives Act.

Less dangerous fireworks

7.20 In the jurisdictions examined, the regulations permit a category of less dangerous fireworks (which will be referred to as 'small fireworks') to be used without requiring authorisation or training.⁶⁸

7.21 These fireworks can be acquired and used by persons under the age of 18 in New Zealand. In Canada, with the exception of toy pistol caps, consumer fireworks can be used by persons under 18 years of age only if they are supervised by an adult.⁶⁹ In Queensland, persons under the age of 18 are only permitted to possess unrestricted fireworks. In New South Wales, section 9 of the Explosives Act 2003 prohibits the sale of explosives to minors. In contrast regulation 47 of the Explosives Regulation 2013 provides that a licence is not required to use toy fireworks. Therefore, while it is illegal for persons under 18 years to purchase toy fireworks, the regulations do not prohibit such persons from using them. In England, there is no age restriction on the use of small fireworks.

⁶⁷ Legal Notice No. 197 od 2018.

⁶⁸ In England, these include caps, cracker snaps, novelty matches, party poppers, serpents, sparklers and throwdowns. In Canada, these include class F.1 consumer fireworks, in Queensland, 'unrestricted fireworks', in New South Wales, 'toy' fireworks and in New Zealand they are known as firework novelties. In Canada, consumer fireworks under the the Explosive Regulations 2013 include roman candles, sparklers, fountains, wheels, volcanoes, mines, and snakes. (Type F.1). In Queensland, 'unrestricted fireworks' referred to in the Explosive Regulations 2017 include amorces and caps for toy pistols, indoor table bombs, model rocket motors—maximum weight 62.5g, snaps for bon bon crackers, sparklers, starting pistol caps, streamer cones and indoor decorative fountains. In New South Wales, 'toy fireworks' under the the Explosive Regulations 2013 include crackers, sparklers, streamer cones, toy pistol caps, starting pistol caps and indoor table bombs. In New Zealand, the Hazardous Substances (Fireworks) Regulations 2001 refer to novelty fireworks as bonbon crackers, snaps, or similar pyrotechnic novelties or noise makers containing less than 1.7 mg of pyrotechnic substance; amorces, crackshots, or similar pyrotechnic novelties or noise makers containing less than 5 mg of pyrotechnic substance; or party poppers, streamer bombs, hand blasters, or similar pyrotechnic novelties or noise makers containing less than 20 mg of pyrotechnic substance.

⁶⁹ Hazardous Substances (Fireworks) regulations, regulation (New Zealand); Explosive Regulations 2013, regulation 359 (Canada), Explosive Regulations 2017, regulation 83 (Queensland).

However, it is illegal for persons under eighteen (18) years to be in possession of adult fireworks in a public place. The requirements for using more dangerous types of fireworks will be considered below when regulations requiring authorisation to use certain display fireworks are examined.

Authorisation

7.22 In some jurisdictions, special authorisation is required to use display fireworks which pose a greater risk or hazard. In England, the Firework Regulations 2004 generally prohibit persons from possessing category 4 fireworks. However, this prohibition does not apply to the category of persons listed in regulation 6, which includes *inter alia* persons in the fireworks display business or those in the business of manufacturing or supplying fireworks. In Canada, display fireworks (class F.2) can only be used by persons who hold a fireworks operator certificate (FOC) either as a display assistant, display supervisor, display supervisor with endorsement or a display visitor). In order the obtain a FOC, persons must be at least 18 years old and must successfully complete a safety and legal awareness course for display fireworks offered by the Explosives Regulatory Division, Department of Natural Resources or a course certified as equivalent by the Minister.

7.23 In New South Wales, only holders of a Pyrotechnician's Licence or a Fireworks (Single Use) Licence are permitted to use display fireworks under the Explosive Regulations 2013. The Pyrotechnician's Licence allows the holder to generally use display fireworks, while a Fireworks (Single Use) Licence authorises the licence holder to use or display fireworks only on one occasion. The Fireworks (Single Use) licences cannot be granted to the same person more than four times with a 12-month period. Applicants for both licences, must be a natural person and must have completed a training course or attained a level of competence in the safe use of display fireworks that is recognised by the regulatory authority for the purposes of obtaining the licence. While a security clearance is required for a Pyrotechnician's Licence, it is not a requirement for the Fireworks (Single Use) Licence, but applicants for the latter must be a fit and proper person to be granted a licence.

7.24 In Queensland, fireworks other than unrestricted fireworks can only be used by persons holding a Fireworks Operator Licence (FOL) at a display organised by a person holding a Fireworks Contractor Licence (FCL). It is noted that firework contractors are not permitted to conduct displays under the regulations. The requirements for obtaining a FOL and FOC are set out in regulations 38 and 38 of the Explosive Regulations 2017. For both licences, applicants must be at least 21 years of age and have attained the specified competencies in using fireworks (or organising displays in the case of a fireworks contractor) in accordance with approved training packages in the industry or can demonstrate the skill, knowledge and experience required to a standard considered by the Chief Inspector to be necessary for the safety and health of persons.

7.25 In New Zealand, regulation 13 of the Hazardous Substances (Class 1 to 5) Controls Regulations 2001 requires any quantity of Class 1 substances to be handled by approved handlers. Approved handlers are persons who have been certified by a test certifier as being capable of handling, using, storing or transporting hazardous

substances in accordance with the Hazardous Substances and New Organisms (Personnel Qualifications) Regulations 2001.⁷⁰

Requirements for professional fireworks displays

7.26 In a number of jurisdictions, there are specific requirements to be followed by those who arrange and conduct fireworks displays. These requirements are either set out in regulations or in some countries the regulatory authorities have codes of practice to support the regulations. Essentially, these regulations or codes seek to ensure safety from the early stages of planning the display to the clean-up exercise after the display. They are geared toward the overall safety of the display site for employees conducting the display as well as spectators and those in the vicinity of the display who may be at risk. It is submitted that these regulations and or codes are useful in the conduct of fireworks displays and consideration may be given to the introduction of similar requirements in Trinidad and Tobago.

7.27 In England, the Health and Safety Executive published a number of guidelines to assist firework display operators and those involved in organising fireworks displays. The guidelines draw attention to the important obligations of employers and those organising displays under the Health and Safety at Work Act 1974 and subsidiary health and safety regulations. The HSE publication entitled *Working together on firework displays: A guide to planning and safety at firework displays for organisers and professional operators*⁷¹ provide useful information for those involved in firework displays. The HSE also provides a number of guidelines to ensure that events are run safely which focus on managing an event, after an event and planning for incidents and emergencies.⁷² As fireworks can distract pilots and cause damage to aircraft, the Civil Aviation Authority also requires prior notice of displays to enable them to alert pilots and air traffic control in advance.

7.28 In Canada, the Explosives Regulatory Division of Natural Resources Canada, first published the Display Fireworks Manual.⁷³ The manual is intended to raise the level of awareness of safety and legal aspects of using display fireworks and is specifically addressed to persons who are authorised or want to become authorised to use display

⁷⁰ Hazardous Substances (Class 1 to 5) Controls Regulations 2001, regulation 13; The approved handler test certificate specifies the activity the approved hander is certified to perform, that is, either handling, using, storing or transporting hazardous substances. In relation to fireworks, it will also specify the permitted height of display that may be conducted by the approved handler and the types of fireworks the handler can use. Approved handlers are not required for novelty fireworks and those with hazard classification 1.3G, 1.4G and 1.4S that are controlled under the Hazardous Substances (Fireworks) Regulations 2001 after the point of sale to the public or where the amount of same is less than 500 kilograms.

⁷¹ 'Working together on firework displays: A guide to planning and safety at firework displays for organisers and professional operators', Version 1.7 (Explosives Industry Group 2018, July 2018) http://www.eig2.org.uk/wp-content/uploads/WTOFD-Blue-Guide.pdf > accessed 02 April 2020.

⁷² 'Running an event safely' *Health and Safety Executive*) <https://www.hse.gov.uk/event-safety/running.htm> accessed 02 April 2020.

⁷³ 'Display Fireworks Manual' Second Edition (*Explosive Regulatory Division*, 2010) <https://www.nrcan.gc.ca/explosives/fireworks-use/national-fireworks-certification-program/displayfireworks-manual-2010/9903> accessed 02 April 2020.

fireworks, companies selling or distributing display fireworks, people who work where display fireworks are used and authorities having jurisdiction.

7.29 Similarly, in Queensland, the Department of Natural Resources and Mines published the *Queensland Code of Practice Control of Outdoor Fireworks Displays*⁷⁴ in 2003. The Code also include requirements to inform the Civil Aviation Authority of fireworks displays when the display will be held within three nautical miles of an airfield, when the fireworks will reach a height of 122 meters (400 feet). In New South Wales, SafeWork has published 'operational conditions for pyrotechnician's and single use fireworks licences'⁷⁵ which sets out similar requirements for safely conducting fireworks displays. If the display is held within 6 kilometres from an airfield or fireworks will reach a height of 400 feet (122 meters) or the firing site is under a flight path then the Civil Aviation Regulations 1998 requires the Civil Aviation Authorities to be given two days' notice.

7.30 In New Zealand, these requirements are set out in the Hazardous Substances (Class 1 to 5) Controls 2001. Regulations 35-43B sets out requirements for outdoor pyrotechnic displays. The Environmental Protection Authority has also published a code entitled *Code of Practice for Outdoor Pyrotechnic Displays,* which is in accordance with the regulations.⁷⁶ Importantly, the regulations require that a written agreement is obtained from the agency responsible for air safety in the vicinity if the display involves firing of pyrotechnics to heights over 60 meters. According to the Code, the EPA has been advised by the Civil Aviation Authority that prior notification will be sufficient and will be acknowledged, and that the acknowledgement in effect will provide the required 'written agreement'. Regulations 44 and 45 set out the requirements for indoor displays which specifically require permission to be obtained from the fire service.

Insurance

7.31 Owing to the risks to life and property that are associated with using fireworks, persons responsible for conducting displays in other countries are required to be covered by an insurance policy. In Canada, the Display Manual 2010 provides that a basic requirement for obtaining approval for a display site is proof of liability insurance covering a minimum of one million dollars (C\$1,000,000.00). In England, although it is not required by law, the HSE recommends that persons conducting public displays have public liability insurance.

7.32 In New South Wales, Condition 4.6 of the Operational Conditions Fireworks requires the licence holder to obtain liability insurance, even if it is a charity event. In

 ⁷⁴ 'Queensland Code of Practice Control of Outdoor Fireworks Displays' (Department of Natural Resources and Mines, 2003)
 https://www.dnrme.qld.gov.au/___data/assets/pdf_file/0015/1400361/outdoor-fireworks-code-practice.pdf> accessed 02 April 2020.

⁷⁵ 'Operational conditions for pyrotechnician's and single use fireworks licences' (*SafeWork NSW*), https://www.safework.nsw.gov.au/resource-library/licence-and-registrations/operational-conditions-for-pyrotechnicians-and-single-use-fireworks-licences > accessed 02 April 2020.

⁷⁶ 'Code of Practice for Outdoor Pyrotechnic Displays' (*Environmental Protection Authority*, 2012) accessed 02 April 2020.

Queensland, it is a requirement for a fireworks contractor licence that the applicant has sufficient public liability insurance. The minimum public liability insurance cover required for a display is \$5 million, for large fireworks displays, higher levels of insurance cover may be required. The Code provides that the fireworks contractor's insurance policy must cover all fireworks personnel, including the fireworks operator, and firework operator's assistants. Similarly, the Code for Outdoor Pyrotechnic Displays 2012 in New Zealand, recommends that for any display, persons responsible should have adequate and appropriate public liability insurance.

Chapter Eight

Enforcement and Prosecution

8.1 In Chapters 4 to 7, the laws regulating different stages of the fireworks supply chain were examined. However, the objectives of these laws can only be achieved if they are enforced. This requires enforcement mechanisms to be in place and operational. Some of these mechanisms include having state bodies to implement and enforce the laws, clearly defining their roles and responsibilities, training staff, engaging persons with specialist expertise and obtaining necessary resources.

8.2 Most of the concerns raised in the recent past took issue with the enforcement of laws governing the sale and use of fireworks. It is submitted however, that the laws must be enforced throughout the entire supply chain, as proper enforcement at the early stages of the supply chain can eradicate problems that occur in the later stages. For example, prohibiting the import of dangerous and loud fireworks prevents them from ending up in the hands of the public, therefore reducing the risks of injury, death, damage to property and excessive noise levels.

8.3 In this Chapter the local enforcement authorities are identified, so too some of the difficulties faced in Trinidad and Tobago. Further, other jurisdictions are examined with a view to identifying existing models which may assist in resolving the difficulties that local authorities face in enforcing the existing provisions.

Enforcement difficulties in Trinidad and Tobago

8.4 As mentioned in previous Chapters, the laws of Trinidad and Tobago only provide basic provisions for regulating the fireworks industry. Without specific fireworks policy and legislation, the reliance on these basic provisions either leaves essential areas unregulated or lacking the necessary degree of effectiveness. The major enforcement difficulties as follows:

- Without a comprehensive fireworks policy to guide information sharing between the enforcement agencies, inspection for compliance with the laws cannot be carried out efficiently.
- The TTPS plays an important role in enforcing the existing provisions. They are involved during the licensing process and throughout the firework supply chain. The TTPS is also responsible for prosecuting persons for the illegal use of fireworks and the offences under the Explosives Act. The TTPS lacks the manpower to respond every time a firework is sold, stored or used illegally. In order to successfully prosecute firework related offences, the TTPS must be equipped with forensic capabilities or obtain the assistance of a forensic agency.⁷⁷

⁷⁷ The forensic capabilities required to prosecute firework offences will be similar to that employed by law enforcement in prosecuting firearm and dangerous drugs offences. This would allow exhibits of evidence to be analysed to determine with a greater degree of certainty if fireworks were used in the commission of an offence. Forensic testing is usually done by a forensic agency. The Trinidad and Tobago Forensic

- The EMA and the EMA Police also lack the manpower to respond every time fireworks exceed the permitted noise levels. In addition, the EMA does not have a real presence or the necessary weight behind it to ensure the citizenry complies with the existing laws.
- The absence of a system of classification allows for all types of fireworks to be imported and made available on the local market. This makes the tasks of the Customs Division, TTPS, the EMA and the EMA Police more difficult. As more fireworks are made available on the market, use increases making it virtually impossible to identify and apprehend persons who illegally use fireworks or to reduce the disturbance caused by loud fireworks especially on nights of national celebrations.
- The minimum weight requirements set out in the Explosives Act for obtaining dealers licences are specific to gunpowder and are not applicable to fireworks which contain a combination of gunpowder, blackpowder, a mixture of other explosive components, packaging and tubing. Therefore, the TTPS will face difficulty when assessing how much fireworks can be stored on licenced premises including storing for purposes of sale or the amount that can be transported by road.
- Information about firework incidents or breaches of the law may never reach the relevant enforcement authorities owing to the uncertainty the public faces in relation to the specific roles and responsibilities of the different enforcement authorities.

Enforcement of fireworks regulations in other jurisdictions

8.5 In the jurisdictions examined, specific firework regulations provide a well organised system to control the fireworks supply chain and by extension the entire fireworks industry. Importantly, the regulations identify the enforcement authorities and set out their respective responsibilities at the different stages of the supply chain. By clearly defining the role of each authority, there is little uncertainty for enforcement authorities when they are required to act. This also allows the public to identify the responsible authorities when situations arise.

Importing fireworks

8.6 Persons applying for authorisation to import fireworks must provide the regulatory authority with details of the fireworks they wish to import including the name, type, UN number, country of origin, port of entry, net explosive quantity and the place of storage.⁷⁸ In England, regulation 11 of the Fireworks Regulations 2004 requires a firework importer to provide the Commissioners of Customs with his name and address, the name and address of the person who will store the fireworks and the address of the storage location.

Science Center is the only forensic agency that forensic testing on firearms and dangerous drugs for the purpose of prosecuting offences. Forensic firearm examination is the forensic process of examining the characteristics of firearms as well as any cartridges or bullets left behind at a crime scene. Specialists in this field are tasked with linking bullets and cartridges to weapons and weapons to individuals. Similar testing can assist law enforcement agencies in successfully prosecuting offences involving the illegal use of fireworks and scratch-bombs.

⁷⁸ Explosive Regulations 2013, regulation 46 (Canada).

This information will be passed on to the relevant authority to inspect the storage site for compliance with the storage requirements. Further, the regulatory authorities are responsible for carrying out testing of the imported fireworks for compliance with the UN Model Regulations prior to granting permission to import the fireworks. At the point of entry, customs authorities are required to screen imported fireworks. The task for customs authorities is made easier with classification systems in place or lists of authorised and prohibited explosives. By monitoring and controlling what fireworks are imported, other jurisdictions have been able to control the types and quantities of fireworks that eventually end up being supplied to the public.

Storing fireworks

8.7 In some jurisdictions, authorisation to import, supply or use fireworks will only be granted if the individual or corporate body is authorised to store fireworks for that specific purpose. In others, the authorisation allows the holder to store a specified quantity of fireworks. The regulatory authorities in those jurisdictions are responsible for granting the authorisation to carry out the above-mentioned activities. As discussed in the previous chapters, the regulations provide an application process to obtain authorisation. During the application process, the applicant may be required to obtain approval from the police, fire service and local authority. Even after authorisation is granted, the regulatory authorities are mandated to conduct regular inspections at storage locations for compliance with the storage regulations.

Supplying fireworks

8.8 In relation to the supply of fireworks, regulations seek to achieve two main things: that the fireworks being sold are safe for purchasers; and to promote safety at sales establishments and places in close proximity to such places. The regulatory authorities are required to carry out inspections for the compliance with storage requirements as well as the display and sale requirements. Breaches of the regulations that amount to criminal offences are enforced and prosecuted by the police service.

Using fireworks

8.9 One of the most important aspects of regulating fireworks is enforcing the provisions that govern use. As in Trinidad and Tobago, the police in other jurisdictions are also responsible for enforcing and prosecuting persons for using fireworks contrary to the regulations. In England, the police can issue on the spot fines for the illegal use of fireworks outside the permitted times. It should be noted that, in most jurisdictions the regulations provide for the regulatory authority to have a system for receiving complaints or reports of fireworks incidents, these include telephone hotlines. This measure facilitates the communication of information from the public to the relevant authorities.

8.10 However, public firework displays however require that additional enforcement agencies be engaged. These include the police, fire service and local government. Permission to conduct the display must be obtained from these authorities in many jurisdictions. The Fire Services are required to be present on the site for the purpose of managing crowds and the local authorities often give notice to persons in the vicinity of

the intended display who are likely to be affected and conduct public hearings to receive any objections to the display beforehand.

8.11 The responsibility for enforcing the fireworks regulations in other jurisdictions is therefore a shared one, with each authority playing its part in the overall system to regulate the supply chain and the fireworks industry. Underpinning this system is a well-established regulatory framework which identifies the responsibility of each enforcement authority and sets out the parameters within which they are to operate.

Chapter Nine

Conclusion and Recommendations

Conclusion

9.1 Although fireworks are used in Trinidad and Tobago on a seasonal basis, they have become a popular source of entertainment. While they provide entertainment, they also pose a serious threat to persons, animals and properties and have caused serious injuries, distress and nuisance over the years.

9.2 The concerns directed toward firework use goes further than that mentioned above. It also raises an important issue of national security, especially in an era where crime and terrorism are prevalent.

9.3 The jurisdictions highlighted in the previous chapters acknowledged the dangers and inconveniences associated with fireworks and have either imposed absolute or partial bans on certain types of fireworks or regulated the activities undertaken at each stage of the fireworks supply chain.

9.4 Firework regulation in Trinidad and Tobago falls within the scope of the Explosives Act, Summary Offences Act and the Public Holidays and Festivals Act. Having compared the measures adopted in several foreign jurisdictions against the local provisions, it is evident that there is a clear need for specific and detailed provisions in order to effectively control the fireworks industry. In reforming the law, an adequate balance must be achieved between the safety and entertainment values associated with firework use.

9.5 The fireworks industry provides significant entertainment and economic value despite the risks of danger and high noise levels associated with its use. The primary objective of regulating fireworks in other jurisdictions is to ensure safety throughout the fireworks life cycle, that is, from the manufacturing stage to the end user/consumer. Another important aim of fireworks regulations has been to control the high noise levels associated with its use by restricting sale and use to specified periods. This paper attempts to find the appropriate balance which will allow for the continued enjoyment of fireworks in a safe and reasonable manner.

9.6 In addition, proper enforcement of the law will require a concerted effort from the TTPS, Customs, EMA and the Fire Service. Importantly, each authority must have a clear understanding of its function and the circumstances in which they are required to act.

9.7 The inability of the current system to treat with the concerns raised against the sale of use of fireworks provides an impetus reform. The options for reform are as follows:

- a) uphold the current status quo.
- b) impose an absolute ban on the sale and use of fireworks

c) regulate the industry along the lines of the jurisdictions that regulate the entire industry through a system of licences, absolute or partial bans on certain types of fireworks, safety requirements and offences.

9.8 The Commission proceeds on the assumption that option (c) is most preferable as reform is clearly needed to address concerns raised in relation to the fireworks industry. Further, option (b) may be considered too harsh as it will result in the closure of the industry causing hardship and losses to the stakeholders in the industry and citizens and will no longer be able to use fireworks for their own private enjoyment.

Recommendations

9.9 In light of the foregoing it is recommended as follows:

General Policy

- 1. There should be specific policy and a legislative framework to regulate the entire lifecycle of fireworks in Trinidad and Tobago. The fireworks policy (the policy) should impose requirements/controls at all stages of the firework lifecycle (i.e. manufacture, import, storage, transport, packaging, sale, handling, possession and use) with the aim of:
 - ensuring national security;
 - ensuring the safety of persons and property;
 - protecting the environment; and
 - balancing the entertainment value and the rights and interests of those adversely affected by the use of fireworks.
- 2. The policy may be implemented by enacting new legislation or amending existing legislation or alternatively, by amending and or making subsidiary legislation pursuant to the Explosives Act, Chap. 16:02, Summary Offences Act, Chap. 11:02 or the Environmental Management Act, Chap. 35:05.
- 3. The policy should adopt the United Nations' classification of explosives based on the type and degree of hazard associated with the explosive as set out in the UN Model Regulations and the UN Manual for Testing and Criteria.
- 4. The policy should require that public fireworks displays are conducted by professional firework operators only with the authorisation of the regulatory body. Before granting authorisation for a public fireworks display, the regulatory authority:
 - shall give notice to those likely to be affected by the display;
 - conduct a public hearing or provide a telephone or email hotline to receive any objections;
 - may require the applicant to submit a site plan, safety management plan and an emergency plan in relation to the site of the intended display;

- may require the applicant to obtain the approval of the TTPS and the Fire Service.
- 5. Section 99 of the Summary Offences Act should be repealed as there should be no distinction between a town and rural area under the fireworks policy. Further, the EMA should review the boundaries of the zones relating to noise pollution under the Environmental Management Act in light of the changes in the national demographics since its enactment.

Storage

- 6. The policy should require that the design and construction of firework storage locations should comply with international standards.
- 7. The policy should impose a limit on the quantity of fireworks that can be stored at such locations.
- 8. As most fireworks contain gunpowder or blackpowder, a mixture of other explosive components, tubing and packaging, the policy should take into account the net explosive content of fireworks when imposing storage requirements.
- 9. The policy should require that at storage locations fireworks are packed in a manner that will prevent any unintended fires from spreading from one storage compartment to another.
- 10. The policy should also require that safety distances are maintained between places where fireworks are stored and between those places and other buildings, public roadways and pathways according to international best practice.
- 11. The policy should identify less dangerous fireworks, commonly referred to as small fireworks, toy fireworks or firework novelties in other jurisdictions which will not require authorisation for sale or use. However, persons storing such fireworks for its intended sale must comply with the storage requirements. The policy should provide a maximum limit on the quantity of such fireworks that can be stored at a dwelling.

Regulatory Authority

12. There should be a regulatory authority charged primarily with the responsibility of co-ordinating and implementing the fireworks policy. The authority should be responsible for granting authorisation to carry out certain activities involving fireworks. The activities requiring authorisation should include importing, storing, supplying and using fireworks. The policy should also provide an appeal process

for aggrieved parties following the decision of the regulatory authority to grant or refuse to grant an authorisation.

- 13. The policy should identify other relevant state authorities other than the regulatory authority, and clearly set out their respective enforcement duties under the policy. These authorities should include the TTPS, Customs and Excise Division, EMA and the Fire Service.
- 14. The regulatory authority should establish a list of authorised fireworks that can be imported, supplied, stored and used in Trinidad and Tobago under the relevant authorisation. The regulatory authority should also establish a list of prohibited fireworks that have been deemed dangerous or excessively loud. Fireworks on the prohibited list may not be imported, supplied, stored or used in Trinidad and Tobago, except by professional firework operators for the purposes of conducting a public firework display under a licence to use fireworks. The authorised list and the prohibited list should be included in a schedule to the legislation implementing the policy.
- 15. The policy should require that authorisation from the regulatory authority must be obtained before one can import, supply, store or use fireworks. The policy should provide the specific requirements for each type of authorisation that may be granted by the regulatory authority. The regulatory authority should have the power to impose conditions on any authorisation granted.
- 16. The regulatory authority should be responsible for ensuring that the requirements referred to in recommendation 9 are satisfied before granting authorisation.
- 17. The regulatory authority should be required to regularly inspect premises where fireworks are stored for compliance with the requirements or conditions referred to in recommendation 9. A breach of the requirements or a condition should be penalized by a fine and at the discretion of the regulatory authority, the authorisation may be suspended until the holder complies with the requirements or condition. If the holder of the authorisations fails to comply with the requirements or conditions of his authorisation the regulatory authority should also have the power to cancel the authorisation or refuse its renewal.

Importation

- 18. The policy should require that all imported fireworks are tested and classified according to the UN standards.
- 19. The policy should require that imported fireworks are packaged according to the UN globalised standards for packaging explosives.

20. The policy should require that all imported fireworks are labelled with its hazard classification, net explosive content, batch number and the name and address of the manufacturer. The policy should also require imported fireworks to have clear user instructions.

Training

- 21. The policy should require importers, suppliers, professional firework display organisers and operators applying for an authorisation mentioned in recommendation 6 to be trained in the safe handling and use of fireworks. The employees of the above-mentioned persons must only handle fireworks under the direct supervision of a trained individual.
- 22. The policy should require the regulatory authority to either conduct training courses in the safe handling and use of fireworks or recognise the equivalent certification in the safe handling and use of fireworks obtained in other jurisdictions.

Sale

- 23. The policy should prescribe the periods in which fireworks can be sold to the public. The sale of fireworks outside the permitted periods should require a special authorisation from the regulatory authority.
- 24. The policy should make the sale of any firework to persons under eighteen (18) years of age an offence punishable by a fine, term of imprisonment and the suspension or revocation of their authorisation to sell fireworks.
- 25. The policy should require firework suppliers to record the details of each firework sold. The details should include the type of firework, hazard classification, batch number and the name and address of the purchaser.
- 26. The policy should require firework suppliers to provide purchasers with guidelines on the safe of fireworks with every purchase of fireworks.

Possession and use

- 27. The policy should impose a curfew on the use of fireworks with exception for specific nights during periods of national celebrations as in England.
- 28. The policy should make it an offence for any person other than a professional firework display operator or an employee under his direct supervision to be in possession of a firework other than a small firework, toy firework or firework novelty

in a public place. The TTPS should be able to issue a on the spot fine to persons who commit this offence.

- 29. The policy should make it an offence for any person to throw, cast, set fire to or let off any firework in a public place except with authorisation from the regulatory authority.
- 30. The policy should promote the use of silent fireworks, particularly in densely populated areas, or close to hospitals and wildlife reserves.

APPENDIX I

CLASSIFICATION OF EXPLOSIVES

What are fireworks?

1. Fireworks are devices containing combustible components which produce spectacular effects and explosions when ignited⁷⁹. They take many forms and produce four primary effects including noise, light, smoke and floating materials (for example confetti). Generally, they are designed to burn with flames and sparks of many colours. They have been categorised as an individual class of explosives in a number of jurisdictions. However, most fireworks contain the explosive gunpowder which is a powdered mixture of saltpetre, sulphur, and charcoal.⁸⁰

How do fireworks work?

2. The spectacular display of colours and the loud explosions that emanate from firework displays result from the arrangement of the chemical components and the precise timing involved in the ignition of those components. The American Chemical Society (ACS) succinctly describes how fireworks work in an article published on its website as follows:

The source of most fireworks is a small tube called an aerial shell that contains explosive chemicals. All the lights, colours, and sounds of a firework come from these chemicals. An aerial shell is made of gunpowder, which is a well-known explosive, and small globs of explosive materials called stars. The stars give fireworks their color when they explode. When we watch fireworks, we actually see the explosion of the stars. They are formed into spheres, cubes, or cylinders that are usually 3–4 centimetres $(1-1\frac{1}{2} \text{ inch})$ in diameter.

Each star contains four chemical ingredients: an oxidizing agent, a fuel, a metal-containing colorant, and a binder. In the presence of a flame or a spark, the oxidizing agent and the fuel are involved in chemical reactions that create intense heat and gas. The metal-containing colorant produces the color, and the binder holds together the oxidizing agent, fuel, and colorants. At the centre of the shell is a bursting charge with a fuse on top. Igniting the fuse with a flame or a spark triggers the explosion of the bursting charge and of the entire aerial shell.

⁷⁹ Oxford Dictionary, Thesaurus and Wordpower Guide, Oxford University Press, published October 4, 2001, 476.

⁸⁰ ibid 571.

The explosion of a firework happens in two steps: The aerial shell is shot into the air, and then it explodes in the air, many feet above the ground. To propel the aerial shell into the air, the shell is placed inside a tube, called a mortar, which is often partially buried in sand or dirt. A lifting charge of gunpowder is present below the shell with a fuse attached to it. When this fuse, called a fastacting fuse, is ignited with a flame or a spark, the gunpowder explodes, creating lots of heat and gas that cause a build-up of pressure beneath the shell. Then, when the pressure is great enough, the shell shoots up into the sky. After a few seconds, when the aerial shell is high above the ground, another fuse inside the aerial shell, called a time-delay fuse, ignites, causing the bursting charge to explode. This, in turn, ignites the black powder and the stars, which rapidly produce lots of gas and heat, causing the shell to burst open, propelling the stars in every direction. During the explosion, not only are the gases produced quickly, but they are also hot, and they expand rapidly, according to Charles' Law, which states that as the temperature of enclosed gas increases, the volume increases, if the pressure is constant (Fig. 1). The loud boom that accompanies fireworks is actually a sonic boom produced by the expansion of the gases at a rate faster than the speed of sound! If the stars are arranged randomly in the aerial shell, they will spread evenly in the sky after the shell explodes. But if the stars are packed carefully in predetermined patterns, then the firework has a specific shape—such as a willow, a peony, or a spinner-because the stars are sent in specific directions during the explosion. The timing of the two fuses is important. The fast-acting fuse ignites first, propelling the shell into the air, and then the time-delay fuse ignites to cause the aerial shell to explode when it is high in the sky. If the timing of the fuses is not just right, the shell can explode too close to the ground, injuring people nearby.⁸¹

Classification of explosives

3. There is no system of classifying explosives under the laws of Trinidad and Tobago. In other jurisdictions, classifying explosives based on the type and degree of hazard they present is essential to regulating the fireworks industry. Identifying the specific type and degree of hazard associated with fireworks enables the appropriate level of precaution to be taken throughout the supply chain.

4. It is important to note the purposes for which explosives are classified, where fireworks fall within the classification system and the approach taken in several jurisdictions to implement a system to classify explosives.

⁸¹ Kathy De Antonis, 'Fireworks!' (*ChemMatters,* October 2010)

https://www.acs.org/content/dam/acsorg/education/resources/highschool/chemmatters/articlesbytopic/oxidationandreduction/chemmatters-oct2010-fireworks.pdf> accessed 02 April 2020.

5. A good starting point for the discussion on the classification of explosives is the progress made by the United Nations (UN) towards the global harmonization of regulations governing the transport of dangerous goods. In order to achieve this aim, dangerous goods, including explosives and chemicals have been classified based on the type and degree of hazard they present for the purposes of transport. The UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals (UNCETDG/GHS⁸²) put forward recommendations for a classification system and the criteria, procedures and methods for testing dangerous goods in the UN Recommendations on the Transport of Dangerous Goods - Model Regulations (The Model Regulations⁸³); and the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and *Criteria* (The Manual of Tests and Criteria)⁸⁴. Further, the *Globally Harmonized System* of Classification and Labelling of Chemicals (GHS)⁸⁵ which was first published by the UNCETDG/GHS in 2003 aims to provide a globally harmonized hazard classification system and a compatible labelling system for dangerous goods. This was intended to promote safety for consumers and employees and also to achieve harmonisation between the transport sector and other sectors. One of the most important purposes of the GHS was to standardize the pictograms to be used on labels to illustrate the type and degree of hazard according to the UN hazard classification system.

6. The Manual of Tests and Criteria supplements the Model Regulations and the GHS, all of which are all based on the same principles of hazard classification. By having a harmonised system of regulations and classification, the recommendations and the GHS were intended to facilitate and promote the international trade in goods categorized as "dangerous" while at the same time ensuring the safety of persons, property and the environment. It is evident that the UN recommendations on the transport of dangerous goods significantly influenced the classification of explosives in several jurisdictions. The classification systems in some of those jurisdictions will be examined later in this chapter.

The Model Regulations

7. The *Model Regulations* provide a scheme of provisions promoting the uniform development of national and international regulations governing the various modes of transport of dangerous goods. Although not binding on Member States (as they carry the status of recommendations), the Model Regulations were developed with the expectation that governments, intergovernmental organizations or other international organizations

⁸² Previously known as the UN Economic and Social Council's Committee of Experts on theTransport of Dangerous Goods which was renamed in 2001.

⁸³ 'Recommendations on the Transport of Dangerous Goods - Model Regulations, Nineteenth Revised Edition' (*United Nations*, 2015) https://www.unece.org/trans/danger/publi/unrec/rev19/19files_e.html accessed 02 April 2020.

⁸⁴ 'Recommendations on the Transport of Dangerous Goods-Manual of Tests and Criteria, Fifth Revised Edition' (*United Nations, New York and Geneva,* 2009). https://www.unece.org/fileadmin/DAM/trans/danger/publi/manual/Rev5/English/ST-SG-AC10-11-Rev5-

EN.pdf> accessed 02 April 2020. ⁸⁵ 'Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Fourth revised

edition' (United Nations, New York and Geneva, 2011)

<https://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev04/English/ST-SG-AC10-30-Rev4e.pdf> accessed 02 April 2020.

responsible for developing or revising regulations would conform to the principles laid down in them, thus contributing to worldwide harmonization in the field.

8. The Model Regulations cover several areas including the classification and definition of classes, listing of the principal dangerous goods, general packing requirements, testing procedures, marking, labelling or placarding, and transport documents. These systems within the *Model Regulations*, were intended to allow carriers, consignors and inspecting authorities to benefit from simplified transport, handling and control and from a reduction in time-consuming formalities.⁸⁶

Classification under the Model Regulations

7 Part 2 of the Model Regulations classifies dangerous goods into 9 distinct classes. Explosives falls within Class 1 of the hazard classification system which is divided into six sub-divisions:

- Division 1.1: Substances and articles which have a mass explosion hazard
- Division 1.2: Substances and articles which have a projection hazard but not a mass explosion hazard
- 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
- Division 1.4: Substances and articles which present no significant hazard
- Division 1.5: Very insensitive substances which have a mass explosion hazard
- Division 1.6: Extremely insensitive articles which do not have a mass explosion hazard

9. Chapter 2.1.3.5.1 of the Model Regulations provides that fireworks shall normally be assigned to hazard divisions 1.1, 1.2, 1.3 and 1.4 on the basis of results derived from Test Series 6 of the Manual of Tests and Criteria. The Model Regulations also allow for the assignment of fireworks to UN Numbers 0333-0336 by analogy, without the need for to Test Series 6 testing, in accordance with the default fireworks classification table provided in 2.1.3.5.5 of the Model Regulations (see Appendix 2 for the table).

Compatibility groups

10. In addition to being assigned to one of the above divisions, explosives are also assigned to one of thirteen (13) compatibility groups which identify the kinds of explosives substances and articles that are deemed to be compatible. Tables 2.1.2.1.1 and 2.1.2.1.2 which are set out in Chapter 2.1 of the Model Regulations show the scheme of classification into compatibility groups, the possible hazard divisions associated with each group and the consequential classification codes.

Dangerous Goods list: UN Numbers and proper shipping names

⁸⁶ 'Recommendations on the Transport of Dangerous Goods - Model Regulations, Nineteenth Revised Edition' (*United Nations*, 2015) 1 <https://www.unece.org/trans/danger/publi/unrec/rev19/19files_e.html> accessed 02 April 2020.

11. The Model Regulations assign UN numbers and proper shipping names to dangerous goods according to their hazard classification and their composition. A list of commonly carried dangerous goods is provided in Chapter 3.2 of the Model Regulations. Each entry is characterized by a UN Number. The list also contains relevant information for each entry, such as hazard class, subsidiary risk(s) if any, packing group (where assigned), packing and tank transport requirements. Fireworks have been assigned UN numbers 0333-0338 under the UN system.

The Manual of Tests and Criteria

12. In 1984, the first version of the Manual of Tests and Criteria was adopted by the Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods. Since then it has been regularly updated and amended under the auspices of the UNCETDG/GHS. The Manual of Tests and Criteria supplements the Model Regulations and the GHS. It presents the United Nation's schemes for the classification of certain types of dangerous goods and contains the criteria, test methods and procedures to be used for the classification of dangerous goods according to the provisions of Parts 2 and 3 of the Model Regulations, as well as chemicals presenting physical hazard according to the GHS. Part 1 of the Manual of Tests and Criteria deals with the classification of explosives and provides descriptions of the test methods and the procedures considered to be the most useful for providing competent authorities with the necessary information to arrive at a proper classification or substances and article for transport.

Classification of explosives and fireworks in other jurisdictions

13. In most of the jurisdictions examined, there is some form of system to classify explosives. Fireworks are classified for the purposes of transport and packing, storage and use based on the type and degree of hazard they present. In some jurisdictions fireworks have been categorised as a separate class of explosives further divided into sub-categories.

England

14. In England, prior to 2014, a system of classification of fireworks was established under the British Standards - BS 7114-1:1988 which provided 4 categories of fireworks:

- Category 1 fireworks suitable for use indoors (indoor fireworks)
- Category 2 fireworks suitable for outdoor use in relatively confined areas (garden fireworks)
- Category 3 fireworks suitable for outdoor use in large open spaces (display fireworks)
- Category 4 fireworks which are incomplete and/or which are not intended for sale to the general public (professional fireworks)

15. However, owing to England's obligations under the European Union, there has been a movement towards classifying explosives and fireworks in accordance with European standards which were aimed at harmonizing the regulations and safety requirements for all explosives products placed on the market within member states.

Hence, the Explosive Regulations 2014 deal with the storage of explosives and classify explosives into four hazard categories:-

hazard type 1 (HT1) explosive - an explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture, has a mass explosion hazard;

hazard type 2 (HT2) explosive - an explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture, has a serious projectile hazard but does not have a mass explosion hazard;

hazard type 3 (HT3) explosive - an explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture, has a fire hazard and either a minor blast hazard or a minor projectile hazard, or both, but does not have a mass explosion hazard;

hazard type 4 (HT4) explosive - an explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture, has a fire hazard or slight explosion hazard, or both, with only local effect;

16. According to the Health and Safety Executive (HSE), for explosives packaged for carriage, that have been classified, there will generally be a direct correlation between the UN hazard division (HD) assigned to them on classification for transport and the hazard type (HT) they should be allocated for storage, i.e.:

- UN HD 1.1 = HT 1
- UN HD 1.2 = HT 2
- UN HD 1.3 = HT 3
- UN HD 1.4 = HT 4⁸⁷

17. Additionally, the Pyrotechnic Articles (Safety) Regulations 2015 (the PA(S)R 2015) require all fireworks offered for sale in the United Kingdom to conform to European safety standards. Importantly, the PA(S)R 2015 classify fireworks for the purpose of determining which may be supplied to the general public as follows:

- **Category F1** fireworks which present a very low hazard and negligible noise level and which are intended for use in confined areas, including fireworks which are intended for use inside domestic buildings (i.e. indoor fireworks).
- **Category F2** fireworks which present a low hazard and low noise level and which are intended for outdoor use in confined areas (i.e. garden fireworks).

⁸⁷ 'Hazard Type' (*Heath and Safety Executive website* [England])

http://www.hse.gov.uk/explosives/licensing/hazard-classification.htm> accessed 02 April 2020.

- **Category F3** fireworks which present a medium hazard, which are intended for outdoor use in large open areas and whose noise level is not harmful to human health (i.e. display fireworks for open areas such as fields).
- **Category F4** fireworks which present a high hazard, which are intended for use only by persons with specialist knowledge and whose noise level is not harmful to human health (i.e. professional fireworks for large open spaces).

18. Great Britain (GB) is a contracting party to the European Union Agreement Concerning the International Carriage of Dangerous Good by Road (ADR) which requires all explosives to be assigned a classification by Competent Authorities of the Contracting Parties before carriage by road. On 1st July 2007, the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007 (CGDUTPER 2007) came into force, making the ADR enforceable in the england. In GB, the Health and Safety Executive (HSE) is the Competent Authority responsible for carrying out the functions of Competent Authorities under the ADR. The CGDUTPER 2007 was revoked by the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 as amended (CGDUTPER 2009) which is currently in force. Pursuant to its responsibility under the CGDUTPER 2009, the HSE may assign classification to an explosive through any of the following methods:

- on the basis of UN test results and information supplied
- by analogy with a similar explosive previously classified by HSE or the Explosives Storage and Transport Committee (ESTC)
- technical argument through documentary evidence
- by recognising the classification assigned by the Competent Authority of a country that is not a Contracting Party to ADR.
- for fireworks that are manufactured in Great Britain or a country that does not have a Competent Authority – UN default classification scheme

19. In terms of classification for the purposes of labelling and packaging, the European Regulation (EC) No. 1272/2008 (the CLP Regulations) came into force on 20 January 2009 in all European Union member states, including the UK. The CLP Regulations adopted the GHS which became effective in 2015 in all member states.

<u>Canada</u>

20. In Canada, the Explosive Regulations 2013 (Federal law) classify explosives based on the intended use. The Chief Inspector of Explosives is also required to classify all explosives by type, hazard category and UN number. In relation to use, fireworks fall into Class F which is further divided into four (4) types:

- F.1 Consumer fireworks;
- F.2 Display fireworks under which a there is a specific division for firecrackers;
- F.3 Special effects pyrotechnics; and

• F.4 - Fireworks accessories.⁸⁸

21. The Explosive Regulations 2013 also classify explosives for the purposes of manufacturing and storage into one or more of the following potential effects (PE) categories (if applicable). The classification is based on the potential hazard which is determined by the manufacturing operations, quantity of explosives and how the explosive will be packaged:

- PE 1 -mass explosion hazard;
- PE 2 -serious projection hazard but not a mass explosion hazard;
- PE 3 -fire hazard and either a minor blast or minor projection hazard, or both, but not a mass explosion hazard; or
- PE 4 -fire hazard or slight explosion hazard, or both, with only local effect.⁸⁹

22. In relation to packaging and transport, dangerous goods are classified according to the UN numbers that have been assigned in the UN Dangerous Goods List. Schedule I to the Transport of Dangerous Goods Regulations⁹⁰ provides a table (similar to the UN Dangerous Goods List) which lists UN numbers assigned to dangerous goods and other information concerning packing groups and permitted quantities in relation to packaging and shipping.

New South Wales, Australia

23. In New South Wales, the Explosive Regulations 2013 provides that explosives are to be classified according to the classification code under the Australian Explosives Code⁹¹ (AEC) or the Australian Code for the Transport of Dangerous Goods by Road and Rail, (ADG Code). For the most part, the AEC adopts the UN system of classification, assignment of hazard divisions and testing and criteria. Paragraph 2.7 of Appendix 2 of the AEC provides that:

"Goods that are dangerous goods are assigned to a Class according to the most significant risk presented by the goods as determined by the criteria set out in the *UN Model Regulations* and in the *UN Manual of Tests and Criteria*".

24. Further, in relation to classification of explosives for the purposes of transport, the *Numerical List of Explosives and Related Goods* provided in Appendix 2 more or less mirrors the UN Dangerous Goods List, and provides the UN Numbers for explosive

⁸⁸ Explosives Regulations 2013 (Canada), s 36(1),(2).

⁸⁹ Explosives Regulations 2003 (Canada), s 36(3).

⁹⁰ SOR/2001-286.

⁹¹ 'Australian Code for the Transport of Explosives by Road and Rail, Third edition' (*Australian Forum of Explosives Regulators*, 2009)

<https://www.safeworkaustralia.gov.au/system/files/documents/1702/australian_code_transport_explo sives_road_rail_3rd_edition.pdf> accessed 02 April 2020.

products, proper shipping names, class, hazard divisions, packing groups and permitted packing quantities for the purpose of transport.

25. In relation to the fireworks classification and the assignment hazard divisions, the AEC adopts the approach in Chapter 2.1.3.5.1 and 2.1.3.5.5 of the Model Regulations

Queensland, Australia

26. In Queensland, the Explosives Act 1999 and the Explosives Regulations 2003 make provision for the classification of explosives. Firstly, section 8(2) of the Explosives Act 1999 requires the Chief Inspector of Explosives to "(a) define the composition, quality and character of the explosive; and (b) classify the explosive in a way prescribed under a regulation" before making a declaration that the explosive is an authorised explosive for the purposes of the Act.

27. Further, section 12 of the Regulations requires that for the purposes of section 8(2)(b) of the Act, explosives must be classified according to—

- (a) the explosive's class, division and compatibility group; or
- (b) the explosive's class, division and packing group; or
- (c) another classification system approved by the Chief Inspector.

28. From the outset, the Explosives Regulations 2003 makes reference to the classification system in the Model Regulations. Regulation 4 provides that references in the regulations regarding the classification of explosive refer to:

- (a) for an explosive to which the Model Regulations apply assigning the class, division and compatibility group, or packing group of the explosive under the Model Regulations.
- (b) for an explosive rejected or otherwise refused classification under the UN model regulations assigning the explosive a classification under a classification system approved by the Chief Inspector; or
- (c) for an explosive to which the Model Regulations do not applyassigning the explosive a classification under a classification system approved by the Chief Inspector.

<u>New Zealand</u>

29. In New Zealand, hazardous substances are classified under the *Hazardous Property Classification Scheme* under the regulations made pursuant to the Hazardous Substances and New Organisms Act 1996. The classification system set out in regulation 4 of the Hazardous Substance (Classification) Regulations 2001 (Classification Regulations) provides that hazardous substance will be assigned a number for their intrinsic hazardous property (for example, explosiveness), a number for the degree of hazard (for example a projection or mass explosion hazard) and a letter indicating the degree of hazard (for example Category A). The combination of numbers and letters used in the classification system constitutes the hazard classification of a substance.

30. Under regulation 5 of the Classification Regulations 2001, there are 8 classes of hazardous properties. Hazardous substances with explosive properties fall into Class 1. Further, regulation 6 provides for the allocation of subclasses and categories in accordance with the criteria set out in Schedule 1 to the Classification Regulations. Part I of Schedule I, provides a table of subclasses and the criteria to be met to allocate explosives into one of six subclasses. Part 2 of Schedule I lists categories and the criteria for each category. Importantly, the Commission notes that Schedule I allocates subclasses and categories to explosives base on the criteria set out in the Manual of Tests and Criteria.

31. In light of the foregoing, the UN system of classifying dangerous goods for the purposes of transport has significantly impacted how explosives are transported, stored, supplied, handled and used.